Instruction Manual

105-24  105-26
105-25  105-28

Blind Rivet Removal Tool Kits
This instruction manual must be read, with particular attention to the following safety guidelines, by any person servicing or operating this tool.

1. Glossary
   - Product complies with requirements set forth by the relevant European directives.
   - Read manual prior to using equipment.
   - Eye protection required while using this equipment.
   - Hearing protection required while using this equipment.

2. A half hour long hands-on training session with qualified personnel is recommended before using Huck equipment.

3. Huck equipment must be maintained in a safe working condition at all times. Tools and hoses should be inspected at the beginning of each shift/day for damage or wear. Any repair should be done by a qualified repairman trained on Huck procedures.

4. Repairman and Operator must read manual prior to using equipment. Warning and Caution stickers/labels supplied with equipment must be understood before connecting equipment to any primary power supply. As applicable, each of the sections in this manual have specific safety and other information.

5. Read MSDS Specifications before servicing the tool. MSDS Specifications are available from the product manufacturer or your Huck representative.

6. When repairing or operating Huck installation equipment, always wear approved eye protection. Where applicable, refer to ANSI Z87.1 - 2003

7. Disconnect primary power source before performing maintenance on Huck equipment or changing Nose Assembly.

8. Tools and hoses should be inspected for leaks at the beginning of each shift/day. If any equipment shows signs of damage, wear, or leakage, do not connect it to the primary power supply.

9. Mounting hardware should be checked at the beginning of each shift/day.

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

11. Release tool trigger if power supply is interrupted.

12. Tools are not to be used in an explosive environment unless specifically designed to do so.

13. Never remove any safety guards or pintail deflectors.

14. Ensure deflector or pintail collector is installed and operating prior to use.

15. Never install a fastener in free air. Personal injury from fastener ejecting may occur.

16. Always clear spent pintail out of nose assembly before installing the next fastener.

17. There is possibility of forcible ejection of pintails or spent mandrels from front of tool.

18. If there is a pinch point between trigger and work piece, use remote trigger. (Remote triggers are available for all tooling).

19. Unsuitable postures may not allow counteracting of normal expected movement of tool.

20. Do not abuse tool by dropping or using it as a hammer. Never use hydraulic or air lines as a handle or to bend or pry the tool. Reasonable care of installation tools by operators is an important factor in maintaining tool efficiency, eliminating downtime, and in preventing an accident which may cause severe personal injury.


22. There is a risk of crushing if tool is cycled without Nose Assembly installed.

23. Tools with ejector rods should never be cycled without nose assembly installed.

24. When two piece lock bolts are being used always make sure the collar orientation is correct. See fastener data sheet of correct positioning.

25. Tool is only to be used as stated in this manual. Any other use is prohibited.
INTRODUCTION

The Huck MLS blind rivet (NAS1919 & NAS1921) can be removed by using the proper Huck Blind Rivet Removal Tool Kit with the proper portable high speed drill motors:

(1) When drilling out pin, use a high speed drill motor with drill.

(2) When removing lock collar, use a drill motor with maximum speed of 1250 rpm with micro-limit tool.

The tools in this kit are illustrated on page 3 and tabulated on page 4.

The fastener removal consists of four operations:

Operation I — Drill pin. (see page 5)

Operation II — Knock out drilled pin and remove upper portion of pin and lock collar. (see page 6)

Operation III — Counterbore sleeve. (see page 7)

Operation IV — Knock out counterbored sleeve and remove head of sleeve. (see page 8)

NOTE

The illustration of the operations for removal show a countersunk Huck blind rivet. The removal of a protruding head Huck blind rivet is the same.
INSPECTING INSTALLED MLS BLIND RIVETS

Positive inspection of MLS lock spindle blind rivets is apparent from the accessible side of the work.

SPINDLE AND COLLAR FLUSHNESS

CONCAVE OR CONVEX PIN BREAK PERMISSIBLE

DRIVEN LOCK COLLAR MUST BE FLUSH OR BELOW THIS SPINDLE LAND, PROVIDING THE SPINDLE POSITION MEETS THE LIMITATIONS SHOWN BELOW.

DRIVEN LOCK COLLAR POSITION

ILLUSTRATED WITHOUT LOCK COLLAR

SPINDLE INSTALLATION REQUIREMENTS

COLLAR INSTALLATION REQUIREMENTS

<table>
<thead>
<tr>
<th>NOMINAL RIVET DIA.</th>
<th>A DIM.</th>
<th>B DIM.</th>
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<td>.250</td>
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"A" MAX. ALLOWABLE DISTANCE OF TOP OF LAND OF SPINDLE ABOVE RIVET HEAD.

"B" MAX. ALLOWABLE DISTANCE OF TOP OF LAND OF SPINDLE BELOW RIVET HEAD.

DIMENSIONS IN INCHES
HUCK BLIND RIVET REMOVAL KIT

<table>
<thead>
<tr>
<th>FASTENERS</th>
<th>NOM. DIA.</th>
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<tr>
<td>MLSP/MLS100</td>
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<tr>
<td>NAS1919</td>
<td>5/32</td>
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DRILL BUSHING

DRILLS

PIN PUNCH

MICRO-LIMIT TOOL ASSEMBLY

SLEEVE PUNCH

HEX KEY
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<tr>
<th>DESCRIPTION</th>
<th>PART NO.</th>
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<th>PART NO.</th>
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<td>503002</td>
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<td>503011</td>
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<tr>
<td>SLEEVE PUNCH</td>
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OPERATION I – DRILL PIN

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<tr>
<th>FASTENER NOM. DIA.</th>
<th>DRILL</th>
<th>SIZE</th>
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<td>.050</td>
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<td>#21</td>
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1. Place drill bushing over pin so that it rests squarely on lock collar.

2. Using a high speed drill motor, drill to lock collar depth.
**OPERATION II — KNOCK OUT PIN**

**PIN PUNCH**

<table>
<thead>
<tr>
<th>FASTENER NOM. DIA.</th>
<th>PART NO.</th>
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<tr>
<td>1/4</td>
<td>503011</td>
<td>1/8&quot;</td>
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</table>

1. Position pin punch on fastener and drive pin out.

2. Remove remaining portion of pin and lock collar with any sharp pointed instrument.
<table>
<thead>
<tr>
<th>FASTENER NOM. DIA.</th>
<th>HOLDER</th>
<th>CUTTER</th>
<th>CUTTER DIA.</th>
<th>ANTI-ROTATION CAP</th>
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<td>110672-8</td>
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<td>110674-8</td>
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</table>

**DEPTH CONTROL COLLAR**

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<tr>
<th>FASTENER NOM. DIA.</th>
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</table>

**CAUTION**
Micro-Limit Tool must be used with drill motor having 1250 maximum rpm.

**OPERATION III — COUNTERBORE SLEEVE**

1. Adjust Micro-Limit Tool to approximately .015 less than the HEAD HEIGHT of the fastener shown in the table. The Micro-Limit Tool is adjusted by disengaging the DEPTH CONTROL COLLAR and adjusting the STOP COLLAR to the desired HEAD HEIGHT dimension. Each graduation is .001 inch.

2. Place anti-rotation cap firmly against head of fastener.

3. Counterbore to desired depth. (The depth may be increased, if required for operation IV)
OPERATION IV — KNOCK OUT SLEEVE

1. Position the sleeve punch in the sleeve and drive out lower portion of the sleeve.

2. Tip the sleeve punch slightly and lift out the head of the fastener.
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 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, PART(S) OR OTHER ITEMS 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.

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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 to discontinue models without notice.

Huck Installation Equipment should be serviced by trained service technicians only.

Always give the Serial Number of the equipment when corresponding or ordering service parts.

Complete repair facilities are maintained by Huck International, Inc. Please contact one of the offices listed below.

Eastern
One Corporate Drive Kingston, New York 12401-0250
Telephone (845) 331-7300 FAX (845) 334-7333

Outside USA and Canada
Contact your nearest Huck International Office, see back cover.

In addition to the above repair facilities, there are Authorized Tool Service Centers (ATSC’s) located throughout the United States. These service centers offer repair services, spare parts, Service Parts Kits, Service Tools Kits and Nose Assemblies. Please contact your Huck Representative or the nearest Huck office listed on the back cover for the ATSC in your area.
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FAX: 845-334-7333

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310-830-8200
FAX: 310-830-1436

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FAX: 254-751-5259

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FAX: 520-748-2142

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France
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FAX: 33-1-34-66-0600

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**Melbourne Operations**
11508 Centre Road
Clayton, Victoria
Australia 3168
03-764-5500
Toll Free: 008-335-030
FAX: 03-764-5510

Huck provides technical assistance regarding the use and application of Huck fasteners and tooling.

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