INSTRUCTION MANUAL

PR2155 SQUEEZER
HYDRAULIC INSTALLATION TOOL
SAFETY

This instruction manual must be read with particular attention to the following safety guide lines, by any person servicing or operating this tool.

1. Safety 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.

   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 manual prior to using equipment 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. See MSDS Specifications before servicing the tool. MSDS Specifications are available from you Huck representative or on-line at www.huck.com. Click on Installation Systems Division.

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

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

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

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

9. Never remove any safety guards or pintail deflector.

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

11. When using an offset nose always clear spent pintail out of nose assembly before installing the next fastener.

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

13. Do not abuse tool by dropping or using it as a hammer. Never use hydraulic or air lines as a handle. 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.

14. Never place hands between nose assembly and work piece.

15. Tools with ejector rods should never be cycled with out nose assembly installed.

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

SAFETY ................................................................. 3

CONTENTS ............................................................ 4

SYSTEM OVERVIEW .................................................. 5

PUTTING INTO SERVICE

Set-Up Procedure ..................................................... 6
Pressure Switch Adjustment ............................................ 6
Operating Instructions ................................................... 7

GENERAL OVERVIEW ................................................. 8

SERVICING THE SQUEEZER

Good Service Practices/Preventive Maintenance ..................... 9
Cylinder Disassembly/Assembly ......................................... 11
Ejector Disassembly/Assembly ........................................... 13
Hydraulic Mounting Block Assembly .................................... 14
Electrical/Trigger Assembly ............................................... 15

ELECTRICAL CONTROL BOX ASSEMBLY/WIRING DIAGRAM ........ 17

MISCELLANEOUS DRAWINGS

Squeezer Control Cable Assembly ....................................... 18
Squeezer Pressure Switch Assembly ..................................... 19

KITS & ACCESSORIES .................................................. 20
Putting into Service

Set-Up Procedure

1. Suspend Squeezer from a counter-balance at the assembly fixture.

2. Mount the Control Box (PR2155-50) near the Powerig.

3. Set the Powerig pressure to 4200 psi Pull and 3400 psi Return, following directions supplied with the Powerig.

4. Connect the Pressure Switch to either the Tool #1 or Tool #2 pull pressure port on the Powerig.

5. Set the normally closed Pressure Switch (PR2155-70) to open at 3500 psi. This has been set at the factory. If adjustments are necessary, refer to section on Pressure Switch Adjustments.

6. Connect the Hydraulic Hoses to the Powerig, Pressure switch and the Squeezer.

7. Connect the Control Cable to the appropriate Tool #1 or Tool #2 connector on the Control Box. Connect the other end of the cable to the Squeezer.

8. Connect the round male plug on the side of the Control box to the appropriate Tool #1 or Tool #2 connector on the Powerig.

9. Connect the round female plug on the side of the Control box to the male plug on the Pressure Switch.

10. Turn off the power on the Control Box by pushing in the large, red ON/OFF switch.

11. Plug the power cord from the Control Box into a 110VAC outlet. Turn on power by pulling the large, red switch out.

Pressure Switch Adjustments

The Pressure switch (PR2155-70) is wired normally closed. This will illuminate the #2 Input light for Tool #1 and/or the #6 Input light for Tool #2 on the PLC when the Powerig pull pressure is off.

1. Connect the Pressure Switch (PR2155-70) to the Pull side of the Powerig.

2. Leaving the Pressure Switch in place, set the Powerig pull pressure to 3500 psi.

3. Connect the round female plug on the side of the Control box to the male plug on the Pressure Switch.

4. Open the door of the Control Box (PR2155-50) and turn on power.

5. Tool #1 is wired to Input-2, Tool #2 is wired to Input-6. Activate the Powerig and watch the appropriate input light.

6. The adjustment is made by turning the adjusting screw on the end of the Pressure Switch until the appropriate Input light, #2 or #6 turns off. This should be repeated while watching the pressure gage to verify that the light turns off at 3500 psi.

7. After the Pressure Switch has been properly adjusted, the Squeezer should be reconnected per the Set-Up procedure.
OPERATING INSTRUCTIONS

Caution - Operating squeezer with a worn driving head or swaging anvil may result in a weaker joint caused by improper fastener installation.

NOTE: To stop unit at any point during installation cycle, release triggers.

1. Align squeezer over fastener to be installed.
2. Cycle squeezer by pressing two handle triggers simultaneously. Hold triggers until fastener installation is complete and driving head returns to its original position.
3. When installation cycle is complete, release both triggers. Tool is ready for next installation cycle.

SERVICE NOTES:

WARNING - DO NOT operate unit with a worn, burred or cracked driving head. Failure of driving head may result in severe personal injury from flying debris.

Keep hands away from driving head and anvil areas during fastener installation. Serious personal injury may result if hands are caught.

Squeezer unit rotates through 180°. To avoid personal injury, care should be taken when rotating unit.
GENERAL OVERVIEW
GOOD SERVICE PRACTICES

CAUTION: Keep dirt and other harmful material out of hydraulic system - this includes tool, hoses, couplers and POWERIG® Hydraulic Unit. Parts must be kept away from unclean work surfaces. Dirt in hydraulic system causes valve failure in hydraulic unit.

Individual parts must be handled carefully and examined for damage or wear. Replace parts where required. Always replace o-rings and back-up rings when tool is disassembled for any reason - see applicable Service Kit.

- The efficiency and life of your tool depends on proper maintenance. Using the manual will help give a clear understanding of the tool and basic maintenance procedures - please read this page completely before proceeding with maintenance and repair. Use proper hand tools in a clean and well-lighted area. Only standard hand tools are required in most cases; where a special tool is required, the description and part number are given.

- While clamping tool or parts in a vise, and when parts require force, use suitable soft materials to cushion impact. For example - using a half-inch brass drift, wood block and vise with soft jaws greatly reduces possibility of damaging tool. Remove components in a straight line without bending, cocking or undue force - reassemble tool with the same care.

Sealants, Lubricants, Hydraulic Fluid and Service Kits

- Rub SLIC-TITE TEFLON thread compound, or equivalent, on pipe threads to prevent leaks and for ease of assembly. CAUTION: Do not use TEFLON tape on pipe threads. Particles of shredded tape cause hydraulic unit valve failure. (SLIC-TITE - in stick form, 503237).

- Smear LUBRIPLATE 130AA, or equivalent, on o-rings and mating surfaces to prevent damaging o-rings on rough or sharp surfaces. This also increases ease of assembly. (LUBRIPLATE in a tube, 502723).

- Each Service Kit contains perishable parts for your specific tool. As foreseeable use may indicate, keep extra kits (o-rings, back-up rings, other standard items) and tool parts in stock.

PREVENTIVE MAINTENANCE

System Inspection

Operating efficiency of the tool is directly related to the performance of the complete system, including the tool, control box, pressure switch, hydraulic hoses, trigger switch, control cord and POWERIG Hydraulic Unit. Therefore, an effective preventive maintenance program includes scheduled inspections of the system to detect and correct minor troubles.

- Inspect tool and anvil for external damage.

- Verify that hydraulic hose fittings and couplings, and electrical connections are secure.

- Inspect hydraulic hoses for damage and deterioration. Replace hoses if damaged.

- Observe tool, hoses and hydraulic unit during operation to detect abnormal heating, leaks or vibration.

POWERIG Hydraulic Unit Maintenance

Refer to the applicable POWERIG instruction manual.

Tool Maintenance

Whenever disassembled and also at regular intervals (depending on severity and length of use) replace all seals, wipers and back-up rings in tool. Service Kits, hoses and extra parts should be kept in stock. Inspect cylinder bore, pistons and piston rods for scored surfaces and excessive wear or damage. Replace as necessary.
Cylinder Assembly PR2155-99

* PR2155-122 Spacer

* PR2155-123 O-Ring

PR2155-109 Clamp Ring

*(3) PR2155-111 Piston Ring

PR2155-102 Cylinder Body

PR2155-104 Piston Body

PR2155-103 Gland Nut

* PR2155-113 Gasket

PR2155-107 Cap Screw

PR2155-109 Cap Screw (2)

PR2155-118 Lipseal Gland

PR2155-121 Scraper

PR2155-105 Piston Rod

PR2155-108 Lock Nut

PR2155-101 Cylinder Cap

PR2155-106 Lock Pin

PR2155-112 Washer Seal*

PR2155-110 Set Screw

PR2155-116 Wiper Seal*

PR2155-117 O-Ring*

PR2155-114 Lipseal*

PR2155-120 Retaining Ring*

* NOTES PARTS CONTAINED IN SEAL KIT PR2155-100
STEP 1: Remove the (2) socket head cap screws from the cylinder cap.

STEP 2: Break gland nut loose from cylinder cap using proper size spanner wrench. turn gland nut counter-clockwise.

STEP 3: After gland nut is loose from the gland nut gasket and cylinder cap, unscrew cylinder cap counter-clockwise.

STEP 4: After cylinder cap is free from cylinder body, pull cylinder CAP away from cylinder body and over piston rod.

STEP 5: After cylinder cap has been removed, pull piston rod with piston body and spacer attached out of the cylinder body.

STEP 6: Remove spacer from piston ROD.

STEP 7: To remove piston rod from piston body, remove set screw FROM clamp ring and piston. turn clamp ring counter-clockwise until free from piston body.

STEP 8: To remove lipseal gland assembly, remove retaining ring and PULL gland assembly out. a gear puller may be required to remove the gland assembly.

STEP 9: Reassemble in reverse order.
EJECTOR CYLINDER ASSEMBLY
STEP 1: Remove anvil assembly by unscrewing from C-frame.
STEP 2: Pull out ejector piston. Use soft grips if necessary.
STEP 3: Screw an 8-32 x 2 inch long cap screw into liner. remove by gripping and pulling on cap screw.
STEP 4: To disassemble anvil assembly remove retaining ring. slide out spacer and wiper seal.
STEP 5: Reassemble in reverse order.

**EJECTOR CYLINDER DISASSEMBLY/ASSEMBLY**
HYD. MOUNTING BLOCK ASSEMBLY

- 110439 MALE COUPLER
  502729 HEX NIPPLE
- 110438 FEMALE COUPLER
  502729 HEX NIPPLE
- PR2155-128 HYD. MOUNTING BLOCK
- PR2155-125 CLAMP-ON COLLAR
- (3) PR2155-127 O-RING
- (4) PR2155-126 BACK-UP RING
- SUSPENSION ARM

FIG 7
PR2155 Squeezer  Alcoa Fastening Systems

PR2155-63 RECEPTACLE CONNECTOR
(4) PR2155-55 SOCKET CONTACT
PR2155-62 STRAIN RELIEF
(3FT) 507438 CABLE, 4-CONDUCTOR

PR2155-130 TRIGGER #2 (LEFT)
GREEN
RED

PR2155-130 TRIGGER #1 (RIGHT)
WHITE
BLACK

PR2155-130 TRIGGER SWITCH

PR2155-131 SET SCREW
(2) PER HANDLE

ELECTRICAL/TRIGGER ASSEMBLY
WIRING DIAGRAM ELECTRICAL CONTROL BOX

PR2155-50

NOTES:

1. WIRE LABEL CODE: XX-XX-XX
   - Indicates conductor size, AWG
   - R = RED
   - W = WHITE
   - BL = BLUE
   - B = BLACK
   - G = GREEN
   - BR = BROWN
   - OR = ORANGE
   - Y = YELLOW

   Indicates alpha-numeric label to appear at both ends of conductor where possible (use 506860 to label conductors)
SQUEEZER CONTROL CABLE ASSEMBLY PR2155-65

FIG 11
# Service Kits

## PR2155KIT Service Kit *(Complete kit, all seals included)*

<table>
<thead>
<tr>
<th>HUCK P/N</th>
<th>QTY</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>PR2155-100</td>
<td>1</td>
<td>Service Kit, Hydraulic Cylinder</td>
</tr>
<tr>
<td>PR2155-98</td>
<td>1</td>
<td>Service Kit, Suspension Block</td>
</tr>
<tr>
<td>505894</td>
<td>1</td>
<td>Wiper Seal</td>
</tr>
<tr>
<td>502334</td>
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<td>500776</td>
<td>1</td>
<td>O-Ring</td>
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<tr>
<td>501082</td>
<td>1</td>
<td>Back-UP Ring</td>
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<tr>
<td>PR2155-4</td>
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<td>Polyseal</td>
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## PR2155-100 Service Kit *(Hydraulic Cylinder)*

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<td>Piston Ring</td>
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<td>PR2155-123</td>
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<td>O-Ring</td>
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<tr>
<td>PR2155-112</td>
<td>1</td>
<td>Washer Seal</td>
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<tr>
<td>PR2155-116</td>
<td>1</td>
<td>Wiper Seal</td>
</tr>
<tr>
<td>PR2155-117</td>
<td>1</td>
<td>O-Ring</td>
</tr>
<tr>
<td>PR2155-114</td>
<td>1</td>
<td>Lipseal</td>
</tr>
<tr>
<td>PR2155-113</td>
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<td>Gasket</td>
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<tr>
<td>PR2155-120</td>
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<td>Retaining Ring</td>
</tr>
</tbody>
</table>

## PR2155-98 Service Kit *(Suspension Block)*

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<td>507228</td>
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<td>O-Ring</td>
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<tr>
<td>PR2155-126</td>
<td>4</td>
<td>Back-UP Ring</td>
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<tr>
<td>PR2155-127</td>
<td>1</td>
<td>Retaining Ring</td>
</tr>
</tbody>
</table>
**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.

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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.**

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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.
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Alcoa Fastening Systems (AFS) maintains company offices throughout the United States and Canada, with subsidiary offices in many other countries. Authorized AFS distributors are also located in many of the world’s industrial and Aerospace centers, where they provide a ready source of AFS fasteners, installation tools, tool parts, and application assistance.

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**Alcoa Fastening Systems**
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FAX: 520-748-2142

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