Thank you for your purchase. You have received a high quality coupler that will increase a machine’s productivity and versatility by enabling the operator to quickly change from one attachment to another. If installed and maintained properly, it should provide years of service in a rugged environment.

This instruction manual describes the installation, operation, and maintenance for a Werk-Brau coupler. Please take the time to record the information listed below.

Serial No.:________________________________________________________
Model No.:________________________________________________________
Date Manufactured:_________________________________________________

**Coupler Introduction**

The coupler attaches onto various tools by "hooking" the front pin and then rotating a locking device under the rear pin of the attachment. The lock is self-adjusting, so no adjustments are needed. While engaged, the lock is securely held in place by an extension spring(s). The Werk-Brau coupler is equipped with a set of powerful tension springs. In the event of spring failure the coupler's safety lock will enable the coupler to hold the attachment. To disengage, remove safety pin and the operator simply sets the attachment on the ground and uses the handle to release the lock.

After engaging lock manually install safety pin and retaining device (lynch pin). The safety pin must be installed at all times during use of the coupler. The safety pin is mandatory and serves two purposes. First, once installed it insures the operator that the lock is in fact properly seated under the pin. The safety pin can't be installed if the lock is only partially engaged. Second, it will prohibit inadvertent disengagement.

**NOTE:** Diagrams in this manual may not be your exact Werk-Brau coupler. These pictures represent an action or a setup.
Safety Statement Guide

- **Danger** tags are used in major hazard situations where an immediate hazard presents a threat of death or serious injury to operator and anyone about.

- **Warning** tags are used to represent a hazard level between “Caution” and “Danger”, instead of the required “Caution” tag, provided that they have a signal word of “Warning,” an appropriate major message.

- **Caution** tags are used in minor hazard situations where a non-immediate or potential hazard or unsafe practice presents a lesser threat of injury.

- **Notice** labels are used where equipment or property damage could result if the instructions are not followed properly.

- This symbol by itself or used with a safety signal word throughout this manual is used to call your attention to instructions involving your personal safety or the safety of others. Failure to follow these instructions can result in injury or death.

General Safety Precautions

**READ MANUAL PRIOR TO INSTALLATION**
Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual as well as all manuals related to this equipment and the operating machine thoroughly before beginning installation, operation, or maintenance. FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND THE OPERATING MACHINES MANUAL.

**READ AND UNDERSTAND ALL SAFETY STATEMENTS**
Read all safety decals and safety statements in all manuals prior to operating or working on this equipment. Know and obey all OSHA regulations, local laws and other professional guidelines for your operation. Know and follow good work practices when assembling, maintaining, repairing, mounting, removing or operating this equipment.

**KNOW YOUR EQUIPMENT**
Know your equipment’s capabilities, dimensions and operations before operating. Visually inspect your equipment before you start, and never operate equipment that is not in proper working order with all safety devices intact. Check all hardware to assure it is tight. Make certain that all locking pins, latches, and connection devices are properly installed and secured. Remove and replace any damaged, fatigued or excessively worn parts. Make certain all safety decals are in place and are legible. Keep decals clean, and replace them if they become worn and hard to read.

**PROTECT AGAINST FLYING DEBRIS**
Always wear proper safety glasses, goggles with a face shield when driving pins in or out or when any operation causes dust, flying debris, or any other hazardous material.

**LOWER OR SUPPORT RAISED EQUIPMENT**
Do not work under raised booms without supporting them. Do not use support material made of concrete blocks, logs, buckets, barrels or any other material that could suddenly collapse or shift positions. Make sure support material is solid, not decayed, warped, twisted, or tapered. Lower the boom(s) to ground level or onto block(s). Lower the boom(s) and attachment(s) to the ground before leaving the cab or operator’s station.
General Safety Precautions - Continued

**WARNING**

**USE CARE WITH HYDRAULIC FLUID PRESSURE**

Hydraulic fluid under pressure can penetrate the skin and cause serious injury or death. Hydraulic leaks under pressure may not be visible. Before connecting or disconnecting hydraulic hoses, read your operating machines operator’s manual for detailed instructions on connecting and disconnecting hydraulic hoses or fittings.

- Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities. Wear safety glasses, protective clothing, and use a sound piece of cardboard or wood when searching for hydraulic leaks. DO NOT USE YOUR HANDS!
- If injured by injected fluid, see a doctor at once. If your doctor is not familiar with this type of injury, ask him to research immediately to determine proper treatment.

**WARNING**

**DO NOT MODIFY MACHINE OR ATTACHMENTS**

Modifications may weaken the integrity of the attachment and may impair the function, safety, life and performance of the attachment. When making repairs, use only the manufacturer’s genuine parts, following authorized instructions. Other parts may be substandard in fit and quality. For loaders, never modify any ROPS (Roll Over Protection System) equipment or device.

!!!Any modifications must be authorized in writing by the Werk-Brau or the manufacturer!!!

**SAFELY OPERATE THE EQUIPMENT**

**DANGER**

Do not operate equipment until you are completely trained by a qualified operator in how to use the controls, know its capabilities, dimensions, and all safety requirements. See your operating machines manual for these instructions.

- Keep all step plates, grab bars, pedals, and controls free of dirt, grease, debris, and oil.
- Be sure that all bystanders are out of harms way when operating.
- Do not allow riders on the attachment or operating machine
- Do not operate the equipment from anywhere other than the correct operators position.
- Never leave equipment unattended with the engine running or with this attachment in a raised position.
- Do not alter or remove any safety feature from the operating machine or this attachment.
- Know your work site safety rules as well as traffic rules and flow. When in doubt on any safety issue, contact your supervisor or safety coordinator for an explanation.

**NOTICE**

- Do not wear loose clothing, or any accessories that can catch in moving parts. If you have long hair, cover or secure it so that it does not become entangled in the equipment.
- Work on a level surface in a well-lit area.
- Use properly grounded electrical outlets and tools.
- Use the correct tool for the job at hand. Make sure tools are in good condition.
- Wear all protective equipment specified by the tool manufacturer.

**SAFELY MAINTAIN AND REPAIR EQUIPMENT**

- Do not wear loose clothing, or any accessories that can catch in moving parts. If you have long hair, cover or secure it so that it does not become entangled in the equipment.
- Work on a level surface in a well-lit area.
- Use properly grounded electrical outlets and tools.
- Use the correct tool for the job at hand. Make sure tools are in good condition.
- Wear all protective equipment specified by the tool manufacturer.
**OPERATING PRECAUTIONS**

**WARNING**
**DO NOT IMPROPERLY USE COUPLER**
This coupler is designed to couple attachments and not for any other use.

**DANGER**
**BE AWARE OF SURROUNDING UTILITIES**
Operator must be aware of all utility line and overhead electrical lines. Operations must be able to clear all lines safely.

**DANGER**
**BE AWARE OF OVERHEAD DANGER**
Operator must be aware of all possible overhead dangers that are within the range of motion of the operating machine.

**WARNING**
**DO NOT OPERATE WITH A LOOSE ATTACHMENT**
Visually check the coupler to verify attachments are secure and lock is fully engaged and that the center to center of the attachment matches the up with the coupler.

**WARNING**
**PINCH POINTS**
Personal injury could result from the careless misuse of this coupler. Keep hands and body parts clear of the coupler when it’s in the process of hooking up to an attachment. Be sure the machine is off and the attachment is on the ground prior to making adjustments.

**NOTICE**
**COUPLER EXTENDS TIP RADIUS**
Notice adding a coupler to machine extends the tip radius. This can cause clearance issues on some machines making it possible for a coupled attachment to come into contact with the machine causing damage.

**SAFETY PIN NOTICE**

Werk-Brau has approved of the following safety retaining pins for use with all Werk-Brau couplers. Pins vary in size, please use the appropriate size approved safety pin on all couplers. Please only use the approved safety pins shown below.

**Standard Variable Pin**
Part # 00161397 (Above)

**Half Inch Pin**
Part # EZG025RLP (Above)
**INSTALLATION**

Un-package the coupler from the shipping skid, remove attaching pins and orient the coupler so that the open mouth of the coupler is towards the machine.

1. Position and align the stick with the front bore on the coupler and install the machine's original front attaching pin. Do the same with the attachment link and install the original rear pin.
2. Install the pins provided with the coupler, into the attachment.
3. Secure and retain all pins.

**IMPORTANT:** Set the bucket on the ground and rotate in a dumping motion until the tracks come off the ground to check that the coupler has positively connected to the bucket. Do this every time attachment is changed.

**COMPONENTS LISTING**

Please see the attached components sheet for a complete listing.

**DO NOT OVER EXTEND LOCK**

If safety pin is in jaw:
- Loosely bind the pin and you may need a new spring due to over extension of spring.
**MECHANICAL SPRING LOADED COUPLER**

### TO INSTALL THE ATTACHMENT

A. LOCKING PIN IN RELEASED POSITION
- Ensure locking hooks are open and locking pin is in released position.
- Position the front hooks of the coupler over the front pin of the attachment.

B. LOCKING HOOKS
- Extend the bucket cylinder (curl in) until the rear pin of the attachment is firmly seated in the coupler.
- Stop the engine and exit the machine.

C. RELEASE BAR
- Insert the release bar and rotate the locking hooks upwards slightly.
- Remove the retainer pin and the locking pin.

D. INSTALL RETAINER PIN
- Rotate the locking hooks downward, cupping (engaging) the attachment pin.
- Install the locking pin and retaining pin and remove the release bar.

**CHECK FOR SECURE ATTACHMENT. NEVER OPERATE WITH RETAINER PINS NOT INSTALLED.**

### TO REMOVE THE ATTACHMENT

A. RELEASE BAR 
- Lower attachment to the ground. Stop the engine.
- Remove the retainer pin. Insert the release bar and rotate the release bar upwards slightly and remove the locking pin.

B. REMOVE RETAINER PIN
- Using the release bar, rotate the locking hooks upwards to the unlock position.

C. INSTALL RETAINER PIN
- Install the locking pin and the retainer pin.
- Remove the release bar.
- Enter the machine. Fasten the seat belt and start the engine.

D. RETRACT BUCKET CYLINDER
- Retract the bucket cylinder.
- Move the arm forward until the manual spring loaded coupler is clear of the attachment.

SEE MANUAL FOR MORE INSTRUCTIONS
### STICKER GUIDE

#### PLACEMENT OF THE WARNING/CAUTION DECAL
Place the warning/caution decal in the cab in visible area for the operator to see at all times. This will act as a safety reminder for the operator to double check and ensure that the coupler’s correctly hooked up to the attachment or attachment...

---

**MECHANICAL SPRING LOADED COUPLER**

#### TO INSTALL THE ATTACHMENT

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<td><img src="image" alt="Illustration C" /></td>
<td><img src="image" alt="Illustration D" /></td>
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</table>

1. Ensure locking hooks are open and locking pin is in released position.
2. Position the front hook of the coupler over the front pin of the attachment.
3. Extend the bucket cylinder (casing) until the rear pin of the attachment is firmly seated in the coupler.
4. Start the engine and set the machine.
5. Insert the release bar and rotate the locking hooks upward slightly.
6. Remove the retainer pin and the locking pin.
7. Retract the bucket cylinder, replacing (engaging) the attachment pin and remove the release bar.

**CHECK FOR Secure ATTACHMENT. NEVER OPERATE WITH RETAINER PIN NOT INSTALLED.**

#### TO REMOVE THE ATTACHMENT

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1. Lever attachment to the ground.
2. Start the engine.
3. Using the release bar, rotate the locking hooks upward to the unlock position.
4. Install the locking pin and the retainer pin. Remove the release bar.
5. Enter the machine. Fasten the seat belt and start the engine.
6. Retract the bucket cylinder.
7. Move the arm forward until the manual spring loaded coupler is clear of the attachment.

---

**ATTENTION**

Visually inspect to ensure that the coupler is properly engaged after each attachment change. Mechanically check by setting attachment on the ground and actuate the dump motion with the bucket control lever as illustrated below.

![Diagram](image)
MAINTENANCE

Inspect coupler occasionally to ensure years of rugged service. There is a grease-zerk located on the lock. Grease as needed. With the proper servicing and adjustment, your Werk-Brau coupler should last years to come.

The following list below should be followed in order to lengthen the life of your WERK-BRAU product.

<table>
<thead>
<tr>
<th>PROCEDURE</th>
<th>INTERVAL</th>
<th>NOTE</th>
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<tr>
<td>GREASE FITTINGS</td>
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<tr>
<td>CHECK SLQT SPRING(S) &amp; PINS</td>
<td>DAILY</td>
<td></td>
</tr>
<tr>
<td>INSPECT LOCKING MECHANISM</td>
<td>DAILY</td>
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SPRING ADJUSTMENTMENT AND REPLACEMENT

ADJUSTMENT
If lock is not holding to the pin tight, tighten the spring nut(s) 2-3 more turns after spring is taunt in place. Over time, the spring will stretch and need tightened.

SPRING REPLACEMENT
1. Remove old spring.
2. Loosen or remove spring nut to allow for play in spring bolt.
3. Hook spring through groove in spring pin.
4. Hook spring through eye of spring bolt.
5. Tighten spring nut on spring bolt so that spring is taunt and then tighten 2-3 more turns.

TROUBLE SHOOTING

Problem #1
- Locking mechanism will not retract.
  Cause/ Corrective Action
  A.) Foreign debris have caused locking mechanism to bind.
  B.) Safety pin is engaged - remove safety pin and lynch pin.

Problem #2
- Lock will not engage properly.
  Cause/ Corrective Action
  A.) Foreign debris have caused locking mechanism to bind.
  B.) Verify that the attachment pin centers match that of the coupler.
  C.) Verify that the coupler is not contacting the attachment.

Should you require any assistance or technical support installation assistance available by calling: 1-800-537-9561
Note: This Safety and Health Information Bulletin (SHIB) updates the "Revision of the Unintended Release of Buckets from Quick Couplers on Hydraulic Excavators" SHIB that was issued on August 26, 2004.

This Safety and Health Information Bulletin is not a standard or regulation, and it creates no new legal obligations. The Bulletin is advisory in nature, informational in content, and is intended to assist employers in providing a safe and healthful workplace. Pursuant to the Occupational Safety and Health Act, employers must comply with hazard-specific safety and health standards promulgated by OSHA or by a state with an OSHA-approved state plan. In addition, pursuant to Section 5(a)(1), the General Duty Clause of the Act, employers must provide their employees with a workplace free from recognized hazards likely to cause death or serious physical harm. Employers can be cited for violating the General Duty Clause if there is a recognized hazard and they do not take reasonable steps to prevent or abate the hazard. However, failure to implement any recommendations in this Safety and Health Information Bulletin is not, in itself, a violation of the General Duty Clause. Citations can only be based on standards, regulations, and the General Duty Clause.

Preface
Following a fatal accident caused by the unexpected release of an excavator bucket from a quick coupling device on a hydraulic excavator, the Occupational Safety and Health Administration (OSHA) reviewed its Integrated Management Information System (IMIS) accident data. The accident data revealed 15 incidents since January 1998 involving the unanticipated release of excavator buckets from quick couplers on hydraulic excavators. Of the fifteen accidents reported by Federal and state OSHA offices, eight resulted in employee fatalities.

Purpose
The purpose of this Safety and Health Information Bulletin (SHIB) is to:

- Alert employers and employees of the need to follow manufacturer instructions regarding the installation, use, testing, inspection, and maintenance of quick coupling devices;
- Explain how buckets and other attachments can be unintentionally released from quick couplers; and
- Detail actions to prevent such unintended releases.

Background
The OSHA Madison, Wisconsin Area Office investigated a fatal accident where an excavator bucket was released unexpectedly from a quick coupler. OSHA’s statistical database revealed fourteen additional incidents within the last six years involving the use of this type of equipment where excavator buckets unexpectedly released from quick couplers. Of the fifteen accidents reported by Federal and state OSHA offices, eight resulted in employee fatalities.

Accident Description
The accident prompting this Safety and Health Information Bulletin occurred at a site where a contractor was installing water mains and laterals. An excavation for a lateral had just been dug and an employee entered that lateral to prepare to install the pipe. The excavator operator changed buckets using a quick coupler on the hydraulic excavator. When the excavator was swung to continue digging on the main line, the bucket became detached from the quick coupler and rolled/slid into the lateral excavation, striking the employee and killing him. The investigation revealed that a locking pin had not been manually installed on this coupler to prevent accidental release of this attachment.
Quick Couplers
Most quick couplers are after-market devices that have been used on hydraulic excavators for several years and have steadily increased in popularity. They enable contractors to quickly make attachment changes on hydraulic excavators. Most quick couplers have a lifting eye to use for lifting material. (Figure 1).

By removing the bucket (Figure 2), the lifting capacity of the excavator is increased by the weight of the bucket. Additionally, removal of the bucket improves the excavator operator’s line of vision during lifting.

Many contractors like to use a large bucket to do the bulk of the digging and to then change to a smaller bucket for fine tuning and working in tight areas. The quick couplers also allow the operator to change from a bucket attachment to various other attachments. In most cases, the unexpected releases of buckets and other attachments are likely caused by the failure to properly engage and lock the quick couplers. (Figures 3 & 4).

Other Information
Quick couplers are made by various manufacturers. Manufacturers of quick couplers have recognized the hazard of the bucket or other attachments being unexpectedly released from the quick couplers and, in many cases, have provided users with a retrofit locking pin (Figures 5 & 6) which is manually inserted behind the front lever (stick pin) or rear lever (link pin) of the couplers to prevent unintended releases.
The National Institute for Occupational Safety and Health also has studied the hazards associated with hydraulic excavators and has issued DHHS Publication No. 2004-107 entitled, "Preventing Injuries When Working with Hydraulic Excavators and Backhoe Loaders". This publication addresses the hazard of excavator buckets being unintentionally detached from a quick disconnect mechanism.

**Conclusions**

Based upon experience, many manufacturers have retrofitted existing quick couplers, designed new and improved quick coupler systems, and developed safe use and operating procedures. Overall, these corrective actions have significantly decreased the probability of a bucket or other attachment being unintentionally released from a quick coupler. However, unintended releases of buckets and other attachments from quick couplers continue as evidenced by the fatal accident in Madison, Wisconsin and the IMIS accident data. Unintended releases appear to continue because: not all employers/contractors who use quick couplers are aware of the hazard and of the manufacturers’ corrective actions; some users fail to retrofit the quick coupler with locking pins; and/or some users have insufficient training on installation and testing procedures associated with the use of such couplers. Given the number of manufacturers and the diversity of quick coupling devices, employers using quick couplers should contact the manufacturer if they have questions regarding the reliability of the quick coupling devices, or to determine whether additional steps or modifications are recommended in order for employees to safely use a particular quick coupling device.

**Safety Measures to Prevent Accidents**

Employers using hydraulic excavators with quick coupling devices can protect employees from the unintended release of attachments by:

- Inspecting all quick couplers to determine if they are subject to unexpected release hazards. Determine whether a manually installed locking pin and installation procedures (or other retrofitting methods) have been provided by the manufacturer.
- If appropriate, obtaining and installing retrofits recommended by the manufacturer, including positive locking pins and other devices that need to be manually installed.
- Using an independent secondary system to retain the bucket/work tool from falling, in the event of a failure of the primary system. The secondary system can be manual or automatic with a verification procedure for the user to check for proper attachment.
- Considering the use of newer models of quick couplers that have been specifically designed to prevent the unintended release of attachments.
- Following the manufacturer’s recommendations for maintenance and inspection of the quick coupler to prevent a malfunction of the quick coupler that could cause an unintended release of the attachments.
- Following the manufacturer’s installation procedures and recommendations for using and testing quick coupler devices and 4 attachment connections whenever an attachment is made.
- Training employees in: the proper use of quick couplers; making visual inspections; procedures for engaging attachments; and methods for testing connections.
- Requiring employees to use the proper procedures for engaging excavation attachments and incorporating the procedures into the company’s safety and health program.
Record of Revisions

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<td>6/24/08</td>
<td>Added notice for coupler extending TR Page 5</td>
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<tr>
<td>C</td>
<td>2/3/11</td>
<td>Removed Components</td>
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<td>D</td>
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<td>Edited layout, added safety pin page, added header, and edited footer.</td>
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ABOUT WERK-BRAU

Since 1947, Werk-Brau has manufactured the highest quality and most innovative specialty products for the heavy equipment industry. Werk-Brau is respected internationally for providing outstanding customer service and being dedicated to excellence in all aspects of our business. Duke Werkheiser and Dutch Brautigan, for whom the company is named after, first opened their blacksmith shop in Findlay Ohio. Still today Werk-Brau manufactures and produces in Findlay Ohio, in a state of the art facility.

Over the decades Werk-Brau has grown and become so much more than a simple blacksmith operation. Today Werk-Brau proudly employs an industry leading team of professionals who work hard to follow the vision set by the founders of Werk-Brau to “Provide Excellence in Customer Service”. As a modern company Werk-Brau is efficient, high-tech, dedicated to its customers, and deeply proud of the quality of products manufactured.

Werk-Brau manufactures a complete line of O.E.M. and replacement attachments for excavators, mini excavators, backhoes, skid steers, mini and full size loaders and crawler loaders. All over the world Werk-Brau attachments can be found hard at work in the toughest of conditions.

THANK YOU FOR YOUR PURCHASE!

WORK SAFE!