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

Serial No.:______________________________________________

Model No.:______________________________________________

Date Manufactured:______________________________________

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Grapple Wheel Loader Introduction

Thank you for your purchase! You have received a high quality, extremely versatile attachment that will increase your machines capability. This product will help you manipulate material and debris. With inspections and proper care your attachment will last you a long time in a rugged environment.

Safety Statement Guide

**DANGER**
- 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**
- 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**
- 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**
- A notice label is 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

**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!!!***

**WARNING**

**SAFELY OPERATE THE EQUIPMENT**

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.

**DANGER**

**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 Attachment
This coupler is designed to grab objects and debris 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.

**NOTICE**
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**
PINCHE 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.

Torque Specs

Please observed these approved specs. Failure to observe these specs can result in damage and other undesirable results.

<table>
<thead>
<tr>
<th>Dash Size</th>
<th>Tube O.D. (Ref)</th>
<th>Thread Size</th>
<th>37° Flare</th>
<th>Straight Thread</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>1/4</td>
<td>7/16-20</td>
<td>10-12</td>
<td>14-16</td>
</tr>
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<td>5</td>
<td>5/16</td>
<td>½-20</td>
<td>13-16</td>
<td>18-21</td>
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<tr>
<td>8</td>
<td>1/2</td>
<td>¾-16</td>
<td>34-42</td>
<td>46-56</td>
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<td>5/8</td>
<td>7/8-14</td>
<td>46-58</td>
<td>62-78</td>
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<td>12</td>
<td>3/4</td>
<td>1-1/16-12</td>
<td>64-80</td>
<td>87-108</td>
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<tr>
<td>14</td>
<td>7/8</td>
<td>1-3/16-12</td>
<td>80-100</td>
<td>109-135</td>
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<tr>
<td>16</td>
<td>1</td>
<td>1-5/16-12</td>
<td>97-117</td>
<td>131-158</td>
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<tr>
<td>20</td>
<td>1 1/4</td>
<td>1-5/8-12</td>
<td>145-165</td>
<td>197-223</td>
</tr>
<tr>
<td>24</td>
<td>1 1/2</td>
<td>1-7/8-12</td>
<td>230-250</td>
<td>312-338</td>
</tr>
</tbody>
</table>

*Apply enough pipe sealer to contact all threads.

** Do not use that excess will squeeze into the hydraulic lines.
Installation

1. These instructions are for a Grapple attachment, meaning it could be a grapple Rake, fork Carriage or Bucket
2. Locate manifold block on back of bucket/rake.
3. Make jumper hoses so that there is enough slack to move the attachment throughout all positions without binding or pulling. If you have a coupler we recommend using self-sealing quick disconnect couplings. Hoses should also be a minimum rating of 4,000 PSI.
4. Your machine’s auxiliary pressure should be no more than 4500 PSI to the manifold block, the block does feature a flow control and pressure reducer cartridges limiting the pressure to the cylinders to 2,900 PSI.
5. Tighten all fittings before testing operation
6. Ensure that the HYD flow is low enough that the grapple arms are not slamming but high enough that the arms are moving at a good pace. Adjust flow control cartridge or flow to manifold. Adjust the nut in ¼ turn increments.
7. Check for any other possible interference by slowly putting the attachment through rotation.
8. Grease all zerks
9. WORK!
INTENDED USE:
All Grapples are designed to pick up bulky, unusually shaped or long materials that would not stay in an ordinary bucket. Using the grapple attachment in any other way is considered contrary to its intended use.

1. Approach the load in such a fashion that the weight will be centered on the floor of the bucket or in the grapples.

NOTE: When operating the grapple, the load’s heaviest side should be towards the back of the attachment and not near the bucket edge/forks. Verify that the bucket is completely under the load and the attachment’s floor is level.

2. Close the grapples to their fullest extent possible and lift the attachment slightly to be certain that the load is secure.

NOTE: If the load appears to be unstable, lower the bucket to the ground, open the grapples and reposition the load to attain full stability. Repeat until full stability is achieved.

NOTICE: When using the grapples as a rake to drag material into position for pick-up, THE GRAPPLIES MUST BE COMPLETELY OPEN. Applying a raking-type force to partially open grapples will greatly magnify the fluid pressure in the hydraulic hoses, fittings and cylinder(s) which may cause component failure.

WARNING! Avoid serious injury. THE GRAPPLIES MOVE QUICKLY! Do not allow anyone between the grapple and the bucket. Do not lift any load that is taller than the height of the fully opened grapple. Do not roll back this product so that the load falls off toward or on the operator.

STORAGE
- Clean the unit thoroughly, removing all mud, dirt, and grease.
- Inspect for visible signs of wear, breakage, or damage. Order any parts required and make the necessary repairs to avoid delays upon removal from storage.
- Tighten loose nuts, cap screws and hydraulic connections.
- Coat exposed portions of the cylinder rods with grease.
- Lubricate grease fittings.
- Seal hydraulic system from contaminants and secure all hydraulic hoses off the ground to help prevent damage.
- Replace decals that are damaged or in unreadable condition.
- Store unit in a dry and protected place. Leaving the unit outside will materially shorten its life.

Additional Precautions for Long Term Storage:
- Touch up all unpainted surfaces with paint to prevent rust. REMOVAL FROM STORAGE
- Remove cover.
- Wash unit and replace any damaged and/or missing parts.
- Lubricate grease fittings.
- Check hydraulic hoses for damage and replace as necessary.

THE GRAPPLIES MOVE QUICKLY
MAINTENANCE SCHEDULE

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Daily</th>
<th>Every 40 Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check all bolts and nuts for tightness</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Replace any missing bolts or nuts with approved replacement parts</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Check hydraulic system for hydraulic oil leaks. See procedure below.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Visually inspect the machine for worn parts or cracked welds, and repair</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>as necessary.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lubricate all grease fittings</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Oil Cleanliness Requirements
IMPORTANT - All hydraulic fluid shall be filtered before use in any FFC product to obtain the ISO cleanliness standard of 20/18/15. Unless explicitly specified otherwise.

Fittings/Hoses Inspection Guidelines
Stop the prime mover engine and release hydraulic pressure before servicing or adjusting hydraulic system.

WARNING!
Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands, to search for suspected leaks.
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.
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 it immediately to determine proper treatment.

IMPORTANT: When replacing parts, use only factory approved replacement parts. Manufacturer will not claim responsibility for use of unapproved parts or accessories, and/or other damages as a result of their use.
Werk-Brau Company warrants attachments and non-hydraulic components against defaults in materials, faulty design and workmanship for a period of twelve months from the date of delivery or 2000 hours, whichever comes first. Werk-Brau’s warranty policy does not apply to purchased subassemblies including, teeth assemblies, forks, cylinders, auxiliary edges and etc. Such items are subject to OEM’s Warranty of their respective manufacturer. NO MILEAGE ALLOWANCES. Werk-Brau must approve any resolution before action is taken. To initiate a claim for warranties please visit http://www.werk-brau.com/warranty-claims/form (for dealers only).

Any warranty that requires a return to Werk-Brau must have an RGA number (see return policy)

Return Policy
Prior to any item being return it must have prior authorization from a Werk-Brau customer service representative and must have Return Goods Authorization paperwork (RGA) attached to the item and claim.

There is a $50 minimum on returns. NO RETURNS ON CUSTOM DESIGNS, NON STANDARD OR USED PARTS/ATTACHMENTS. Items ordered in error, MAY be returned with a restocking fee and freight prepaid. Item(s) that have been placed in the ground or show any signs of use, will not be considered for return. Werk-Brau Company, Inc. has the final "say so" in determining if any product can be returned.

Cancellation Policy
Orders canceled are subject to a % of the retail amount of the order. Items manufactured by the Werk-Brau Company have varied manufacturing times; therefore, this policy is at the discretion of Werk-Brau Company, Inc. If order is complete and awaiting shipment or pickup by customer, cancellation at that time, will have a penalty of 100% of the net invoice and will be charged to the purchasing customer.

PLEASE BE REALISTIC, NOT EVERYTHING IS COVERED
Due to the nature of heavy construction, there are certain things that are simply expected to wear and or replaced. These are powerful machines and inexperienced or careless operation will also cause failures.

WARRANTY CLAIMS WILL NOT BE CONSIDERED FOR

- Failures due to neglect or misuse
- Paint or Finish
- Altered product
- Personal Injury or damage to machine or property
- Wear items and consumables
- Shop Supplies or environmental charges
- Travel, Downtime, Loss of Productivity, Loss of Profit
- Any Additional Warranty or Benefit Outside of Werk-Brau
- Exposure to the elements due to improper storage
- Items not supplied by Werk-Brau

*Werk-Brau holds the right to change this policy at any time without notification