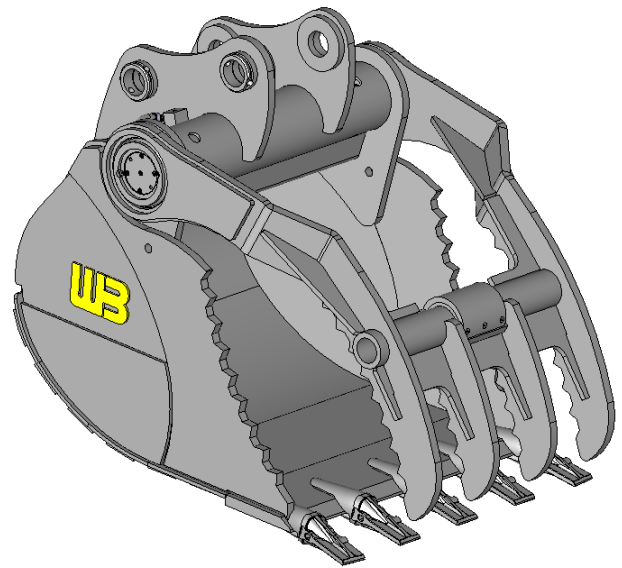


WERK-BRAU CO., INC. PRODUCT AND INSTALLATION MANUAL

PG / HCB

(PowerGrip / Hydra-Clamp Buckets)



Serial No: _____

Model No: _____

Date Manufactured: _____

PROUDLY MANUFACTURED IN FINDLAY, OH
Werk-Brau.com



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

DANGER

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.

WARNING

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.

DANGER

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.

NOTICE

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.

WARNING

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

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 Werk-Brau or the manufacturer!!!

DANGER

NOTICE

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.



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.

GENERAL SAFETY GUIDELINES

Cautionary Notices

Before beginning disassembly of the PowerGrip, there are several cautionary notices that should be considered. If you are not comfortable with repair or maintenance of this product, contact your local dealer or Helac Corporation's Service Department for assistance.

| | |
|---|--|
|  | WARNING To avoid personal injury and machinery damage: Read the Service and Repair Manual for proper installation, maintenance and repair procedures. |
|  | WARNING Pinch point hazard: Moving parts can cause serious injury. Keep clear during operation. |
|  | WARNING To avoid personal injury and machinery damage: Make sure PowerGrip does not come in contact with dipperstick boom, boom cylinder and/or operator area. |
|  | WARNING Crushing hazard: Falling material can cause serious injury. Keep clear during operation. |
|  | WARNING To avoid personal injury and machinery damage: Do not use PowerGrip to lift excessive weight objects or oversize material that can upset the stability of the machine. |
|  | NOTICE To avoid damage to seals or other internal components: Do not weld directly onto the PowerGrip when it is fully assembled. Modifications may void product warranty. |

Other Safety Guidelines and Precautions

1. PowerGrip should only be used to perform tasks for which it was designed. Abusing the product and/or using it for purposes for which it was not intended can expose the operator and others to hazards as well as result in damage to the PowerGrip, carrier and/or other attachments.
2. The operation of the PowerGrip Bucket is similar to the operation of OEM buckets in trenching and material handling applications. However, the PowerGrip Bucket has the added ability to grip, hold and lift materials in a pick and place capability. This attachment is not designed for long term holding of materials.

Refer to the carrier manufacturer's instructions regarding safe material handling practices.

The bucket jaw should only be opened when needed for specific tasks. Failure to close the jaw can result in damage to the dipper arm.

3. Modification to the PowerGrip is done at the owner's risk and may void the Helac Corporation, Attachments Division warranty.
4. It is the owner's responsibility to be sure all safety equipment is in place and operating properly at all times. If safety decals fade, are damaged or become unreadable from a distance of 10 feet, they should be replaced immediately.



TABLE OF CONTENTS

| TITLE | PAGE |
|------------------------------|------|
| Introduction | 6 |
| Attachment Installation | 7 |
| Attachment Removal | 8 |
| Hydraulic Requirements | 9 |
| Hydraulic Lines and Plumbing | 11 |
| Suggested Hose Routing | 12 |
| Maintenance | 13 |

If at any time in the future, you require additional information on this product or any aspects of its use, please do not hesitate to contact Werk-Brau Co., Inc.



INTRODUCTION

THANK YOU FOR YOUR PURCHASE You have received a high quality, extremely versatile attachment that will increase your machine's capability. The multi-purpose is a versatile-durable tool used as a trenching, grading or clamshell bucket and from gripping and loading. This attachment increases the tasks a single machine can perform; reducing the number of dedicated task machines needed on a job site.

TELL US WHAT YOU THINK Werk-Brau would like what you think about its products. Please visit our website & share your experience with us!

ATTACHMENT INSTALLTION

Each PowerGrip and HydraClamp Bucket is engineered for a specific backhoe or excavator and is designed to be pin mounted directly to the machine.

Installing the Bucket onto the Carrier

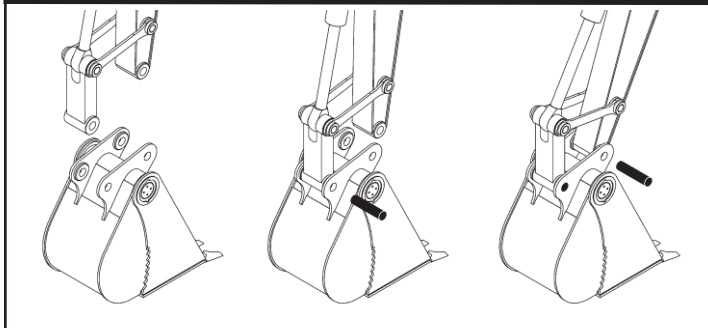
All PowerGrip and HydraClamp models should be mounted to the carrier according to the instructions outlined below.

1. Position the PowerGrip close to the carrier boom to ensure easy use of the lifting reach and range of the carrier boom.
2. Lower the dipper to approximately 2-3 inches (50-75 mm) above the PowerGrip. Roll out the bucket cylinder to lower the link bars to the PowerGrip.
3. Align the PowerGrip and link bar holes and install the link pin.
4. Slowly lift the PowerGrip to a safe height with the bucket and boom cylinders.
5. Curl the bucket cylinder until the PowerGrip and dipper holes align and install the bucket pivot pin. Rotate the pins as necessary and install the required retainers.

Safety check. Check that the Werk-Brau attachment is fitting correctly by maneuvering it with the machine and at the same time watching for any interference or resistance to movement that may exist. If there is any sign of problems with the smooth functioning of the PowerGrip, DO NOT attempt to carry out any modifications to it, or the host machine. Instead contact Werk-Brau's Customer Service Department who will advise as necessary.

6.

PowerGrip/HydraClamp Installation



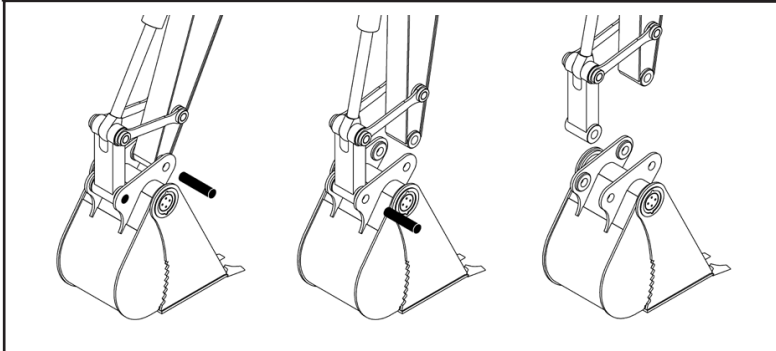
ATTACHMENT REMOVAL

Removing the Bucket from the Carrier

To remove the PowerGrip bucket follow the instructions outlined below.

1. Position the bucket so it is lightly supported by the ground and in a position so it will not move or fall when a pin is removed.
2. Remove the bucket pivot and link pins.

PowerGrip/HydraClamp Removal



HYDRAULIC REQUIREMENTS

Important Notice:

Werk-Brau does not assume any responsibility beyond the design and performance of its construction equipment attachment products. The customer is solely responsible for engineering of mating structures, fasteners, and other associated components related to the installation of the product and its ultimate application.

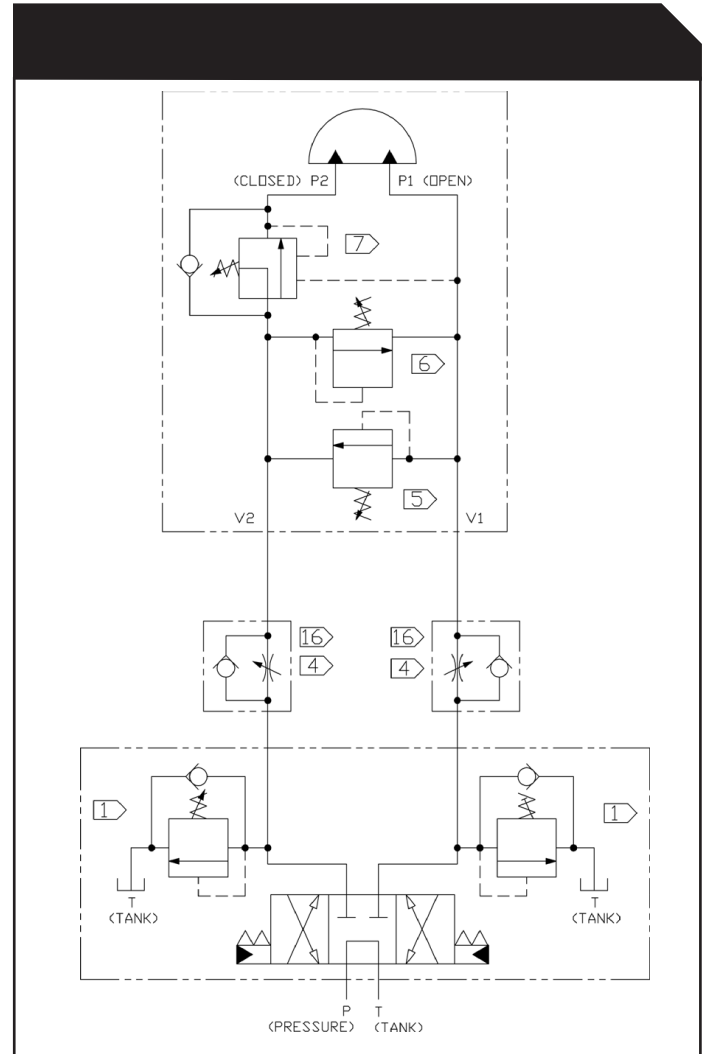
Hydraulic Requirements

The typical PowerGrip Circuit Chart and the Tool Circuit Requirements Table illustrate the control circuit requirements for the PowerGrip. The hydraulic pressures and flow requirements must be observed or damage to the actuator can occur.

The installer of the PowerGrip is responsible for selecting control circuits that are compatible with the excavator and meet the tool circuit requirements. Werk-Brau can be contacted for additional control circuits and methods for controlling the PowerGrip.

Notice

PowerGrips are equipped with a standard pressure control/load lock manifold welded to the bucket shell. Refer to the Suggested Hose Routings Diagram on Page 12 for the recommended routings.



Hydraulic Requirements

Werk-Brau does not provide hydraulic kits for the PowerGrip.

| Tool Circuit Requirements | | | | |
|--|--------------------|-----------------|---------|---------------|
| Model Sizes | | PG06 | PG07 | PG08 |
| Displacement | in ³ | 84.8 | 118.5 | 211 |
| | (cm ³) | (1390) | (1942) | (3458) |
| Required Oil Flow | gpm | 2-7 | 3-10 | 5-18 |
| | (liters/minute) | (8-28) | (12-39) | (21-70) |
| Port Connections* | SAE | 6 | 6 | 6 |
| | BSPP | (1/4) | (1/4) | (1/4) |
| Hydraulic Circuit | | | | |
| Min. Hose Tube Size | in | 1/2 | 5/8 | 5/8 |
| | (mm) | (12) | (16) | (16) |
| Whip Hose Size | in | 3/8 | 3/8 | 3/8 |
| | (mm) | (10) | (10) | (10) |
| Hydraulic Pressures | | | | |
| Cross Port Relief Valve Pressure (opening) | | 1,000-1,500 psi | | (70-103 bar) |
| Cross Port Relief Valve Pressure (closing) | | 3,200-3,300 psi | | (220-230 bar) |
| Circuit Pressure | | 3,650-3,750 psi | | (250-260 bar) |
| Maximum Circuit Back Pressure | | 580 psi | | (40 bar) |

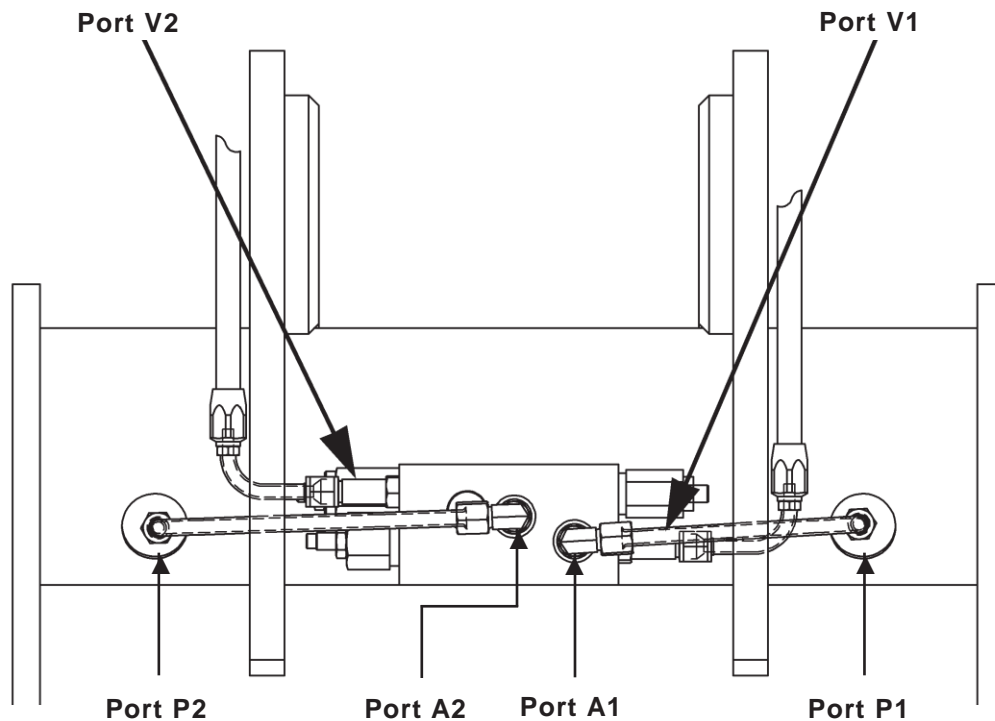
*3-10 second open/close time

Hydraulic Lines and Plumbing

Installing and Removing Hydraulic Lines

The manifold incorporates two ports for hydraulic hose connections, Port V1 and Port V2. When pressure is applied to Port V1 the jaw opens. When pressure is applied to Port V2 the jaw closes.

After installing the PowerGrip onto the equipment and attaching the hydraulic lines, it is important that all safety devices are properly reattached.



Plumbing

Hose and tube size recommendations can be found in the Tool Circuit Requirements Chart shown on Page 10.

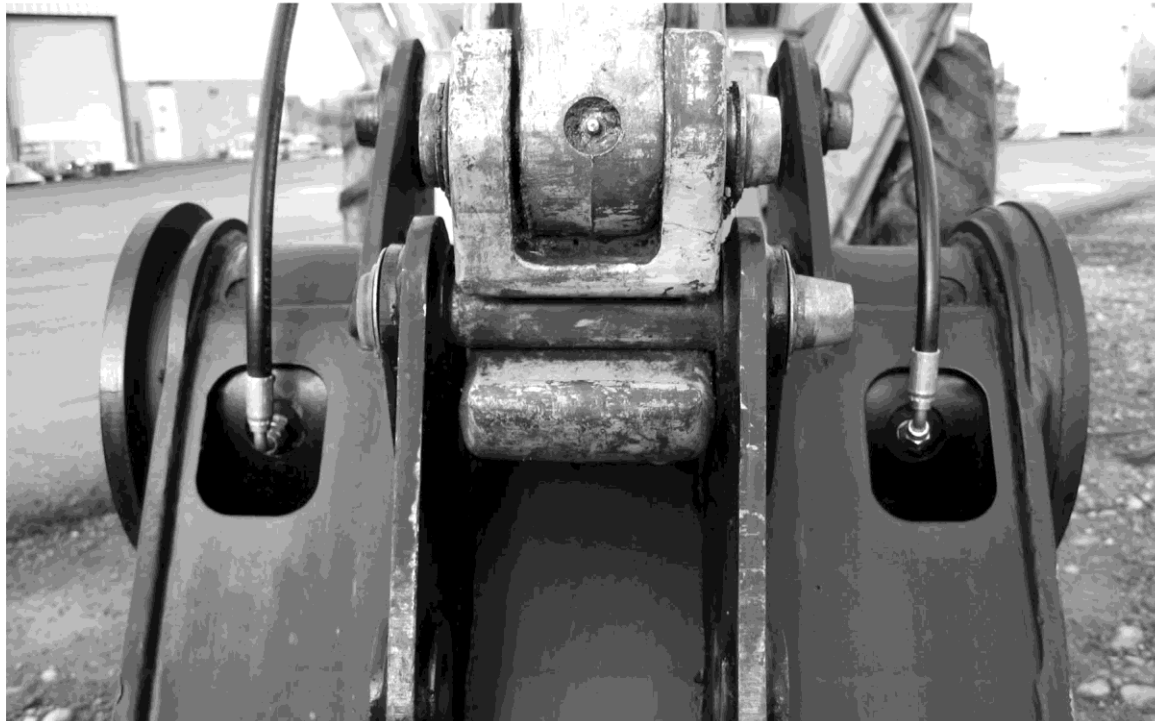
The position of the hoses is important for reliable operation. Refer to the Suggested Hose Routings Chart on Page 12 for suggested hose routings.

Connect hydraulic hoses to the appropriate ports. Be sure the hoses do not cross, foul, crush or chafe when operating the PowerGrip or machine. Verify proper hose routing for all possible positions of the PowerGrip and all attachments, which are to be used with the PowerGrip. Repair any oil leaks immediately.

NOTICE

When installing a new tool circuit or hydraulic lines, flush all the tool circuit lines with hydraulic oil prior to connecting the PowerGrip. This will help remove any contaminants from the circuit components which may have accumulated during manufacturing and/or installation.

Suggested Hose Routings



MAINTENANCE

Daily

1. Grease the PowerGrip at the two grease fittings with a high quality Lithium-based grease. Apply grease until clean grease flows from the grease reliefs. Severe operating conditions such as abrasive dust or prolonged submersion in water may require more frequent grease applications.
2. Make sure the grease reliefs are functioning properly. Open or replace non-functioning grease reliefs immediately.

NOTICE

Never replace the grease relief valves with grease fittings or plugs.

NOTICE

Do not operate the PowerGrip if the grease reliefs are not functioning.

3. Inspect the PowerGrip for loose, worn or damaged components and replace or repair immediately.
4. Mounting pins should be greased upon installation and thereafter according to the equipment manufacturer's instructions.

Important Notice

Refer to the PowerGrip Service & Repair Manual regarding any product repairs or adjustments. To view or print a PowerGrip Service & Repair Manual go to www.WerkBrau.com.

Werk-Brau Customer Service

To contact our Service Department call:

1-800-537-9561
www.Werk-Brau.com

Technical Support

To contact Technical Support e-mail us at warranty@werk-brau.com

Parts Support

To contact a parts representative e-mail us at sales@Werk-Brau.com

Service & Repair Support

To contact a service and repair representative e-mail us at sales@Werk-Brau.com

WARRANTY INFORMATION

Refer to our website for more information regarding Warranty Policy, Warranty Return Policy and Warranty Cancellation Policy and Procedure:

www.werk-brau.com/warranty-claims

**Werk-Brau Co. INC.,
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Findlay, Ohio
45839**

For replacement parts, questions, and other matters please call your local dealer. If you cannot reach a local dealer please call us and we will be happy to find a dealer for you and answer any questions.

**PHONE:
1-800-537-9561**

**FAX:
(419) 422-7207**

**WEBSITE:
www.werk-brau.com**

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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!

To learn more about your Warranty
please visit:
<http://www.werk-brau.com/warranty-claims>

To file a Warranty Claim
please visit:
<http://www.werk-brau.com/warranty-claims/form>

Or Call:
1-800-537-9561

TOUGH JOBS DEMAND TOUGH ATTACHMENTS



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