



HYDRAULIC LOADER COUPLER PRODUCT MANUAL & INSTALLATION KIT

THANK YOU FOR YOUR PURCHASE You have received a high quality, extremely versatile attachment that will increase your machine's capability. 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!

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**PRODUCT MANUAL
&
INSTALLATION KIT**



**WERK-BRAU
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*YOUR PARTNER IN
PRODUCTION*

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

Serial No.: _____

Model No.: _____

Date Manufactured: _____

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 Brautigam, 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, 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

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.



→ 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. Operations and maintenance personnel should read this manual as well as manuals related to equipment and the operating



READ AND UNDERSTAND ALL SAFETY STATEMENTS Read all safety decals and safety statements in all manuals prior to operating or working on the 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.



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.



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 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.

OPERATING PRECAUTIONS



DO NOT IMPROPERLY USE ATTACHMENT This coupler is designed to grab objects and debris and not for any other use.



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.



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.



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.



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.

TORQUE SPECIFICATIONS

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

Dash Size	Tube O.D. (Ref)	Thread Size	Torque Values Ft. Lbs.			
			37° Flare		Straight Thread	
			Ft. Lbs.	Nm.	Ft. Lbs.	Nm.
4	1/4	7/16-20	10-12	14-16	15-19	20-25
5	5/16	1/2-20	13-16	18-21	20-25	27-33
6	3/8	9/16-18	20-25	27-33	32-40	45-54
8	1/2	3/4-16	34-42	46-56	54-67	73-90
10	5/8	7/8-14	46-58	62-78	74-92	100-124
12	3/4	1-1/16-12	64-80	87-108	102-128	138-173
14	7/8	1-3/16-12	80-100	109-135	128-160	173-216
16	1	1-5/16-12	97-117	131-158	150-187	203-253
20	1-1/4	1-5/8-12	145-165	197-223	227-264	308-357
24	1-1/2	1-7/8-12	230-250	312-338	363-400	492-542

**Apply enough pipe sealer to contact all threads.*

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

HYDRAULIC INSTRUCTIONS

ALWAYS BE SURE TO DOUBLE CHECK HYDRUALICS Make sure all hydraulic lines and fittings are tight and secure before starting the machine. In the event of a hydraulic problem or failure, discontinue use of the attachment immediately.

CYLINDER BORE	PORT SIZE	MAX PRESSURE	FLOW RATE
2.5"	M1-1.5 SAE O-RING	4,500 PSI	5-10 GPM

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.

MAINTENANCE AND SERVICE

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

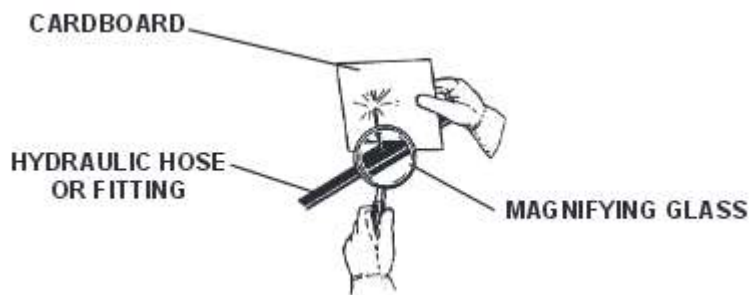
OIL CLEANLINESS REQUIREMENTS All hydraulic fluid shall be filtered before use in any FFC product to obtain the ISO cleanliness standard of 20/18/15. Unless explicitly specified otherwise.

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.



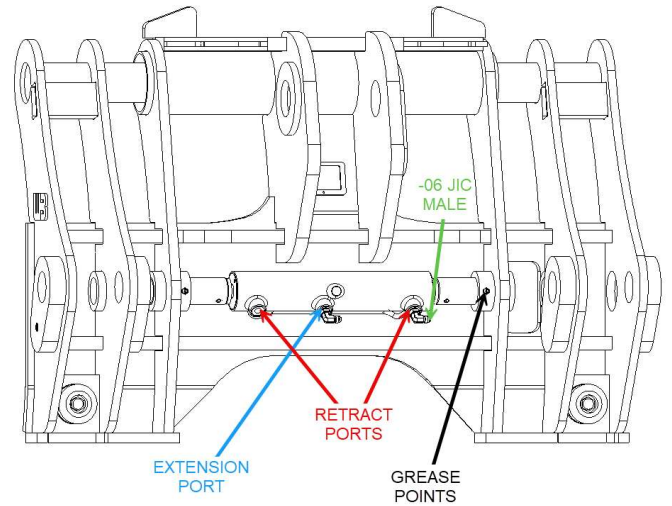
IMPORTANT When replacing parts, use only factory approved replacement parts. Manufacturer will not claim responsibility for use of unapproved parts or accessories, and/or other damages as a result of their use.

QUESTIONS

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

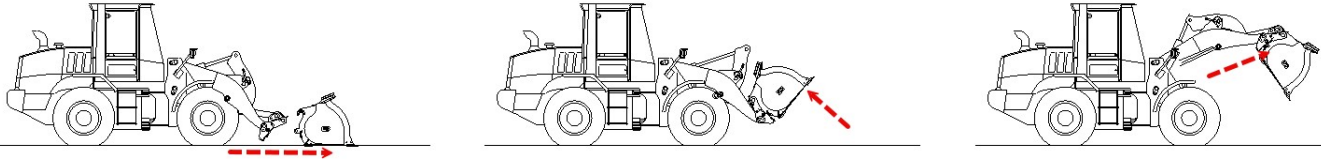
INSTALLATION

1. The couplers come with 2 fittings installed on the cylinders. Both have a -06 JIC male end for attachment of machine hydraulic lines.
2. There are 3 ports per cylinder. One in the center and two on the outside. The center port is for plunger pin extension (engagement), and the outer two are for retract (disengagement).
3. Only 1 of the outer ports is required for disengagement, both the left hand and right hand sides are connected via an integral hardline tube.
4. Run the machine hydraulics according to manufacture instructions or Werk Brau kit install instructions. The engagement hydraulic line from the machine should be run to the center port of the cylinder.
5. The retract hydraulics line from the machine should be run to either of the outer ports on the cylinders based on preference / machine setup. The other outer port should remain plugged with the provided steel plug.
6. Apply grease to coupler wedges using the grease zerk on the front of the plunger bosses
7. Slowly run coupler through its full rotation checking for clearance or interference issues. Verify installed hoses are not in dnage of being pinched during operation.

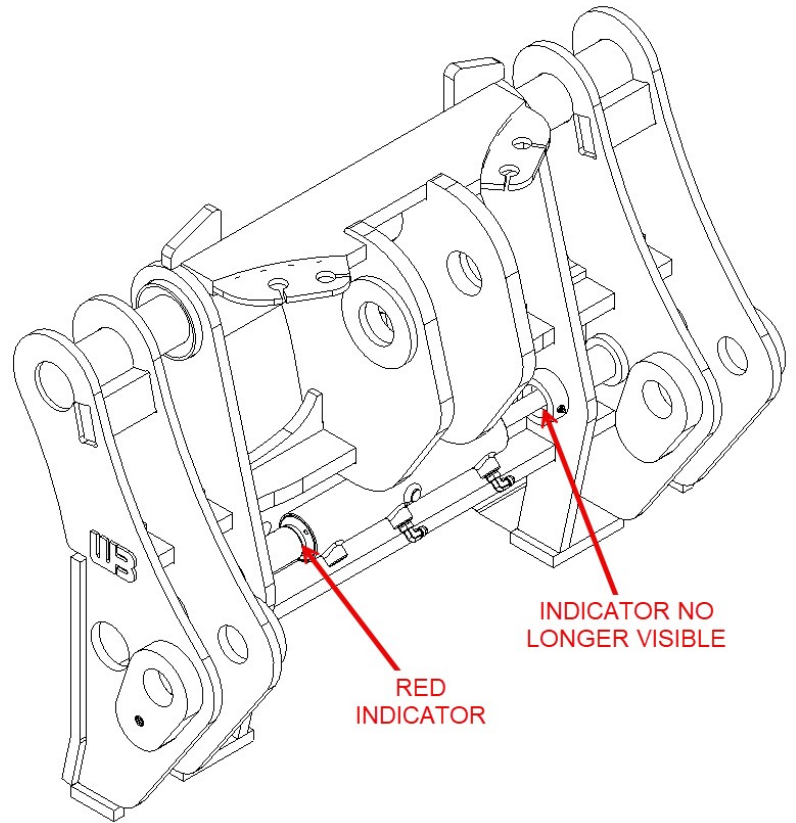


STANDARD OPERATION

Engaging Attachment



1. Roll the coupler forward, drive into the attachment hooks, then roll the coupler back with the attachment before engaging plunger pins.
2. Energize extension hydraulics to engage plunger pins.
3. Verify pin engagement on attachment by rolling the attachment forward and verifying the attachment does not swing on the attachment hooks.
4. If pins are fully engaged the red indicator installed on the back of the pins will no longer be visible.



Daily Maintenance

1. At the start of every shift, apply grease to the coupler plunger pins using the grease zerk on the front of the plunger bosses.
2. Several times a shift, cycle the coupler hydraulics. Fully retract the plunger pins, and then re-engage the attachment. The attachment does not need removed each time this is completed, just the pins need cycled. If the machine is changing attachments multiple times a shift, that suffices for this requirement.
 - This prevents foreign debris from building up in the holes and prevents the pins from seizing to the attachment.

Troubleshooting

1. Pins will not engage completely
 - a. Check for any debris / rusting in the attachment or coupler plunger holes.
 - i. Clear and attempt to re-engage.
 - b. Grease plunger Bosses
2. Pins slamming open when disengaging attachment
 - a. Check for any debris / rusting in the attachment or coupler plunger holes.
 - i. Clear and attempt to re-engage.
 - b. Grease plunger Bosses
3. Verify coupler is not interfering with any part of the attachment causing the holes to be mis-aligned.
 - a. If issue is present contact Werk Brau for instruction