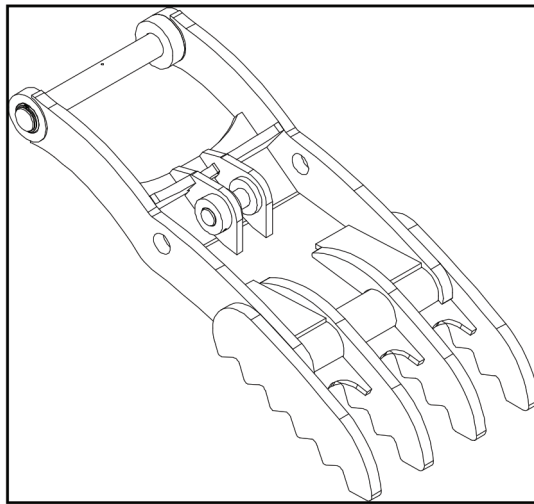


PRODUCT MANUAL AND INSTALLATION KIT

EZG Series HYDRAULIC and Rigid



Serial No: _____

Model No: _____

Date Manufactured: _____



WERK-BRAU CO., INC.

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P.O. Box 545 Findlay, Ohio 45839-0545 U.S.A.

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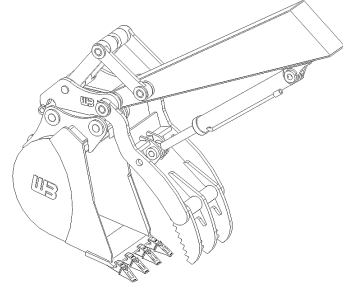
Fax (419)422-7207

Visit Werk-Brau at: www.werk-brau.com

INSTALLATION AND MAINTENANCE INSTRUCTIONS EZG

INTRODUCTION

You have received a high quality, extremely versatile attachment that will increase your backhoe or excavator capability. This product will help you manipulate material and debris. With inspections and proper care your EZG will last you a long time in a rugged environment. **EZG's are also called thumbs, clamps, and grips.**



NOTE: Pictures and diagrams may not be your exact Werk-Brau attachment. The pictures represent an action or a setup required for installation and operation.

Torque Specs

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	43-54
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.



SAFETY STATEMENTS

⚠ 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

NOTICE

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.

⚠ WARNING 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.

⚠ DANGER 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!!!

⚠ DANGER

SAFELY OPERATE EQUIPMENT

NOTICE

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

⚠ WARNING

DO NOT IMPROPERLY USE GRIP

This EZG is designed to grab objects and debris and not for any other use.

⚠ DANGER

BE AWARE OF SURROUNDING UTILITIES

NOTICE

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.

WELDING INSTRUCTIONS

⚠ WARNING

All Welding to be done by a Certified Welder!

Dipper Mounting Bracket & Return Stop

- a.) Disconnect battery before welding.
- b.) Use a low hydrogen electrode.
- c.) Clean weld area – weld completely around bracket.
- d.) Weld a 3/8 fillet on the sides of the bracket to the stick.

NOTE: Some models include side plates which transfer the loads onto the stick. See the enclosed illustrations for these models (Case 580 D & E, and all Extend-a-hoes). The Case 580K,L,& N requires a special mount due to dipper material. See the enclosed instructions for the installation of this mount.

NOTICE

DO NOT WELD ANYTHING INPLACE BEFORE CHECKING ROTATION AND CLEARANCES!!!!

Components List

See separate parts breakdown

Hydraulics Chart

GRIP PART NO.	CYLINDER BORE	PORT SIZE	MAX PRESSURE	FLOW RATE
EZG-040	2"	6 SAE O-RING	2,500 PSI	12-15 GPM
EZG-050	2 ½"	10 SAE O-RING	2,500 PSI	12-15 GPM
EZG-100	3 ½"	10 SAE O-RING	2,500 PSI	12-15 GPM
EZG-200	3 ½"	10 SAE O-RING	2,500 PSI	12-15 GPM
EZG-300	4"	12 SAE O-RING	2,500 PSI	16-20 GPM
EZG-400	4"	12 SAE O-RING	2,500 PSI	16-20 GPM
EZG-500	5"	12 SAE O-RING	2,500 PSI	25-30 GPM
EZG-600	6"	12 SAE O-RING	2,500 PSI	40-50 GPM

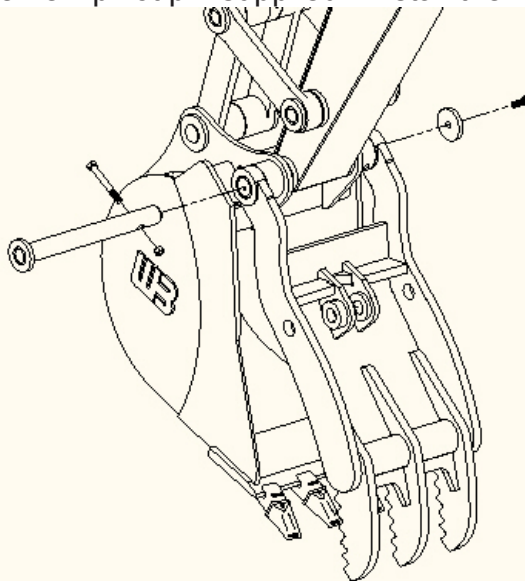
Rigid Thumb Note

If you have a RIGID THUMB (not Hydraulic), follow all the same steps less hydraulic portion. Install with Rigid Stick in Completely retracted (shortest) position.

Note: Rigid Sticks and Cylinders are interchangeable.

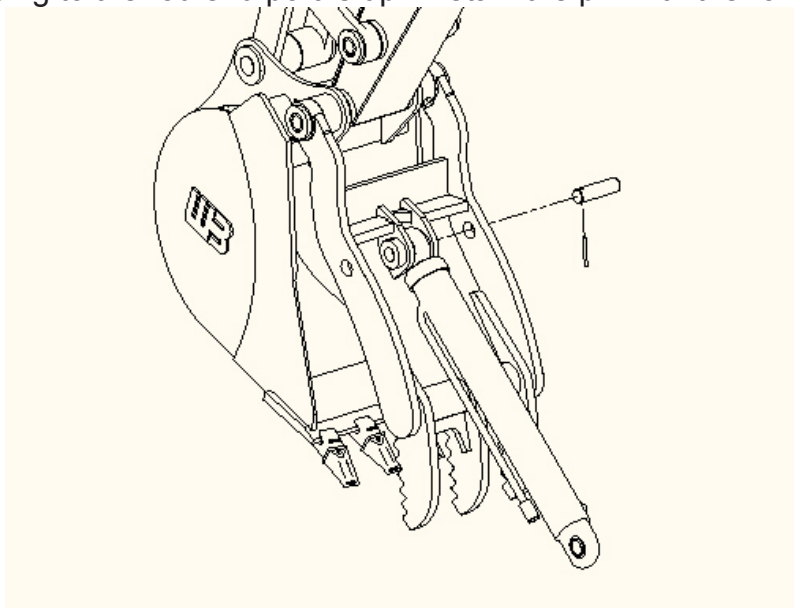
INSTALLATION

1. Unpack the EZ Grip from the shipping skid.
2. Lower the bucket or coupler to the ground and remove the front attaching pin. Align the pivot bores of the EZ Grip with the bores through the bucket and stick, insert the new pivot pin supplied. Install the retaining device.

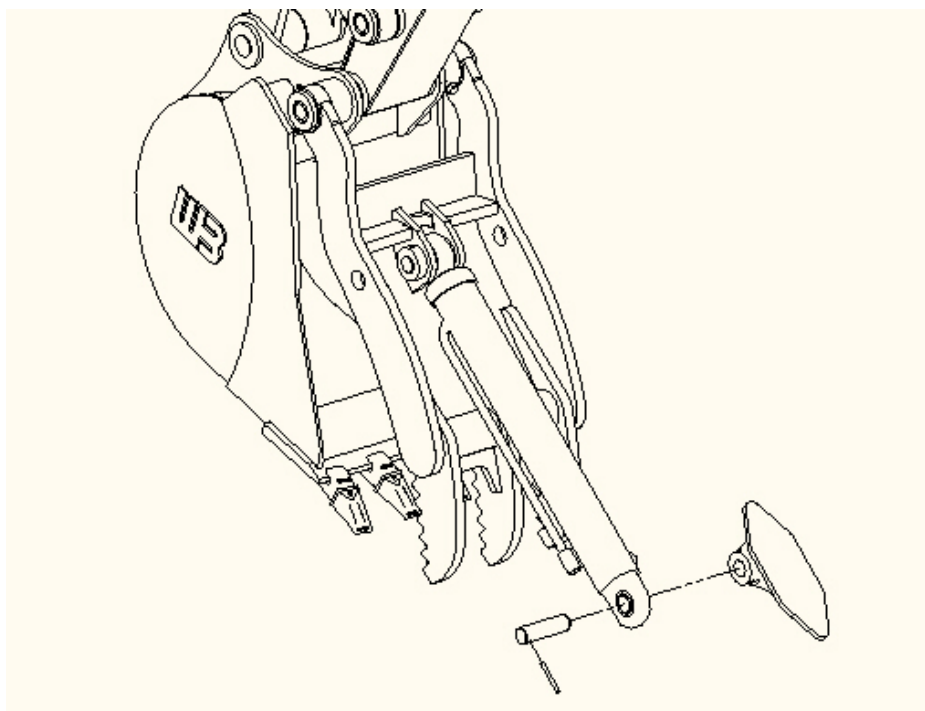




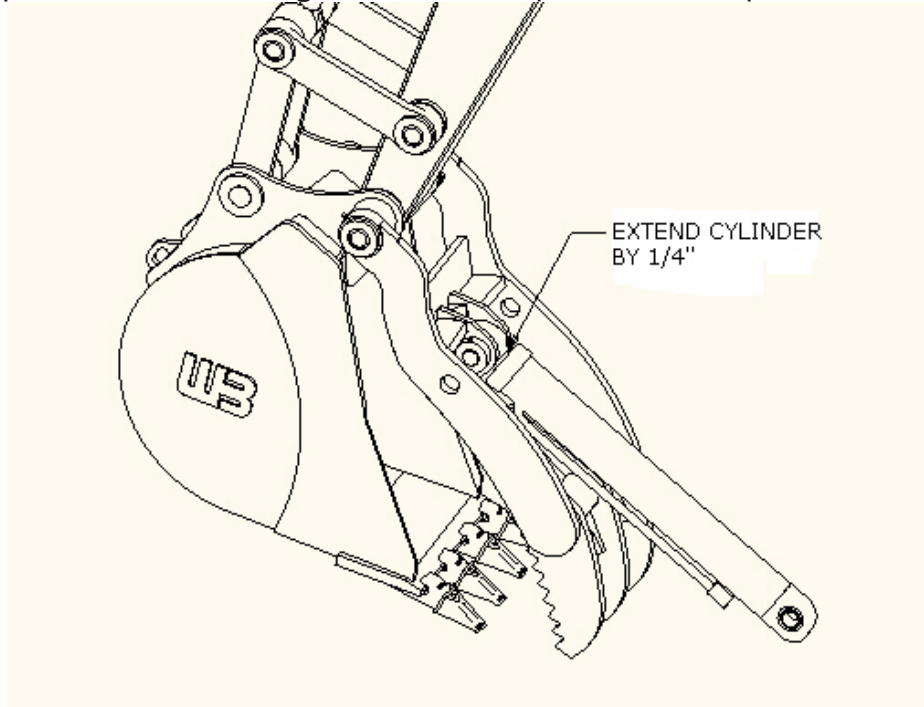
3. Position the rod end of the EZ Grip cylinder into the EZ Grip and install the attaching pin supplied; be sure to orientate the cylinder so that the manifold tube going to the rod end port is up. Retain the pin with the roll pin supplied.



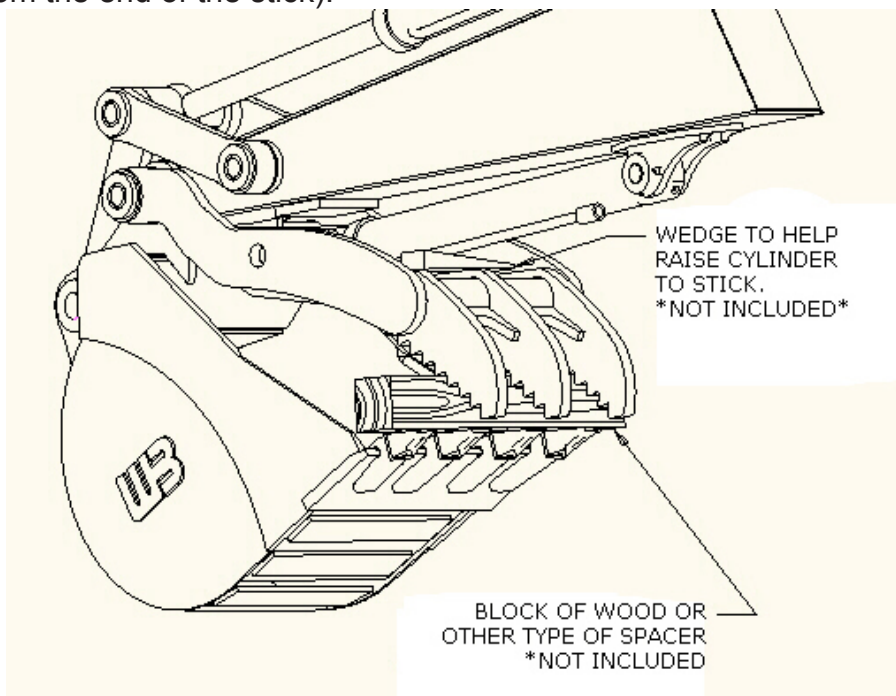
4. Install the dipper/stick mounting bracket onto the base end of the cylinder with the pin and roll pin supplied.



5. **Extend the cylinder by 1/4"** so that the cylinder doesn't bottom out when the grip is retracted. For **Rigid manual** arm put in shortest position.

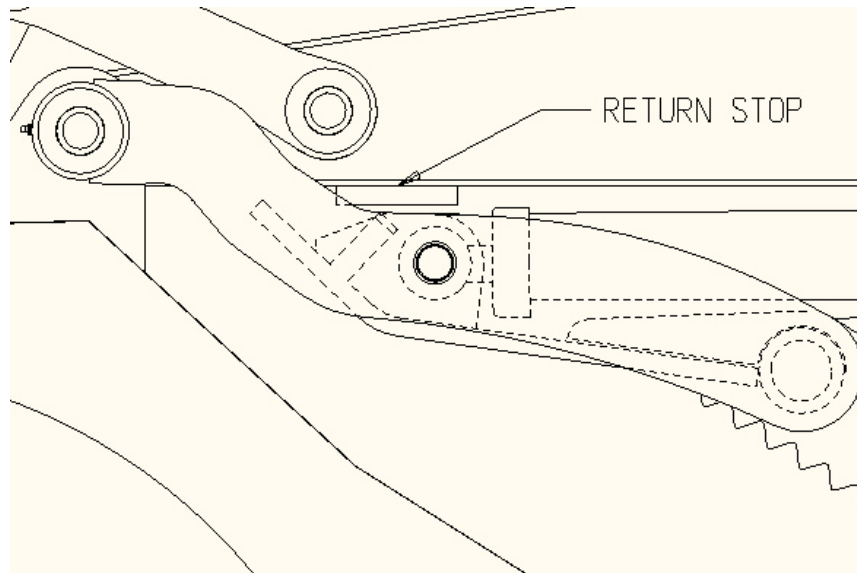


6. Next, with the aid of the bucket and a block of wood positioned between the grip and the bucket, rotate the grip and cylinder assembly back to the stick, **YOU MAY NEED TO PUSH THUMB AND CYLINDER AGAINST STICK. CYLINDER SHOULD BE ALMOST PARARELL TO STICK.** Grind paint from area where the mount is to be welded and where grip would hit on stick (just up from the end of the stick).





7. Now, lift the cylinder upward until the mount bracket is firmly against the bottom of the stick. A wedge can be lodged between the grip and the cylinder to hold the mount snugly against the stick. **CYLINDER SHOULD BE ALMOST PARALLEL TO THE STICK.**
8. Disconnect battery before doing any welding. Center the mount bracket on the stick, re-check clearances at the grip and tack weld the mount bracket to the stick, on the sides only. **NOTE:** Finish welding bracket after the hydraulics are connected and the grip is functioning. (See Welding Instructions)
9. Locate the grip stop. Identify where grip is hitting on stick and mark, when Grip is up against stick. Weld stop along sides only into place.



10. Locate bolt or pivot pin retaining rod and install.
 - a. Pivot pin with not cross hole: A retaining rod should be welded to the coupler, if no coupler then the bucket. (This piece is a round simple bar)
 - b. Pivot Pin with a cross hole: Bolt should be installed in coupler or bucket pin retainer
 - c. **NOTE: Thumb pin should not spin with thumb!** Should be retained to bucket or coupler
11. Install the two “caution” decals in clear visibility of the operator.

You are now ready to install the hydraulics to the EZ Grip. If you are using an auxiliary hydraulic system supplied by the machine’s manufacturer, follow their instructions carefully. Remember to limit the working pressure to a specified maximum pressure.

HYDRAULIC INSTALLATION

!!DOUBLE CHECK!!

Be sure to, double check that all hydraulic lines and fittings are tight and secure before starting the machine.



➔ **In the event of a hydraulic problem or failure, discontinue the use of the attachment immediately!!**

MAINTENANCE

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

PROCEDURE	INTERVAL	NOTE
GREASE FITTINGS	WEEKLY	
CHECK FOR HYDRAULIC LEAKS	DAILY	
INSPECT GRIP ASSEMBLY FOR DAMAGE (CRACKS, STRESS)	DAILY	

TROUBLE SHOOTING

Problem #1

EZG tip radius does not line up with bucket.

Corrective Action

- A.) *Verify that pivot pin is not through the link hole, and is in stick pin hole.*
- B.) *Check to see if T.R. was ordered correct for attachments*

Problem # 2

Pivot pin is squeaking or even prematurely wearing.

Corrective action

- A.) *Make sure that pin is greased either through stick or pivot pin.*
- B.) *Verify that the pivot pin is retained and not spinning.*

1-800-537-9561

Ask for Installation Assistance

Monday through Friday - 8:00 a.m. to 5:00 p.m. EST

Revision Record (Original is revision 1)

Revision	Date	#	Description
A	11/5/09	1	Added torque specs
B	2/3/11	6	Cert Welder and Removed components list
C	7/22/13	All	Combined R and H, general clean
D	9/19/13	All	Changed wording and added PP rod info



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