



Installation and Operating Instructions for Hydraulic and Fixed Bear Claw Thumbs

PLEASE MAKE SURE THIS MANUAL IS DELIVERED TO THE END USER OF THE THUMB

READ THIS MANUAL BEFORE INSTALLATION AND USE OF THUMBS!
Improper installation, operation or maintenance of thumbs could result in serious injury or death. Operators and installation personnel should read all this manual thoroughly before installation, operation and maintenance.

RELIEVE PRESSURE TO HYDRAULIC SYSTEM BEFORE DISCONNECTING LINES OR OTHER COMPONENTS. Escaping pressurized fluids can cause serious injury. Make sure you TIGHTEN ALL CONNECTIONS BEFORE APPLYING HYDRAULIC PRESSURE. Do not allow skin or body contact with escaping high-pressure fluid.

ALWAYS WEAR EYE PROTECTION during installation of the thumbs, especially when driving connecting pins in or out of attachments.

Always SUPPORT EQUIPMENT YOU ARE WORKING ON using a solid support apparatus. Never work below equipment that is supported only by hydraulic systems. Work areas need to be level, clean, open, well lit and ventilated.

DO NOT MODIFY ANY BEAR CLAW THUMBS WITHOUT RECEIVING SPECIFIC AUTHORIZATION AND INSTRUCTIONS FROM M.C. FAULKNER AND SONS, INC. Unauthorized modifications can impair performance of the thumb or cause damage to the thumb or equipment, or cause personal injury.

A Bear Claw Thumb Serial number tag should be permanently affixed to your thumb. There may be additional decals shipped loose to be affixed in the cab after installation of the thumb. Please refer to your cab OEM manual for proper location of the decal.

THUMB USAGE AND OPERATION

Thumb Usage

Hydraulic and Fixed Thumbs are for grasping objects between the thumb and a bucket. Our thumbs are designed to operate with many different machine types and with many different buckets. The proper tooth tip radius Thumb is important for optimal usage, and to ensure damage is not done to the bucket, machine or the thumb. Please call M. C Faulkner and Sons, Inc (207) 839-2048 if you have any questions about the proper size thumb and your tooth tip radius.

Improper usage of the thumb includes, but is not limited to: using the thumb to rake material, to push off or pull material, using the side of the thumb to move material, using the thumb with ropes or chains as a lifting devise, using the thumb as a “pry bar” to dislodge objects. Never slam the thumb into the stored position.

Thumb Operation:

The operator should become familiar with the added weight and geometry of the thumb before starting machine operation. Because a heavy load (rocks or logs) can generate a great deal of momentum in side-to-side movements, the operator should also use caution to avoid sudden stops and starts.

A Fixed Thumb is mounted in a fixed position, and does not have a built in relief system. Do not overload the bucket and thumb capacity or damage to the stick will result. Also refer to the “Thumb Usage” section for improper use of the thumb. Avoid improper usage of the thumb to prevent unnecessary damage to the thumb or machine.

The purpose of the fixed thumb is for grasping objects between the thumb and a bucket. The thumb is designed to operate with many different machine models and types, but it is not intended for other usages.

Maintenance

Hydraulic Thumbs should be greased every 10 hours of machine operation. Fixed Thumbs should be greased weekly and pins must be kept clean and free of burrs. Proper care of your thumb will result in many years of trouble free service.

Thumb Installation

PLEASE READ THESE INSTRUCTIONS THROUGH TO THE END AND MAKE SURE YOU UNDERSTAND THEM BEFORE BEGINNING THE INSTALLATION. IF YOU HAVE ANY QUESTIONS PLEASE CALL (207) 839-2048 BEFORE BEGINNING INSTALLATION.

These Thumbs should only be installed by qualified personnel.

BEFORE INSTALLING THE THUMB, THOUGHLY CLEAN THE ARM/BUCKET JOINT AREA AT THE END OF THE MACHINE ARM TO AVOID BEARING CONTAMINATION.

Disconnect both the positive and negative battery terminals before any welding is done on the machine. If possible, disconnect the on-board computer.

Caution!!

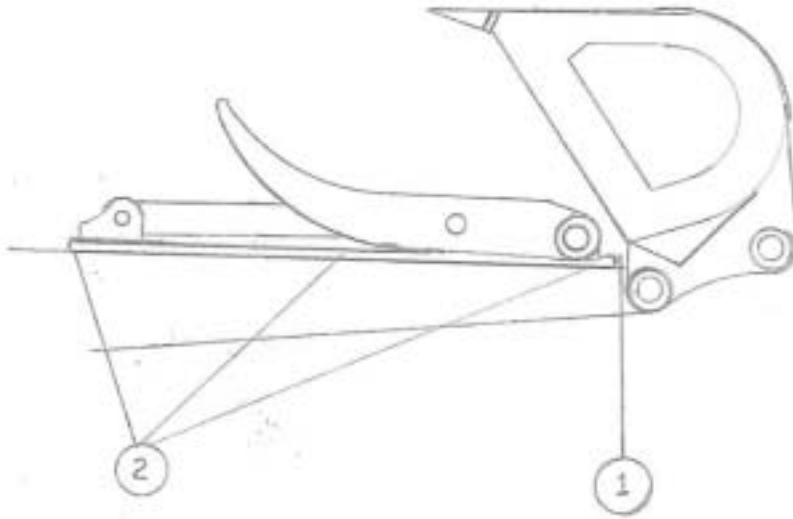
When welding, stay parallel to the long edge of the stick. Never weld across the width of the stick. Failure to follow these instructions can cause weakening or damage to your stick.

Do Not allow weld splatter to contact hydraulic components. Damage could occur to cylinder rods, hoses, and hydraulic fitting

Thumbs are designed to be used with a bucket. Please refer to bucket mounting and set-up procedures that may be in the machine or bucket user manuals.

Position the thumb on the ground near the end of the machine arm. Move the machine arm to a position near the thumb. Place bucket in full curl up position. Locate the thumb with approximately 1" (one inch) between the bucket and the thumb bracket (1 – see next page diagram). Make sure the bucket will not contact the thumb base plate in full curl.

FIXED THUMBS MUST BE PINNED IN THE STORED POSITION WHILE WELDING THE THUMB ON THE EQUIPMENT TO ENSURE THE PIN HOLES STAY LINED UP PROPERLY AFTER WELDING IS COMPLETED. PLEASE CALL IF YOU HAVE ANY QUESTIONS.



Tack Weld (2) the 4 corners and the centers. Curl the bucket out and extend the thumb all the way out to ensure the bucket and the teeth are aligned left to right, and to check for clearance. With both of these attachments having 2 different pivot points it is important to check for proper fit in all the thumb positions.

Check left to right alignment making sure the thumb talons align with the bucket teeth before completing the welding. Always weld parallel to the long axis of the arm (not across the arm).

Improper alignment could impair thumb performance and damage the machine arm and attachments.

Once the thumb is in the proper location proceed with the final welding – weld along both long sides of the thumb base plate, and on the larger thumbs where there is a cut-out, weld along the inside of the cut-out. Weld 1” to 2” beyond the end of each plate. **DO NOT WELD ACROSS THE ENDS OF THE BASE PLATE.**

Fixed Thumbs:

After final welding of the base plate, proceed to locate the thumb for working or storage position. The working position of the thumb will vary depending on the make and model of the machine and bucket. The thumb fixed arm must be pinned to the thumb base plate to operate properly. For storage remove the thumb fixed arm and pin the thumb directly to the thumb base plate.

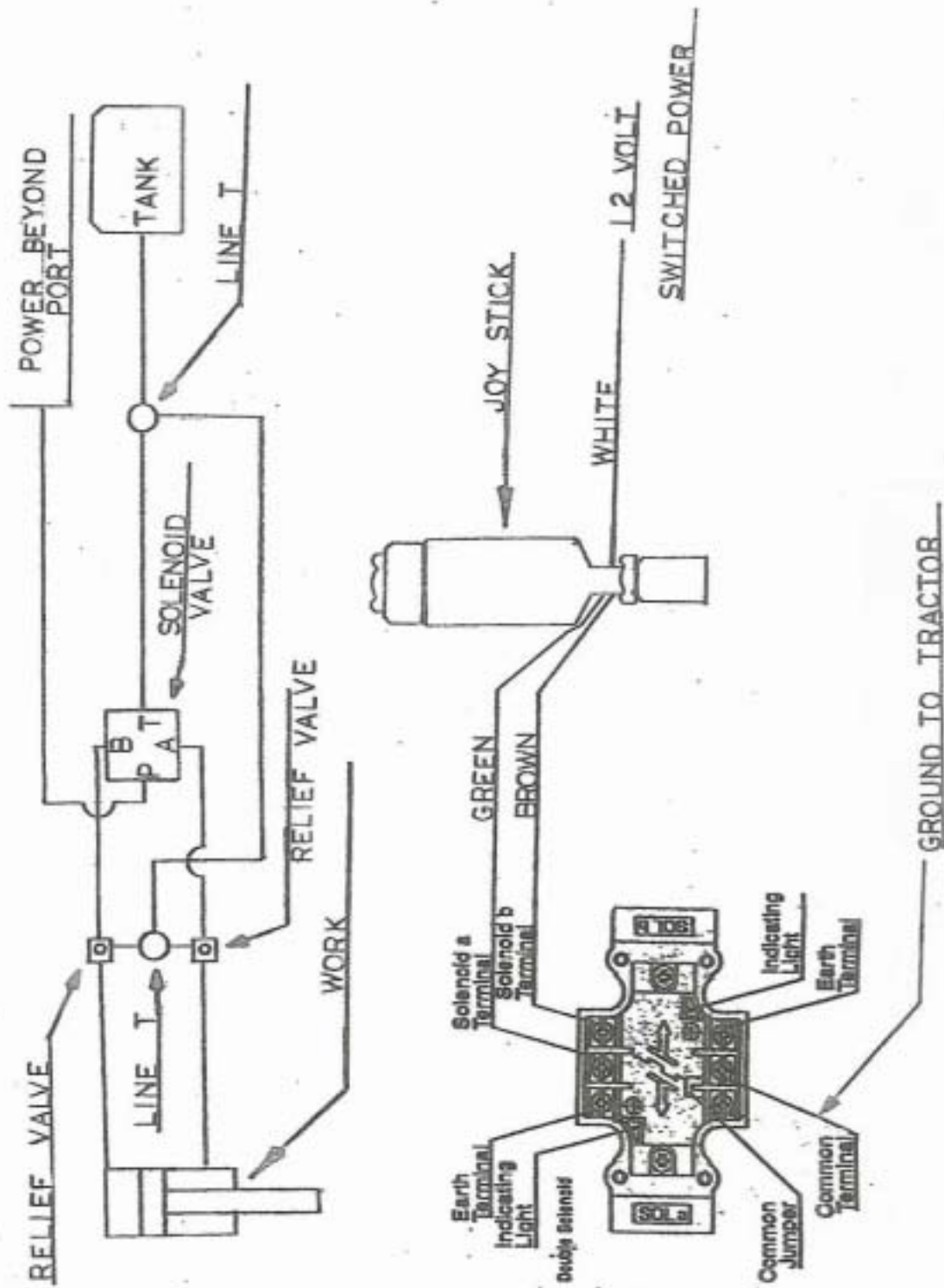
Hydraulic Thumbs:

Please refer to MC Faulkner and Sons, Inc. Valve Kit instructions or to your OEM manual for hydraulic plumbing requirements and locations for power beyond. Every Make and Model machine is different and we are not able to provide detailed hydraulic information here – please refer to your specific machine OEM manual.

Caution!!

HYDRAULIC PRESSURE ON THUMB CYLINDER SHOULD NOT EXCEED **2000** PSI. IT IS ESSENTIAL TO PERFORM TESTS TO ENSURE THAT THE BUCKET AND ATTACHMENTS *ALWAYS* OVERPOWER THE THUMB. FAILURE TO DO SO WILL CAUSE DAMAGE TO THUMB, PINS, CYLINDERS, BRACKETS AND STICK.

Valve Kit sub plates: The smaller sub plates for the Woods valve Kits, or VK-812 valve kits require o-ring fittings. The larger valve kits VK1316, or for L-48 machines require pipe thread fittings. Please verify the fittings are correct for the valve kit being used.



Hydraulic Thumb Valve Kit Schematic - Note: every make and model machine is slightly different than others. This is intended as a guide for a layout. Dealers may call 207-839-2048 if you have any questions. End Users please call your Dealer for assistance.

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Direct Pin Hydraulic Thumb Installation

Installation Procedure

Connecting Thumb to Machine:

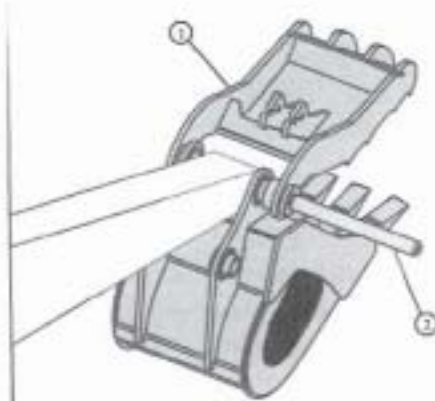
Read these instructions completely before you start your installation.

There are many different types of attachments that can be installed in combination with the direct pin hydraulic thumb. Coordinating the installation with the appropriate attachment is very important.

Remove any existing attachment (bucket etc.) from the machine.

Position the hydraulic thumb on the ground near the end of the machine arm. Move the machine arm to a position near the thumb. Lower the arm to align the mounting holes in the thumb with the holes in the arm. Install the new mounting pin (see figure 2) and grease to manufacturer's specifications. Fit locking bolts and nuts.

Disconnect both the positive and negative battery terminals before any welding is done on the machine. If possible, disconnect the on-board

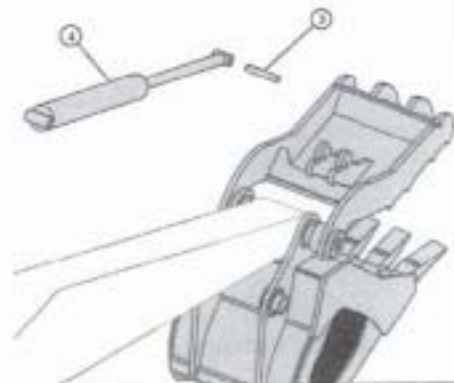


CAUTION!

FAILURE TO DISCONNECT BATTERY TERMINAL AND COMPUTER COULD ALLOW DAMAGE TO THE ELECTRICAL SYSTEM DURING THE WELDING OPERATION.

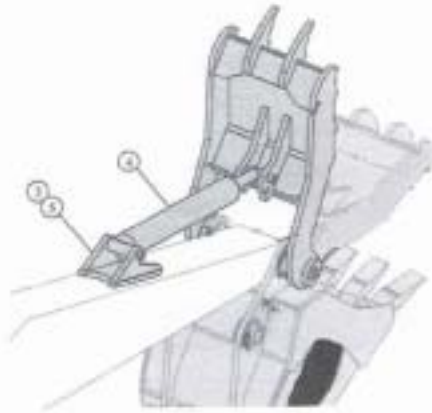
After installing the thumb, check for proper fit and clearance before proceeding. Now install the cylinder pin (3) through the cylinder (4) and thumb bracket.

Compress the cylinder rod down as far as possible.



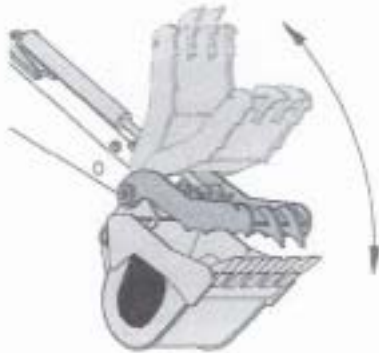
MC Faulkner and Sons, Inc.

With the Cylinder compressed and free, install the cylinder pin (3) and cylinder bracket(5). Rotate the hydraulic thumb and cylinder assembly so that the cylinder bracket will move up the machine arm as far as clearances will permit, leaving approximately 1/4" of stroke to prevent the cylinder from bottoming out. This will be the position of the cylinder bracket, mark and temporarily tack weld the bracket in place. **ALWAYS WELD PARALLEL TO THE LONG AXIS OF THE ARM - NOT ACROSS THE ARM.**



Caution
Do Not Weld across the width of the arm. Only weld along the long edge of the arm!

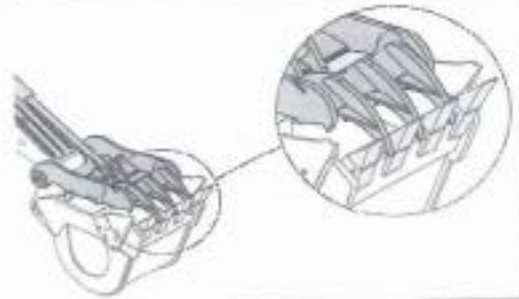
Rotate the thumb checking for clearances before starting the final welding. Be sure to re-check that all the pins, nuts and bolts are installed and tightened



Do Not Allow weld splatter to hydraulic components.

Check the alignment of the thumb talons and the teeth of the bucket before final welding. Improper alignment could damage the thumb or the bucket. The thumb needs to either be mounted tooth tip to talon tip, OR as shown below - clean fit between bucket teeth.

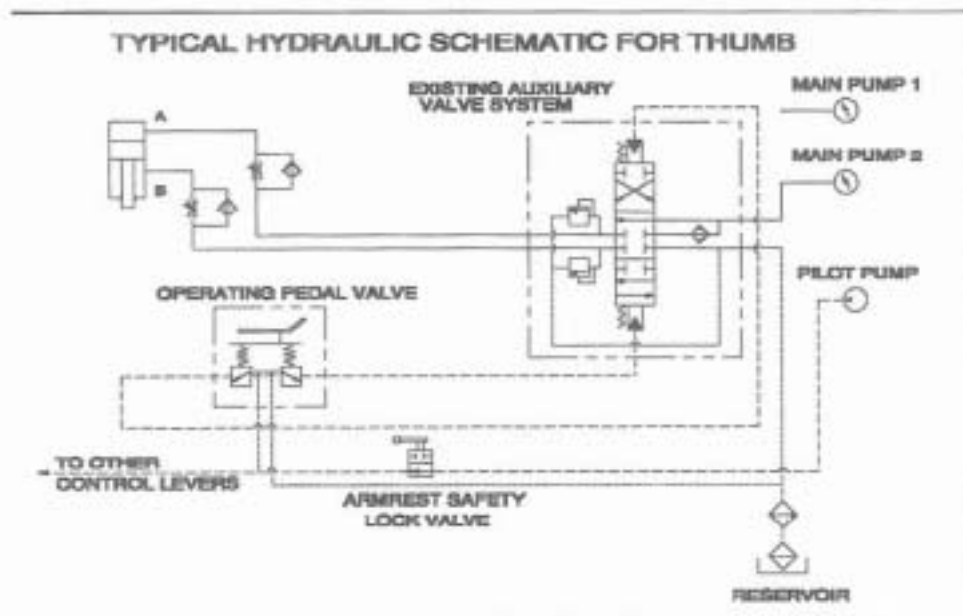
Once the fit and all pins, nuts and bolts have been checked, do final welding along the arm.



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MC Faulkner and Sons, Inc. phone 207-839-2048 Call if you have any questions!



4 ½" X 4" Stop Plate – Weld sides only



WARRANTY POLICY

MC Faulkner and Sons, Inc.

Gorham, Maine

SCOPE: ALL MC FAULKNER AND SONS, INC. Bear Claw Thumbs®

MC FAULKNER AND SONS, INC. warrants its standard Duty Bear Claw® Thumb to be free from defects in material or workmanship for a period of (12) twelve months or 2000 hours whichever comes first. **MC FAULKNER AND SONS, INC.** warrants its severe Duty Bear Claw® Thumb to be free from defects in material or workmanship for a period of (6) six months or 1000 hours whichever comes first. The warranty period will begin on the documented date that the attachment is first placed in service. If this documentation is not available then the period will commence on the date the attachment was shipped from the MC FAULKNER AND SONS, INC. facility.

MC FAULKNER AND SONS, INC. products must be utilized in approved applications, defined as applications for which the attachment was originally designed and use intended for use by MC FAULKNER AND SONS, INC.. Installation must have been properly performed according to MC FAULKNER AND SONS, INC. instructions and training given in the safe operation and proper use of each product as appropriate.

MC FAULKNER AND SONS, INC. will, at its option, repair or replace, FOB our facility in Gorham Maine, any standard or heavy-duty product that in its judgment is defective.

Where a service part has failed it shall be the policy of MC FAULKNER AND SONS, INC. to send a replacement part and an invoice for that part. Upon return of the original part to MC FAULKNER AND SONS, INC., a credit will be issued to the dealer if, after examination by MC FAULKNER AND SONS, INC., the part in question is judged defective.

MC FAULKNER AND SONS, INC. will make allowances for work performed on products deemed defective after examination of the defective product either by having the attachment returned to our facility, freight prepaid, or by photographic evidence clearly showing the problem area and/or details of failure. **Written approval is required from MC FAULKNER AND SONS, INC. PRIOR to the performance of all warranty work, in order for a warranty claim to be honored.**

Warranty will **NOT** apply to:

1. Failures that in MC FAULKNER AND SONS, INC.'s determination were the result of misapplication or misuse, negligence, lack of appropriate user training, accidental damage, failure to perform maintenance and/or improper installation.

2. Component parts not manufactured by MC FAULKNER AND SONS, INC., including all wear parts (e.g Hydraulic Cylinders) will carry the warranty extended by the supplier; MC FAULKNER AND SONS, INC. responsibility for these items will equal the warranty offered by the supplier.

3. Any equipment that has been repaired or altered in any manner without the express written approval of MC FAULKNER AND SONS, INC. will void all warranty. Once a product is determined to be defective and it has been determined it can be field repaired, MC FAULKNER AND SONS, INC. will provide parts (if necessary), a written repair procedure and will authorize maximum time allotted to accomplish the repair via a Warranty Claim and Authorization Form.

Labor will be paid at 70% of the Dealer's retail labor rate, subject to change without notice. No provisions will be made for incidental or consequential damages, mileage, travel time, overtime, downtime, or special freight charges.

In the event where an MC FAULKNER AND SONS, INC. product or component must be returned, MC FAULKNER AND SONS, INC. will send by fax a Return Goods Authorization (RGA) to claimant. Please refer to the RGA number on all shipping documents and future correspondence.

Approved dealer warranty expense will be reimbursed with a Credit Memo against future business placed with MC FAULKNER AND SONS, INC..

MC FAULKNER AND SONS, INC. Industries, Inc. reserves the right to make changes of any type to its products at any time without obligation to make changes or alterations to products previously sold. MC FAULKNER AND SONS, INC. also reserves the right to alter this warranty policy and/or its terms at any time. This warranty is in lieu of all other/or previous warranties either express or implied. No other persons or company is authorized to act on behalf of MC FAULKNER AND SONS, INC. or authorized to assume for MC FAULKNER AND SONS, INC. any liability in connection with the sale and use of MC FAULKNER AND SONS, INC. products other than as set forth herein.

August 16, 2002