



# EX-CUT/PLT/PMH/SMT

## CRAIG HYDRAULIC THUMBS

### OWNER'S MANUAL

Important safety and operation instructions inside

Read thoroughly before operating

### CRAIG MANUFACTURING LTD.

96 Mclean Ave  
Hartland, New Brunswick  
E7P 2K5 Canada

Tel: 1-506-375-4493  
Toll Free: 1-800-565-5007

Email: [sales@craigattachments.com](mailto:sales@craigattachments.com)  
Website: [www.craigattachments.com](http://www.craigattachments.com)

**HARTLAND BRANCH**  
96 Mclean Avenue  
Hartland, New Brunswick  
E7P 2K5 Canada

**CAMBRIDGE BRANCH**  
315 Thompson Drive  
Cambridge, Ontario  
N1T 2B3 Canada

**BLACKFALDS BRANCH**  
88 27323 TWP Rd 394  
Lacombe County, Alberta  
T4M 0S1 Canada

**LAWRENCEBURG BRANCH**  
408 Commerce Way  
Ethridge, Tennessee  
38456 USA

**1-800-565-5007 • WWW.CRAIGATTACHMENTS.COM**



# TABLE OF CONTENTS

**PREFACE**

**INTRODUCTION**

**SAFETY INSTRUCTIONS**

**DECALS**

**INSTALLATION INSTRUCTIONS**

**OPERATION INSTRUCTIONS**

**TROUBLESHOOTING**

**MAINTENANCE**

**STORAGE**

**SPECIFICATIONS**

**PARTS**

## PREFACE

Congratulations on the purchase of your new Craig Manufacturing Ltd. product. This manual provides safety, operation, and maintenance information. To keep your product in good condition, please read this manual and follow all recommendations. Failure to do so may invalidate your warranty.

When parts or service are necessary contact Craig at 1-800-565-5007 for genuine Craig Parts. Before using your product, make sure your machine is equipped with all the OEM recommended requirements for your product application.

### CRAIG FACTORY ORIGINAL PARTS



The best way to ensure equipment reliability is to use only genuine Craig Manufacturing Ltd. Factory Original Parts. Our parts department can help you not only find the right part for your application but also offers advice and support for the repair. Using aftermarket non-approved parts can alter your product's performance characteristics and may affect your warranty.

To help ensure that correct parts are ordered, please record the serial number of your product. Over time serial tags can become tarnished or difficult to read. Please supply this serial number to your dealership when ordering parts and it will ensure the correct part gets ordered.

Serial: \_\_\_\_\_

Machine: \_\_\_\_\_

Model: \_\_\_\_\_

In-Service Date: \_\_\_\_\_

Purchased From: \_\_\_\_\_



**Never let anyone operate this unit without reading the "SAFETY INSTRUCTIONS" and "OPERATION INSTRUCTIONS" sections of this manual.**

**NOTE:** The illustrations and data used in this manual were current (according to the information available to us) at the time of printing, however, we reserve the right to redesign and change the attachment as may be necessary without notification.

## INTRODUCTION

As the new owner and/or operator of the Craig hydraulic thumb we require you take the time to read this Operator's Manual carefully before commencing work.

### FOLLOW THE SAFETY INSTRUCTIONS

- Carefully read all the safety information contained in this manual.
- Make sure all safety decals are securely fitted in the cab.
- Immediately replace any safety decals that are missing or damaged.
- Before starting work make sure you have a copy of this Operator's Manual in the cab and are familiar with all the safety procedures and instructions contained in this manual.

### INFORMATION FOR THE USER

The user of the Craig thumb is obliged to ensure that the equipment is always in safe working order in accordance with accident prevention regulations, Occupational Safety and Health regulations or any other official instructions.

### ENHANCED WARRANTY FOR ELIGIBLE PRODUCTS

Craig offers an enhanced warranty from 12 months (or 2,000 hours which ever comes first) to 36 months (or 6,000 hours) for **eligible products**. To take advantage of this enhanced warranty the eligible product must be registered within 30 days of receiving the product. You can register your product at the following website:

<https://www.craigattachments.com/product-registration/>

Refer to the contents of this manual to remedy faults and contact Craig at 1-800-565-5007 if you require assistance. Notice that unauthorized modifications to this equipment is prohibited and will void warranty.

## SAFETY INSTRUCTIONS



This is an alert symbol. It indicates an imminent or potential hazard. Signal words “DANGER”, “WARNING”, and “CAUTION” qualify this alert symbol into the following categories:



Hazardous situation which, if not avoided, WILL result in death or serious injury



Hazardous situation which, if not avoided, COULD result in death or serious injury



Hazardous situation which, if not avoided, could result in minor or moderate injury

The signal word “**NOTICE**” indicates important information that, if not followed, could result in severe damage to equipment or property.

### SAFETY PRECAUTIONS BEFORE OPERATION

The primary responsibility for safety with this product falls to the operator. Make sure the product is operated only by trained individuals that have read and understood this manual. If there is any portion of this manual or function you do not understand, contact your local authorized dealer, or Craig Manufacturing Ltd. Keep this manual available for reference.



## WARNING!



### Read Manual Prior to Installation, Operation or Maintenance

Improper installation, operation, and/or maintenance of your Craig Manufacturing Ltd. attachments can cause death or bodily injury, property damage, or damage to your equipment. Read and understand this manual and all labels before operating or doing any work on the equipment. NEVER allow anyone to operate this unit without first reading the safety and operating instructions. Failure to do so may affect your warranty.

Read your machines owner's manual and always be aware of capacities and heights of all materials moved are within the machines stated operational capacity.

### Understand All Safety Decals and Statements

Become familiar with and inform users about all safety decals and safety statements in all manuals and on the back of the attachment prior to operating or working on this product. Know and follow all national occupational safety regulations, local laws, and other professional guidelines. As well as all good work practices when working on or with this product. Know your equipment capabilities and operations.

Worn, damaged, or illegible safety decals must be replaced. New safety decals can be ordered from your local dealer.

**SAFETY INSTRUCTIONS****WARNING!**

Inspect all equipment prior to operating and ensure all components are in proper working order. Check hardware for tightness and that all guards and safety devices are in place. Know all decals and check for legibility. Replace anything damaged, worn or missing. Make sure operator cab is clean and free of any distracting objects or spills.

Be aware of overhead or buried utilities. Contact your local utilities to locate any underground lines or other hazards.

Make sure all levers, pedals, switches, or other controls are in neutral position prior to starting the engine.

Before exiting the machine, for any reason, follow the "MANDATORY SHUT DOWN PROCEDURE".

**MANDATORY SHUT DOWN PROCEDURE**

1. Stop the machine on level ground.
2. Lower the attachment to the ground.
3. Move throttle to the idle position.
4. Disengage all power to the attachment.
5. Apply the brakes.
6. Turn off the engine and remove the key.

Never use your attachment as a work platform or personnel carrier

Never lift, move, or swing an attachment over anyone.

Do not use attachment for lifting materials outside of its purpose. This attachment is not a lifting device unless approved for your jurisdiction.

Never perform any work on the attachment unless you are authorized and qualified to do so. Work in pairs. Always read the operator service manuals before any repair is made. Wear proper PPE.

**Personal Protective Equipment (PPE) Required**

Remove ignition key and immobilize the machine during installation, inspection, or service. Always follow safe work practices when installing, servicing, or inspecting your product by wearing

only snug-fitting clothing, removing jewelry, and securing long hair. Wear safety goggles to protect your eyes from hydraulic fluid, sparks, dirt, and dust. Always have a fire extinguisher rated BC on hand for flammable liquid and electrical fires. Lastly, always lift with your legs, and use lifting equipment when applicable.



**SAFETY INSTRUCTIONS****WARNING!****CRUSH HAZARD – DO NOT work under or around raised arm or attachment.**

Lower or Support Unstable/Raised Equipment. NEVER trust that the hydraulic system will not fail. ALWAYS lower booms and attachments to the ground before leaving the cab or operator's station. DO NOT work under or around attachments or heavy items not supported by stands, blocks or safety chains. Furthermore, it is important to use chains and/or stands to steady unstable attachments or heavy components that may fall if being disconnected.

**Skin Injection Hazard**

- Relieve pressure before working on system
- Wear gloves & eye protection
- Detect leaks with wood or cardboard
- NEVER use hands to detect leaks
- Fluid injected in skin must be surgically removed

**Hydraulic Safety**

Always inspect hydraulic components before operating your product. Replace any damaged or worn parts immediately. Temperature changes can change hydraulic pressure, which allow the cylinders to drop unexpectedly, causing injury or damaging hydraulic components.

Hydraulic fluid under pressure can cause bodily harm. If you suspect a hydraulic leak note the following:

- The high pressure of the hydraulic lines can cause leaks that can puncture flesh. Therefore, it is important to keep uncovered body parts such as face, eyes, and arms away from a suspected leak.
- Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities. If injured by leaking hydraulic fluid, see a doctor immediately. Hydraulic fluid could have injected into the wound, and it may not be known.
- Before disconnecting hydraulic lines, wait until the fluid cools down. Hot hydraulic fluid can cause severe burns.
- Always wear protective clothing, such as gloves and safety glasses, and use a piece of cardboard when searching for hydraulic leaks. **DO NOT USE YOUR HANDS.**

Never make hydraulic repairs while the system is under pressure. Serious personal injury or death could occur. Never work under a raised attachment. Check the weight of the attachment and use handling equipment of sufficient capacity.

Always tag "DO NOT OPERATE" until all problems are corrected.



**SAFETY INSTRUCTIONS****WARNING!**

Lubricants may contain toxins, cause adverse health effects or be hazardous to the environment. Ensure environmentally safe disposal. Observe all safety labels.

**Do Not Alter Attachment**

Any alterations to this product could affect the safety and performance of the attachment. When making repairs, use only Craig Manufacturing Ltd. parts, and follow the provided procedures. If the parts and procedures are not used the warranty is void and any alterations may cause the attachment to become unsafe. Any modifications must be authorized in writing by Craig Manufacturing Ltd.

**Safe Transport**

- Travel only with the attachment in a safe transport position to prevent uncontrolled movement. Drive slowly over rough terrain and slopes.
- When transporting on a trailer, secure attachment using tie downs in recommended locations to maintain attachment stability.
- When driving on public roads use safety lights, reflectors, and slow-moving vehicle signs to prevent accidents. Check local government regulations that may affect you.
- Do not drive close to ditches or excavations, because a cave-in could occur.

**CAUTION!****Remove Paint Before Welding or Heating**

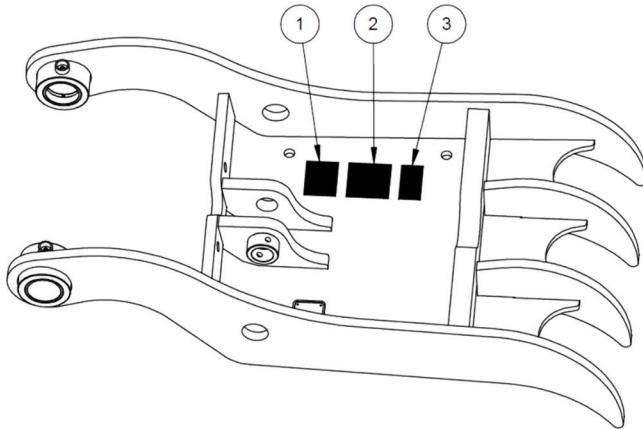
When paint is heated by welding, or by using a torch, hazardous fumes/dust can be generated. Therefore, it is important to do all work in a well-ventilated area and dispose of paint and solvent properly. **TURN OFF ENGINE AND DISCONNECT BATTERY PRIOR TO WELDING.** Refer to machine's owner's manual for procedure.

**When removing paint:**

- It is important to wear an approved respirator when sanding or grinding paint.
- If you use a paint stripper or solvent, remove the stripper with soap and water.
- Remove solvent or paint stripper containers and other flammable material from the welding/heating area.
- Allow fumes to disperse at least 15 minutes before welding or heating.

## DECALS

Item	Part #	Description	Quantity
1	159025-XX	Decal, pressure setting	1
2	490429-XX	Decal, crush hazard	1
3	164953-XX	Decal, grease frequently	1
4	229499-XX	Decal, maintenance lock	1

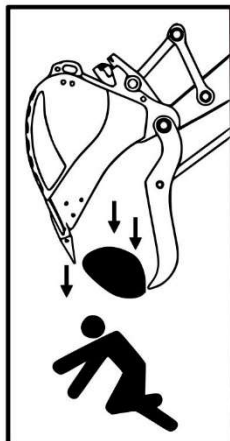


### NOTICE

This attachment must be connected to a valve section that is set no higher than:

## 2500 PSI

159025-EN



### ⚠ WARNING

#### DROP / CRUSH HAZARD

Ensure personnel remains a safe distance when moving material. Improperly loaded material may fall from attachment which can cause serious injury or death.

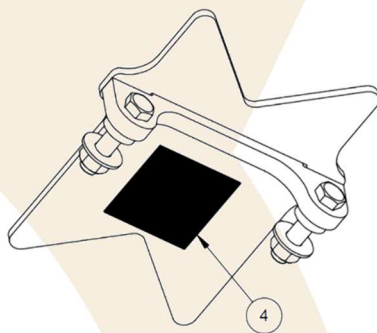
490429-EN

### NOTICE

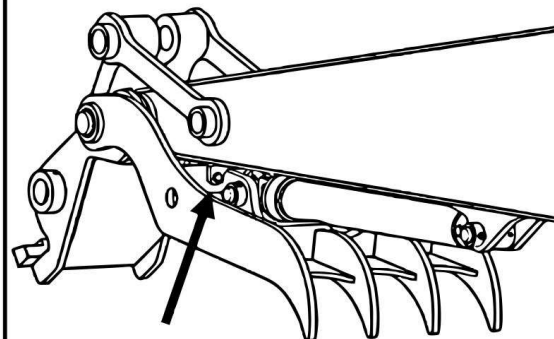


**Grease frequently**

164953-EN



### MAINTENANCE LOCK



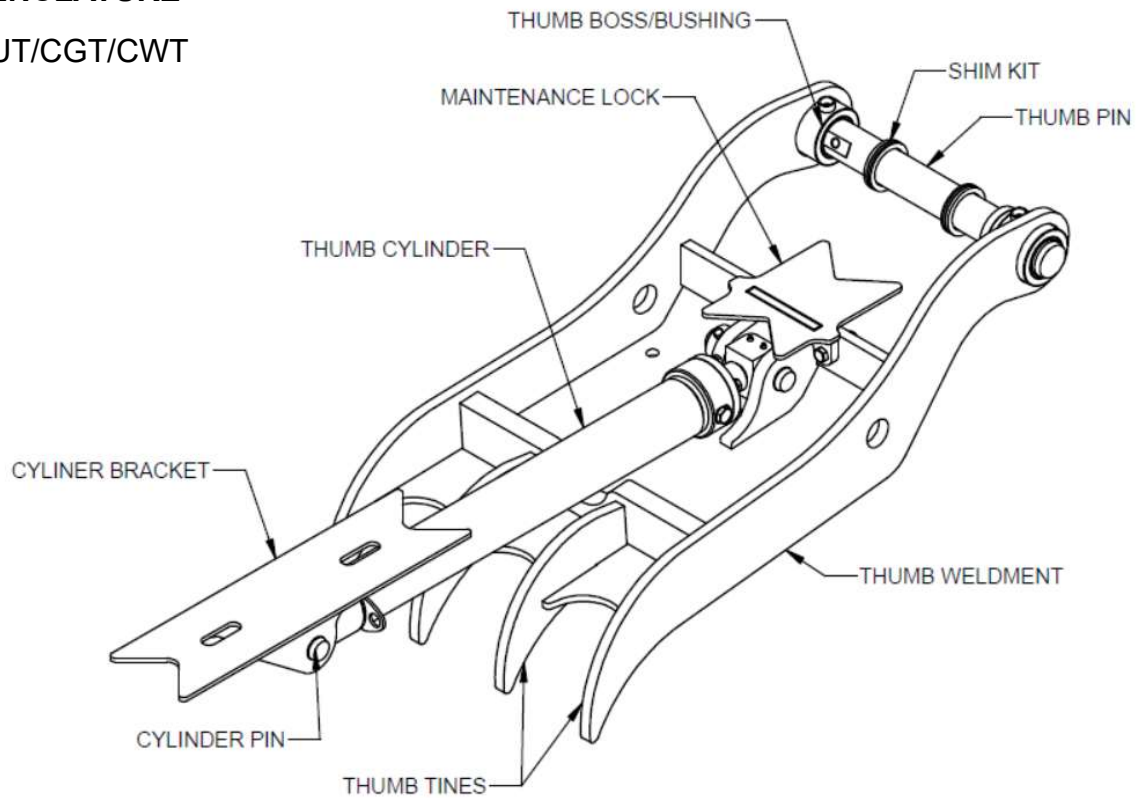
Thumb safety/maintenance lock is intended to lock thumb when performing maintenance on machine/attachments.

229499-EN

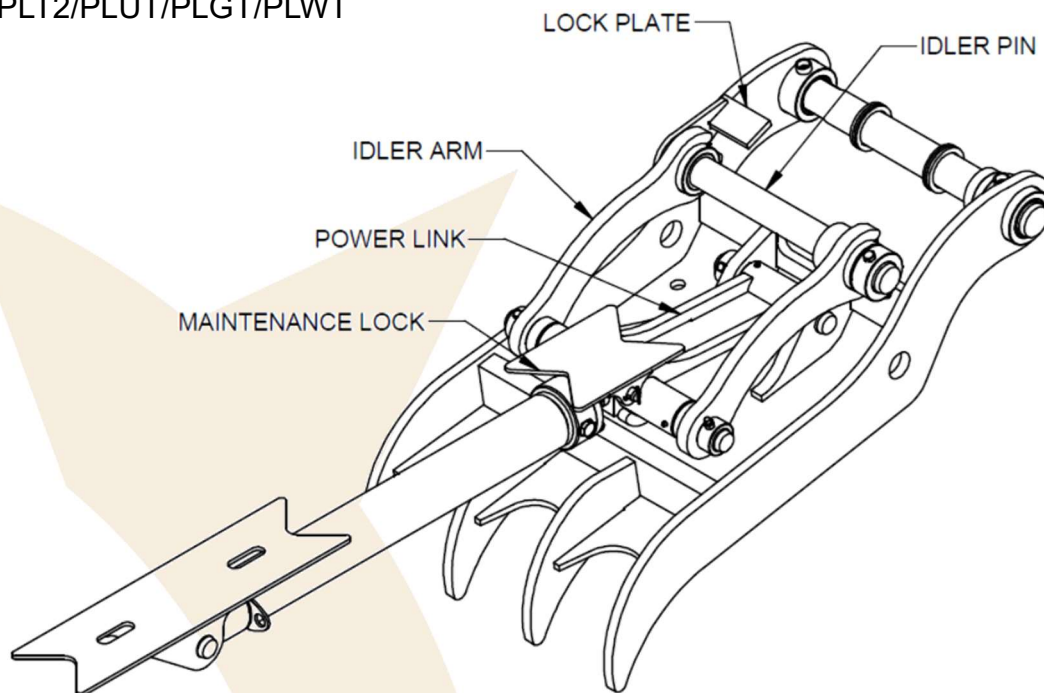
## INSTALLATION INSTRUCTIONS

### NOMENCLATURE

EX-CUT/CGT/CWT



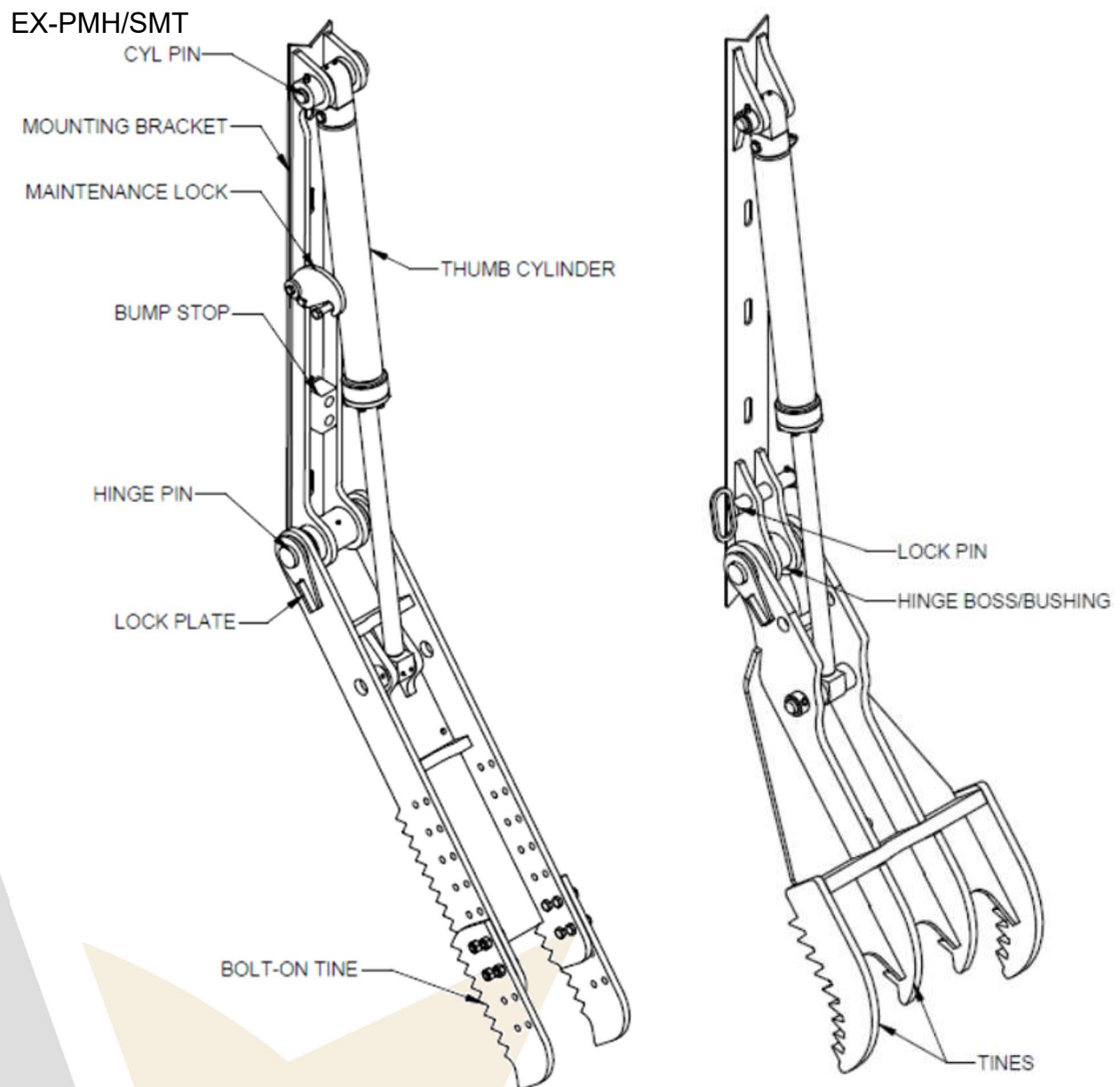
EX-PLT/PLT2/PLUT/PLGT/PLWT



NOTE: YOUR PRODUCT MAY NOT APPEAR EXACTLY AS SHOWN

## INSTALLATION INSTRUCTIONS

EX-PMH/SMT



NOTE: YOUR PRODUCT MAY NOT APPEAR EXACTLY AS SHOWN

# INSTALLATION INSTRUCTIONS

## TERMINOLOGY

Thumb (hinge) pin	Acts as point of rotation for thumb weldment. This pin replaces your bucket pin except for EX-PMH and EX-SMT which hinge on their mounting bracket. This pin is typically made from CS4140
Cylinder pins	Pins that attach the cylinder to the thumb weldment and cylinder bracket. These pins require grease through the cylinder bushings.
Cylinder bracket	Bracket for the cylinder that welds on to the stick of the machine
Thumb cylinder	Hydraulic cylinder that actuates the thumb.
Maintenance lock	Lock bracket that welds to the stick of the machine for locking the thumb weldment in tucked position close to the stick. This aids in maintenance or to keep the cylinder from drifting when the thumb is not in use.
Thumb weldment	This is the main weldment structure of the thumb.
Thumb tines	Plates that are used for gripping along the thumb
Bolt-on tines	Adjustable thumb tines to change the length of the thumb to better suit the bucket
Thumb boss/bushing	Greaseable hinge for the thumb pin that is part of the thumb weldment
Shim kit	A set of shims that can be used to reduce the side-to-side play of the thumb on the excavator.
Idler arm	The link that guides travel through the thumb rotation (similar to the bucket link arm)
Idler pin	Pin that connects the idler arm to the machine (replaces existing)
Power link	Link that connects thumb weldment and link arm (similar to bucket power link)
Lock plate	Plate used to lock the rotation of a pin
Mounting bracket	Bracket that welds to the stick of the machine for pad mount or stick mount thumbs
Lock assembly	Acts as the maintenance lock for pad mount thumbs
Bump stop	A rubber stop for the pad mount thumb weldment when tucked close to the stick

## ACCESSORIES AND OPTIONS

Weld-on AR400 tines	Improves wear characteristics of the thumb tips
Serrated tines	Improves grip of thumb for picking up objects
Cylinder guard	A metal guard that protects the cylinder hose from debris



## INSTALLATION INSTRUCTIONS

### INSTALLATION AND REMOVAL

Read all safety precautions before installing the attachment.



DO NOT work under raised attachment. Ensure all parts/attachments are properly supported when removing pins. Failure to do so could result in serious injury or death.

Refer to the machine's owner's manual for direct pin-on installation instructions. If a coupler system is involved ensure that the coupler is working properly before use. In addition, refer to the manufacturer for the coupler owner's manual to familiarize yourself with its proper procedures and operations. Craig coupler owner's manuals can be found by going to:

[www.craigattachments.com/technicaldocuments](http://www.craigattachments.com/technicaldocuments)



Turn off the machine during install/maintenance. Never leave equipment unattended with the engine running or with attachment in a raised position.



Lower attachment to the ground and remove paint from the areas to be welded. **REMOVE PAINT BEFORE WELDING OR HEATING.** When paint is heated by welding, or by using a torch, hazardous fumes/dust can be generated. Therefore, it is important to do all work in a well-ventilated area and dispose of paint and solvent properly. **TURN OFF ENGINE AND DISCONNECT BATTERY PRIOR TO WELDING.** Refer to machine's owner's manual for procedure.



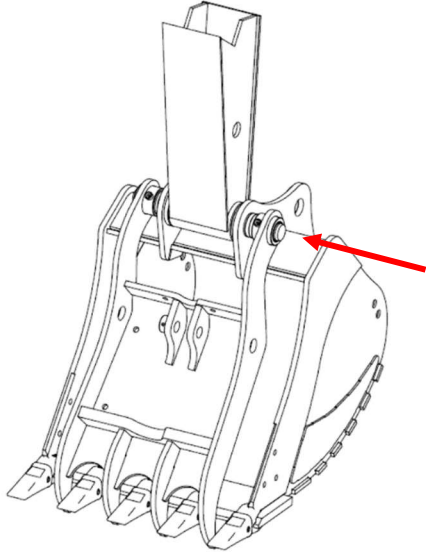
DO NOT weld straight across (90° to side plates) the bottom face of the stick. Doing this could cause a weak point in the excavator stick.



## INSTALLATION INSTRUCTIONS

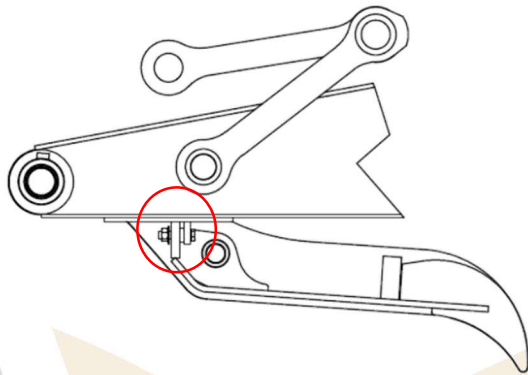
### INSTALLATION – EX-CUT/CGT/CWT

#### STEP 1: Pin thumb to stick



Attach thumb and bucket to stick using thumb pin. Use the shim kit to take up the extra space between the thumb bosses and the bucket hookup. Thumb should be centered with bucket and stick.

#### STEP 2: Position maintenance lock

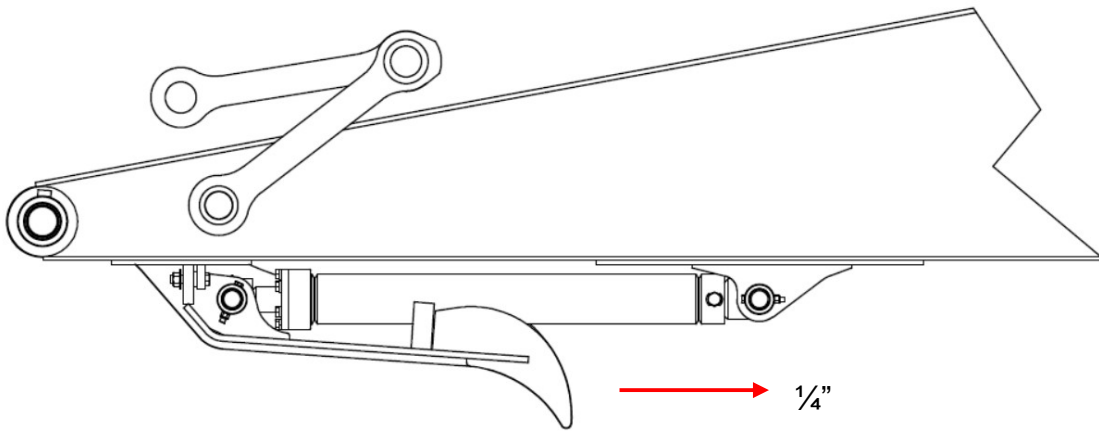


With the maintenance lock loosely bolted to the thumb, rotate the thumb until it contacts the bottom of the stick. The maintenance lock acts as a stop for the thumb and prevents damage to the stick. Weld the lock to the underside of the stick using a 5/16" fillet weld. Tighten the bolts to secure the thumb to the stick.

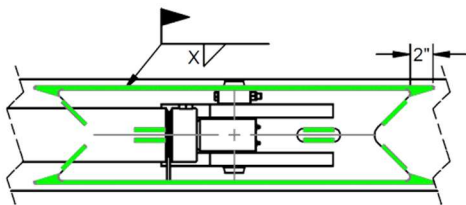
**NOTE:** If your machine stick has grouser bars they will need to be removed unless maintenance lock is designed to fit them.

## INSTALLATION INSTRUCTIONS

### STEP 3: Position cylinder bracket

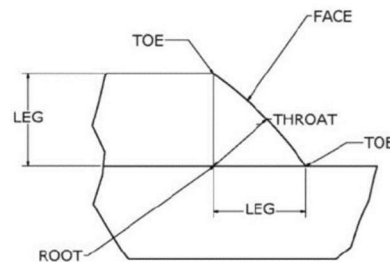


Attach the cylinder using pins and bolts to the thumb and cylinder bracket. Retract the cylinder until it “bottoms out” then extend it 1/4". Make sure the thumb is still hitting the maintenance lock with the cylinder out 1/4" before welding the bracket in place. The cylinder bracket must be centered on the stick and parallel with the cylinder lugs



and stick. Weld only the shaded area shown below using a fillet size 3/4 the thickness of the cylinder bracket base plate (see chart). Extend welds 2" past ends and taper down flush to 1/16" of mating surface.

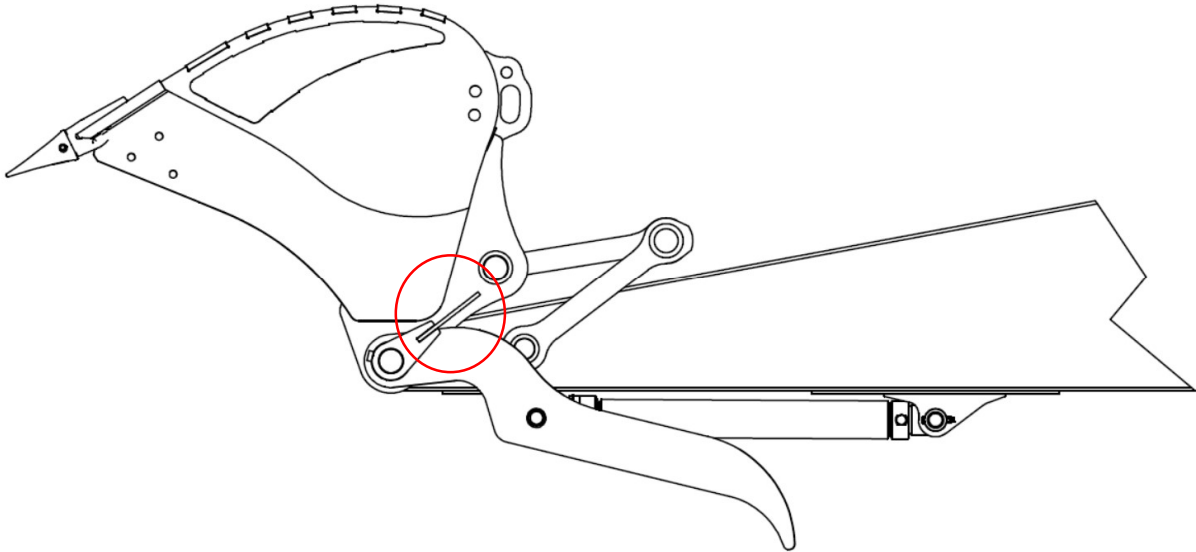
Base Plate Thickness (in)	(X) Fillet Weld Leg Length (in)
3/8	5/16
3/4	1/2



## INSTALLATION INSTRUCTIONS

### STEP 4: Setting pin lock plate (if included)

1. Break tacks between lock plate and pin head.
2. Put the bucket in dump position
3. Position the thumb tucked under stick
4. Weld the lock plate to the bucket hookup rib or coupler hookup rib (whichever is directly linked to the machine) making sure that the plate doesn't interfere with the thumb. Trimming the lock plate may be required.



### STEP 5: Install hydraulics.

**NOTICE**

This attachment must be connected to a valve section that has work port relief set to **2500 psi**

Recommended flow for a 4" X 2-1/2" Shaft X 36" Stroke is around 20 GPM. This will give a retraction time 3.5 seconds and an extension time 6.0 seconds. The cylinder is typically ported for 3/4" hosing and typically uses 12ORB male fittings.

### STEP 6: Lubricate all grease points. Refer to maintenance section for details.

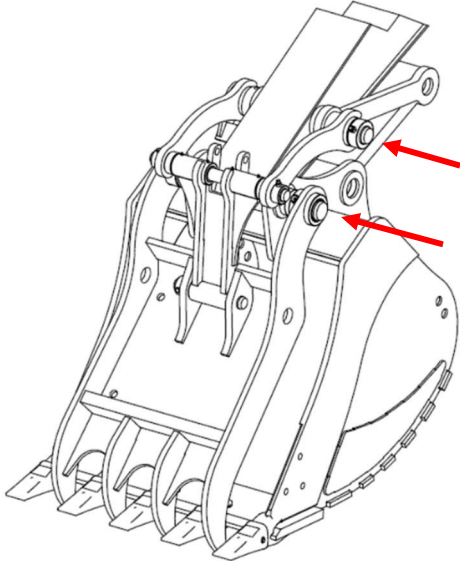
### STEP 7: Check full range of motion

Test the full range of motion of bucket and thumb making sure that there are no interferences.

## INSTALLATION INSTRUCTIONS

### INSTALLATION – EX-PLT/PLT2/PLUT/PLGT/PLWT

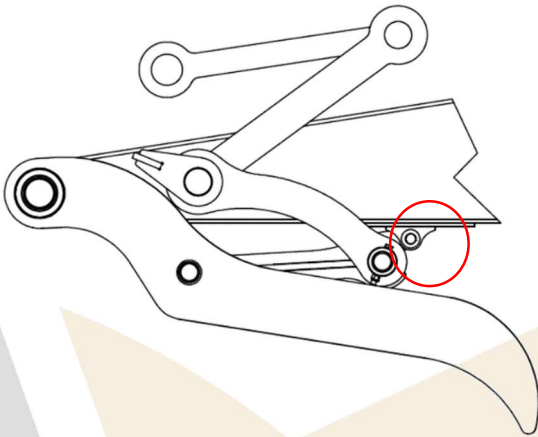
#### STEP 1: Pin thumb to stick



Attach thumb and bucket to stick using thumb pin. Use the shim kit to take up the extra space between the thumb bosses and the bucket hookup. Thumb should be centered with bucket and stick.

With the idler arms and power link assembled, attach the linkage to the stick using thumb idler pin. Use the appropriate shims to make sure the power link is centered, and the idler arms are parallel to the stick.

#### STEP 2: Position maintenance lock

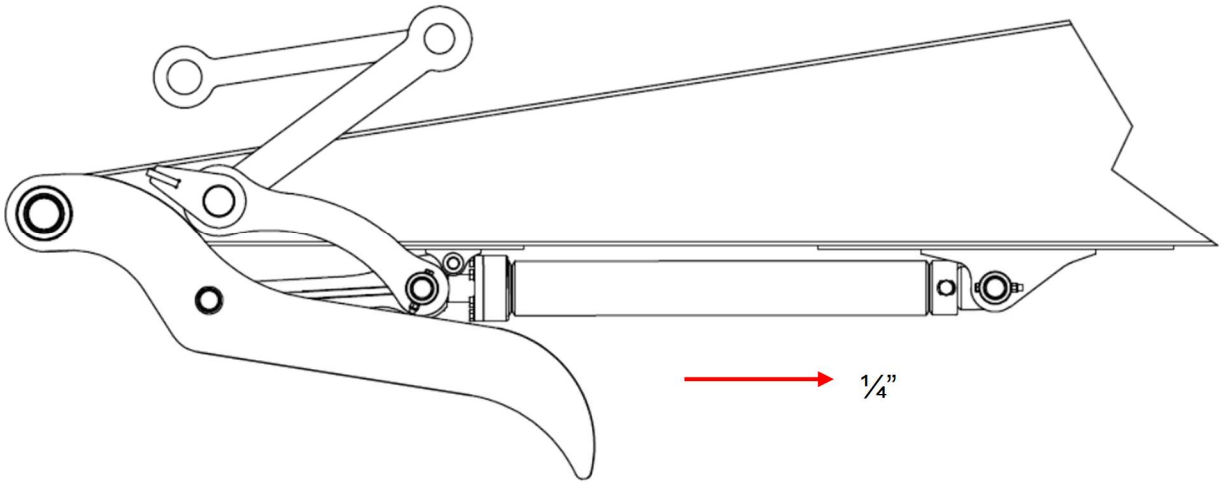


NOTE: your maintenance lock design may differ from the image shown. With the maintenance lock loosely bolted or pinned to the thumb/linkage, rotate the thumb until it stops with the thumb and plate to be welded in contact with the stick. Weld the plate to the bottom of the stick using a 5/16" fillet weld. This plate prevents damage to the stick when closing the thumb. The maintenance lock pin or bolts secure the thumb in tucked position under the stick.

NOTE: If your machine stick has grouser bars they will need to be removed unless maintenance lock is designed to fit them.

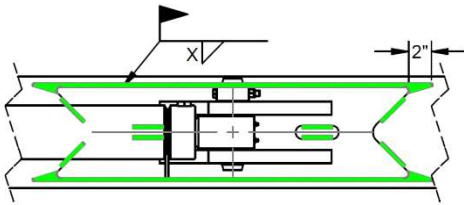
## INSTALLATION INSTRUCTIONS

### STEP 3: Position cylinder bracket

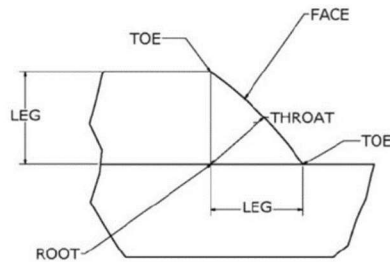


Attach the cylinder using pins and bolts to the thumb and cylinder bracket. Retract the cylinder until it “bottoms out” then extend it 1/4". Make sure the thumb is still hitting the maintenance lock with the cylinder out 1/4" before welding the bracket in place.

The cylinder bracket must be centered on the stick and parallel with the cylinder lugs and stick. Weld only the shaded area shown below using a fillet size 3/4 the thickness of the cylinder bracket base plate (see chart). Extend welds 2" past ends and taper down flush to 1/16" of mating surface.



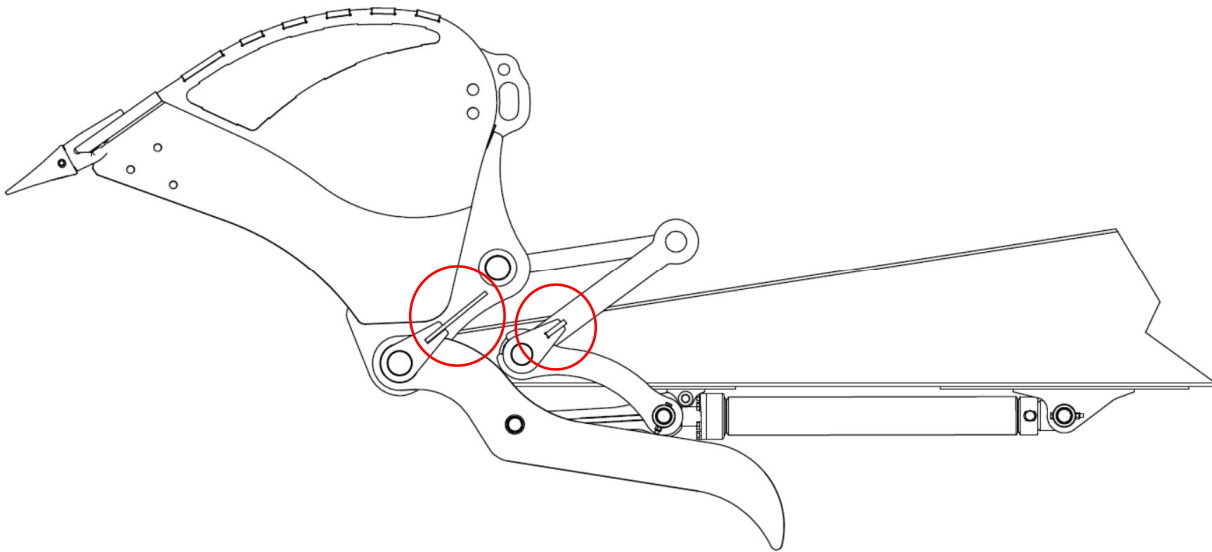
Base Plate Thickness (in)	(X) Fillet Weld Leg Length (in)
3/8	5/16
3/4	1/2



## INSTALLATION INSTRUCTIONS

### STEP 4: Setting pin lock plate (if included)

1. Break tacks between lock plate and pin head.
2. Put the bucket in dump position
3. Position the thumb tucked under stick
4. Weld the lock plate to the bucket hookup rib or coupler hookup rib (whichever is directly linked to the machine) making sure that the plate doesn't interfere with the thumb. Trimming the lock plate may be required. If your thumb idler pin has a lock plate, weld it to the machine idler arm.



### STEP 5: Install hydraulics.

#### **NOTICE**

This attachment must be connected to a valve section that has work port relief set to **2500 psi**.

Recommended flow for a 4" X 2-1/2" Shaft X 36" Stroke is around 20 GPM. This will give a retraction time 3.5 seconds and an extension time 6.0 seconds. The cylinder is typically ported for 3/4" hosing and typically uses 12ORB male fittings.

### STEP 6: Lubricate all grease points. Refer to maintenance section for details.

### STEP 7: Check full range of motion

Test the full range of motion of bucket and thumb making sure that there are no interferences.

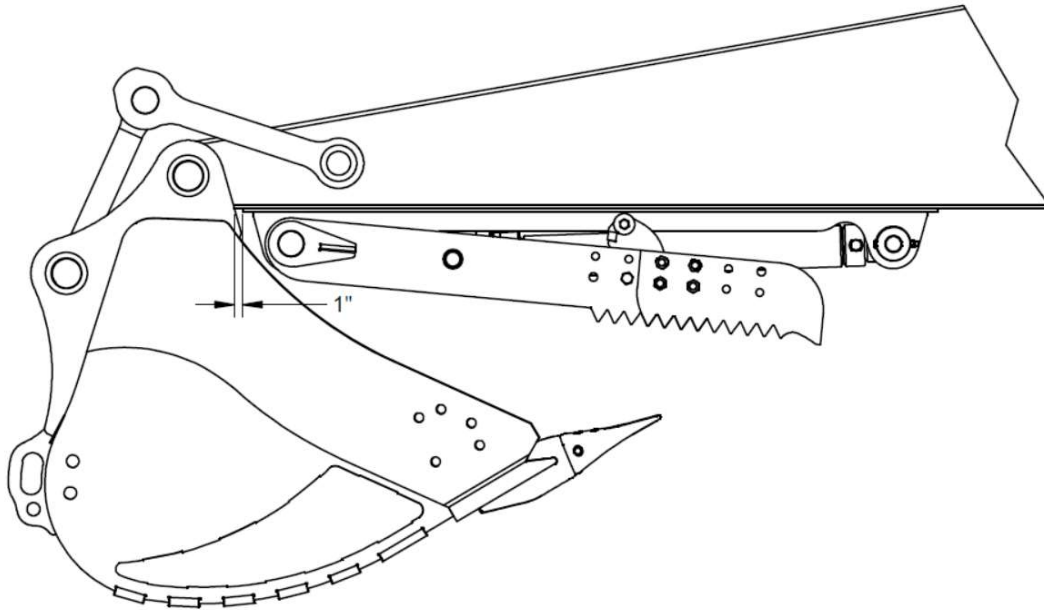


# INSTALLATION INSTRUCTIONS

## INSTALLATION – EX-PMH/SMT

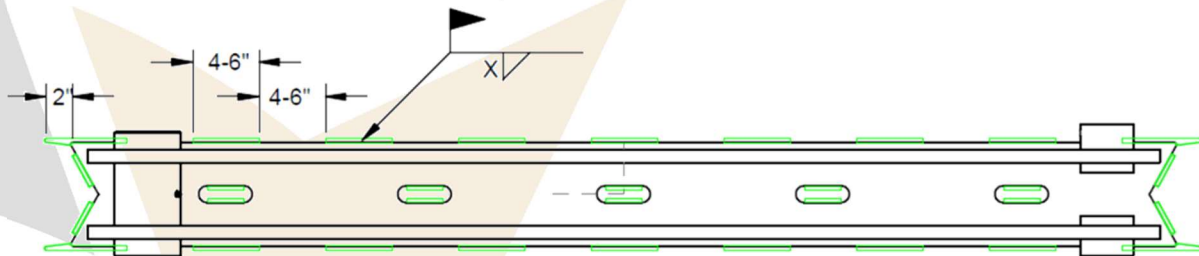
### STEP 1: Place mounting bracket

Curl the bucket into the closed position and set the mounting bracket 1" away from the closest edge of the bucket hookup as shown. The hinge pin of the thumb should be as close to the bucket pin as possible in order to minimize the mismatch between tip-radius of the thumb vs the bucket throughout their rotation.

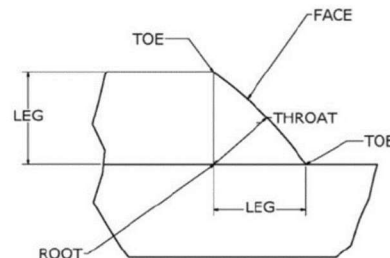


### STEP 2: Weld mounting bracket

Stitch-weld the mounting bracket to the machine stick in the pattern shown. You may need to adjust the length of the stitch welds to be ideally between 4-6". Use a fillet weld  $\frac{3}{4}$  the thickness of the base plate.



Base Plate Thickness (in)	(X) Fillet Weld Leg Length (in)
$\frac{3}{8}$	$\frac{5}{16}$
$\frac{3}{4}$	$\frac{1}{2}$



## INSTALLATION INSTRUCTIONS

STEP 3: Install hydraulics.

**NOTICE**

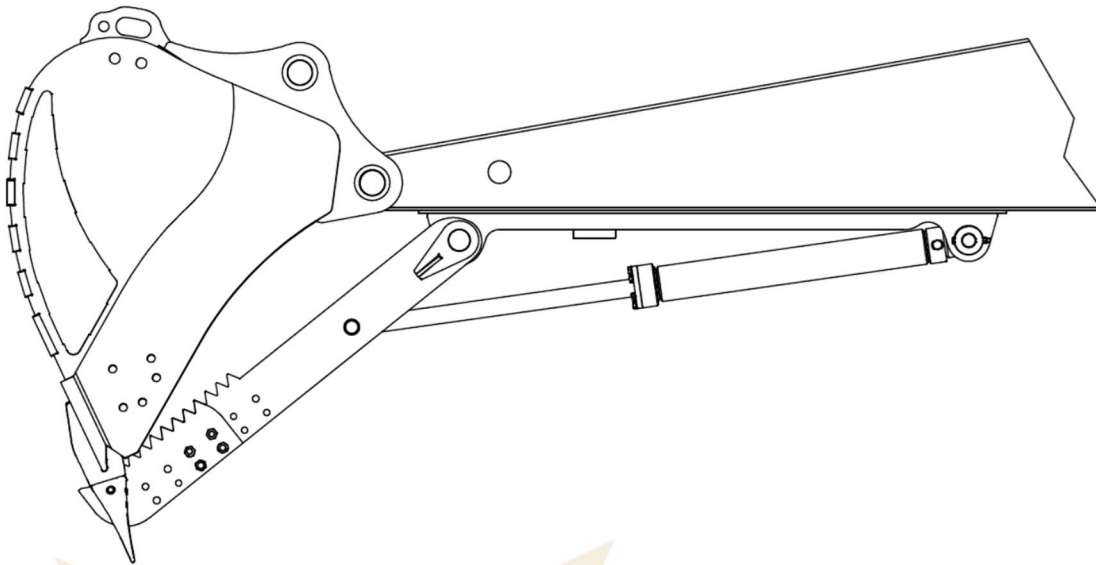
This attachment must be connected to a valve section that has work port relief set to **2500 psi**

Recommended flow for a 4" X 2-1/2" Shaft X 36" Stroke is around 20 GPM. This will give a retraction time 3.5 seconds and an extension time 6.0 seconds. The cylinder is typically ported for 3/4" hosing and typically uses 12ORB male fittings.

STEP 4: Lubricate all grease points. Refer to maintenance section for details.

STEP 5: Adjust the thumb length.

Roll out the bucket and fully extend the thumb cylinder. Adjust the bolt-on tines to roughly match the tip radius of the bucket. The thumb is designed to work with a wide range of coupler systems and buckets and may not mesh together like a Craig custom thumb. Customer may be required to trim thumb to suit bucket.



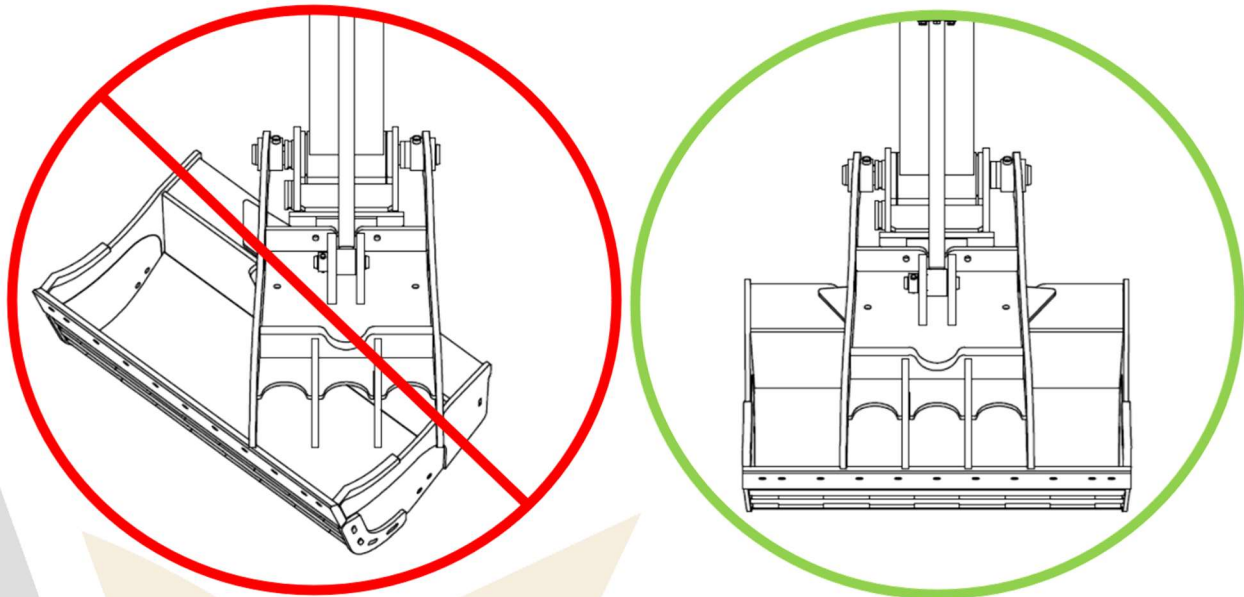
## OPERATION INSTRUCTIONS

### INTENDED USE

This thumb is intended for material handling and object manipulation purposes. The weight class of the machine must match the attachment. Thumbs are typically designed to suit a particular bucket. If another bucket is used the thumb may not work as intended. Use outside of this scope is considered misuse.

### MISUSE

Thumbs are not designed for digging, raking, or prying and should not be side loaded as this can damage the cylinder. Hydraulic angling ditching buckets are often used with thumbs to maximize the utility of the machine. However, they can cause severe damage to the thumb if used incorrectly. The angling bucket lateral tilting function must not be used when operating the thumb.



**WARNING** Operator and maintenance personnel must be trained and familiar with the entire manual. The operator is responsible for safety. If there is any portion of this manual or function you do not understand, contact your local authorized dealer, or Craig Manufacturing Ltd.

### PRIOR TO OPERATION

- Inspect machine and all equipment prior to use. Refer to “MAINTENANCE” section and perform all periodic inspections and maintenance.
- Ensure operator cab is clean and free of distracting objects or spills.
- No passengers allowed.
- Make sure all levers, pedals, switches, or other controls are in neutral position prior to starting the engine.

## OPERATION INSTRUCTIONS

### OPERATION

- The operator should be familiar with all controls. Refer to the machine owner's manual for further operation instructions.
- Ensure that the thumb is not locked to the stick. Operating the hydraulics with the thumb locked may break the maintenance lock or damage equipment.
- Lock the thumb securely to the machine stick when not in use. Refer to maintenance section for locking instructions.
- Do not overload the bucket or thumb.
- Always make sure the load is stable by lifting slightly before continuing. If load appears to be unstable, lower to the ground and reposition until secure.



**WARNING** NEVER lift or swing the arm over someone. Avoid sudden starts and stops. Heavy loads can slip or be thrown resulting in death or serious injury. Be aware of the momentum of heavy objects and ensure personnel are clear of the area.

**TROUBLESHOOTING**

Problem	Possible Cause	Remedy
Cracks in steel structure or weld	Overloading or side loading	Immediately stop use and contact Craig Tech Support at 1-800-565-5007
Cylinder is slow or fails to actuate	Leaking hose or fittings	Check for pinched hose or damaged fittings. Refer to safety instructions for proper procedure to check for leaks.
	Insufficient hydraulic flow	Recommended flow for a 4" X 2-1/2" Shaft X 36" Stroke is around 20 GPM. This will give a retraction time 3.5 seconds and an extension time 6.0 seconds.
Excessive wear on pins	Lack of grease	Ensure all pins are greased regularly. Replace any worn parts.

# MAINTENANCE

## GENERAL INFORMATION

It is the operator's responsibility to inspect all equipment daily. Regular maintenance is necessary to prolong the life of the equipment, avoid costly shutdowns, and keep things running optimally.



**WARNING** Operator and maintenance personnel must be trained and familiar with the entire manual. Refer to the "SAFETY INSTRUCTIONS" section and follow the "MANDATORY SHUTDOWN PROCEDURE" prior to doing any work on the machine.

## PERIODIC MAINTENANCE TABLE

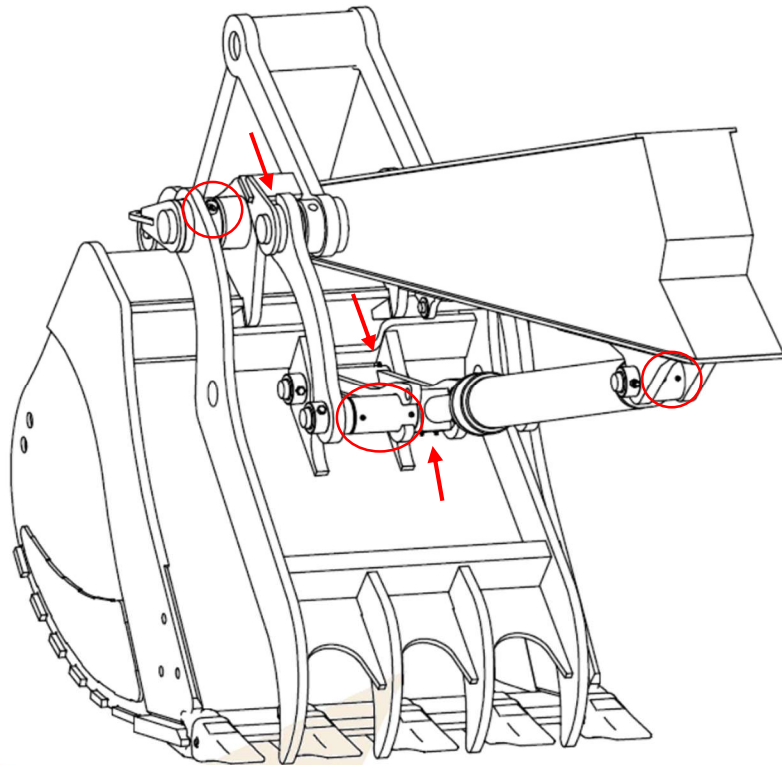
Procedure	Daily	Weekly
Clean attachment of dirt/debris prior to inspection, especially around cylinder.	X	
Inspect all equipment for damage, worn parts, cracked welds, etc. If a crack is found in either the steel structure or welds, the attachment must be removed from the machine and Craig Contacted immediately. <i>Contact Craig Tech Support (1-800-565-5007) for recommended weld procedures.</i>	X	
Check pins and bushings for play or wear. Replace if worn	X	
Hardware - replace missing or damaged bolts/fasteners, tighten as necessary	X	
Check for kinked/pinched or worn hoses. <i>Repair/reroute as necessary</i>	X	
Hoses - check for leaks. <i>Repair/tighten as necessary</i>	X	
Decals - replace worn or missing	X	
Lubricate grease points	X	
Ensure daily checks are completed		X



## MAINTENANCE

### LUBRICATION

The most crucial maintenance tip required for an excavator thumb is greasing. Greasing the pins on your thumb daily with use will help to ensure smooth operation over its lifetime. Look for grease points at every pin. A proper greasing technique involves pumping grease onto the fitting until you can visibly see the grease coming out around the pin. It is important to have grease come out into the gap around the pin because it protects the area surrounding the pin from dirt getting in and causing abrasive wear on your pins.



### TECHNICAL SUPPORT

If you have followed the maintenance instructions contained in this manual, you should have years of trouble-free operation from your Craig attachment. Should you encounter any issue or have any questions about your attachment please contact us at 1-800-565-5007 and ask for technical support.

### READING PRODUCT TAG

Craig Manufacturing Ltd. stamps a blue serial tag onto every attachment. The tag is often located on the rear of the attachment in the upper left corner. The information contained on this tag will be required for parts and support. Craig serial numbers begin with a "T" followed by the year then month of construction. For example, T1203 would denote the year 2012 and 03 the month of March.

## STORAGE



Disconnection from the machine and installation must be done by a qualified technician. NEVER trust that the hydraulic system will not fail. ALWAYS lower booms and attachments to the ground before leaving the cab or operator's station. DO NOT work under or around attachments or heavy items not supported by stands, blocks or safety chains. Furthermore, it is important to use chains and/or stands to steady unstable attachments or heavy components that may fall if being disconnected.

### END OF SEASON



- Clean equipment thoroughly
- Inspect for damage and order any replacement parts.
- Tighten all hardware and make sure there are no loose connections.
- Paint all replacement parts.
- Paint any bare surfaces to prevent rust.
- Lubricate all grease points. Refer to maintenance section.
- Coat exposed portions of cylinder rods with grease.
- Seal hydraulic system from contaminants.
- Secure all hoses in a manner that prevents potential damage during transport.
- Replace any illegible or missing decals.
- Store unit inside a clean, dry area to prolong life.

### BEGINNING OF SEASON

- Review entire operator's manual.
- Clean equipment
- Install any replacement parts.
- Secure all fasteners.
- Check hydraulic hoses for damage and replace as necessary.
- Replace missing or illegible decals.
- Refer to installation section for important information.
- Fully understand this manual and the prime mover operator's manual and take proper precautions prior to testing.

# SPECIFICATIONS

## TORQUE CHART - COURSE THREAD

Nominal Dia. (in.)	Threads per inch	 SAE J429 Grade 5				 SAE J429 Grade 8			
		Clamp Load (lbs.)	Tightening Torque (ft-lbs)			Clamp Load (lbs.)	Tightening Torque (ft-lbs)		
			Lubricated K = 0.15	Thread- locker K = 0.17	Zinc & Dry K = 0.20		Lubricated K = 0.15	Thread- locker K = 0.17	Zinc & Dry K = 0.20
1/4	20	2029	6.3	7.2	8.5	2864	9.0	10.1	11.9
5/16	18	3342	13	15	17	4719	18	21	25
3/8	16	4940	23	26	31	6974	33	37	44
7/16	14	6777	37	42	49	9568	52	59	70
1/2	13	9046	57	64	75	12771	80	90	106
9/16	12	11599	82	92	109	16375	115	130	154
5/8	11	14408	113	128	150	20340	159	180	212
3/4	10	21322	200	227	267	30101	282	320	376
7/8	9	29436	322	365	429	41556	455	515	606
1	8	38616	483	547	644	54517	681	772	909
1 1/4	7	53786	840	952	1121	87220	1363	1545	1817
1 3/8	6	64096	1102	1249	1469	103939	1786	2025	2382
1 1/2	6	77991	1462	1657	1950	126473	2371	2688	3162

## PARTS

To provide you with the most UP-TO-DATE part information, parts diagrams for this attachment have been moved to our Portal website. Please use these diagrams and parts lists to locate your replacement parts.

<https://portal.craigattachments.com/>

When servicing your attachment, remember to use only original manufacturer replacement parts. Substitute parts may not meet the standards required for safe and dependable operation.

To facilitate parts ordering when contacting any of our branches, please have the product serial number or product part number for your attachment ready to ensure that you receive the correct parts for your attachment.

The product serial number and product part number for your attachment should be recorded in the space provided in this manual. This information may be obtained from the serial number identification plate located on your attachment.

**NOTE: Most parts orders (in stock) received by 12:00pm (Atlantic Standard Time) can be shipped the same day or following business day.**

## WARRANTY

To provide you with the most UP-TO-DATE warranty information, warranty procedures, technical documents, product terms, and product registration, please go to our website at:

<https://www.craigattachments.com/>

## NOTES

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. In the bottom-left corner, there is a decorative graphic element consisting of overlapping semi-transparent shapes in light grey and pale yellow, creating a modern, abstract design.

## NOTES

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. In the bottom-left corner, there is a decorative graphic consisting of overlapping geometric shapes in light gray and light beige colors. The overall appearance is that of a clean, unused piece of stationery or a template for writing.





**HARTLAND BRANCH**

96 McLean Avenue  
Hartland, New Brunswick  
E7P 2K5 Canada

**CAMBRIDGE BRANCH**

315 Thompson Drive  
Cambridge, Ontario  
N1T 2B3 Canada

**BLACKFALDS BRANCH**

88 27323 TWP Rd 394  
Lacombe County, Alberta  
T4M 0S1 Canada

**LAWRENCEBURG BRANCH**

408 Commerce Way  
Ethridge, Tennessee  
38456 USA

**1-800-565-5007 • WWW.CRAIGATTACHMENTS.COM**