



EXM-TG

PIN-GRABBER COUPLER

OWNER'S MANUAL

Important safety and operation instructions inside

Read thoroughly before operating

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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 TrueGrip coupler 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 coupler 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:

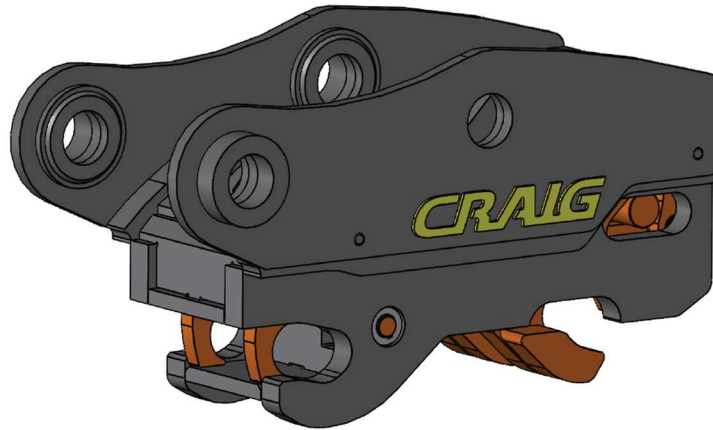
<https://www.craigattachments.com/product-registration/>

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.

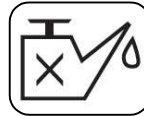
GETTING TO KNOW YOUR CRAIG TRUEGRIP COUPLER

The Craig TrueGrip coupler has a simple and reliable design. It features 2 independent locks and has visual safety indicators that allow the operator to ensure both the front locking knuckle and rear latch are engaged. Can work with OEM hydraulic kits (contact Craig for more details) or can be supplied with different options of Craig hydraulic kits.

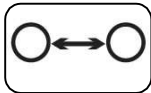
INTRODUCTION

**FULLY COMPLAINT**

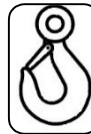
Meets ISO 13031:2016, EN 474, and AS 4772 standards for safe operating quick couplers. (Depends on hydraulic kit option)

**VERY LOW MAINTENANCE**

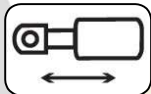
Minimal moving parts allows for a low maintenance coupler with no greasing required.

**MULTI-PIN CENTRE**

Features a multi-pin design to pickup attachments from most OEMs in the same machine category. (See Compatibility Chart)

**RATED LIFTING POINT**

Complete with rated lifting point installed.

**SIMPLE SINGLE CYCLE**

Simple to use, only requiring a single cycle to change attachments.

**VERSATILITY**

Attachments can be picked up in forward and reverse

MULTIPLE HYDRAULIC KIT OPTIONS

- ✦ Use existing machine coupler hydraulic kit – kit must supply constant locking pressure and Craig cannot guarantee safety unless a Craig hydraulic kit is used. See Installation section of this manual for more details.
- ✦ Craig Stick Mounted Hydraulic Kit – designed for easy install with only electrical connections back to cab.
- ✦ Craig Fully Independent Hydraulic kit – lines run back to tank – ISO 13031:2016 **compliant** installation.

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.

Keep attachment close to the ground when engaging/disengaging attachments!

It is possible to drop an attachment during engaging and disengaging procedures. Therefore, it is best to make sure the attachment is kept close to the ground. Visually check that the attachment is securely locked before operating. Follow the procedures outlined in the operation section of this manual. If coupler is not functioning properly, it must be checked/repared by a qualified service technician prior to use. Failure to do so could result in serious injury or death.

If attachment is loose on coupler, immediately stop use!

If the attachment seems loose on the coupler, please immediately stop use and call Craig Technical Support at 1-800-565-5007. There could be something wrong that could affect the safety of the coupler.

Craig hydraulic kit recommended for safety!

Since hydraulic systems can vary in many different aspects, Craig cannot know whether the coupler may be operated safely with other hydraulic systems. Because of the unknown properties of other hydraulic systems, **Craig takes no responsibility for the safety of this coupler if it is operated with a hydraulic system other than one provided by Craig.**

DO NOT move attachments by front pin only!

Always engage both locking mechanisms before moving or swinging the excavator. It is possible to drop the attachment if only one but not both front and rear locking mechanisms is engaged.

SAFETY INSTRUCTIONS**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:

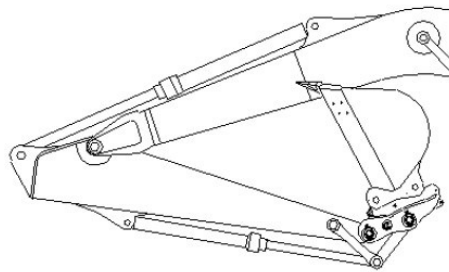
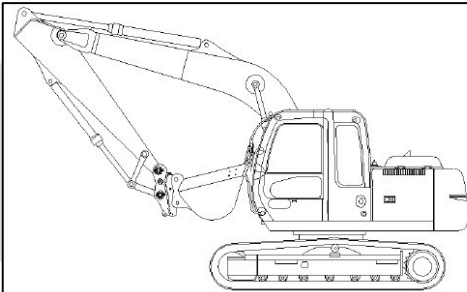
- It is important to wear an approved respirator when sanding or grinding paint.
- If you use a paint stripper or solvent, remove the stripper with soap and water.
- Remove solvent or paint stripper containers and other flammable material from the welding/heating area.
- Allow fumes to disperse at least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

Check coupler for debris before operating!

Debris could build up in the coupler during use. Make sure the debris is cleared out before operation. Debris can interfere with the operation of the locking mechanisms and could affect the safety of the coupler.

Understand the change in performance of attachments.

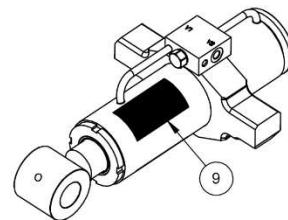
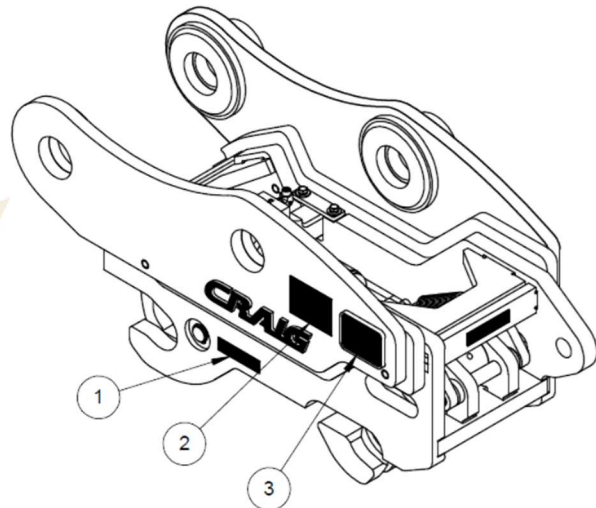
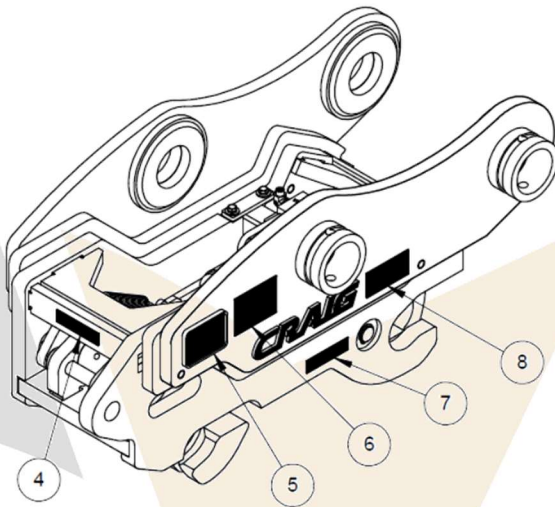
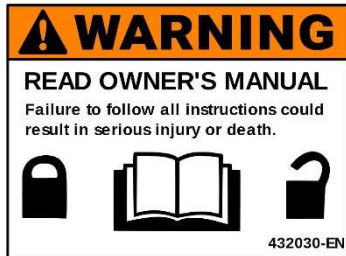
Operators should be aware that the use of this coupler may affect the machine's breakout force, as well as the balance of the machine. Furthermore, the added weight of the coupler will affect the lifting capacity of the machine, as well as any lifting attachments. Lastly, depending on the attachment, it may be possible for the attachment to collide with the excavator cab or the boom. The operator should familiarize themselves with any potential interference locations prior to use.



DECALS

IDENTIFICATION LABELS

Item#	Part#	Description
1	432071-XX	DECAL, EXM-TG, INSPECT SNAP RING (RIGHT)
2	432030-XX	DECAL, EXM-TG, READ OPERATOR'S MANUAL
3	-	PARTS TAG
4	432069-XX	DECAL, EXM-TG, CHECK SET SCREW DAILY
5	-	SERIAL TAG
6	432031-XX	DECAL, EXM-TG, OPERATOR'S MANUAL IN CAB
7	432070-XX	DECAL, EXM-TG, INSPECT SNAP RING (LEFT)
8	489352-XX	DECAL, EXM-TG, PRESSURE SETTING
9	493392-XX	DECAL, EXM-TG, CHECK VALVE

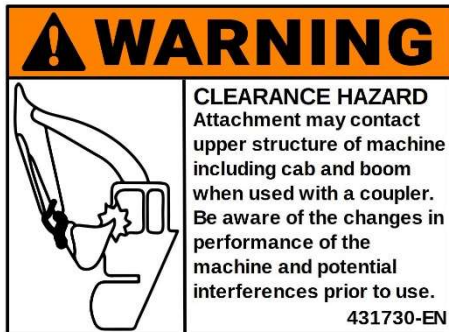


DECALS

IN-CAB DECALS

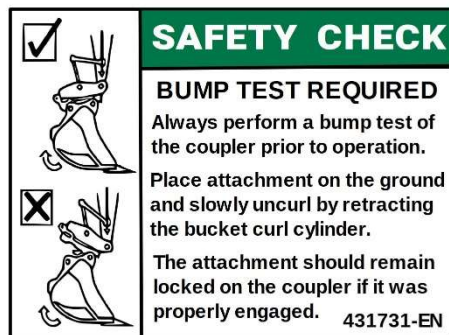
There are safety decals that come with this product that are required to be put in the cab of the machine that the product will be installed on. They detail the hazards to watch out for, and the safe operating procedure of the product. They must be installed in the cab in a spot that is in clear view of the operator.

CRAIG FULLY INDEPENDENT HYDRAULIC KIT



Part#: 431730-XX

Decal, Clearance Hazard



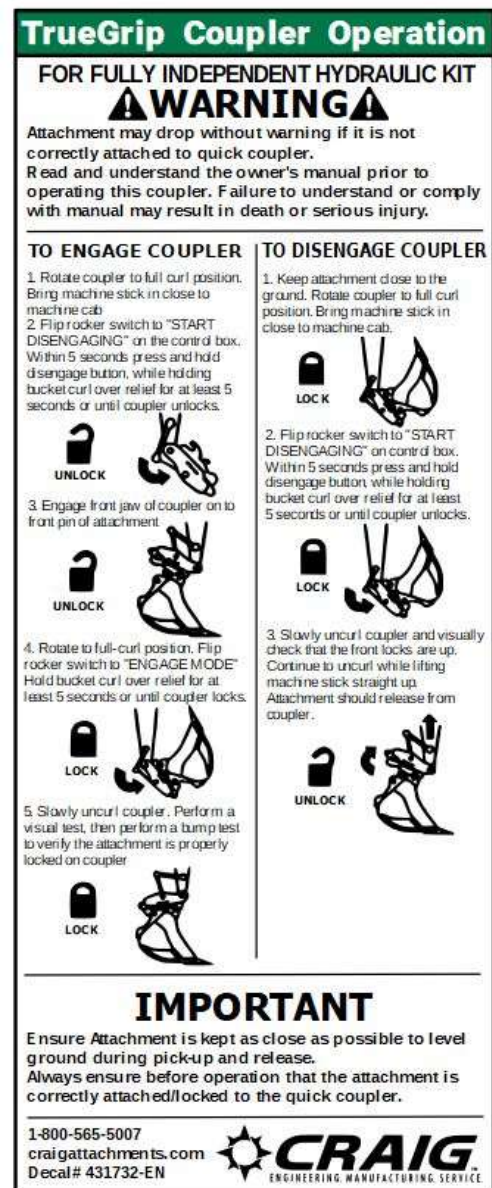
Part#: 431731-XX

Decal, Bump Test, Required



Part#: 431729-XX

Decal, Misuse Hazard

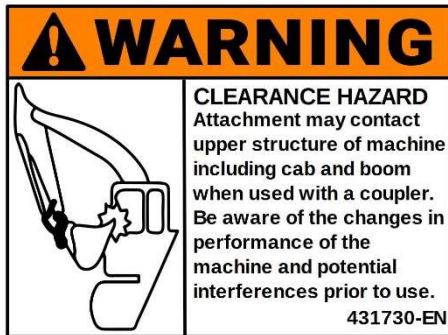


Part#: 431732-XX

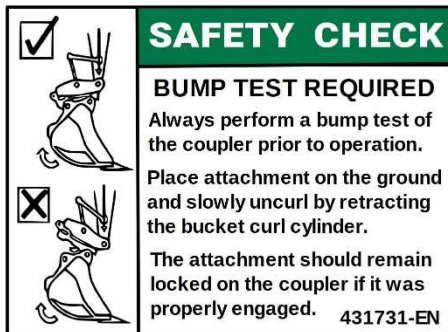
Decal, TrueGrip Coupler
Operation For Fully
Independent Hydraulic Kit

DECALS

CRAIG STICK MOUNTED HYDRAULIC KIT



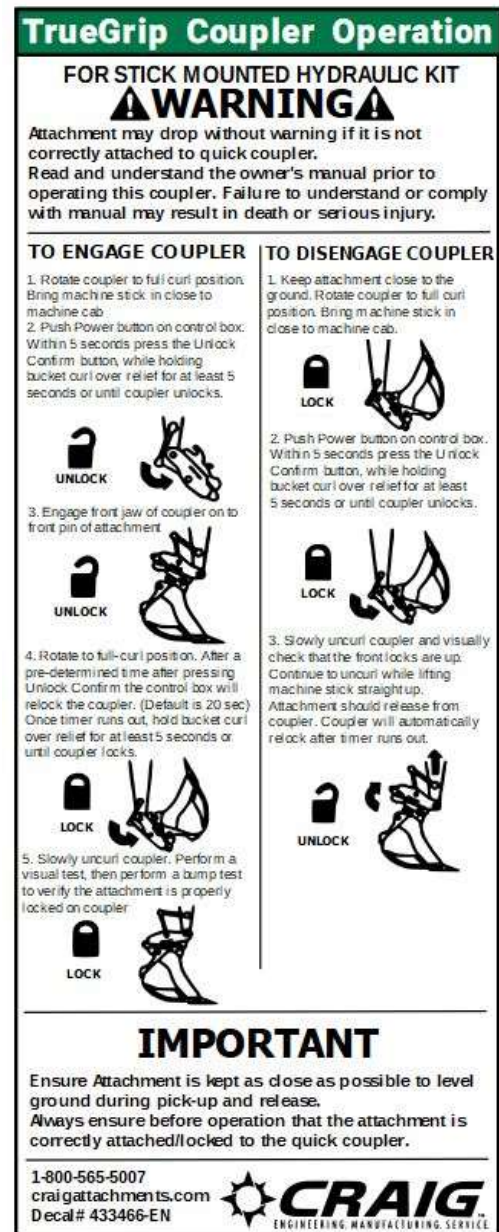
Part#: 431730-XX
Decal, Clearance Hazard



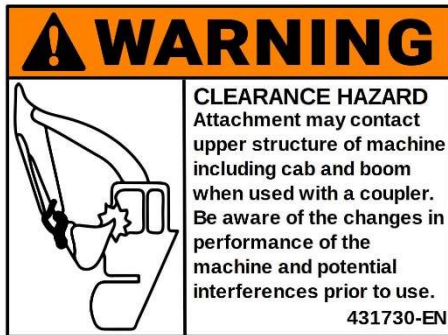
Part#: 431731-XX
Decal, Bump Test, Required



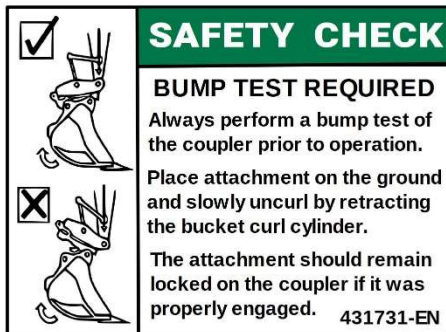
Part#: 431729-XX
Decal, Misuse Hazard



Part#: 433466-XX
Decal, TrueGrip Coupler
Operation For Stick Mounted
Hydraulic Kit

DECALS**USING OEM HYDRAULIC KIT**

Part#: 431730-XX
Decal, Clearance Hazard



Part#: 431731-XX
Decal, Bump Test, Required



Part#: 431729-XX
Decal, Misuse Hazard

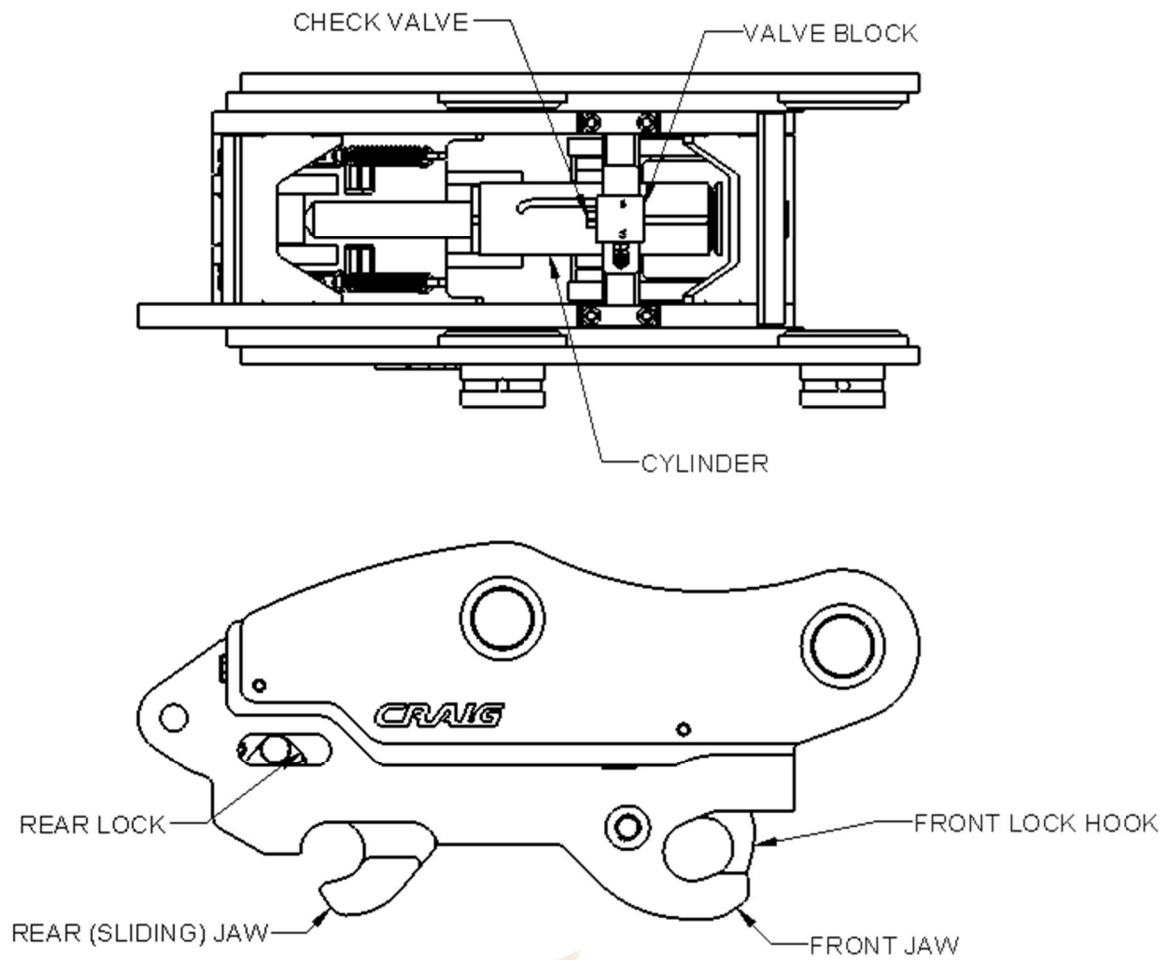
Coupler Operation Decal

If you chose to use the OEM hydraulic kit already installed on the machine, then you do not need to install any coupler operation decal that comes with the Craig TrueGrip coupler. The coupler operation decals we provide are for our hydraulic kits and are not the same operation instructions as the OEM hydraulic kit.

For operation instructions for the OEM hydraulic kit, please refer to your OEM.

INSTALLATION INSTRUCTIONS

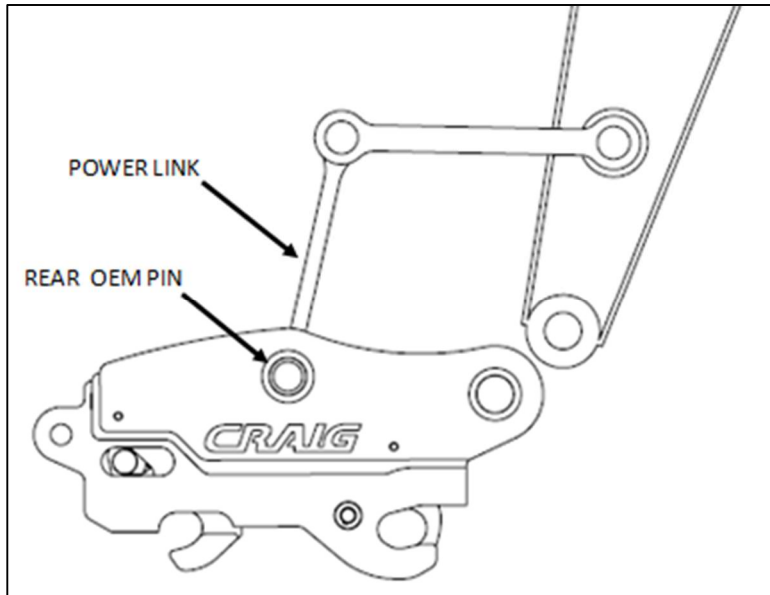
NOMENCLATURE



INSTALLATION INSTRUCTIONS

INSTALLING COUPLER TO MACHINE

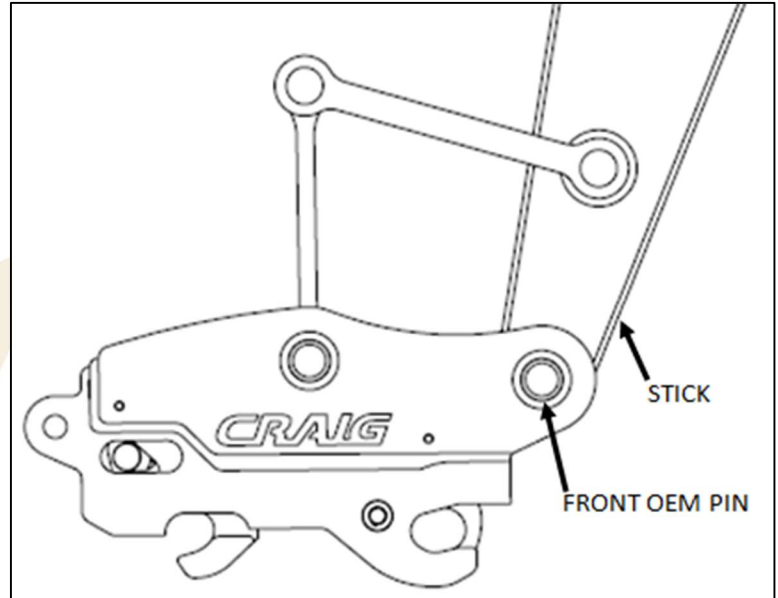
NOTE: Refer to the OEM manual of the machine for more in depth and specific instructions for installing pin-on attachments (like this coupler) on to the machine.



☀ Align the rear pin of the TrueGrip coupler with the power link of the machine and insert the OEM pin.

☀ Fit shims and O-rings as required. Reference the machine's OEM manual for these instructions.

- ☀ Align the front pin of the TrueGrip coupler with the stick and insert the OEM pin.
- ☀ Fit shims and O-rings as required. Reference the machine's OEM manual for these instructions
- ☀ Fit retaining bolts into the pinlocks on the TrueGrip coupler as per the machine's OEM manual.



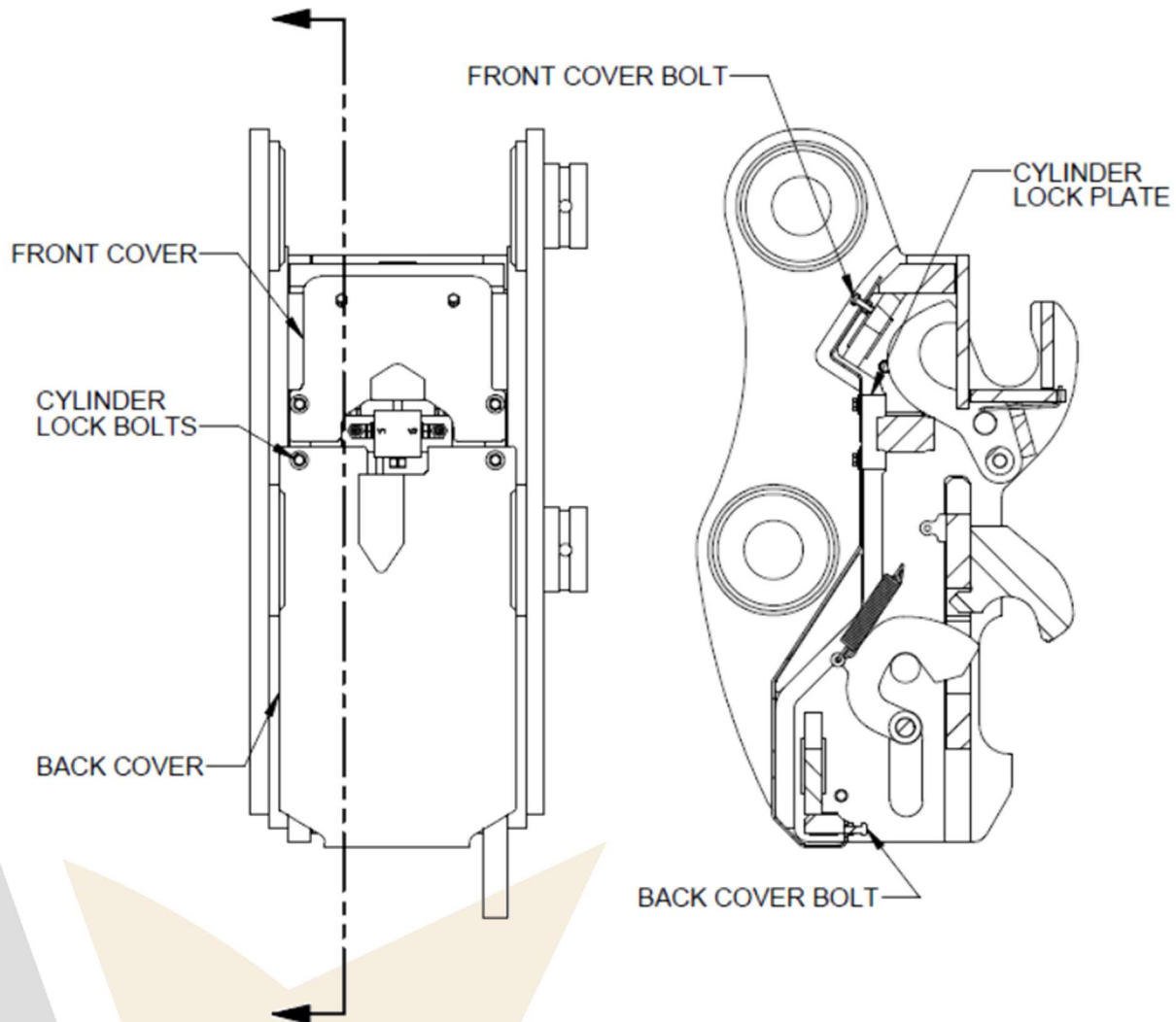
NOTICE

There is at least one set of soft pins that will come with every TrueGrip coupler. Please do not use these pins for pinning the coupler to the machine. The soft pins do not have a hard finish and wear quicker and are meant to be used in attachments that the coupler will pick up. The reason for the soft pins is to prevent wear occurring on the coupler, and to ensure the coupler grips the pins better.

INSTALLATION INSTRUCTIONS

INSTALLING COVERS

The front and back cover plates are used to protect the cylinder, springs and locking components from damage and keep debris out of the locking mechanism.



To install the cover plates, first position the coupler level to the ground to prevent the cylinder lock bolts from falling out. If there is an existing cylinder lock plate, remove the bolts and replace with the new cylinder lock plate that comes with the covers. Before adding the cylinder lock bolts, slide the front cover over the front crosspiece of the coupler, adjusting the front cover bolt and tightening once in place. Slide the back cover into place cupping the back crosspiece and adjusting/tightening the back cover bolt. Once the covers are in place, add the cylinder lock bolts and tighten everything.

INSTALLATION INSTRUCTIONS

INSTALLING FRONT LOCK ASSEMBLY

Removing front lock assembly:

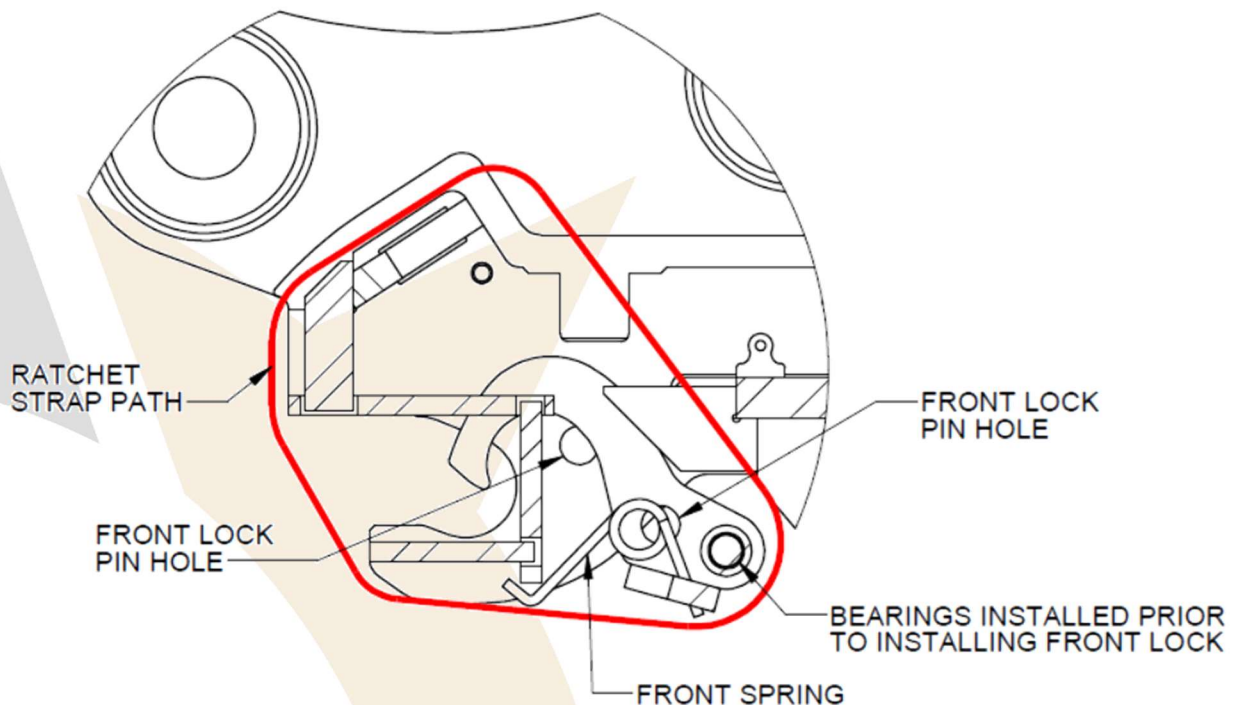


pin.

Spring loaded! Use ratchet straps and/or blocks to secure and prevent sudden movements of the front lock when removing the

Replacing front lock assembly:

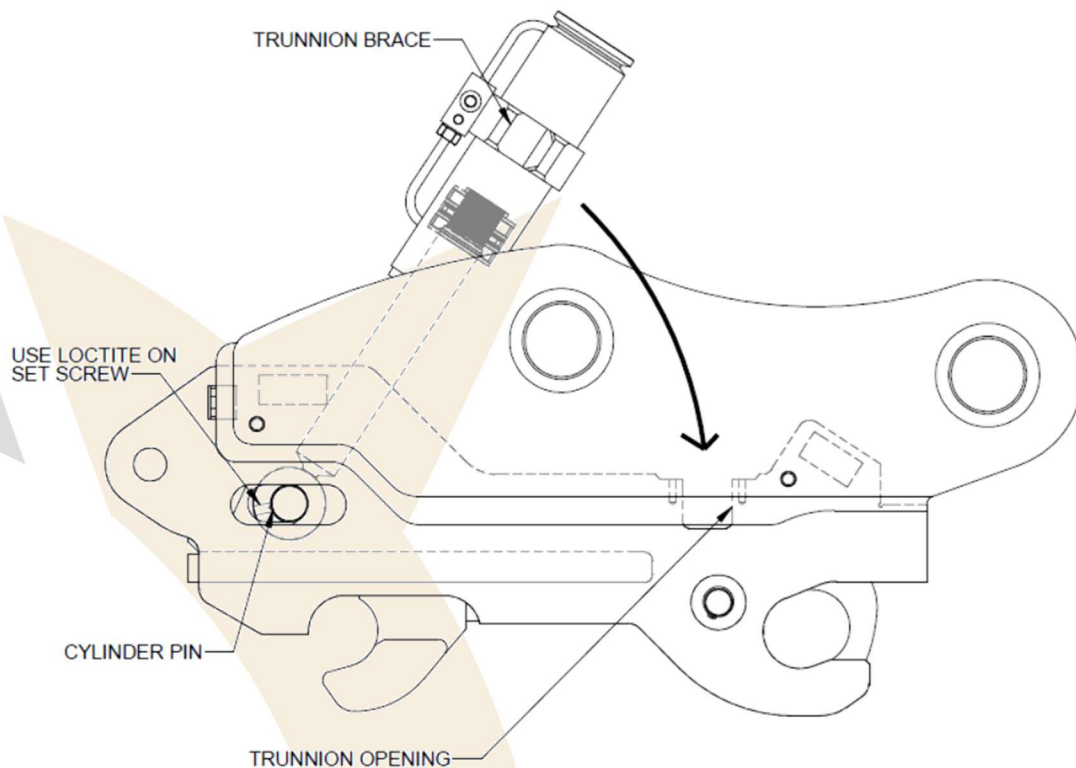
- The covers must be removed to access the area to install front locks.
- Remove or rotate the cylinder out of the way. Be sure not to damage the steel hose lines.
- Position the front lock inside the coupler close to the location of the lock pin hole through the side of the chassis.
- Hook the front springs in under the chassis and through the slots in the front lock cross-piece (see image below)
- Use ratchet straps to draw in the front lock until the front lock holes are lined up in the chassis (see ratchet strap path below).
- Use of pry bars, punches, hammers may be required to install pin. Be careful not to damage the head of the pin where the snap ring is located.
- Install snap rings on both ends of pin.



INSTALLATION INSTRUCTIONS

INSTALLING SLIDING JAW AND CYLINDER

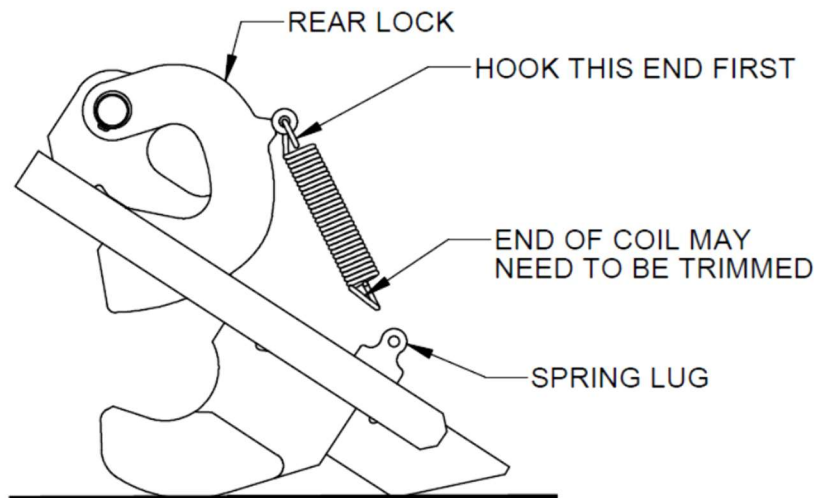
- The covers must be removed during this operation.
- The rear locks and springs must be installed on the sliding jaw prior to sliding into the coupler.
- The cylinder must be extended prior to installing.
- Position the coupler level with the ground so that the sliding jaw can be inserted horizontally. Ensure there is no obstruction for the sliding jaw.
- Use of crane is recommended for any object over 50 lbs.
- Slide the rear jaw into the back of the coupler until the slot in the jaw is lined up with the slot in the chassis (see below).
- Insert the cylinder shaft end down in between the cylinder lugs of the rear jaw.
- Push the cylinder pin through the slot opening into the cylinder eye. The pin needs to be perfectly centered so that the set screw will seat into the groove in the middle of the cylinder pin.
- Rotate the cylinder down into the coupler. You may need to shift the sliding jaw in order to allow the trunnion brace to drop down into the opening.
- Install set screw for cylinder eye using Loctite 243. NOTE: removing the set screw once Loctite is dry may require applying heat to the area.
- Install the cylinder lock plates and bolts.



INSTALLATION INSTRUCTIONS

INSTALLING REAR LOCKS

- The slide assembly should be removed from the coupler prior to removing/replacing the rear locks and springs.
- Pin the rear locks to the sliding jaw prior to installing the springs and add the snap rings to both ends of pin.
- Position the sliding jaw on a solid level surface as shown below and use straps to secure it when attempting to install the springs.
- The ends of the spring coil may need to be trimmed prior to fitment but be sure not to trim too much that the hook does not curl around enough to be securely attached.
- Hook each spring to the rear lock spring hole first, then use a tool that can hook the other end of the spring to pull it down onto the spring lug of the sliding jaw.



HYDRAULIC KIT INSTALLATION

For instructions on installing either the Craig Fully Independent Hydraulic Kit or the Craig Stick Mounted Hydraulic Kit, please refer to the install manual that would have been a part of the hydraulic kits that were purchased with the coupler. If no Craig hydraulic kit was purchased, please refer to the instructions below for using an OEM hydraulic kit.

USING OEM HYDRAULIC KIT



It is the responsibility of the installer to ensure that an OEM hydraulic kit will provide the same level of safety as the Craig provided hydraulic kit.

INSTALLATION INSTRUCTIONS

Craig takes no responsibility for the safety of a coupler if it is operated with a hydraulic kit other than the one provided by Craig.



The following features are strongly recommended when evaluating safety of a hydraulic kit:

- The system must use full system pressure to lock and unlock the coupler. Servo/pilot pressure is not sufficient to provide a safe level of use.
- The system must have a free line to tank to make sure there is no back pressure that may interfere with locking and unlocking.
- The system must provide constant pressure to the shaft end of the coupler cylinder during normal use to ensure the coupler is always locked.
- The system must have a feature to prevent the coupler from unlocking when it is not intended to. For instance, both Craig provided hydraulic kits require the operator to fully curl in to unlock the coupler. It will not unlock in any other position. This safety feature is there to make sure the attachment does not immediately drop from the coupler when unlocking.
- The controls in the cab must be designed in a way that they are protected against inadvertent activation.
- There must be an acoustic signal (i.e., buzzer) that must be in operation during the period the coupler is unlocked.
- Unlocking of the coupler must not be possible if the acoustic signal becomes non-operational.
- The operation of this hydraulic kit requires the attachment be in a safe position as to not be dropped during engaging or disengaging.
- If the operator must use the joysticks on the machine to increase flow or pressure as part of the unlocking procedure, then the controls must be designed in a way that the operator must press and hold a switch or button during the entire unlocking procedure, or the control must be on a timer that relocks the coupler after a given amount of time.
- If the operator must use the joysticks on the machine to increase flow or pressure as part of the unlocking procedure, then the controls must be two independent controls which must be arranged in a way that they cannot be simultaneously operated by one hand.

INSTALLATION INSTRUCTIONS

Be sure to check and torque any bolts to the correct tightening torque.

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

OPERATION INSTRUCTIONS

INTENDED USE

The Craig TrueGrip coupler is designed as a tool to provide safe and efficient way for the operator to quickly engage and disengage between attachments with ease. It can accommodate a variety of different attachments, including demolition attachments. As well as it can accommodate different makes and models of pin-on hook-ups, as long as the attachment is built for the same weight class as the machine. Use outside of this scope is considered misuse.

**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 – ENGAGING/DISENGAGING AN ATTACHMENT

**WARNING**

Do not change or release an attachment near any person or in any areas that may result in accident or injury. Engage/Disengage attachments on level ground clear of bystanders.

TRANSPORTING

Follow all local government regulations that may apply along with recommended tiedown points and any equipment safety precautions at the front of this handbook when transporting your attachment.

MEASURE TRAVEL HEIGHT AND LENGTH PRIOR TO TRANSPORTING

NOTICE

This coupler adds extension to attachments, and therefore the travel height/ and or length of the machine will increase with this coupler and an attachment installed. Therefore, the travel height and length in the machine's specification will not be accurate. The actual travel height and length should be measured before transporting to eliminate potential issues.

OPERATION INSTRUCTIONS**PRE-START CHECKLIST**

Follow this pre-start checklist before operating this coupler to ensure the safety of the coupler. This is recommended as a daily check.

Operator's Name:		TrueGrip Model:	
Craig Serial #:		Date:	

In Cab

Are the TrueGrip operating controls functioning correctly?	<input type="checkbox"/>
Is the Operator's Manual in the cab of the machine?	<input type="checkbox"/>

Hydraulic System

Check for wear or damage to hoses or fittings	<input type="checkbox"/>
Check hoses are free from pinch points	<input type="checkbox"/>
Check for visible hydraulic leaks	<input type="checkbox"/>

TrueGrip Coupler

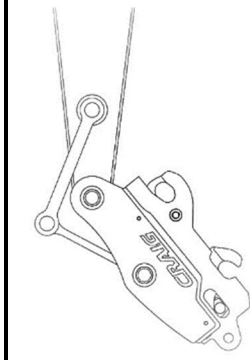
Check wear and damage to hitch/attachment pins and retainers.	<input type="checkbox"/>
Check security of mounting pins, locking bolts and nuts.	<input type="checkbox"/>
Check lift eye and shackle for wear and damage.	<input type="checkbox"/>
Check coupler cylinder set screw for looseness	<input type="checkbox"/>
Check snap rings to make sure they are secure.	<input type="checkbox"/>
Is the attachment safe use?	<input type="checkbox"/>

Operator Signature:	Manager Signature:
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OPERATION INSTRUCTIONS

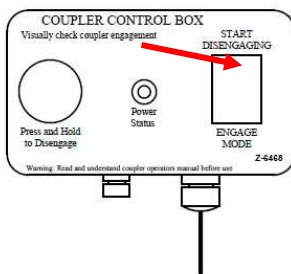
UNLOCKING COUPLER TO ENGAGE AN ATTACHMENT

STEP 1:



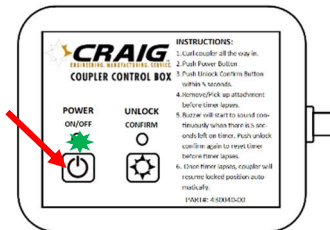
Curl the coupler all the way in so that the bucket curl cylinder goes over relief, as shown on the left.

CRAIG FULLY INDEPENDENT HYDRAULIC KIT STEP 2:



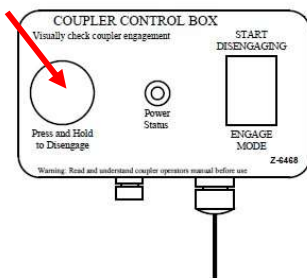
Once the coupler is curled all the way in, flip the rocker switch to "START DISENGAGING", as shown in the picture to the left. **At this time, the buzzer will start sounding constantly, and the button will light up.**

CRAIG STICK MOUNTED HYDRAULIC KIT STEP 2:



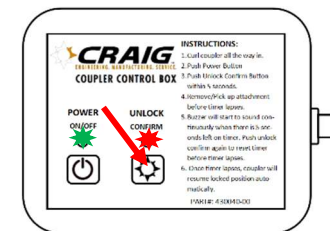
Once the coupler is curled all the way in, press the Power button as shown in the picture to the left. At this time the buzzer will start sounding constantly and the Power indicator LED will be solid green.

CRAIG FULLY INDEPENDENT HYDRAULIC KIT STEP 3:



Within 5 seconds of flipping the rocker switch, press and hold the disengage button for at least 2 seconds (see picture to the left). **The buzzer will start to beep once every second, and the button will start flashing.** Hold the bucket curl cylinder over relief for at least 5 seconds until you see the coupler fully unlocked. **NOTE:** The control box will lock out if you wait longer than 5 seconds to hit the button. If that happens, flip the rocker switch back to "ENGAGE MODE".

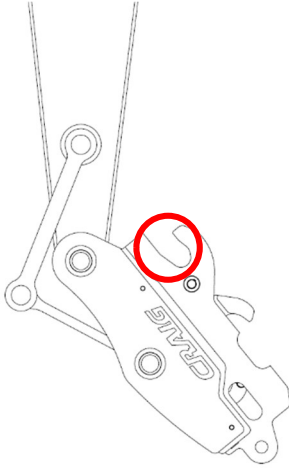
CRAIG STICK MOUNTED HYDRAULIC KIT STEP 3:



Within 5 seconds of pressing the Power button, press the Unlock Confirm button. (See picture to the left) **The buzzer will start to beep twice every second, and the Unlock Confirm indicator LED will start flashing red.** Hold the bucket curl cylinder over relief for at least 5 seconds until you see the coupler fully unlocked. **NOTE:** The control box will automatically revert to idle mode if you wait longer than 5 seconds to hit the Unlock Confirm button.

OPERATION INSTRUCTIONS

CRAIG FULLY INDEPENDENT HYDRAULIC KIT STEP 4:



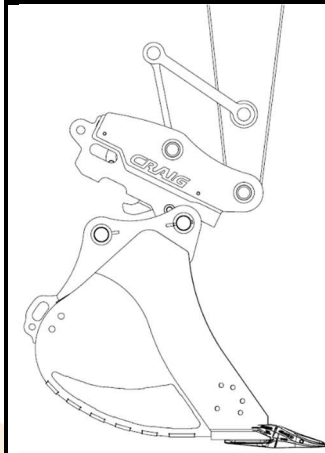
Visually check to make sure that the front lock is up. (See picture to the left) **The buzzer will continue to beep once every second, to alert you that the coupler is still unlocked.** Now, the coupler is ready to engage onto an attachment.

CRAIG STICK MOUNTED HYDRAULIC KIT STEP 4:

Visually check to make sure that the front lock is up. (See picture to the left) **The control box is designed to automatically lock the coupler after a pre-determined amount of time after pressing the Unlock Confirm button.** (The default is 20 seconds) You must unlock the coupler and pick up the attachment before this time lapses, and the coupler re-locks. **The buzzer will continue to beep twice every second, until there is only 5 seconds left on the timer, at which point the buzzer will start to sound continuously.** If you need more time, you can press the Unlock Confirm button again to reset the timer.

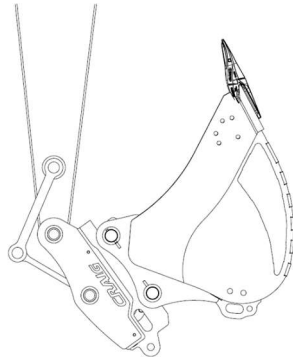
ENGAGING AN ATTACHMENT

STEP 5:



Curl the coupler out so that the front jaw of the coupler can line up with the attachment. Slide the front jaw into the front pin of the attachment. (See picture to the left).

STEP 6:

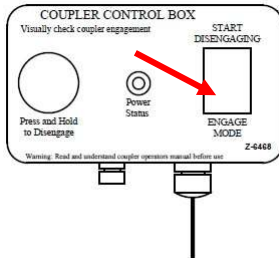


Once the front jaw is on the pin, curl the coupler and attachment inwards. You may have to lift the boom a little. The rear pin should now be contacting the coupler

OPERATION INSTRUCTIONS

LOCKING COUPLER ONTO AN ATTACHMENT

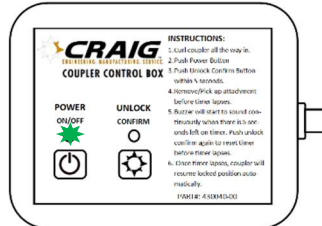
CRAIG FULLY INDEPENDENT HYDRAULIC KIT STEP 7:



Once the coupler and attachment are curled in, and the rear boss is now seated in the rear saddle, flip the rocker switch to "ENGAGE MODE". (See picture to the left) **Once the rocker switch is**

flipped, the buzzer will shut off and the control box will revert to idle mode. Continue to hold the bucket curl over relief for at least 5 seconds until the coupler locks.

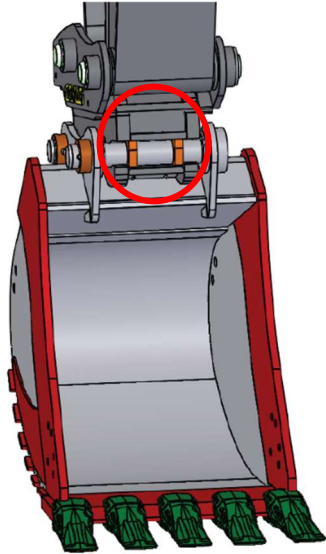
CRAIG STICK MOUNTED HYDRAULIC KIT STEP 7:



After the timer has lapsed, the coupler will automatically lock the attachment on, and the control box will revert to idle mode. **At this time, the buzzer**

will shut off and the Power indicator LED will flash green continuously. Continue to hold the bucket curl over relief for at least 5 seconds until the coupler locks.

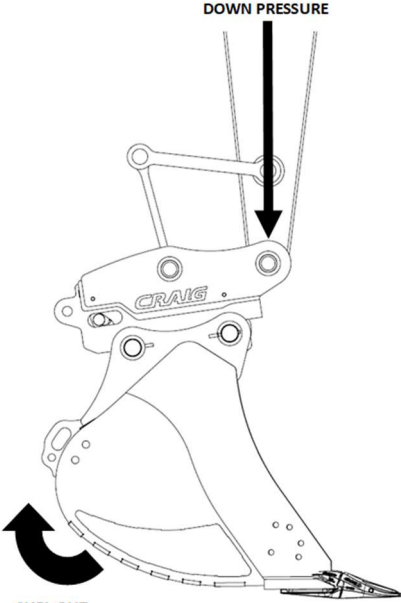
VISUAL CHECK



STEP 8:

Check that the front lock hooks are down. If they are not completely down, drop the attachment and start again.


OPERATION INSTRUCTIONS



BUMP TEST

STEP 9:

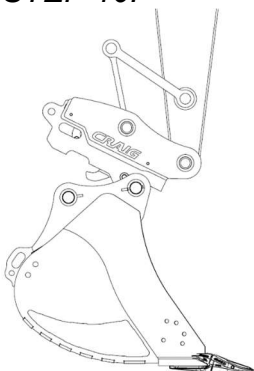
Lastly, a bump test should be done to make sure that the coupler is properly locked on to the attachment. Put the attachment onto the ground and apply some down pressure using the boom or stick. (See picture to the left) Then, curl the coupler and attachment out while pressing the attachment into the ground, and try to get the coupler to come off the rear saddle. If the coupler moves off the rear saddle, drop the attachment and repeat steps 1 through 8.

 **CAUTION**

Confirm that the coupler fits tight to the attachment with no movement. If movement exists check the coupler and hydraulics for any issue.

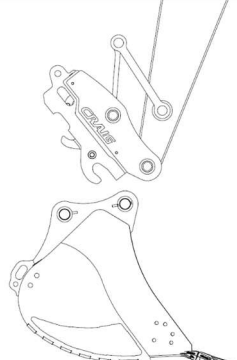
UNLOCKING COUPLER TO DROP ATTACHMENT

STEP 10:



Perform steps 1-4, then curl the coupler out so that it first sets the attachment level on the ground, then separates from the rear pin of the attachment.

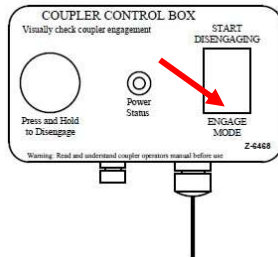
STEP 11:



Once the coupler is free from the rear saddle, continue to curl the coupler all the way out and slide the front boss of the coupler out of the front saddle.

OPERATION INSTRUCTIONS

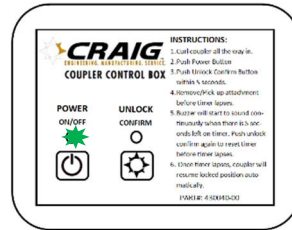
CRAIG FULLY INDEPENDENT HYDRAULIC KIT STEP 12:



Lastly, once the coupler is free from the attachment. Flip the rocker switch to "ENGAGE MODE", see picture to the left. **Once the rocker switch is flipped, the buzzer will shut off and the control box**

will revert to idle mode.

CRAIG STICK MOUNTED HYDRAULIC KIT STEP 12:



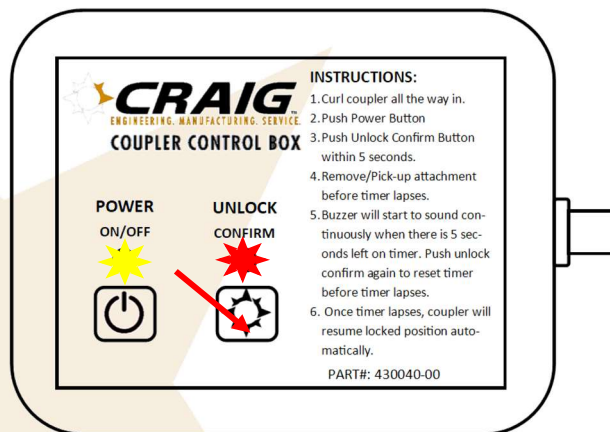
After the timer has lapsed, the coupler will automatically relock, and the control box will revert to idle mode. **At this time, the buzzer will shut**

off and the Power indicator LED will flash green continuously.

ADJUSTING TIMER ON CRAIG STICK MOUNTED HYDRAULIC KIT

The control box that comes in the Craig Stick Mounted Hydraulic Kit automatically locks the coupler after a pre-determined time. The default setting is 20 seconds to disengage the attachment from the coupler, before the coupler automatically re-locks. To better fit the operator's experience level, we have added the ability for the operator to adjust the duration of the timer to 3 different settings.

When the system is in idle mode, Power indicator LED is flashing green, press and hold the Unlock Confirm button for at least 5 seconds. This will signal the control box to enter programming mode. The Unlock Confirm indicator LED will start flashing red rapidly and the buzzer will sound for 2 seconds continuously to acknowledge that it is in programming mode.



Once the control box is in programming mode, the Power indicator LED will light up with a colour showing the current setting of the device. The 3 different settings will be differentiated by 3 different colors on the Power indicator LED. Please refer to table below for timing settings.

OPERATION INSTRUCTIONS

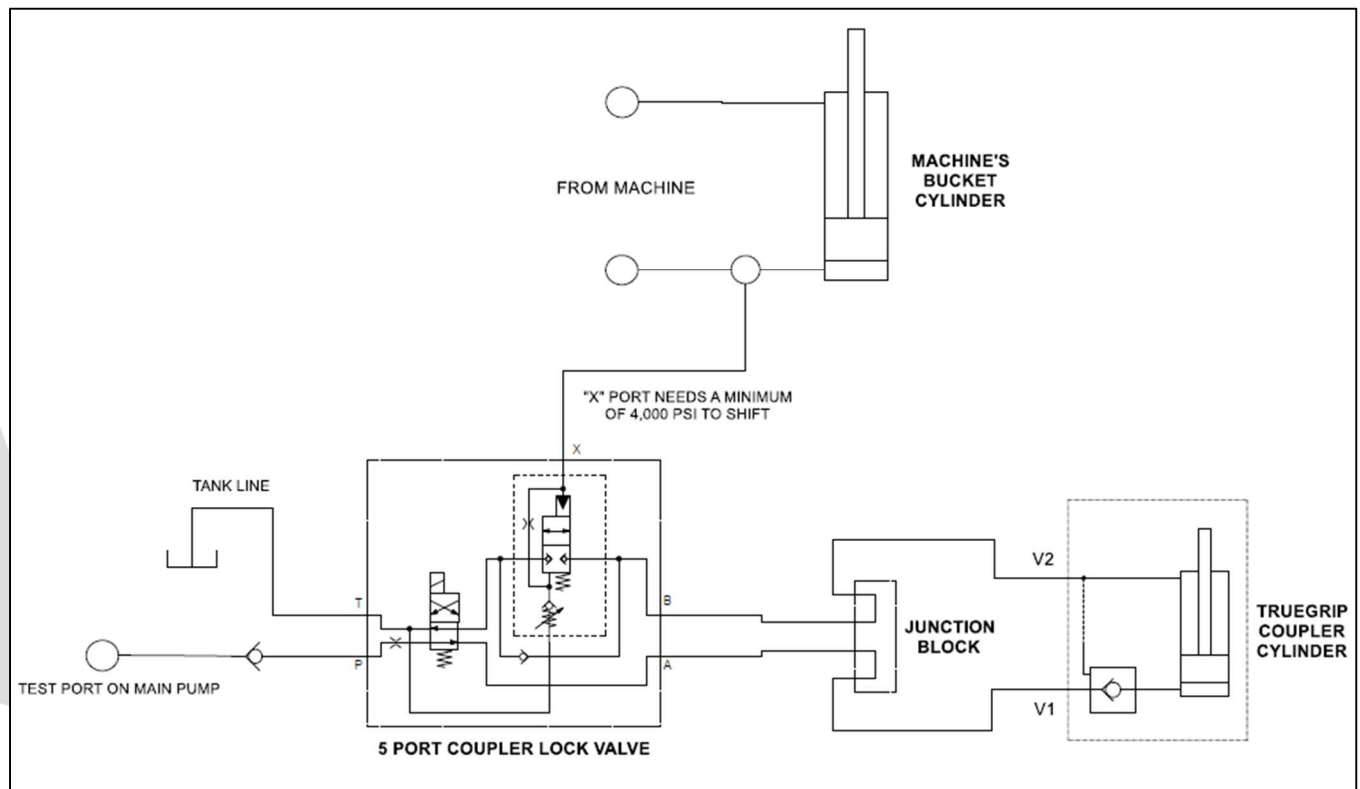
Color of the Power LED	Duration Coupler will be Unlocked
Blue	10s
Red	15s
Yellow	20s

Upon pressing the Power button in programming mode, the buzzer will sound for a short duration to acknowledge the button press and the Power indicator LED will cycle through the 3 colors thereby changing the setting.

Once the desired time is set, press the Unlock Confirm button to save the setting in the device. The buzzer will sound for 2 seconds continuously to indicate exit from programming mode and entry back to idle mode.

THEORY OF OPERATION

CRAIG FULLY INDEPENDENT HYDRAULIC KIT



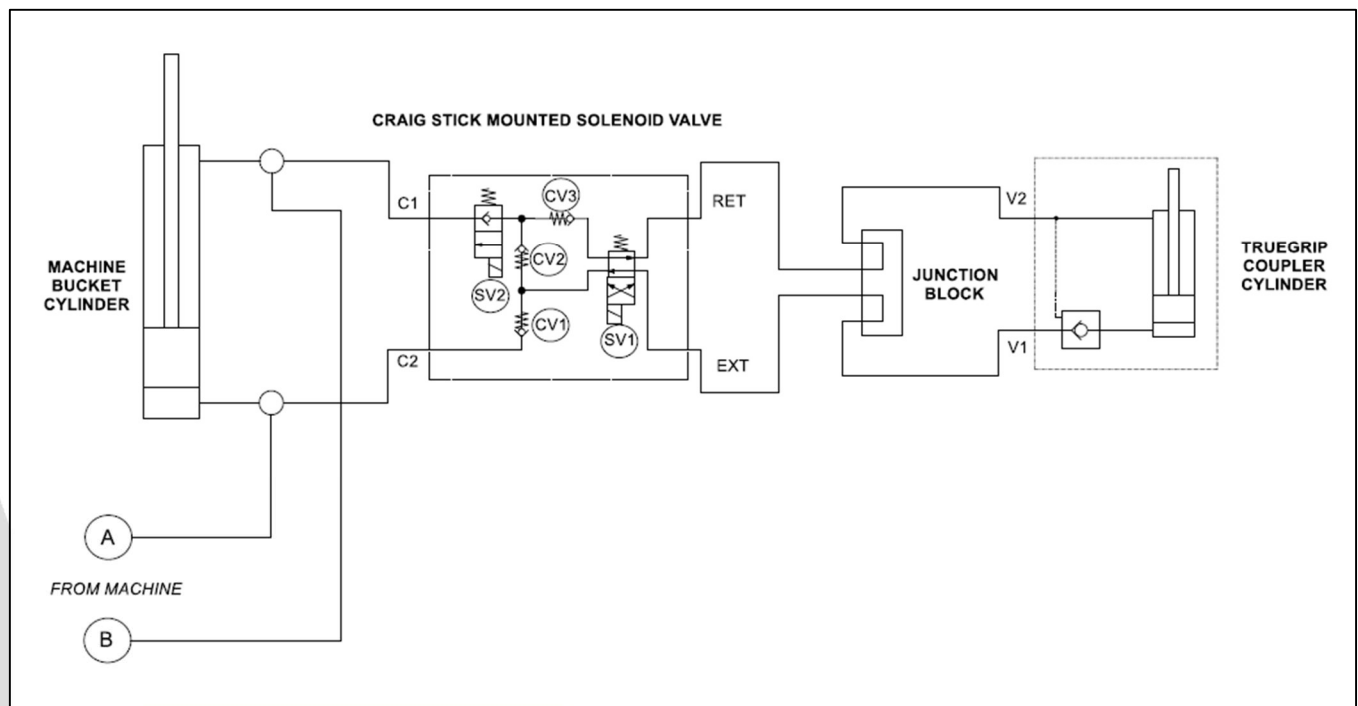
The schematic shown above is currently in its LOCKED state. (No electrical power going to solenoids) Pressure is hooked into the test port on the main pump, and so there will be constant pressure going through port "P" on the 5 port coupler lock valve, and exits through port "A" to the barrel end of the TrueGrip coupler cylinder, constantly keeping the cylinder extended. Therefore, the coupler constantly keeps tightening.

OPERATION INSTRUCTIONS

With the rocker switch flipped to “START DISENGAGING” and the disengage button pressed, electrical power is applied to the solenoid on the 5 port coupler lock valve. This allows pressure to go toward a second pilot operated solenoid valve. This pilot operated solenoid valve reads pressure on the machine’s bucket curl cylinder, and when the pressure on the bucket curl cylinder exceeds 4,000 PSI, it will shift and allow fluid from port “P” to go to port “B” and to the rod side of the TrueGrip coupler cylinder to UNLOCK. This is why you must hold the bucket curl cylinder over relief while unlocking, because the TrueGrip coupler will not unlock unless the 5 port coupler lock valve reads 4,000 PSI on the bucket curl cylinder.

THEORY OF OPERATION

CRAIG STICK MOUNTED HYDRAULIC KIT



The schematic above is shown in its LOCKED state. (No electrical power to the solenoids) System pressure applied to the bucket cylinder lines, “A” and “B” is teed off through gauge ports (supplied in the Craig Stick Mounted Hydraulic Kit) to valve port “C2” and “C1” respectively. Pressure is then sent through CV1 or SV2/CV2 through solenoid SV1 and pressurizes the barrel end of the TrueGrip coupler cylinder. The system maintains a positive force for locking the rear lock while the bucket cylinder is pressurized.

With the Power button on and the Unlock Confirm button on, electrical power is applied to both solenoids SV1 and SV2. The bucket cylinder line will have to be pressurized using the bucket curl in function on the machine to allow pressure to go through CV1

OPERATION INSTRUCTIONS

and SV1 and that pressurizes the rod end of the TrueGrip coupler cylinder to retract the rear lock. Fluid from the barrel end of the TrueGrip coupler cylinder moves through the “EXT” port back through SV1, CV2, and SV2 and drains into line B. When line B is pressurized, the TrueGrip coupler cylinder cannot be retracted. After the pre-determined time lapses, the control box will deenergize the solenoids automatically, which will relock the coupler.

LIFTING EYE SAFE USAGE

This coupler is designed with a lifting eye at the rear of the coupler for material handling. The rated lifting capacity is indicated on the coupler serial tag. It is also listed in the specifications section of this manual. The lift capacity may be further limited by the lifting capacity of the machine. Refer to the machine manufacturer for specifications and correct lifting procedures. Also follow all manufacturer instructions for the shackle, chains, and any other lifting equipment.



WARNING

Failure to follow proper lifting procedures could result in serious injury or death. Never use the lift eye on the coupler when coupled to an attachment. DO NOT use any lift eye on the attachment when it is coupled to this coupler. Decouple the attachment to use the coupler lift eye. **NOTICE:** This is not only safer but increases the lift capacity of the machine and lowers risk of property damage.

Inspect all lifting equipment daily prior to use. Ensure all personnel are clear of the load before lifting, lowering, or moving.

Use a bolt type anchor shackle with an equal or greater certified working load limit than the eye.

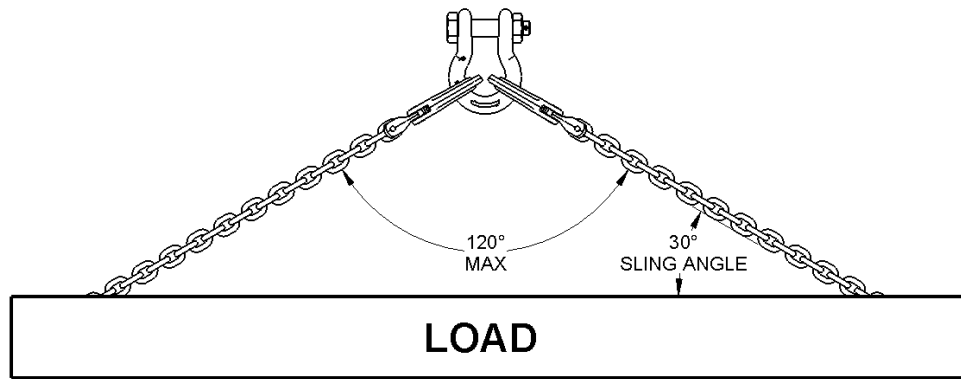
DO NOT USE ROUND PIN
ANCHOR SHACKLES



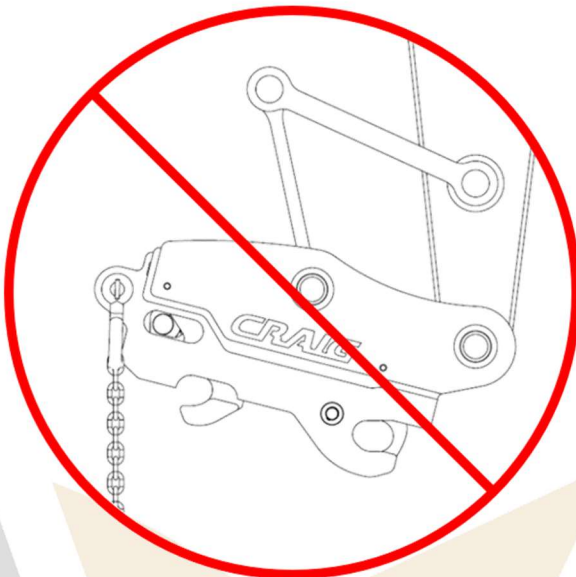
USE BOLT TYPE ANCHOR
SHACKLES ONLY



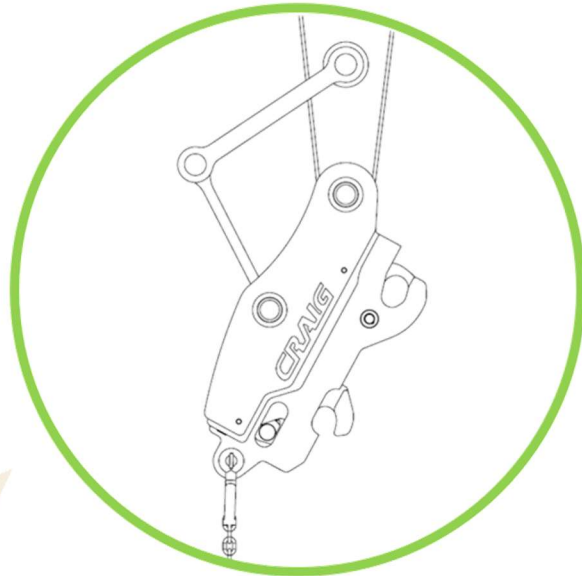
If using an angled load (two chains supported by one shackle), the maximum included angle is 120° or less depending on the manufacturer of lifting equipment. The angle of the load must be applied in the plane of the shackle bow as shown below.

OPERATION INSTRUCTIONS

**DO NOT LIFT IF CHAIN
OR SHACKLE INTERFERE
WITH COUPLER**



**LIFT IN VERTICAL
POSITION ONLY WITH
SHACKLE HANGING FREE**

**NOTICE**

Remove shackle when not in use to prevent damage and prolong life of equipment.

OPERATION INSTRUCTIONS

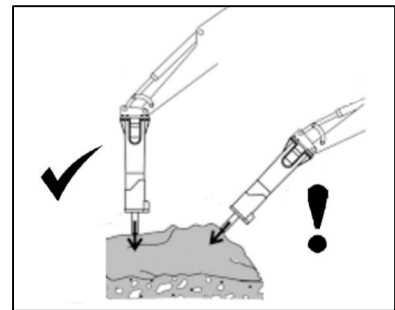
USING DEMOLITION ATTACHMENTS & WORK TOOLS

The TrueGrip coupler can work with various different attachments including demolition attachments, like hydraulic breakers, depending on pin spread and weight. However, **Craig does not approve the use of mechanical pulverizers, mechanical shears and such tools with this coupler.** The reason being is the coupler jaw is put under tremendous force from the leverage of these attachments due to no relief built into these tools.

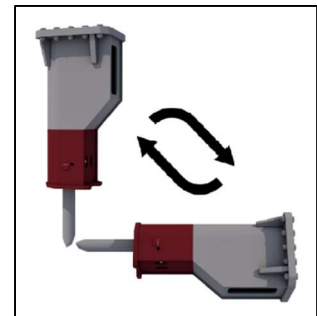
WARNING!

Do not use any tool that is not in the same weight class as the machine that it is being used with is in. Failure to do this can affect the performance of the machine and can cause the coupler to fail in some scenarios. Failure to do so could cause the coupler to fail, which could result in severe injury or death.

When operating a hydraulic breaker, you must always use it in the vertical position.



When using a work tool that is long and heavy, like a hydraulic breaker, never use it as a lever or for prying. Failure to do so could cause the coupler to fail, which could result in severe injury or death.



Do not use the coupler with a hydraulic breaker for long periods without a periodic inspection of all working parts. If the breaker needs to be used continuously for a long period, it is recommended that the hydraulic breaker be mounted directly to the machine. The coupler has not been designed to work with prolonged excessive vibration.

TROUBLESHOOTING

Problem	Possible Cause	Remedy
Attachment is loose on coupler	Excessive wear on pins, rear slide, and/or TrueGrip frame.	Contact Craig Tech Support at 1-800-565-5007
	Debris preventing full travel of the rear slide.	Clean any dirt/debris from the rear slide and locking mechanism
	Loss of locking pressure	Check for leaks/damage to hoses/fittings. Repair as necessary.
Coupler will not release from attachment.	Front locks will not flip up	Clean any dirt/debris from the areas around the front lock.
		Check the slide bearings to make sure they are contacting the ramps on the rear slide
	Rear locks will not flip up	Clean any dirt/debris from around the rear locks to prevent any jamming that occurred.
		Check to make sure the springs have not broken or been stretched
	No hydraulic power to wedge cylinder	Refer to Operation Instructions to verify correct procedure is followed for unlocking coupler.
		Clean any dirt/debris around the locking cylinder, front and rear locks.
		Check for leaks/damage to hoses/fittings. Repair as necessary.
		Check for problem with control box or electrical system. If the control box does not unlock coupler out of the box, there is a high likelihood the female and male Deutsch connectors are incorrect and need to be swapped.
Coupler will not lock on to attachment	Front locks will not flip down	Clean any dirt/debris from the areas around the front lock.
		Check front lock springs for damage.
Coupler locking too fast	Control box timer set too low. (Craig Stick Mounted Hydraulic Kit installed)	Follow the instructions for adjusting the timer setting included in this manual.
Bucket curl cylinder drifting	Leaking in lock valve logic cartridge. (Craig Fully Independent Hydraulic Kit)	Contact Technical Support at 1-800-565-5007

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.



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

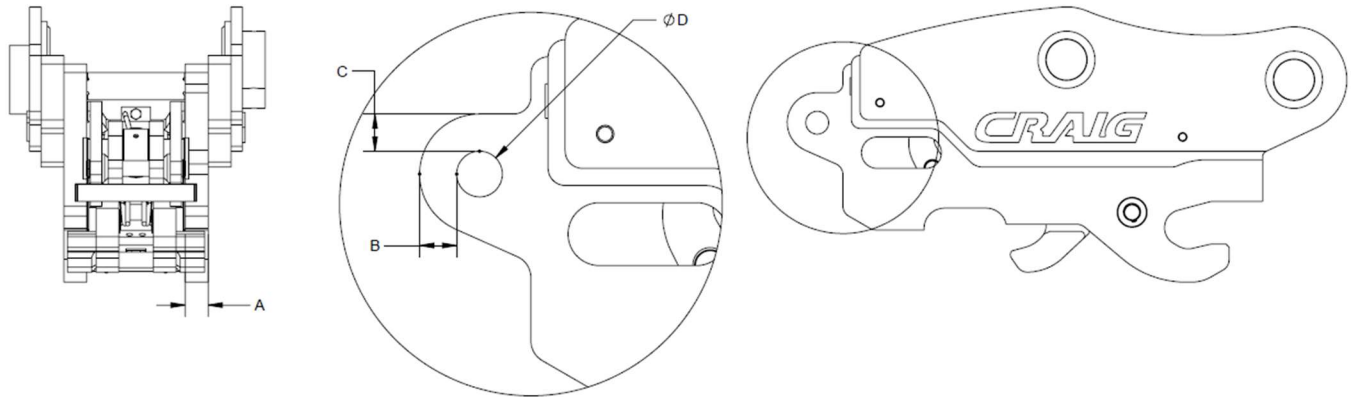
Procedure	Daily	Weekly
Inspect all equipment for damage, worn parts, cracked welds, etc. If a crack is found in either the steel structure or welds, the attachment must be removed from the machine and Craig Contacted immediately. <i>Contact Craig Tech Support (1-800-565-5007) for recommended weld procedures.</i>	X	
Inspect lift eye for any cracks/deformation. <i>If any exist, contact Craig Tech Support, and do not use lift eye.</i>	X	
Test the attachment is safe to operate and all safety features are operational as per the manual.	X	
Hardware - replace missing or damaged bolts/fasteners, tighten as necessary	X	
Check for loose/damaged or missing pins/snap rings/fasteners	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	
Clean wedge and locking mechanism of all dirt/debris	X	
Inspect lifting point for wear as per this manual (check dimensions).		X
Check base and attachments for signs of wear on pin engagement		X
Clean coupler of all dirt/debris.		X

NOTICE

Remove attachment from coupler at least once per shift. The wedge locking system is self tightening and the longer the attachment is left on the coupler, the more likely it will become stuck.

MAINTENANCE

LIFT EYE INSPECTION



LIFT EYE INSPECTION

1. Visually check for cracking or deformation. If any cracks or deformations are present anywhere on the lift eye, please contact Technical Support at 1-800-565-5007.
2. Take measurements A, B, C, and D as per the drawings above. If possible, please use a pair of calipers to get as accurate a measurement as possible.
3. Damage to the surface of the lift eye must be within the measurements in the chart below. If the lifting eye has exceeded recommended ratings, immediately stop using the lift eye as it is unsafe to use.

Chassis Size	Minimum Lift Eye Width (mm)	Minimum Distance to Edge (mm)	Minimum Distance to Edge (mm)
	A	B	C
EXM-TG50-60	22	17	24
EXM-TG60-65	26	22	31
EXM-TG70-80	26	21	42
EXM-TG80	26	21	42
EXM-TG80-90	40	31	62
EXM-TG90-100	40	31	62
EXM-TG100-110	40	31	62

MAINTENANCE

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.

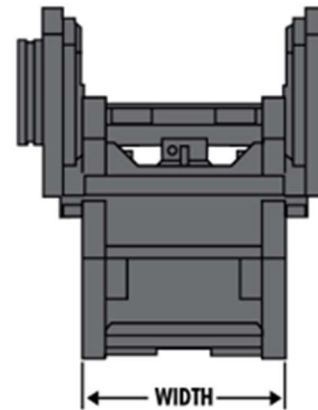
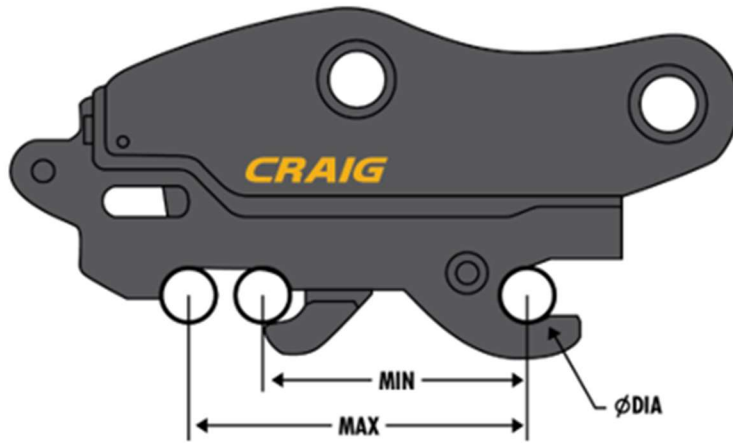
END OF SEASON

- 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



CATEGORY	80 Class (8T)	120 Class (12T)	150 Class (15T)	200 Class (20T)	250 Class (25T)	300 Class (30T)	400 Class (40T)
TRUEGRIP PIN GRABBER	EXM-TG50-60	EXM-TG60-65	EXM-TG70-80	EXM-TG80	EXM-TG80-90	EXM-TG90-100	EXM-TG100-110
OEM PIN DIA	50 mm 55 mm 60 mm	60 mm 65 mm	70 mm 80 mm	80 mm	80 mm 90 mm	90 mm 100 mm	100 mm 110 mm
PIN SPREAD MIN - MAX	50mm Pins 10.472 - 12.598" (266 - 320 mm)	60mm Pins 13.875 - 15.960" (353 - 405 mm)	70mm Pins 14.750 - 18.268" (375 - 464 mm)		80mm Pins 17.087 - 20.063" (434 - 510 mm)	90mm Pins 19.125 - 22.375" (486 - 568 mm)	100mm Pins 20.750 - 24.875" (527 - 632 mm)
	55mm Pins 10.748 - 12.992" (273 - 330 mm)	65mm Pins 14.188 - 16.688" (361 - 423 mm)	80mm Pins 15.375 - 19.5" (391 - 495 mm)	80mm Pins 17.087 - 19.5" (434 - 495 mm)	90mm Pins 17.688 - 21.375" (450 - 542mm)	100mm Pins 19.813 - 23.688" (503 - 601 mm)	110mm Pins 21.438 - 26.125" (545 - 664 mm)
	60mm Pins 11.102 - 13.583" (282 - 345 mm)		70&80mm Pins 15.198 - 18.716" (386 - 475 mm)			90&100mm Pins 19.636 - 22.886" (499 - 581 mm)	100&110mm Pins 21.260 - 25.385" (540 - 645 mm)
CHASSIS WIDTH	6.6875" (170mm)	8.6875" (221mm)	10.9375" (278mm)	11.8125" (300mm)	12.6875" (323mm)	13.5625" (345mm)	14.5625" (370mm)
WEIGHT	286 lbs. (130 kg)	485 lbs. (220 kg)	697 lbs. (316 kg)	743 lbs. (337 kg)	1380 lbs. (626 kg)	1569 lbs. (712 kg)	1868 lbs. (847 kg)
LIFT EYE RATING	12000 lbs. (5400 kg)	25000 lbs. (11300 kg)	29000 lbs. (13100 kg)	41000 lbs. (18600 kg)	45000 lbs. (20400 kg)	60000 lbs. (27200 kg)	68000 lbs. (30800 kg)

Specifications subject to change without notice

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Refer to serial tag on the attachment for identification.



FULLY COMPLAINT

Meets ISO 13031:2016, EN 474, and AS 4772 standards for safe operating quick couplers. (Depends on hydraulic kit option)

SPECIFICATIONS

CRAIG TRUEGRIP COMPATIBILITY CHART

CATEGORY	80 Class (8T)	120 Class (12T)	150 Class (15T)	200 Class (20T)	250 Class (25T)	300 Class (30T)	400 Class (40T)
TRUEGRIP PIN GRABBER	EXM-TG50-60	EXM-TG60-65	EXM-TG70-80	EXM-TG80	EXM-TG80-90	EXM-TG90-100	EXM-TG100-110
CASE	CX75C, CX80	CX130D, CX145C SR	CX160D	*CX160D*, CX210D	CX250D, CX290B, CX300D, *CX350C*	CX350C	CX460, CX470
CAT	307D, 308D	311-314D	315D, 317	B LINKAGE	CB LINKAGE	324-336 DB LINKAGE	TB LINKAGE
DEERE	75D, 80D, 85D	110C, 120C, 130G, 135G	160 LC/DLC	190DW, 200D, 210G, 220D, 225D	230CLC, 240DLC, 250GLC, 270DLC, 290GLC	330CLC, 350DLC, 350G, 370C, 380G	*330CLC, 350DLC, 350G, 370C, 380G*, 450DLC, 470G
DOOSAN		DX140LC-3	DX170W-3	DX225LC-5	*DX225LC-5*, DX255LC-3, DX300LC-3	*DX255LC-3, DX300LC-3*, DX340, DX350LC-3	*DX340, DX350LC-3*
HITACHI	ZX75US-3	ZX130-5, ZX135US-3	ZX160LC-6	ZX210-5	ZX250LC-5	ZX350LC-6, ZX380LC-6	ZX470LC-6
HYUNDAI	R80-7	HX140L, HX145LCR	R170W, HX160L, HX180L	HX210AL, HX220L, HX235LCR	*HX210AL, HX220L, HX235LCR*, HX260L, HX300L	*HX260L, HX300L*, HX330L, HX380L	*HX330L, HX380L*, R450LC-7
JCB		JS130, JS145	JS160, JS190	JS160, JS190, JS220	JS240, JS260	JS330	JS460
KOBELCO	SK70SR, SK75SR-3E, SK80CS, SK85CS-3E	SK140SRLC-5, ED160-5	SK160-6, SK170-10, ED190-6, ED195-8	SK210-10, SK230SRLC-5, SK270SRLC-5	*SK210-10, SK230SRLC-5, SK270SRLC-5*, SK250-6, SK260-10, *SK300LC-10, SK330-6, SK350-9*	SK300LC-10, SK330-6, SK350-9	SK480-6, SK485-9, SK500LC-10
KOMATSU	PC78US-8, PC88MR-8	PC120-6, PC138USLC-10	PC170LC-10	PC210LC-10, PC238USLC-3, *PC240LC-10, PC290LC-10*	*PC210LC-10, PC238USLC-3*, PC240LC-10, PC290LC-10, *PC360LC-10, PC390LC-10*	PC360LC-10, PC390LC-10	PC490LC-10
LIEBHERR	*** CONTACT CRAIG FOR NON-STANDARD OFFERING (standard pin grabber will not pick up Liebherr attachments) ***						
LINK-BELT	SH74MSR	130X4, 145X4	160X4	*160X4*, 210X4, 235X4	250X4, 300X4, *350X4*	350X4	460LX
LIUGONG	908D			922E	925E, 930E	936E	
SANY	SY75C, SY95C	SY135C9, SY155U		SY215C	*SY215C*, SY225C, SY265C, *SY365C*	SY365C	
VOLVO	ECR88	EC140B, ECR145	EC160E, EW160D, EW180D, EW210D	EC210, EC220, ECR235	*EC210, EC220, ECR235*, EC240C, EC250D, EC290C, EC300E, ECR305D, ECR355E	*EC240C, EC250D, EC290C, EC300E, ECR305D, ECR355E*	*EC330D, EC340D, EC360D, EC380D, EC350E*, EC460C, EC480D

NON-STANDARD ATTACHMENT FOR MACHINE CLASS

NOTE: 150 CLASS PIN GRABBER WILL PICK UP 200 CLASS ATTACHMENTS (NOT RECOMMENDED)

NOTE: THIS CHART IS PROVIDED AS A CUSTOMER CONVENIENCE. CRAIG MFG ASSUMES NO RESPONSIBILITY OR LIABILITY IN IT'S USE.

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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

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NOTES

[illegible]



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