

Sure-Grip Coupler



**MAKING
IT EASY!**

ATTACH23
EQUIPMENT

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Introduction

This manual contains important information about the installation, maintenance, connection and safe operation of your Sure-Grip Coupler.

You can assist in this proactive safety approach by ensuring that all persons involved with the fitting and operation of the Sure-Grip, read and understand these basic safety features and instructions.

ATTACH2 reserves the right of modification as a result of further technical developments with regard to the information and illustrations cited in this manual:

- ATTACH2 have sole copyright of this manual.
- The manual is intended solely for the use of the Sure-Grip.
- No part of this manual may be reprinted, translated or reproduced by any means without prior written permission from ATTACH2.
- Utilisation for the purposes of competition is forbidden.
- The Sure-Grip is designed for safe and dependable service if installed, maintained and operated correctly.

We request that time be devoted to the study of installation and maintenance requirements. Users are also expected to familiarise themselves with the correct operation and use of the Sure-Grip and its advised safety procedures.

Important Note

To comply with Occupational Safety and Health requirements, a record must be made of all repairs, adjustments and regular maintenance events involving your Sure-Grip.

A Maintenance & Repair Log has been placed at the back of this manual for this purpose, please refer to Page 35.

Sure-Grip Coupler

➤ LOW PROFILE

The low profile and light-weight structure is designed to ensure break-out forces are optimised, improving fuel economy and enhancing productivity – beneficial to both light weight and heavy duty attachments.

➤ MULTI PIN CENTRE PICK UP

The extensive pin centre range enables the user to pick up any attachments in the same weight class with the same pin diameter.

➤ DUAL LOCKING

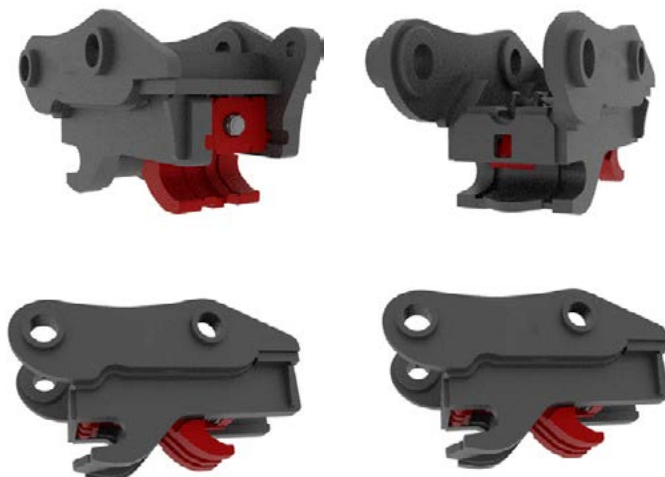
Dual locking, fast and intuitive connection and disconnection process with a front safety latch that automatically locks, securing attachments even in the event of hydraulic failure.

➤ SIMPLE ROBUST COMPONENTS

Consisting of only eight components, the Sure-Grip coupler is the simplest design on the market reducing the complexity inherent of most other couplers. Internal moving components made from durable cast steel purposefully hardened to prevent wear and tear.

➤ SOLID CYLINDER CONSTRUCTION

The Sure-Grip cylinder is manufactured from a single block reducing the risk of operational damage associated with exposed return lines and external welds.



✓ FULLY COMPLIANT

Compliant with all Australian and New Zealand Safety Standards AS4772-2008 and NSW Work Cover WC01783.

Compliant with European Standard EN474-5 and ISO 13031: 2016 Earthmoving Machinery, and all other major contracting policies.

To The Owner

As the new owner and/or operator of the Sure-Grip we would recommend that you take the time to read this Operation Manual carefully before commencing work.

FOLLOW THE SAFETY INSTRUCTIONS:

- Carefully read all the safety information contained in this manual.
- Make sure all warning signs are securely fitted.
- Immediately replace any signs that are missing or damaged.
- Before starting work make sure you are familiar with the equipment and where necessary, with the machine and its control devices.

INFORMATION FOR THE USER:

The user of the Sure-Grip 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.

WARRANTY:

ATTACH2 extends its warranty policy from twelve months to three years or 3000 machine hours (whichever comes first).

In order to qualify for the full three year warranty, customers must submit a Warranty Submission Form which can be found in our Warranty book or on our website: **www.ATTACH2.co.nz**

Should a Warranty Submission Form upon purchase not be submitted, the standard 12 month warranty period will apply.

The extended guarantee assumes proper operation and use as intended but will be nullified as a result of:

- Repairs or other intervention not undertaken by persons authorised by ATTACH2.
- With use of accessories or replacement parts not approved by ATTACH2 or which are not original replacement parts supplied by ATTACH2.

After the warranty period has expired, we highly recommend the use of original replacement parts and manufacturer's replacement parts approved by ATTACH2.

Safety Instructions



WARNING

Improper operation of the Sure-Grip can cause injury or death. Before using this product make certain that every operator:

- Is instructed in safe and proper use of the attachment.
- Reads and understands the manual pertaining to the attachment.
- Reads and understands all safety decals and tags on the machine.
- Clears the area of all other persons.
- Learns and practises safely using attachment controls in a safe, clear area before operating this machine on a job site.

It is your responsibility to observe pertinent laws and regulations and follow ATTACH2's instructions for operation and maintenance.

ATTACH2 supplies a standard Sure-Grip Coupler to fit ATTACH2 approved attachments. However, when fitting a non-standard attachment, check that the operation fitting guide for the attachment's pin range and width to suit the Sure-Grip Coupler model.

NOTE: The Sure-Grip Coupler base has a maximum and minimum pin centre range. Please refer to the Identification Labels section on Page 9 for more information.



WARNING:

This safety alert symbol indicates important safety messages in this manual. When you see this symbol carefully read the message that follows and be alerted to the possibility of personal injury or death.

Safety Standards

The Sure-Grip is fully compliant with Australian and New Zealand Standards, AS4772-2008 and NSW Workcover WC01783. EN474-5 Standards and ISO 13031 International Standard in all aspects*



FULLY COMPLIANT

Compliant with all Australian and New Zealand Safety Standards AS4772-2008 and NSW Work Cover WC01783.

Compliant with European Standard EN474-5 and ISO 13031: 2016 Earthmoving Machinery, and all other major contracting policies.



*The onus falls on the installer regarding the engagement/disengagement function to ensure:

- (i) The control shall be protected against inadvertent activation.
- (ii) The acoustic signal shall be in continuous operation when the disengaging function is activated.
- (iii) Neither unlocking or disengagement shall be possible if the electrical signal for the acoustic signal device fails e.g. by cable failure/disconnection.
- (iv) The acoustic signal operation shall be activated automatically at every engine start to allow verification of signal to the operator.

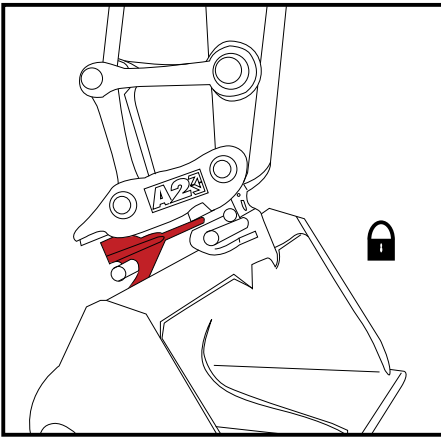
NOTE: For attachments supplied to or manufactured in countries other than New Zealand and Australia, the rules for prevention of accidents and safety regulations for the respective country must be strictly adhered to.

ISO Requires - slide pick ups and pin sizes for all ranges and recommended bucket widths.

Safety Decals

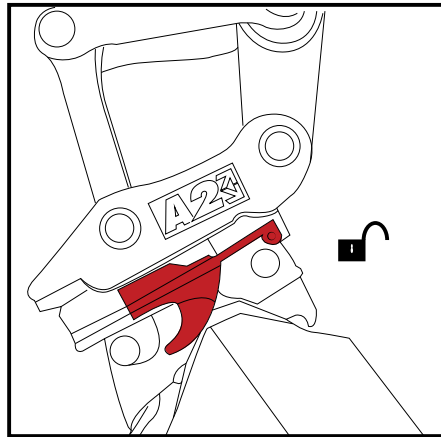
The Sure-Grip Coupler is supplied with safety decals which are to be fitted inside the cab in clear view of the operator to identify correct operation of the Sure-Grip.

ATTACHMENT PICK UP



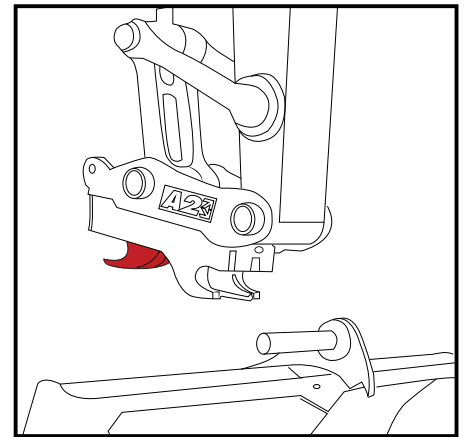
STEP 1

Disengage quick coupler (Buzzer on). With sliding jaw retracted engage Coupler onto front pin.



STEP 2

Crowd onto rear pin.



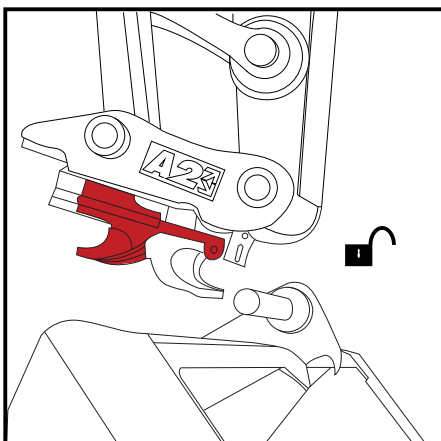
STEP 3

Engage quick coupler, jaw will slide onto rear pin which engages front safety latch.

SAFETY

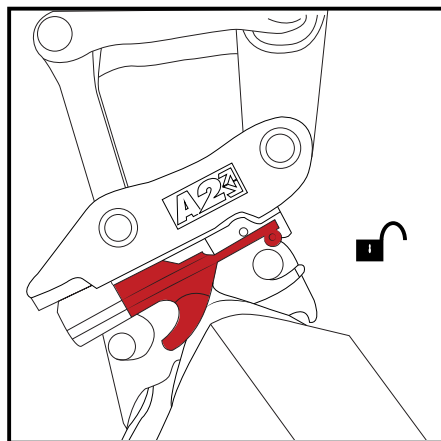
- Visually check front Latch is down.
- Crowd Bucket to visually see rear slide is wedged on to rear in.
- Physically push Attachment against ground and away from machine to confirm engagement is complete.

ATTACHMENT RELEASE



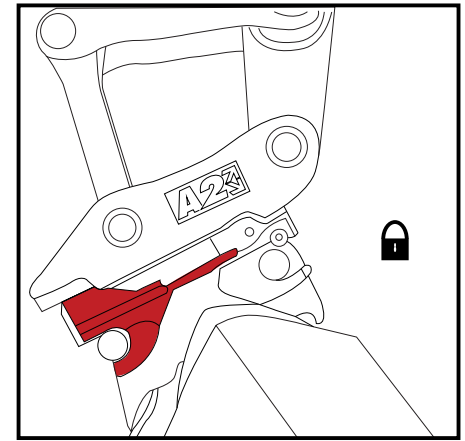
STEP 1

Place Attachment on flat ground.



STEP 2

Disengage quick coupler (buzzer on), retract slide jaw and crowd off the rear pin.



STEP 3

Front safety latch will disengage. Lift coupler away from attachment.

Identification Labels

All Sure-Grip Couplers are supplied with an Identification Label as shown below.

ATTACH2 EQUIPMENT	
MACHINE MAKE: _____	MODEL: _____
MANUFACTURE DATE: _____	WEIGHT: _____
PICKUP PIN SIZE: _____	PART #: _____
LIFTING EYE SWL: _____	SERIAL #: _____
MIN PIN CENTRE RANGE: _____	MAX: _____
<small>FULLY COMPLIANT: AS2772-2008 / NSW WC01783 New Zealand: Tel +64 6 929 5792 Australia: Tel +61 7 3557 2654 www.attach2.com </small>	

Each Identification Label displays the following;

- Machine make
- Model
- Manufacturer date
- Attachment weight
- Pickup pin size
- Part number
- Lifting Eye Capacity
- Serial number
- The pin centre range to suit the Sure-Grip.

The pin centre range displays the minimum and maximum travel distance for the Sure-Grip slide.

It is recommended that a copy of these details be kept in office for reference.

W.L.L - Working Load Limit

The Sure-Grip Coupler comes with an integrally designed Lifting Eye which has been designed to meet and exceed current standards.*



W.L.L is stamped on both the Sure-Grip serial plate and also clearly marked adjacent to the lifting eye as per ISO. Stamping shows the W.L.L e.g. XXXXKG

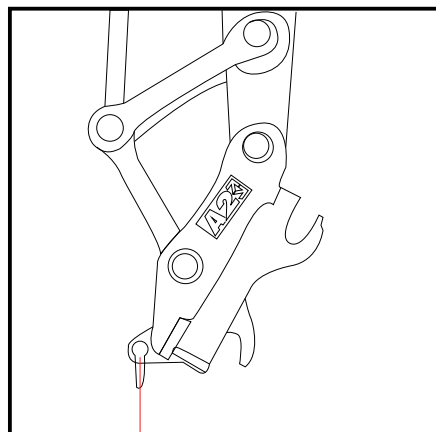
Lifting Eye

THE LIFTING EYE MUST BE USED ACCORDINGLY TO THE FOLLOWING GUIDELINES:

- Only use the lifting eye at the rear of the Sure-Grip for lifting.
- Do not lift with a bucket or any other attachment fitted to the Sure-Grip.
- Ensure that the load to be lifted does not exceed the rated W.L.L of the Sure-Grip and lifting eye.
- The lifting eye is to be used with certified lifting shackle with the same or greater safe working load.
- Lifting must be carried out with the Sure-Grip in a vertical plane so that the load can hang freely without interfering with the Sure-Grip body.
- It is recommend that lifting eye and shackle must be visually inspected daily for defects and wear.
- During normal operation, it is not recommended to keep lifting devices attached to the lifting eye.

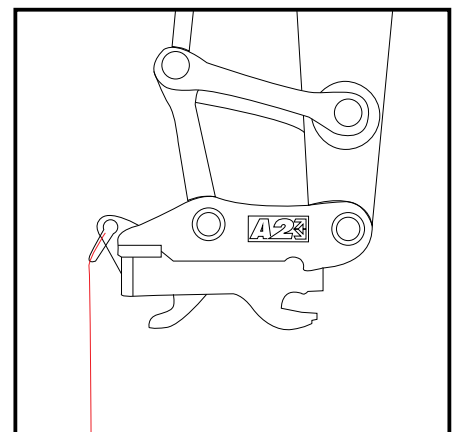
WARNING

- Use In A Safe Proper Manner At All Times.
- Report Damage Or Malfunctions Immediately.
- Do Not Exceed Rated Lift Capacity Of The Machine.
- Do Not Use If Damage Or Malfunction Has Occurred. Only Lift From Lifting Eye.
- Do Not Exceed Lifting Eye Capacity On Name Plate.



DO

Lift in verticle plane ONLY shackle MUST hang freely.



DON'T

Do not lift if the chain and shackle interfere with coupler.

Risk Assessment

Location: _____ Date: _____ Ref no: _____

Hazards Identified

- | | | |
|---|--|---|
| <input type="checkbox"/> Work Equipment | <input type="checkbox"/> Lifting Devices | <input type="checkbox"/> Access / Exit |
| <input type="checkbox"/> Ergonomics | <input type="checkbox"/> Plant Movement | <input type="checkbox"/> Slip, Trip and Fall |
| <input type="checkbox"/> Entanglement | <input type="checkbox"/> Fumes | <input type="checkbox"/> Warning Devices on Equipment |
| <input type="checkbox"/> Crushing | <input type="checkbox"/> Vibration | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Environmental | | |

People Affected	Yes	No	N/A
Involved in Activity			
Close to Activity			
Everyone on Site			
Members of the Public			

Expected Precautions	Yes	No	N/A
Has the operator been adequately trained on how to use the Sure-Grip in general?			
Is the operator competent in using the specific attachment on the machine?			
Is there a system for checking that the attachment pins are in place on the Sure-Grip prior to work starting every time a different attachment is fitted?			
Is the operator aware that they must not operate the machine unless they are satisfied that the Sure-Grip is secured in place.			
Does the view of the operator from inside of the cab allow them to visually see that the Sure-Grip is secured in place?			
Does the Sure-Grip have the approved labels stating and referring to attachment specifications?			
Is there a risk assessment for the Sure-Grip detachment?			
Are there cab instructions for the Sure-Grip?			

Personal Protective Equipment

Hard Hat	High Visibility Vest	Safety Boots	Gloves
Ear Protection	Safety Glasses	Other	

Management

Assessed by:	Reported to:		
Name:	Date:	Name:	Date:

Installation Checklist

Customer Details / End User

Installation Date:		Customer:	
Landline:		Mobile:	
Company Name:		Email:	
Address:			

ATTACH2 Product Details

Description:		ATTACH2 Serial Number:	
Purchase Date:		Installation Date:	

Company Completing Installation

Company:		Installer Name:	
Landline:		Mobile:	
Machine Maker:		Machine Model:	
Email:			

Installation Inspection

✓ Compliant ✗ Not Yet Compliant

CHECKS	✓	✗	CHECK	✓	✗
Verify all hose installations are as per manual and free to move through the hitches designed full movement without hose issues.			Verify installation completed as per the manuals installation plumbing circuit diagram.		
Shimming of the hitch pins complete.			Verify hydraulic system is bled and free from the air.		
Verify system pressures for the coupling circuit pressure set as per the manual. PSI.			Verify system pressures and flows for the: Tilting circuit pressure is set to: PSI Tilting flow rate set to: LPM Tilting cycle time LHS to RHS: Seconds		
Verify all hydraulic fittings are undamaged and free from leakages under operating pressure.			Verify all attachments are for use with the hitch attach and detach without operation issues or contact with machine.		

INSTALLATION SIGN OFF

Was the installation complete with proportional solenoid valves?		Was the installation complete with double P/O check valves?	
Is the hitch compliant at time of installation?		Are any follow ups required to make hitch complaint?	
Installation time/date:	Signature:		

Pre-Start Checklist

Operators Name:		ATTACH2 Model:	
ATTACH2 Serial No:		Date:	

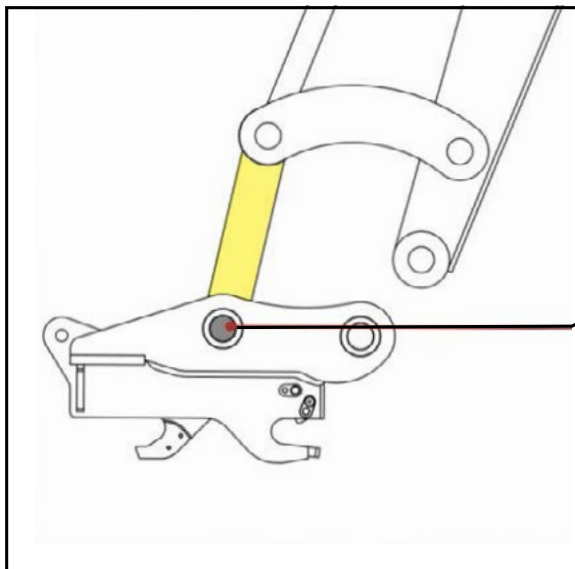
In Cab	M	T	W	T	F	S	S
Are the Sure-Grip operating controls serviceable?							
Are the operating instructions (labels) in the cabin?							
Are the operating & maintenance manuals in the cabin?							

Hydraulic System	M	T	W	T	F	S	S
Check wear or damage to hoses or fittings.							
Check hoses are free from pinch points.							
Check for visible Hydraulic leaks.							

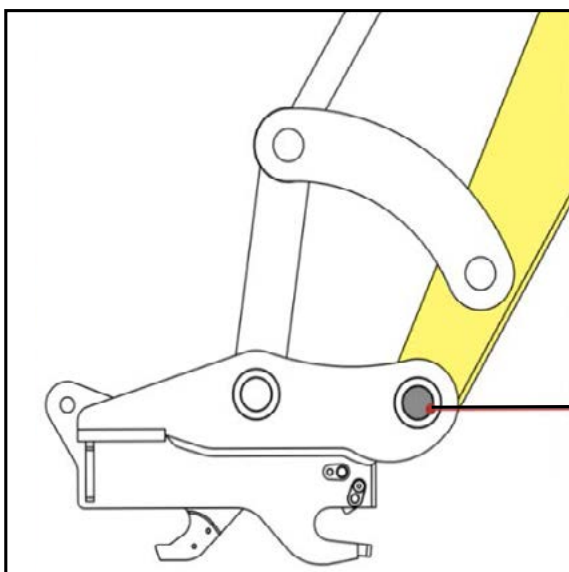
Sure-Grip Coupler	M	T	W	T	F	S	S
Check wear and damage to hitch / attachment pins and retainers.							
Check security of mounting pins, locking bolts and nuts.							
Is the attachment safe to use? Yes or No.							

Operator:	Manager Signature:

Installation To Machine



- Align Sure-Grip to the H-Link and insert the pin.
- Fit shims and O-Rings as required.



- Align Sure-Grip to the dipper arm and insert the pin.
- Fit shims and O-Rings as required.
- Fit retaining bolts as per the OEM manual.



WARNING:

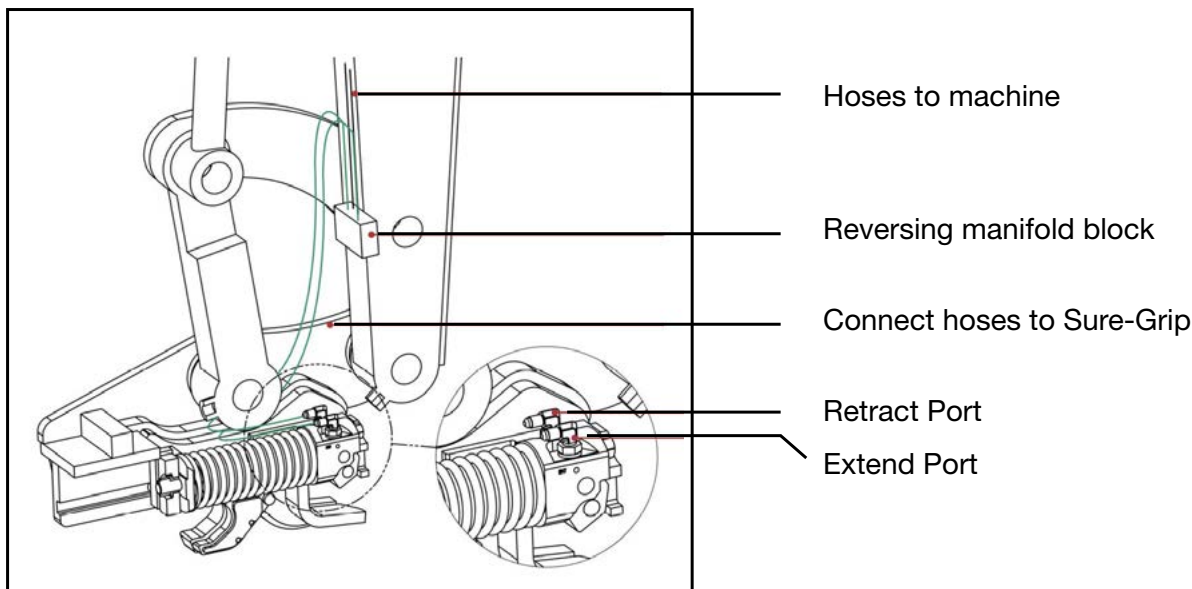
Check Pins Are Original Equipment Manufacturers Pins.

Plumbing Overview

ATTACH2 suggests using a reversing manifold block mounted to the dipper arm for plumbing the Sure-Grip to the machine.

This should be carried out by a professional and experienced hydraulics installer.

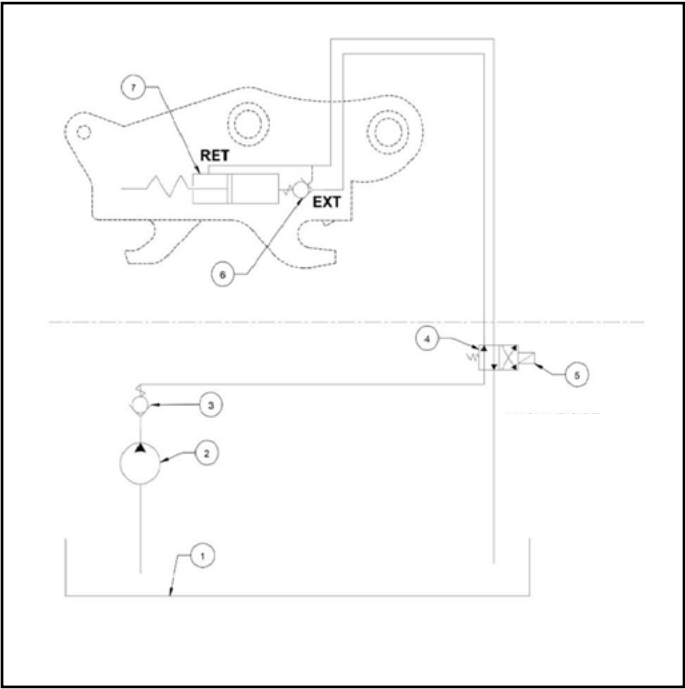
If you require advice on a preferred hydraulic installer, please contact your local ATTACH2 Service Department on; AUS: +61 7 3557 2654 / NZ: +64 6 929 7592



WHEN PLUMBING THE SURE-GRIP ONTO THE MACHINE:

- Disconnect battery prior to any welding - failure to do so can result in damage to machine electronics.
- Protect hydraulic cylinder rods from weld spatter.
- Ensure that the connecting hoses will not be pinched or damaged through the entire crowd linkage movement.

Plumbing Circuit Diagram



COUPLER SIDE
(ATTACH2 Supply)

MACHINE SIDE
(OEM or Hydraulic
installer supply)

DESCRIPTION

1	Oil Reservoir
2	Machine High Pressure Pump
3	Check Valve
4	Single Acting Solenoid
5	Connect Solenoid to Buzzer/Alarm
6	Pilot Operated Check Valve
7	Coupler Cylinder

Hydraulic Requirements and Plumbing

SURE-GRIP COUPLER CIRCUIT REQUIREMENTS

Operating Pressure*	2800-5100PSI
Hoses / Tube Size	1/4" Maximum up to and including 20T
	3/8" Maximum 35T and over
Port Connecting (ATTACH2 Supplied)	7/16" JIC Male up to and including 20T
	9/16" JIC Male 35T and over

*The onus falls on the installer regarding the machine controls set up.
Please refer to Page 10 for more information.

Checking Attachments



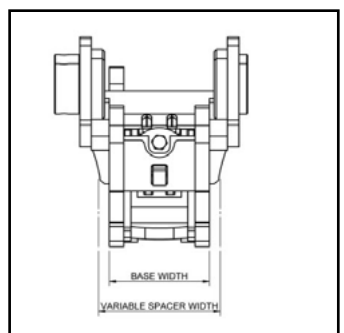
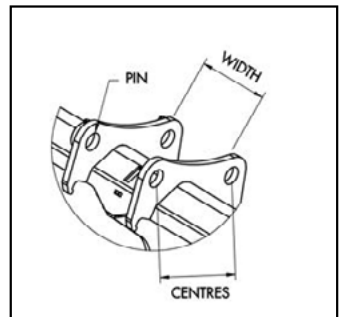
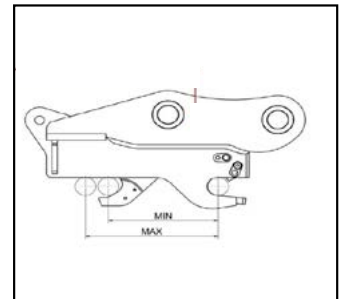
WARNING:

Ensure attachments being picked up suit the build Information on the Sure-Grips Identification Label.

Identification Label will indicate Pin Centre Range (Minimum - Maximum)

- A** Check that each individual attachment pin centre fits the Sure-Grip by confirming the range on the label.
- B** Check the inner width of the Sure-Grip. Width must be wider than the Sure-Grip base.
- C** Check pin spacers can be fitted to either the base of the Sure-Grip or between the inner side of the ears and the bosses of attachment.

It is highly recommended to fit spacers in the case of heavier applications, particularly on machines that are 14 tonne and above.

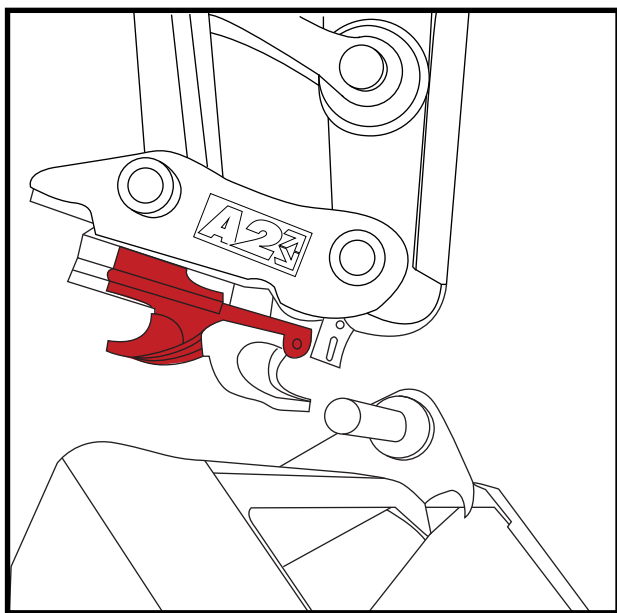


DANGER:

Do not use any Attachment unless all Safety Functions are Serviceable and within Specifications.

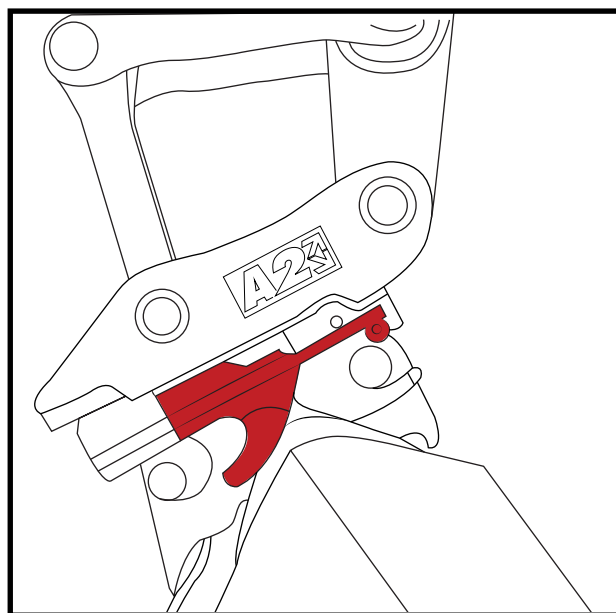
Operating & Attaching

THE CONNECTION AND DISCONNECTION PROCESS OF OUR LATEST QUICK HITCH, THE ATTACH2 SURE-GRIP COUPLER IS A SIMPLE AND EFFICIENT PROCESS.



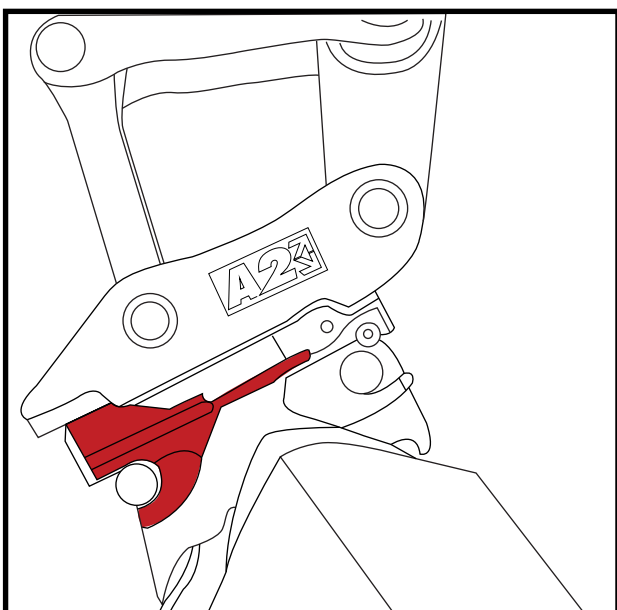
STEP 1

Activate switch. With slide retracted engage coupler onto front pin.



STEP 2

Deactivate switch. Crowd onto rear pin.



STEP 3

Extend slide onto rear pin which engages front safety latch.

TO RELEASE ATTACHMENTS

1. Place attachment on flat ground
2. Retract slide and crowd out of rear pin
3. Lift Sure-Grip away from attachment

For a visual representation of the Sure-Grip engagement process and safety features, please refer to the support section of our website

Connection Test

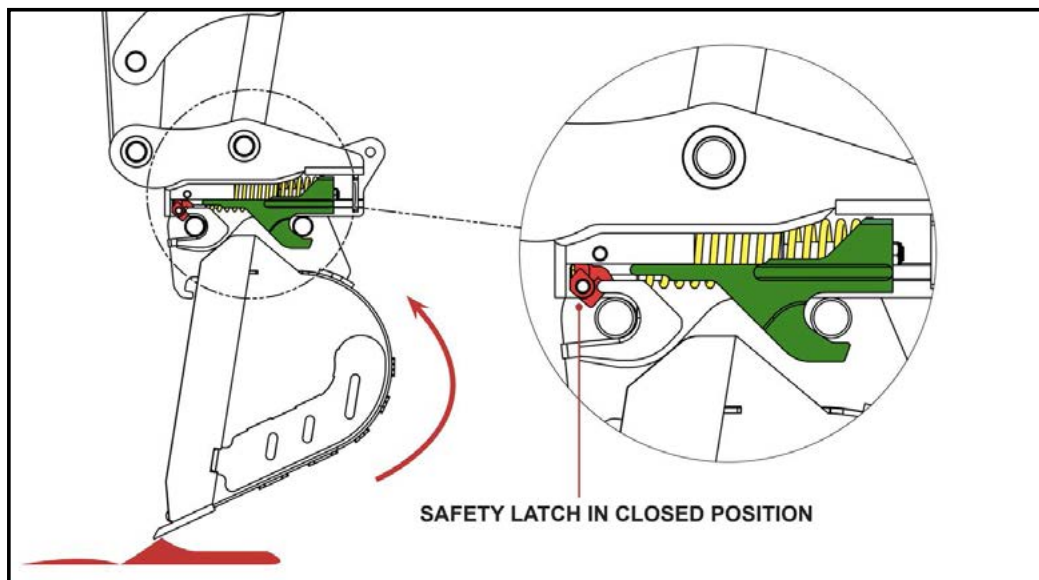
Check all attachments fit correctly. The safety latch is designed to work in a closed position on the front pin. If the safety latch is not closed when attached to any attachment, check the rear jaw of the Sure-Grip base is engaged with the rear pin.

If uncertain, DO NOT USE THIS ATTACHMENT.
Please refer to 'Checking Attachments' on Page 18 or alternatively, please contact your local ATTACH2 Service Department.

SAFETY LATCH IN CLOSED POSITION

TO ENSURE THE SURE-GRIP COUPLER BASE HAS ENGAGED SECURELY TO PINS ON ATTACHMENT:

- Visually check the safety latch is engaged on the pin.
- Test before operating by applying pressure to attachment by rotating against the ground and away from machine.
- Do not proceed with work unless the safety latch is in the closed position on the front pin (see below).
- If the safety latch on the front pin is open DO NOT OPERATE THE SURE-GRIP.
Please contact your local ATTACH2 Service department immediately on;
AUS: +61 7 3557 2654
NZ: +64 6 929 7592



Safety Latch Inspections

Manual inspection of the front safety latch must be carried out to ensure the safety latch movement is within acceptable safety tolerances as specified below. This is in addition to a daily visual check of the safety latch and usual wear and tear assessments.

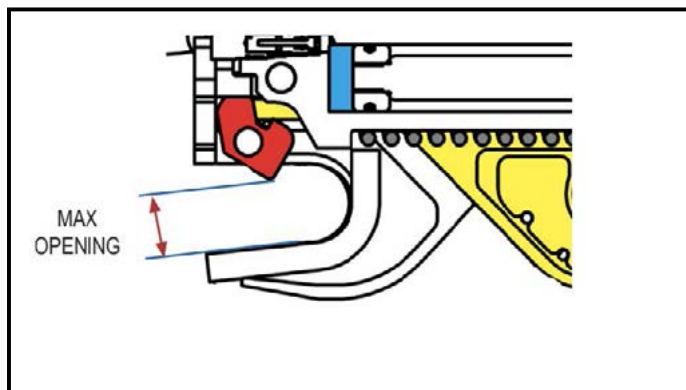
The maximum opening distance should be measured and compared to the safe allowable variation table.

If the maximum opening distance is LESS than the maximum allowable opening distance for the Sure-Grip model, it is safe to use.

FRONT SAFETY LATCH MEASUREMENT

- Slide must be extended to lock safety latch
- Measure gap as shown

MAXIMUM OPENING DISTANCE



SAFE VARIATION TABLE

PIN	MAX OPENING
30	27
35	32
40	36
45	41
50	45
55	50
60	54
65	59
70	63
80	72
90	81
100	90
110	99
120	108



DANGER:

If the maximum opening distance is greater than the maximum allowable opening value for that Sure-Grip base, do not use the Sure-Grip. Please contact your local ATTACH2 Service department immediately on: AUS: +61 7 3557 2654 / NZ: +64 6 929 7592

Maintenance

GENERAL MAINTENANCE

All maintenance is to be performed by a qualified and competent trades person.

Before beginning maintenance work on the Sure-Grip Coupler, there are several cautionary notices that should be considered.

If you are not comfortable with the repair or maintenance of this product, please contact your local ATTACH2 Service Department on: AUS: +61 7 3557 2654 / NZ: +64 6 929 7592



DANGER

Never use hands to search for hydraulic leaks. Escaping fluid under pressure can be invisible and can penetrate the skin and cause serious injury.



WARNING

Only fit the Sure-Grip with genuine replacement parts. Quote serial number stamped on the Identification Label when ordering.



WARNING

To ensure that your Sure-Grip works safely to a maximum efficiency, it is imperative that it is properly maintained in accordance with the manual.



WARNING

A defective Sure-Grip could injure you or others. Do not operate a Sure-Grip that is defective.

WARNING

Ensure that hoses aren't loose and don't come into contact with the spring mechanism, preventing safe operation of the blocking bar.

OTHER SAFETY REQUIREMENTS

1. Sure-Grip should only be used to perform tasks for which it was designed. Abusing the product and/or using it for purposes for which it was not intended can expose the operator and others to hazards as well as result in damage to the Sure-Grip, carrier and/or other attachments.
2. Modification to the Sure-Grip is done at the owner's risk and may void warranty.
3. The Sure-Grip is designed for a maximum bucket width. Applying the full force of the excavator or backhoe to the corner of a wide bucket (e.g. corner digging with a wide bucket) may cause premature wear and/or reduced equipment life. It is also recommended that the bucket widths are not exceeded.
4. It is the owners responsibility to be sure all safety equipment is in place and operating properly at all times. If safety decals fade, are damaged or become unreadable they should be replaced immediately.

Maintenance Schedule

Daily

- ☐ Ensure cabin control safety guards are serviceable.
- ☐ Ensure operating and maintenance manual is in cabin.
- ☐ Test the attachment is safe to operate and all safety features are operational as per the manual.
- ☐ Check lifting point for any damage or wear.
- ☐ Ensure all safety decals and instructions are clear and legible.
- ☐ Check attachment for signs of damage, wear or cracking.
- ☐ Check attachment hydraulics for leaks and signs of wear.

Weekly

- ☐ Check attachment for any signs of cracking.
- ☐ Check base and attachments for signs of wear on pin engagement.
- ☐ Check attachments for loose bolts/pins.
- ☐ Check attachment operation and notify ATTACH2 of any defects found.

6 Monthly

- ☐ Ensure operating and maintenance manuals are in cabin and pre-start check have been documented.
- ☐ Check attachment for signs of damage, wear or cracking.
- ☐ Check slide wear as per the manual.
- ☐ Check attachment hydraulics for leaks and signs of wear.
- ☐ Check base wear as per the manual.
- ☐ Check lifting point for any damage, wear or cracking.
- ☐ Test the attachment is safe to operate and all safety features are operational as per the manual.

Notes / Remarks

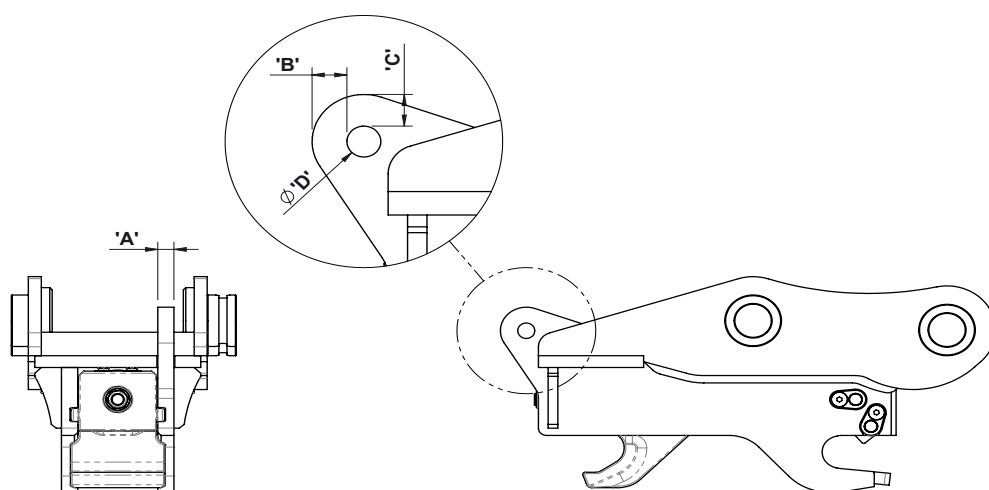
Description:		ATTACH2 Serial Number:	
Machine Make:		Machine Model:	
Company:		Contact:	
Email:		Phone:	
Company:		Trades Person Number:	
Date:		Sign:	
Phone:		Email:	

Lifting Eye Inspection

(CHECK DAILY)

WARNING: The Lifting Eye requires visual inspection.

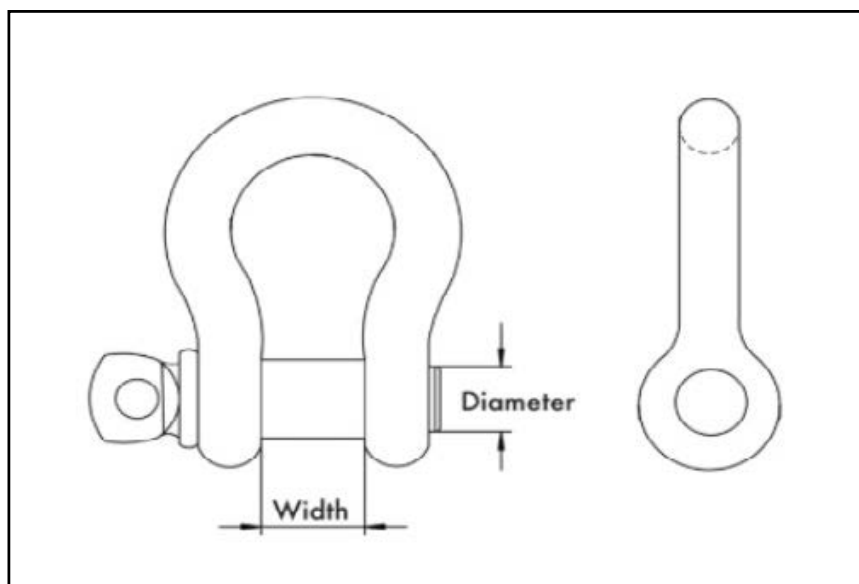
Tonne Range	Minimum Lifting Eye Width (mm)	Minimum Distance To Edge (mm)	Minimum Distance to Edge (mm)	Maximum Lifting Eye Hole (mm)
	A	B	C	D
2T	16	12	12	14.5
3T	20	16	16	20.5
4T	20	16	16	20.5
6T	18	19	19	23.5
8T	23	20.5	20.5	26.5
14T	38	24.5	24.5	32.5
20T	48	28.5	28.5	40.5
35T	56	35.5	35.7	46.5
45T	58	37.5	37.5	54.6



1. Visually check for cracking or deformation - if present.
2. Check for wear on the above chart.
3. Damage to outer surface (A, B, C, D) must be within the measurements in above chart.
4. If the Lifting Eye has exceeded recommended ratings - immediately stop using attachment. Should you find any deformations or cracks anywhere on the Lifting Eye, please contact your local ATTACH2 Service Department on: AUS: +61 7 3557 2654 / NZ: +64 6 929 7592

Shackle Table

Model	W.L.L	Pin Diameter	Width	Standard
2T	1.00	11	17	AS2741
3T	2.00	16	20	AS2741
4T	2.00	16	22	RR-C-271
	2.00	16	20	AS2741
	2.00	16	22	RR-C-271
6T	3.25	19	27	AS2741
	3.25	19	27	RR-C-271
8T	4.25	22	32	AS2741
	4.75	22	31	RR-C-271
14T	8.50	28	43	AS2741
	8.50	28	43	RR-C-271
20T	12.00	35	51	AS2741
35T	12.00	35	51	RR-C-271
	17.00	41	60	AS2741
	17.00	41	60	RR-C-271
	22.00	50	74	RR-C-271

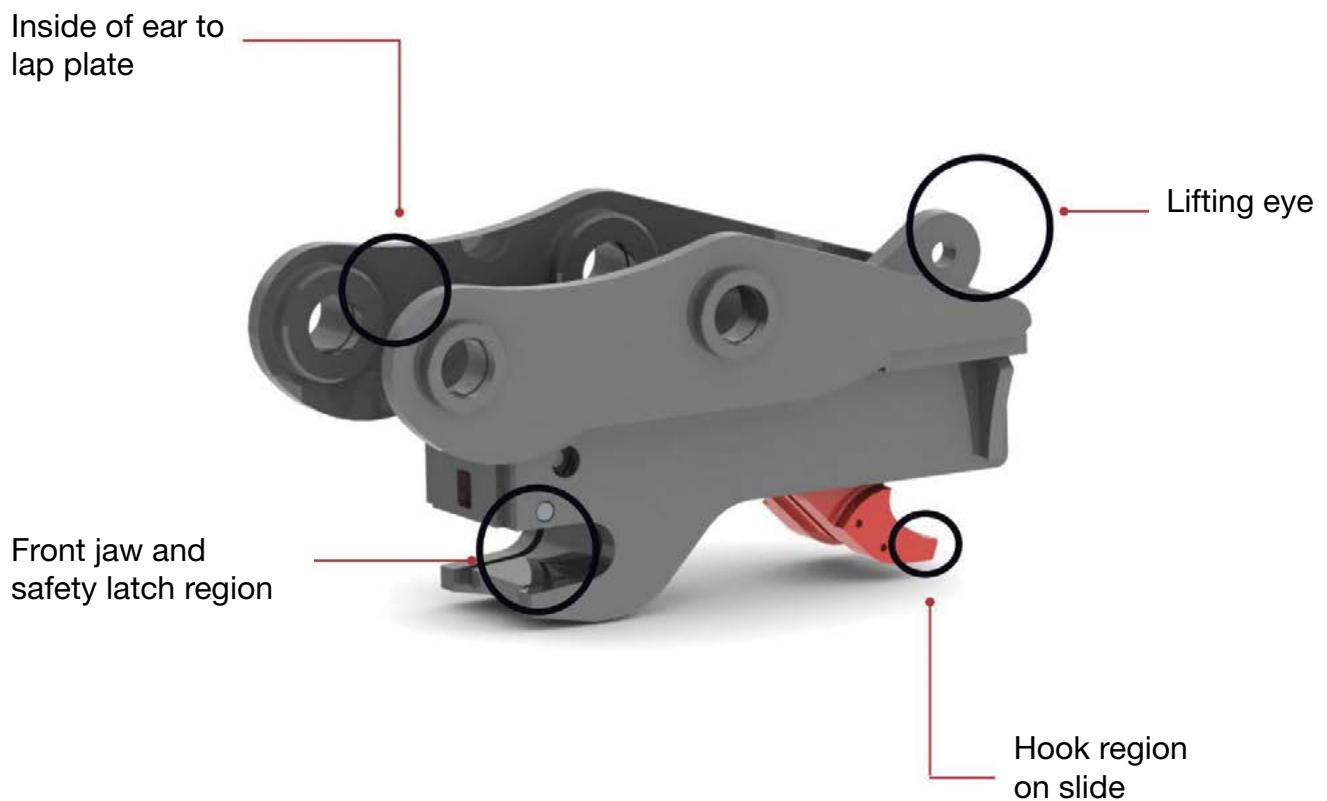


Daily/Weekly Checks

VISUAL STRESS POINTS CHECK:

Visually check the entire Sure-Grip for any cracks, damage and excessive wear.

The image below highlights major stress areas, where particular attention should be given during checks. Should you find any cracks, damage or excessive wear, please contact your local ATTACH2 Service Department on: AUS: +61 7 3557 2654 / NZ: +64 6 929 7592



6 Monthly Slide Wear

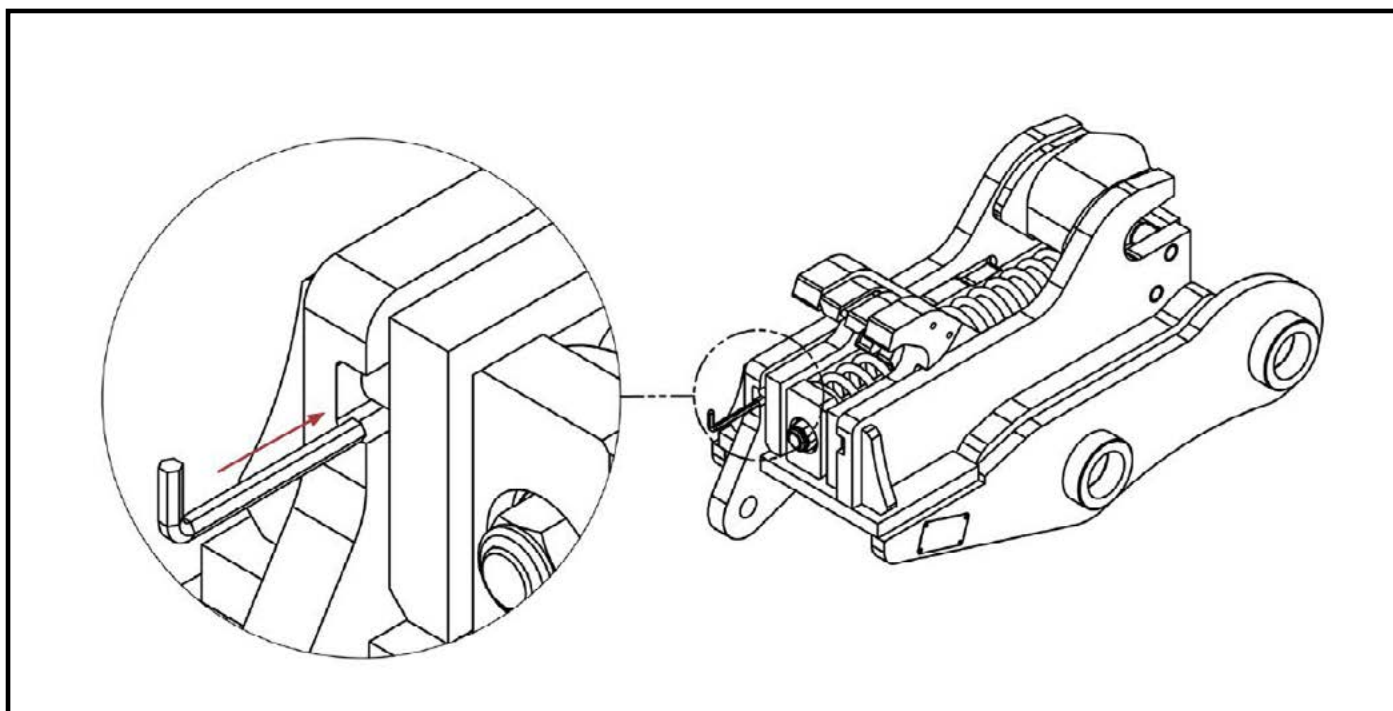
VISUAL STRESS POINTS CHECK:

The slide will have free movement when new. To gauge the wear of the body and slide, place an allen key as shown below to test the space between the slide hook and body.

Please see the table below to verify the maximum wear of the body.

GUIDELINE FOR MAXIMUM WEAR

6T, 8T, 14T	5mm
20T, 35T, 45T	7mm



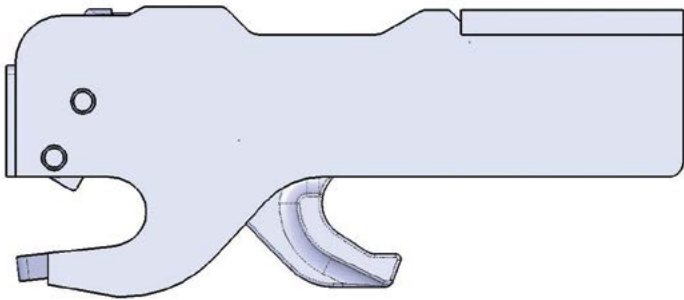
WARNING:

If the Sure-Grip base becomes worn or damaged in this area, please contact your local ATTACH2 Service Department immediately on:
AUS: +61 7 3557 2654 / NZ: +64 6 929 7592

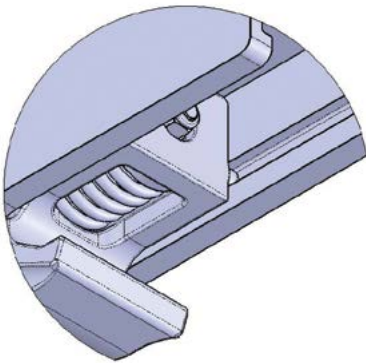
6 Monthly Base Wear Tolerance

WEAR TOLERANCE OF THE SURE-GRIP COUPLER BASE

5mm Allowable Wear



Wear allowance
on both sides



If the Sure-Grip base becomes worn or damaged in this area or in excess of 5mm, please contact your local ATTACH2 Service Department immediately on:

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Troubleshooting Guide

SURE-GRIP

1. Slide will not dis-engage correctly

or

Slide will not engage correctly.

- 1.1 Install pressures not at specification.
- 1.2 Damaged base jamming slide operation.
- 1.3 Slide Jamming in rail.
- 1.4 Check cylinder pilot operated check valve.

- 1.1 Check and adjust pressures. Ensure installation is as per the ATTACH2 manual.
- 1.2 Check base for damage interfering with sliding action. Repairs as required to allow free movement of the slide.
- 1.3 Check rail tolerance as per the ATTACH2 manual, excessive movement in rail may cause the slide to jam.
- 1.4 Check cylinder pilot operated valve may require replacement; even small amount of foreign material can cause the check valve to fault. If the fault remains, please contact your ATTACH2 service department on:
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2. Hitch will not fit attachments.

- 2.1 Incorrect attachments
 - Pin sizes
 - Pin centres
 - Between the ears measurements
- 2.2 Incorrect hitch build specification.

- 2.1 Check attachment pin sizes and centres are within the range on the hitch serial plate. As per checking attachment section in the ATTACH2 manual.
- 2.2 Contact ATTACH2 with hitch serial number to confirm ordered build specifications.
NOTE: Hybrid hitches have differing top specification and differing bottom specification and will be built as ordered. Loan units are extremely rare for Hybrid builds.

Troubleshooting Guide

SURE-GRIP

3. Attachment engagement is loose

3.1 Attachment may not suit the coupler specification.

3.2 Install pressures not at specification.

3.3 Special pickup may require modified coupler slide.

3.4 Check C-section, Base and Slide for damages, wear or defects.

3.1 Check attachment pin sizes and centres are within the range on the hitch serial plate. As per Checking attachment section in the ATTACH2 manual.

3.2 Check for installation for low pressures or pressure drop.

Check installation flow is set as per the ATTACH2 manual.

Check installation hose sizes are as per the ATTACH2 manual.

Inspect installation valves are seating correctly or for damage/foreign material, replace with new if required.

Check installation is set to correct specification as per the ATTACH2 Manual. Adjust or replace if required.

Ensure installation solenoids and electrical circuits are serviceable. Adjust or replace components if required.

If the fault remains, please contact your ATTACH2 service department on:

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If the attachment is within the serial plate specification and is still loose, the hitch may be a hybrid and require a special modified slide. Please contact your ATTACH2 service department on:

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3.4 Complete visual and maintenance checks as per the ATTACH2 manual. If the fault remains, please contact your ATTACH2 service department on:

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Troubleshooting Guide

SURE-GRIP

4. Safety Latch stuck open or closed.

- 4.1 Damaged or cracked safety latch.
- 4.2 Foreign material is jamming spring operation.
- 4.3 Safety latch springs damaged.
- 4.4 Damage / snapped Slide tail section.

4.1 Check Safety latch for damages and replace.

NOTE: Forcing the attachment pin over the safety latch will cause wear and damages to the safety latch. See Operating and attaching in the ATTACH2 manual.

4.2 Clean all foreign materials from behind the safety latch and springs to ensure clear and free operation.

4.3 Replace broken or worn springs to allow correct operation.

4.4 Replace slide - When fully retracted the slide tail section mechanically opens the safety latch.

5. Wear/ Defects on base.

- 5.1 Damages due to external operational contact.
- 5.2 Wear on pin contact area.

5.1 Contact ATTACH2 for repair instructions if required. Please contact your ATTACH2 service contact department on:

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5.2 Check wear tolerance specification as per the ATTACH2 manual. Contact ATTACH2 for repair instructions if required. Please contact your ATTACH2 service department on:

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NOTE: Hardened attachment pins or high tensile pins may wear into base, after initial wear in periods the base wear normally will not develop any further.

Troubleshooting Guide

SURE-GRIP

6. Damage / Wear / Defects on slide rail.	<p>6.1 Damages due to external operational contact.</p> <p>6.2 Wear on rail slide area.</p>	<p>6.1 Please contact ATTACH2 service department for repair instructions on:</p> <p>AUS: +61 7 3557 2654 NZ: +64 6 929 7592</p> <p>6.2 Check rail wear tolerance specification as per the ATTACH2 manual. Please contact ATTACH2 service department for repair instructions if required on:</p> <p>AUS: +61 7 3557 2654 NZ: +64 6 929 7592</p>
7. Damage / Wear / Defects on C-Section.	<p>7.1 Damages due to external contact.</p> <p>7.2 C-Section pulled open due to misuse.</p>	<p>7.1 Contact ATTACH2 for repair instructions if required. Please contact your ATTACH2 service department on:</p> <p>AUS: +61 7 3557 2654 NZ: +64 6 929 7592</p> <p>7.2 A misused C-Section can cause loose attachment engagement and increase wear to pin engagement surfaces. Please contact your ATTACH2 service department on:</p> <p>AUS: +61 7 3557 2654 NZ: +64 6 929 7592</p>
8. Damage / Wear / Defects on Slide.	<p>8.1 Damages due to external contact.</p>	<p>8.1 Replace Slide</p> <p>Check installation for low pressures or pressure drop.</p> <p>Check installation flow is set as per the ATTACH2 manual.</p> <p>Check installation hose sizes are as per the ATTACH2 manual.</p> <p>Inspect installation valves are seating correctly or for damage/ foreign material, replace with new if required.</p> <p>Check installation is set to the correct specification as per the ATTACH2 manual. Adjust or replace if required.</p>

Troubleshooting Guide

SURE-GRIP

8. Damage / Wear / Defects on Slide.

- 8.2 Wear on pin contact area.
- 8.3 Wear on slide rail area.
- 8.4 Broken slide tail.

8.2 Ensure installation solenoids and electrical circuits are serviceable, Adjust or replace components if required.

If the attachment is within the serial plate specification and is still loose, the hitch may be a hybrid and require a special modified slide. Please contact your ATTACH2 service department on:

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8.3 Replace Slide, Check rail wear tolerance specification as per the ATTACH2 manual. Contact ATTACH2 for repair instructions if required. Please contact your ATTACH2 service department on:

AUS: +61 7 3557 2654
NZ: +64 6 929 7592

8.4 Replace slide. Please contact your ATTACH2 service department on:

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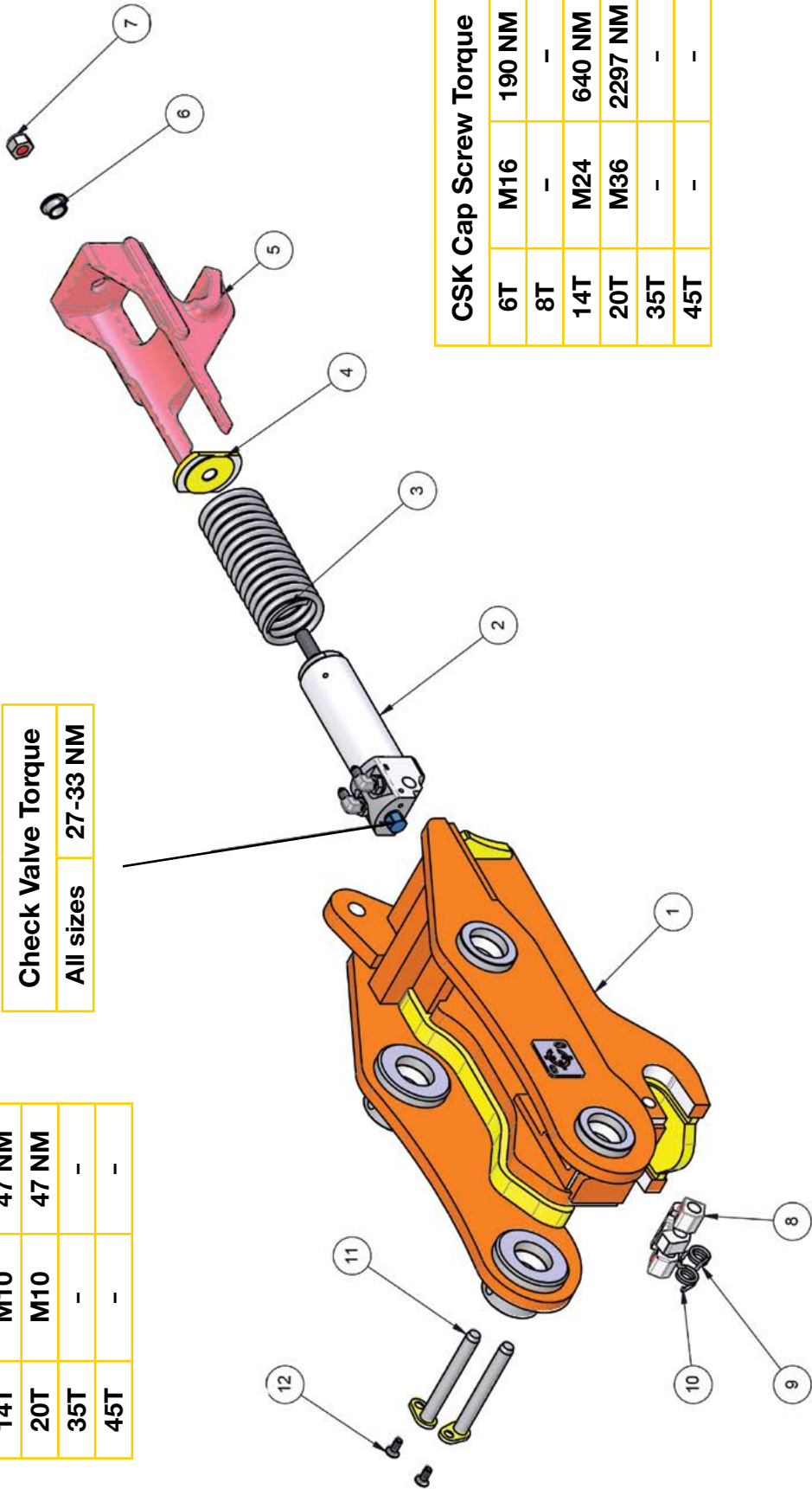
NOTE: Broken slide tails could be a result of excessive rail tolerances.

Parts Diagram

Nylock Nut		
6T	M10	47 NM
8T	M10	47 NM
14T	M10	47 NM
20T	M10	47 NM
35T	-	-
45T	-	-

Check Valve Torque	
All sizes	27-33 NM

CSK Cap Screw Torque		
6T	M16	190 NM
8T	-	-
14T	M24	640 NM
20T	M36	2297 NM
35T	-	-
45T	-	-



Parts List

	DESCRIPTION	2T PN	3T PN	4T PN	6T PN	8T PN	14T PN	20T PN	35T PN	45T PN
1	Cylinder Assembly	304312	304112	304112	303207	304189	303821	303521	304212	304712
1.1	Check Valve	303184	10325	10325	10325	10325	10325	10325	10325	10325
1.2	90 Elbow	304130	304130	304130	30324	30324	30324	30324	30324	30324
2	Safety Spring	304317	304117	304117	303212	304027	303827	303527	304217	304717
3	Plate Rod End	304318	304118	304118	303213	304020	303828	303528	304218	304718
4	Slide	304326	304121	304121	303850	302287	304198	304199	304636	304708
5	Boss Top Hat	304332	304127	304127	203115	303826	303826	303226	303226	304738
6	Nut Nyloc	20265	20266	20266	20268	20271	20271	303541	303541	20379
7	Spring R/H	304330	304125	304125	303205	303839	303839	303539	304224	304736
8	Latch Safety	304327	304122	304122	303217	304021	303838	303538	304236	304733
9	Spring L/H	304331	304126	304126	303206	303840	303840	303540	304225	304739
10	Pin Latch	304333	304123	304123	303214	304024	303170	303542	304237	304739
11	Pin CYL	304328	304128	304128	303214	304022	303837	303547	304220	304734
12	Capscrew	20265	303220	303220	20189	20189	20189	20189	20189	
12.1	Capscrew								20359	20359

Maintenance & Repair Log

Date	Fault	Repair	By Whom

Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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