BTS Safety Systems

AirHook Max PRO Anchor System

Code: 70720S

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ANSI 2359.18
CEN TS 16415
CE 795
AS/NZS 5532: 2013

BEAVER TECHNOLOGY SERVICES
PTY LIMITED

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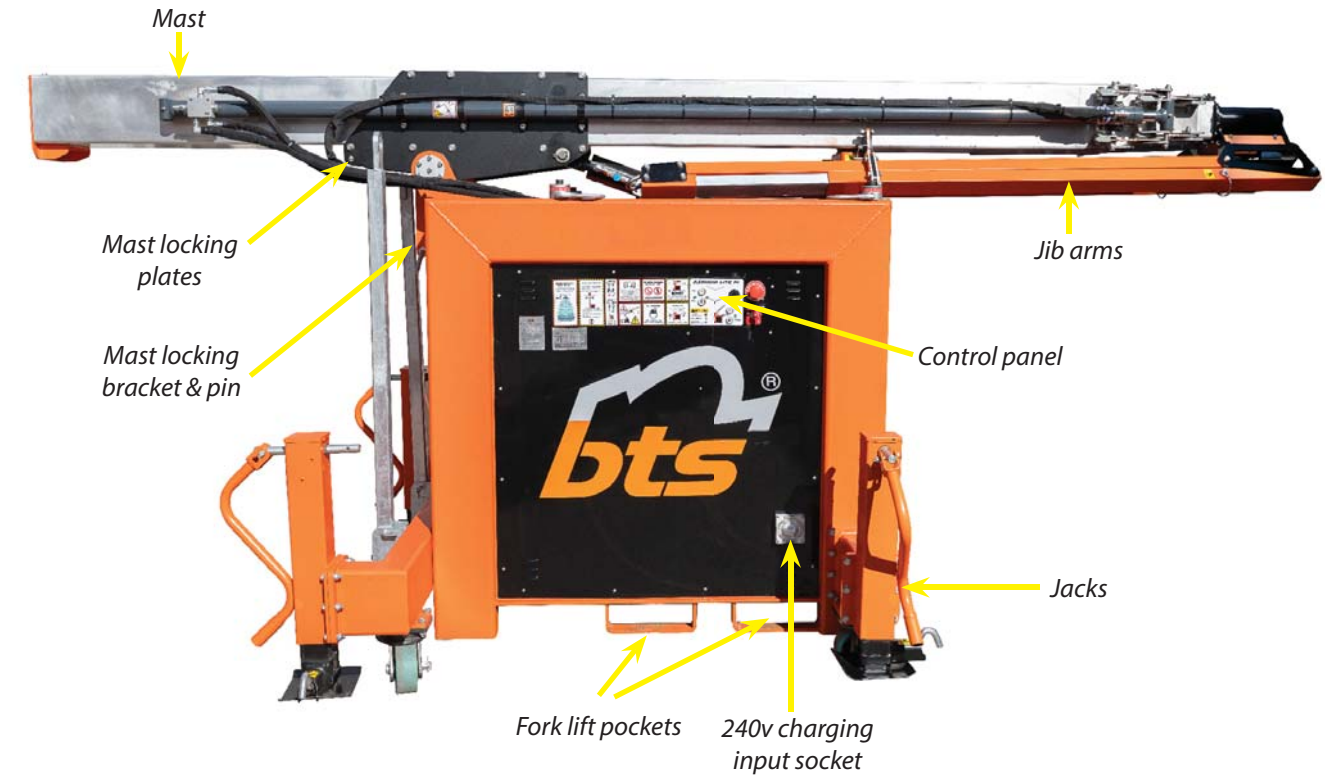
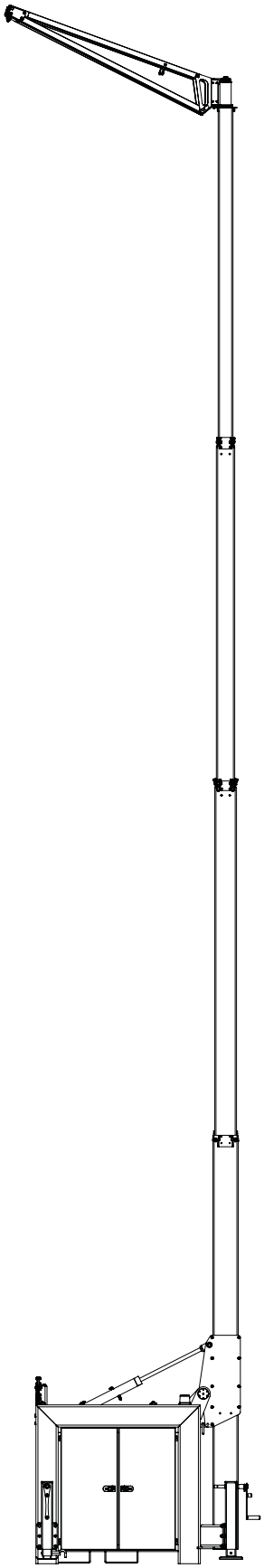
TABLE OF CONTENTS

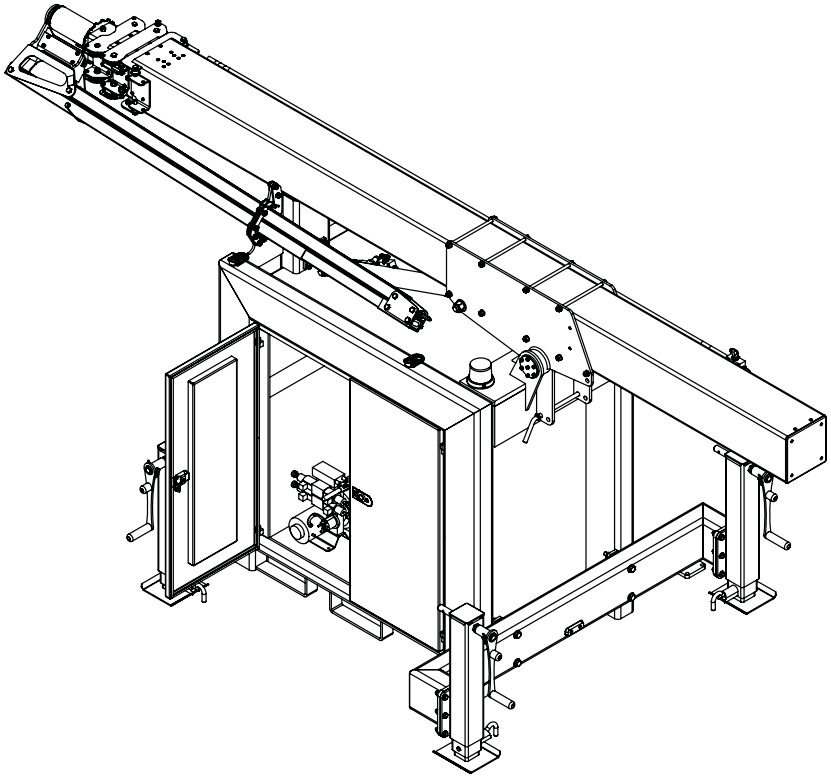
1. REPORTING SAFETY DEFECTS

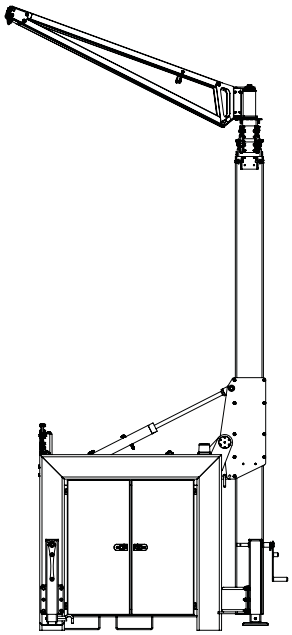
If you believe that your AirHook Max PRO has a defect which could cause injury or death, you should immediately stop using the AirHook Max PRO, tag it out of service and notify your Supervisor to organise immediate repairs.

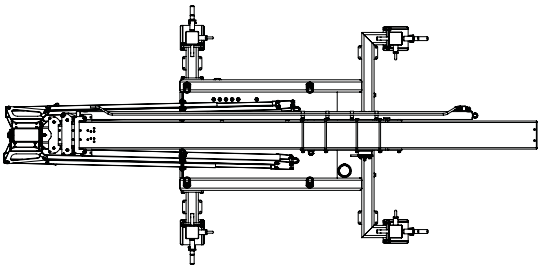
2. PARTS IDENTIFICATION

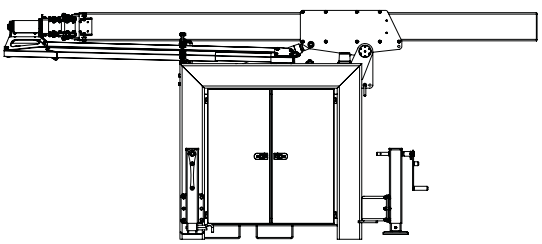












2.1 INTRODUCTION

Congratulations on your purchase of an AirHook Max PRO as part of your safety-at-heights equipment. This system has been specifically designed, manufactured and rated to provide reliable operation in many different safety-at- height applications and is NOT intended to be used for material handling/lifting. Using the system for material handling/lifting may SERIOUSLY damage the system integrity and would VOID all warranties.

The system features a rugged steel base with the upper structure constructed of high quality lightweight aluminium extrusions. The centre of gravity is as low as possible for improved stability during towing, set-up and operation.

The structure has been static tested to 21kN. Under excessive loads exceeding the SRL capacity the anchor point arm will deploy the fuse indicating overload (see section 7.4), Anchor arms continue to support the static load, 21kN per anchor point.

2.2 FALL PROTECTION

There are 2 davit arms each equipped with a 15kN rated anchor point designed for a worker weighing a total of 136kgs including all clothing, tools and equipment..

3. APPLICATION RESTRICTIONS

There are restrictions and limitations that must be carefully considered in the selection, installation, and operation of this type of equipment. Serious injury or death may result from failure to consider these factors.

3.1 WORKING LOAD LIMIT

This system is designed and rated to 15kN, to provide fall protection for two (2) workers (one per anchor point) each weighing a maximum of 136kgs including all clothing, tools, and equipment. Self-Retracting Lifelines selected for use with this system must have a Maximum Arrest Force (MAF) rating 4kN or less. This system is not intended for use with shock absorbing lanyards or other energy absorbing devices other than SRL's. Please refer to the appropriate manufacturer's instructions and specifications for all system accessories to ensure compatibility of components.

3.2 FALL CLEARANCE

Ensure that adequate clearance exists in the potential fall path to avoid striking a lower level or other objects. The potential swing fall must be minimized. Refer to the instructions provided with the connecting device being used for guidelines on calculating required fall clearance.

3.3 SITE CHARACTERISTICS, PHYSICAL and ENVIRONMENTAL FACTORS

Work sites have associated with them a number of potential hazards related to the site itself. These may include, but are not limited to poisonous or explosive atmospheric conditions, poisonous or corrosive chemical hazards, hot surfaces, electrical hazards including overhead power lines, sharp edges, engulfment hazards, or moving machinery.

All of these factors must be taken into consideration when selecting equipment for a given application.

4. GENERAL SYSTEM REQUIREMENTS

4.1 ANCHORAGE REQUIREMENTS

The system is designed to be set up and used on a supporting surface (anchorage) capable of safely supporting the weight of the system plus all static and dynamic loads that may be applied to the system during use.

Typical anchorages for this type of a system would be a relatively smooth and level surface such as a workshop, car parks, hard stand or compacted surfaces.

Surfaces other than level concrete (for example asphalt, gravel, hard packed soil) with the potential to sink over time under the weight of the AirHook Max PRO must be assessed and approved by a Competent Person.

All installations MUST BE approved by a Competent Person as defined by AS/NZS1891.4 or Country/State or Territory Standards /Directives and used under the supervision of a Competent Person.

4.2 COMPATIBILITY OF CONNECTORS

Connectors used to connect components in the system must be compatible with each other to ensure sufficient strength and eliminate the risk of accidental disengagement or rollout during use. Connectors supplied with products designed, manufactured, and/or approved by BTS will meet all applicable requirements for connectors. Any connectors not supplied by BTS MUST BE selected and approved by a Qualified Person.

4.3 FULL BODY HARNESS

Use only a full body harness designed, tested, and approved for fall arrest when connecting a person to this system. Body belts or straps do not provide adequate support to the body to prevent serious injury or death in the event of a fall and MUST NOT be used (see AS/NZS1891.4 for guidance or Country/State or Territory Standards /Directives).

4.4 FALL PROTECTION

Activities involving working at heights require the use of equipment to protect the worker in the event of a fall. Suitable fall protection must be provided as required by applicable local regulations when using this equipment. Fall protection equipment MUST be selected, and installed under the supervision of a Competent Person as defined by AS/NZS1891.4 or Country/State or Territory Standards /Directives and must be used by a Competent person or under the supervision of a Competent Person.

4.4.1 SWING ANGLE

Care must be taken at all times to minimize the potential for swing fall when working at heights. Figure 3 below shows the allowed Safe Working Zone when using this system for fall protection. Workers MUST stay within the prescribed safe working area at all times while anchored to the system. When site related hazards within the Safe Working Zone shown in *(Figure 3)* require restriction of movement within this area, a Competent Person must identify these limitations and explain them to all users.

4.4.2 FREE FALL DISTANCE

Care must be taken at all times to minimize the potential free fall distance when working at heights. No worker shall climb to any point such that their harness D-ring is higher than the system anchor point, or work outside the Safe Working Zone described in *(Figure 3)*.

4.5 CONFINED SPACE SAFETY

When this equipment is used as part of a system involving work in a confined space, always follow an approved confined space safety plan meeting all local regulations (Check with your local regulatory authority prior to commencing work).

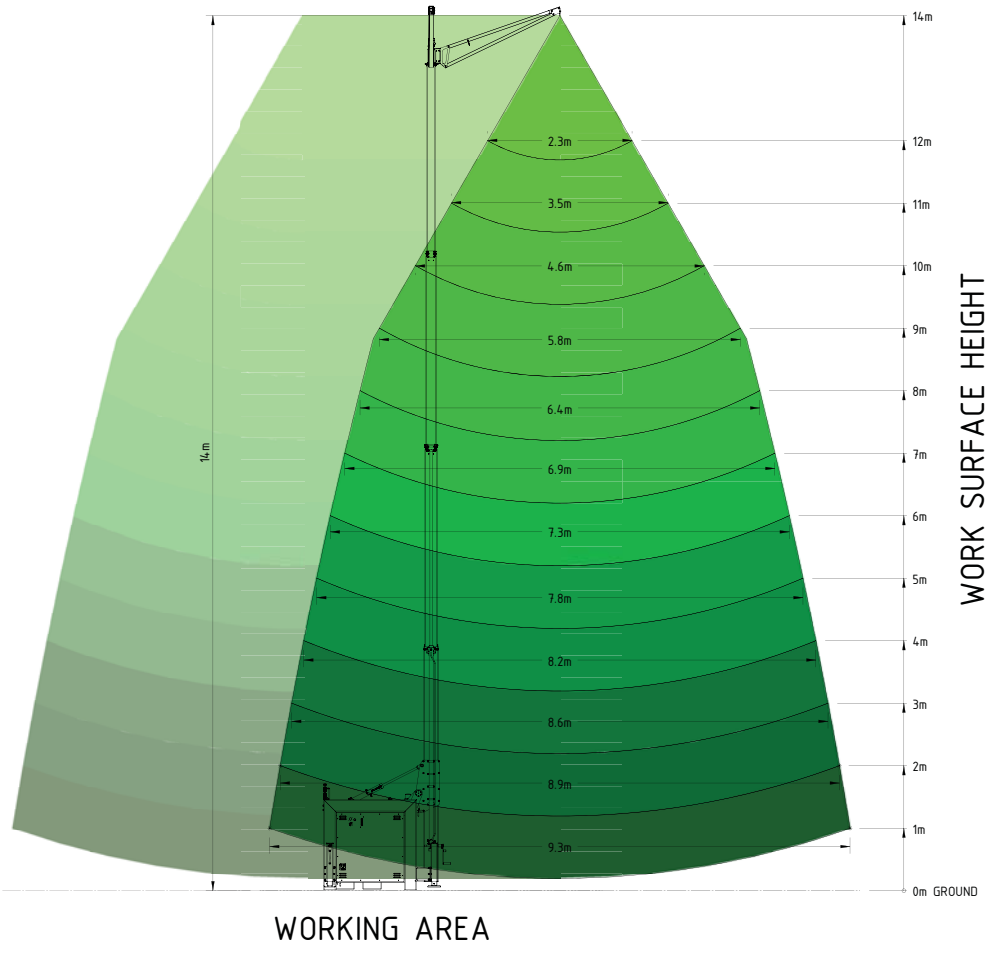


Figure 3

Typical Safe Working Zone for Fall Protection.

5. SYSTEM SET-UP and OPERATION

5.0 INTRODUCTION

This equipment is designed for use in conjunction with various accessories to meet different work site requirements. These include self-retracting lifelines (SRL's) and full-body harnesses.

This system is not intended for use with shock absorbing lanyards or other energy absorbing devices.

All accessories and their installation must be approved by a Competent Person as defined by AS/NZS1891.4 for use with the system.

5.1 SET-UP

The system is shipped pre filled with hydraulic fluid. Before use ensure the battery is fully charged. The initial set up must be done under the supervision of a Competent Person. This equipment MUST BE used by a competent person or under the supervision of a Competent Person.

5.2 SYSTEM TRANSPORT AND POSITIONING

⚠ DANGER! ⚠

Be aware of any overhead power lines or other hazards, as the aluminium structure is highly conductive of electricity. Failure to follow these procedures could result in serious injury or death!

The AirHook Max PRO is equipped with a Stabilizer base, a Forklift with a capacity of 2500 kgs) is required.

For long distance or high-speed transport the system must be moved by truck or other means.

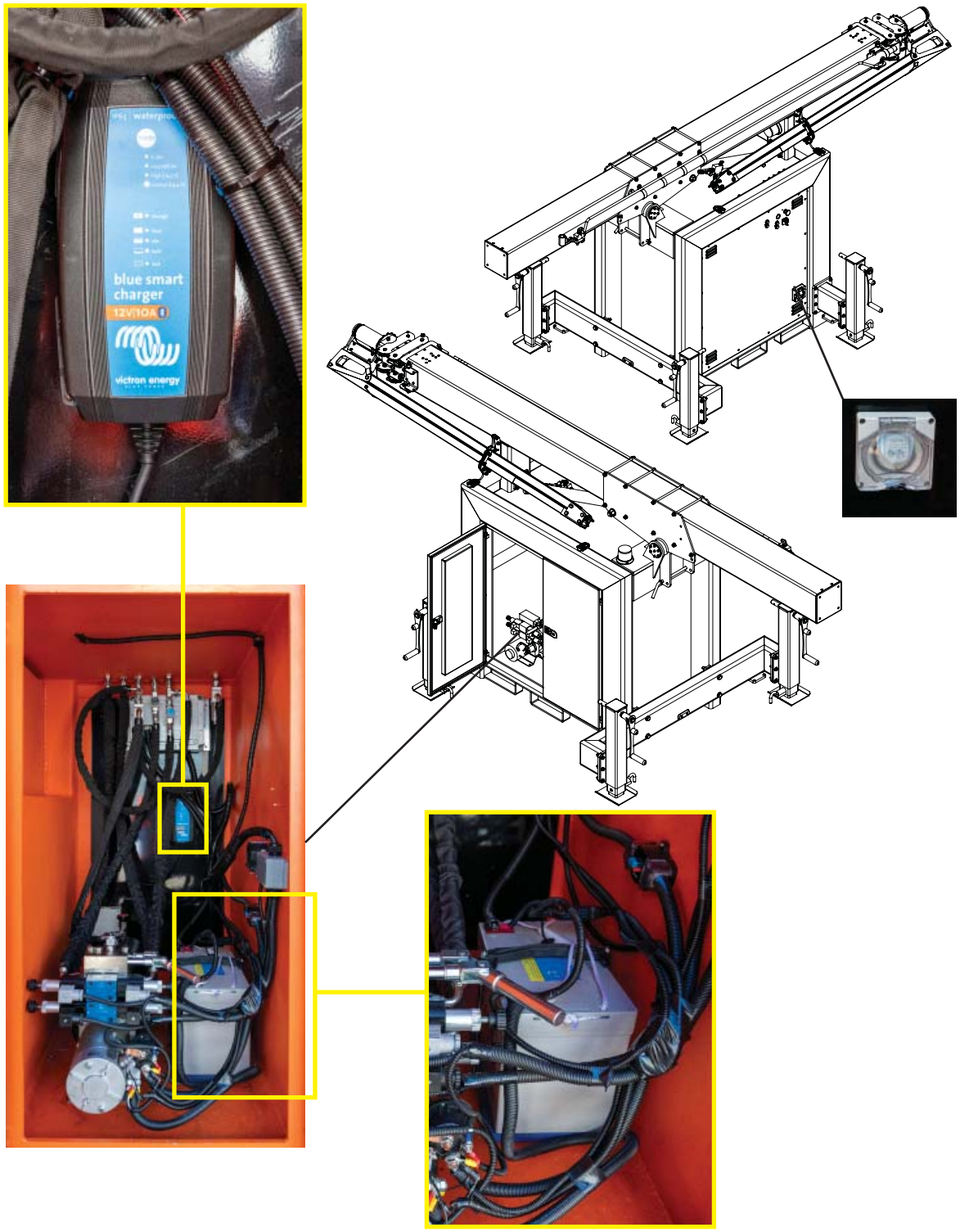
Under No Circumstances shall personnel ride on the system; on top of the cube or mast. See Risk Assessment for other warnings.

5.3 BATTERY

The system comes standard with a 12v (1000 cca deep cycle) battery, a battery charger, both located in the hydraulic control box.

The battery charger has a charge rate of 80 amp, so the charger when plugged in will take about 2-3 hrs to fully charge a dead battery.

The output of the battery charger is connected to the battery, the input side of the charger is connected to the output side of the Transformer, the input side of the transformer is connected to a plug located on the out side of the box (as shown in figure 8a). Both transformer and the battery charger have an ON/OFF switch, ensure that both switch's are ON, then plug in a extension cord (that has been plugged into a power outlet/generator/wall) in, and the system will charge the battery.



5.4 SYSTEM OPERATION

Once the system has been initially set up and is certified ready for use, the operation of the system is as outlined below.

Read all Warning Labels carefully and understand the information contained in them. The following instructions detail the setup and operation to Raise or Lower the VERTICAL height of the Anchor points.

STEP 1:

Read all Warning Labels carefully and understand the information contained in them.

On front of control panel

Pay attention to pinch point, lift point & fork lift pocket labels attached to various parts of the unit.

STEP 2:

Position the system in relation to the work structure with a suitably rated fork lift.

Position the fork lift only where marked (FORKLIFT POCKET)

STEP 3:

Lower and adjust the height of all 4 jacks, to level the unit and lift the casters of the surface.

Locate the locking pin at the base of the jack

rotate the locking pin 90° counter clock wise

place foot on jack base plate and push to the ground

With foot placed firmly on the base plate, rotate locking pin 90° clockwise. Slowly remove foot as the base locks into position.

Locate jack handle, rotate counter clockwise to extend jacks and clockwise to retract untill unit is level and supported by the jacks.

5.5-1 ANCHOR ARM ROTATION SETUP INSTRUCTION;

The Anchor Arms are able to rotate 360°each

The Mast Head Assembly has multiple rotation position setups, the position can be adjusted by using the "Lock Lever".

OUTDOOR USE: for outdoor use it is **HIGHLY RECOMMENDED** that the Mast Head Assembly be set up for the 30° FIXED rotation position.

This is recommended to prevent the Anchor Arms from turning is high winds and coming into contact with overhead equipment and twisting the SRL taglines.

INDOOR USE: for indoor use it is recommended that the Mast Head Assembly be set up for the 360°FREE rotation position.

Please refer to page 15 for instructions on installation of the Anchor Arms.

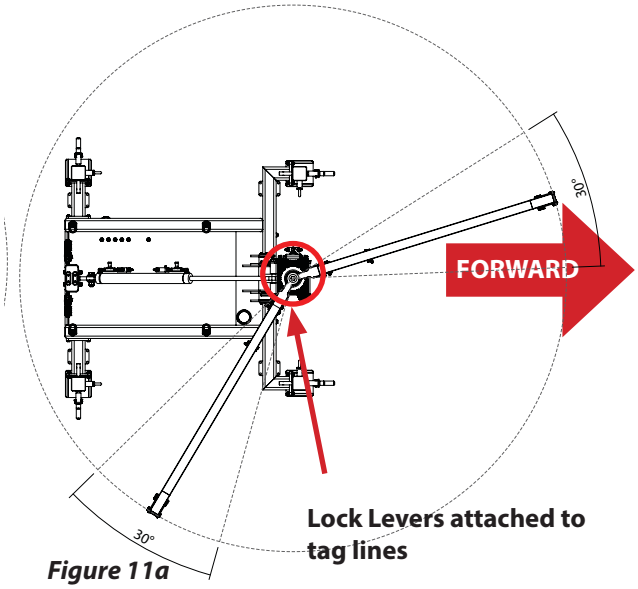
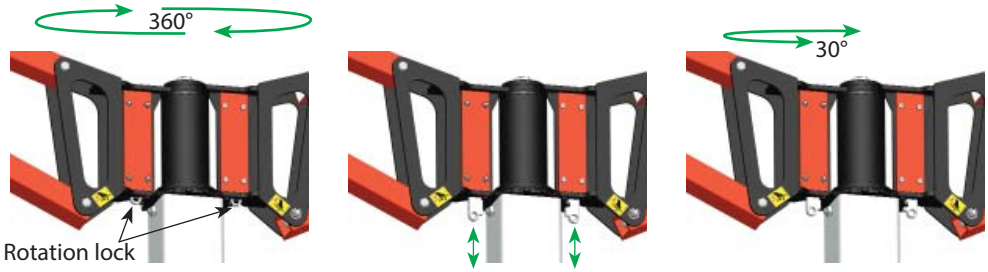
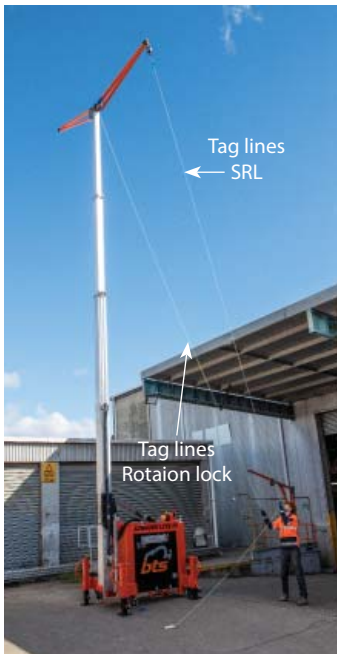


Figure 11a
Anchor Arms

To lock jib in to position

Pull down on the tag line attached to the rotation lock, move the jib to the desired position using the tag line attached to the SRL, then release the rotation lock and it will stay in the locked position

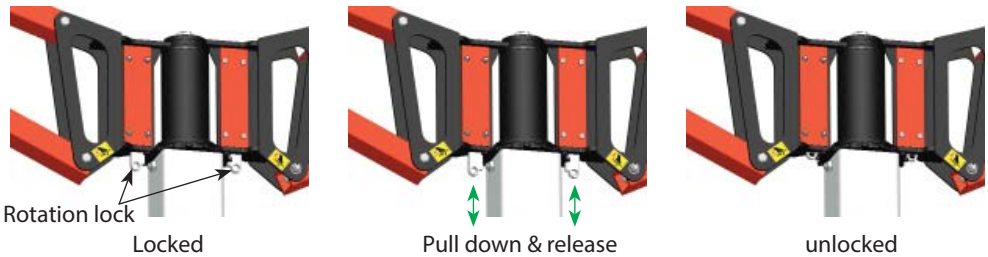




Tag Lines not shown for clarity

To unlock the jib

Pull down on the tag line attached to the "LOCKED" rotation lock, then release the rotation lock and it will return to the unlocked position



Tag Lines not shown for clarity

5.5-2 RAISING, LOWERING AND HEIGHT ADJUSTMENT INSTRUCTIONS;

THE FOLLOWING INSTRUCTIONS DETAIL THE OPERATION OF THE 12 V HYDRAULIC SYSTEMS IN RAISING THE MAST FROM HORIZONTAL TO VERTICAL AND POSITIONING THE ANCHOR POINT HEIGHT.

READ ALL WARNING LABELS CAREFULLY AND UNDERSTAND THE INFORMATION CONTAINED IN THEM.

Figure 12
Raising Mast

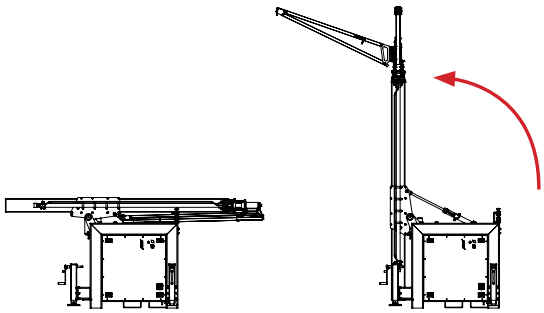
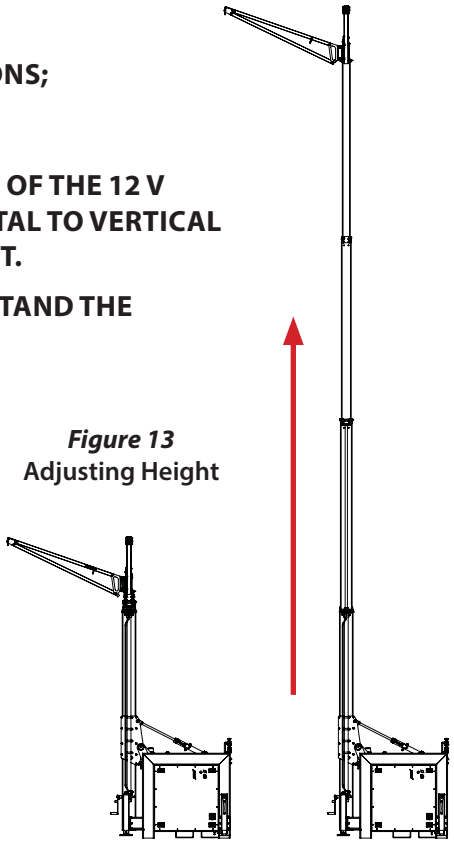


Figure 13
Adjusting Height



Before operating the unit ensure that the Isolation Switch & Emergency Stop are in the "ON" Position

To Raise the mast to a vertical position

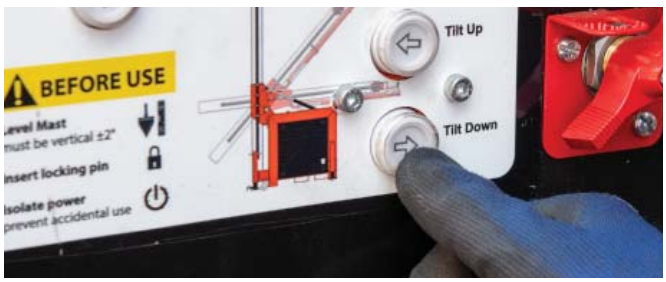
- Press and hold button, Marked "Tilt Up"

To Raise the height of the anchor point

- Press and hold button, Marked "Extend"

To Lower the mast from Vertical to Horizontal

- Press and hold button, Marked "Tilt Down"



To Lower the anchor point height

- Press and hold button, Marked "Retract"

CAUTION: WHEN LIFTING THE MAST FROM THE HORIZONTAL POSITION PERSONNEL MUST BE STANDING IN THE APPROVED AREAS AS SHOWN IN *(Figure 14)***.**

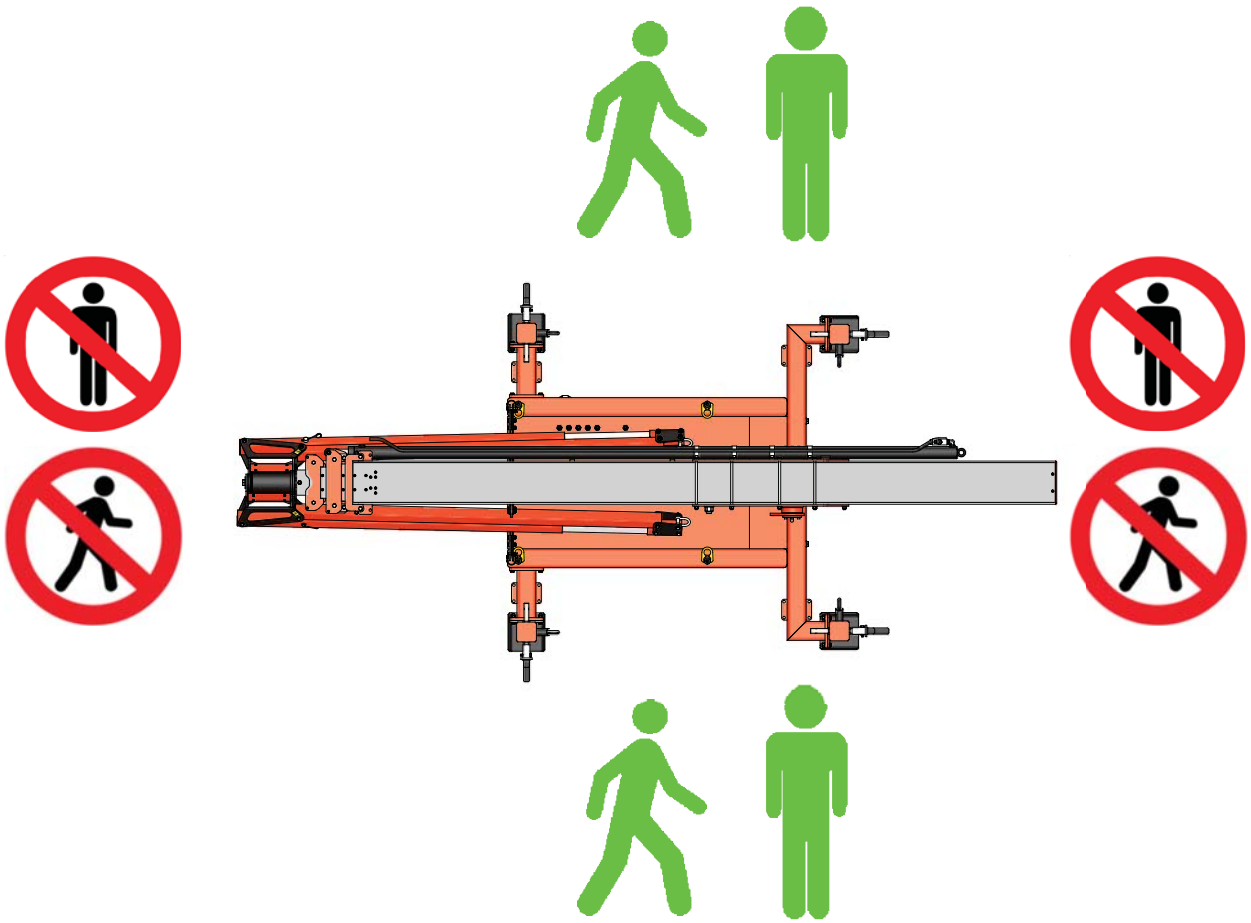


Figure 14
Approved Standing Areas.

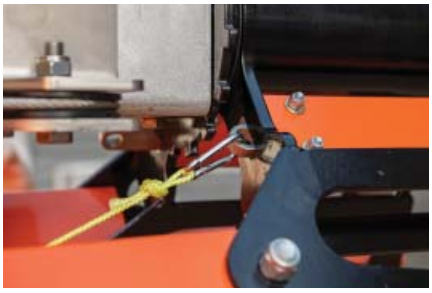
5.5-3 INSTALLATION OF ANCHOR ARMS IN THE 360° FREE ROTATION POSITION;

The following instructions are based on the Mast being in the transport (horizontal) position.

STEP 1:

Attach supplied tag line to the rotation lock on the mast head





STEP 2:

Remove the jib arm extension pin, set aside for future use



STEP 3:

Unlock the transport jib arm holder, open clamp then replace pin in the opened clamp for safe keeping




STEP 4:

lift and remove the jib arm from the transport cradle. While lifting the jib arm to a horizontal level, lock the rotation lock to support the jib arm by pulling on the attached tag line. Once locked, extend the jib arm until perpendicular to the mast.




STEP 5:

extend the mast until the extention pin holes line up. Replace the extention pin and retaining clip.



STEP 6:

Locate the supplied SRL & Tag line. Using the supplied karabiner, attach the SRL to the anchor point on the end of the jib arm. Now attach the tag line to the SRL hook. The setup of the Jib arm is complete.

Repeat steps with the second jib arm.




Note:

If the AirHook Max PRO is to be used with only one worker attached, the second SRL & tag line do not have to be installed, but the second jib arm must be setup as per the 1st.

SELF-RETRACTING LIFELINES

Self-Retracting Lifelines (SRL's) selected for use with this system must have a Maximum Arrest Force (MAF) rating of 4kN or less and must be installed, inspected and used as per the manufacturer's instructions.

A typical SRL Installation is shown in *(Figure 15)* right

Use of a tagline on the SRL cables is required to allow access to the lifeline from the ground.

Note: Attach Taglines to SRL before raising the mast.

For accessories not supplied by BTS, the Competent Person responsible for the selection, set up and use of the system, must provide to all users the applicable manufacturer's instructions related to those accessory installation and operation.

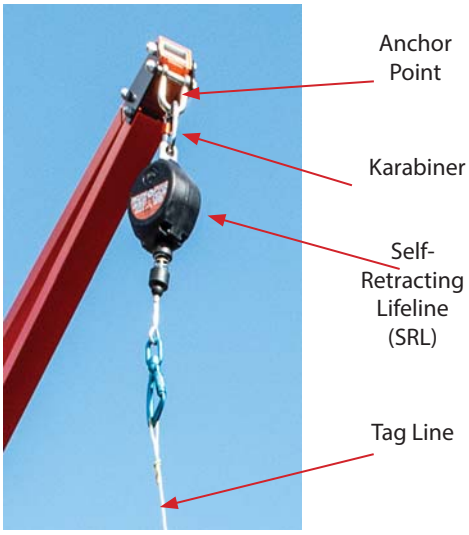


Figure 15

Typical Installation of SRL

5.5-4 RAISING THE MAST FROM TRANSPORT (HORIZONTAL) TO VERTICAL.

Failure to follow these instructions can result in property damage, serious injury and/or Death.

CAUTION must be taken when rasing the Mast with the 360° FREE rotation position (Anchor Arms pointing DOWN towards the ground) the Anchor Arms WILL move as the Mast is being raised. The Operator MUST be ALERT and AWARE of overhead objects (i.e.; Anchor Arms and SRL blocks) during operation.

Ensure a Safety Zone of 2 metres around system during operation. Only the operator is allowed within this safe zone during operation. The operator is required to wear an approved HARDHAT and approved SAFETY GLASSES during operation.

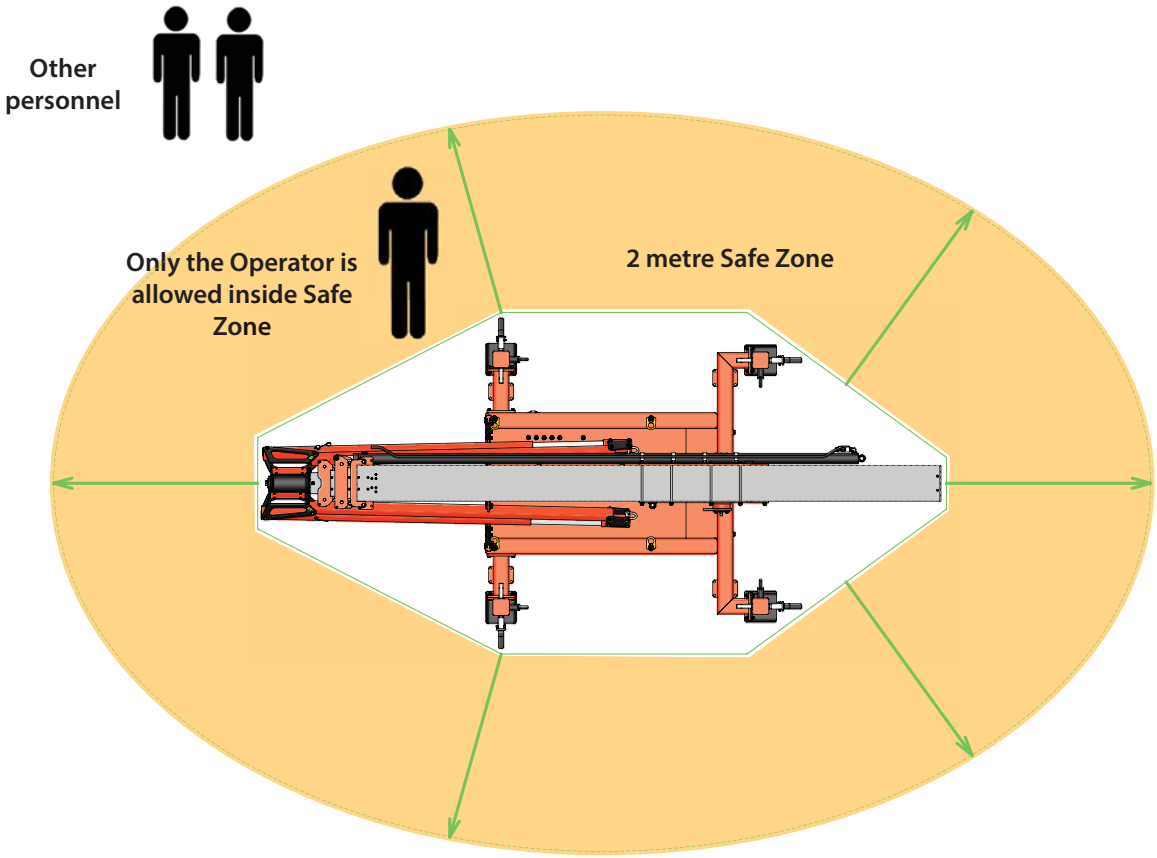
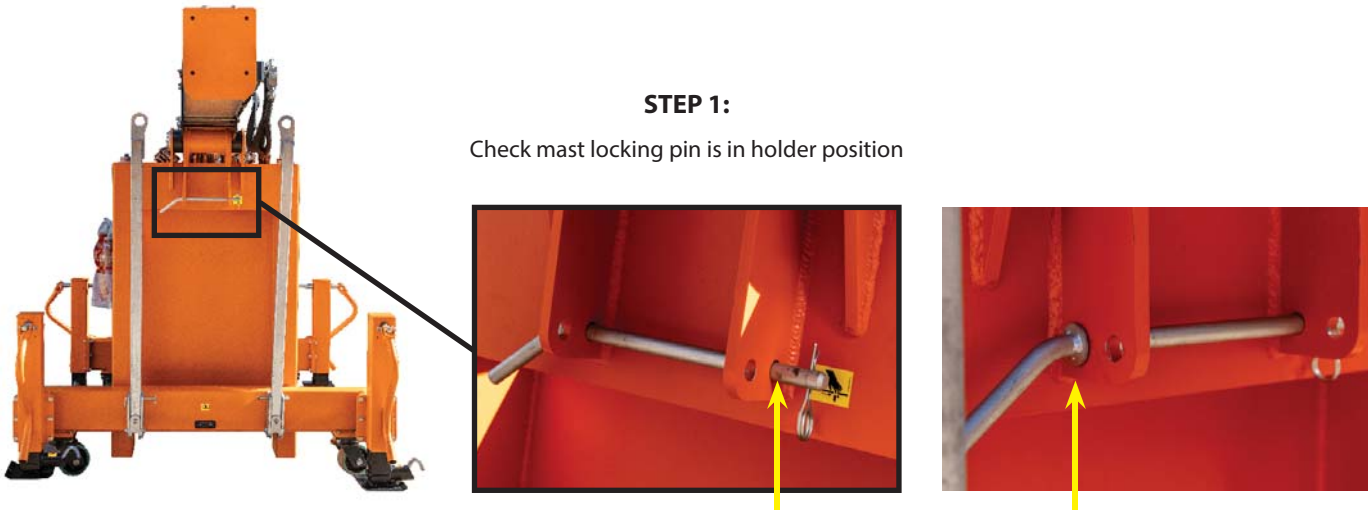


Figure 16
Ensure a 2 metre safe zone around system.



STEP 1:

Check mast locking pin is in holder position

holder position is the holes nearest the welds

CAUTION must be taken around the bottom of the mast during raising and lowering as the Mast base is pivoting down.

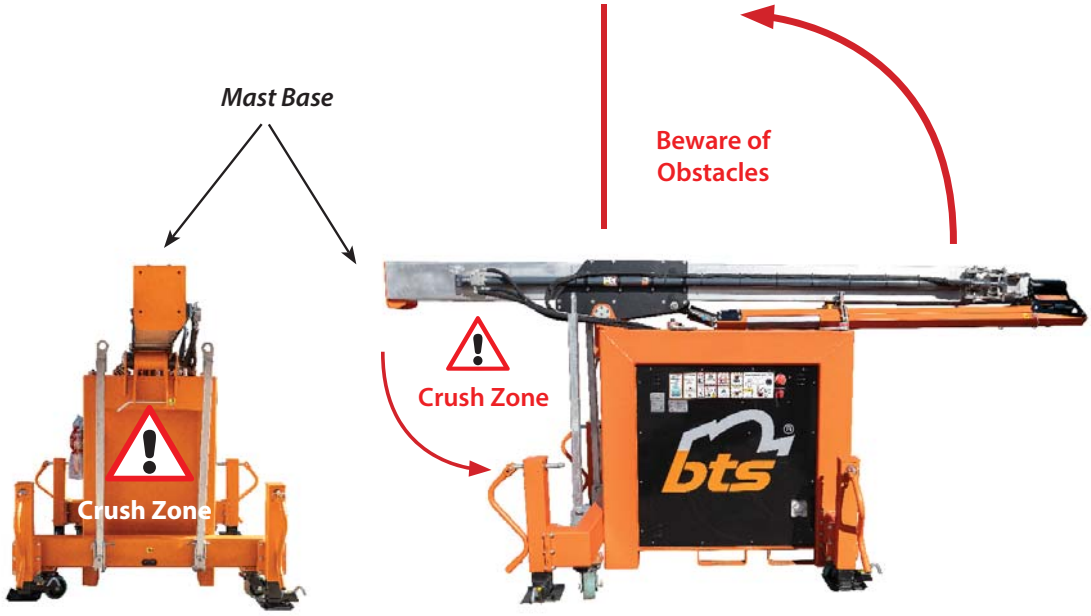
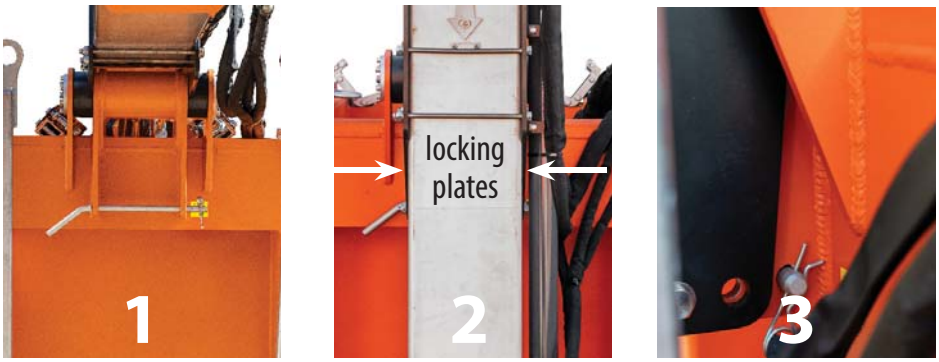


Figure 17
Caution must be taken around Mast Base as the mast is being raised

The mast locking pin bracket acts as both a guide and a horizontal stabiliser for the mast.

If the Mast Guide locking plates located on the mast do not line up with the bracket system (located on the unit frame) as shown in *(figure 17d)* (1,2 & 3), the unit must be taken out of service, inspected and/or repaired by a competent person.



Mast Locking Pin Bracket with locking pin in holder position

Mast Locking Pin Bracket with mast in vertical position and mast guide locking plates in position. Holes lined up ready for insertion of locking pin.

Figure 17d
Mast Locking Bracket

To Raise the Mast from Transport (horizontal) to vertical, follow the instruction located on the control panel.

STEP 2:

Pull Emergency Stop button to the on / out position, switch battery isolator to on position.

Isolation switch in OFF position

Turn Isolation switch to ON position

Whilst the Emergency Stop is in the on position the Warning Beacon will flash. When operating the hydraulics, a warning buzzer will sound.

STEP 3:

To Raise the mast to a vertical position Press and hold button, Marked "Tilt Up". Press until the holes on the locking bracket & locking plates line up Re. fig 17d

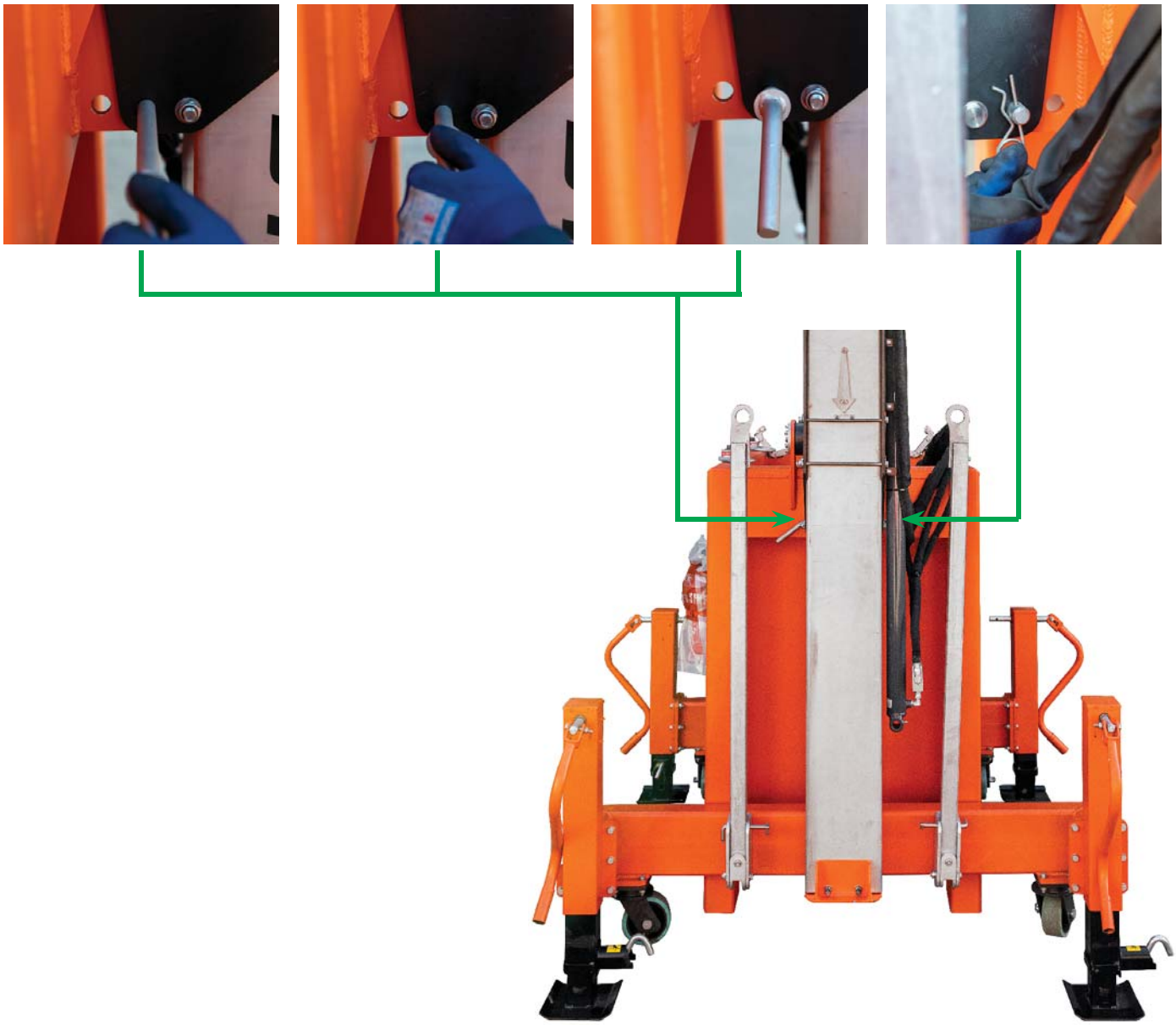
CAUTION:

With Arms and SRLs attached, caution must be taken when raising to prevent contact with surrounding equipment.

STEP 4:

Now that the mast is in the vertical position, remove the locking pin from its holder position, by removing the retaining pin and sliding the pin out from the other side as shown below.

Insert the locking pin into the second hole (mast guide locking plates & mast locking pin bracket) and replace the retaining pin as shown below



DANGER!

Be aware of any overhead power lines or other hazards, as the aluminium structure is highly conductive of electricity. Failure to follow these procedures could result in serious injury or death!

STEP 5:

With the mast now locked in the vertical position, it is now time to ensure the mast is level. Using the level indicator on the mast (Fig. 17e) adjust the jacks on the unit until the arrow is in the centre as shown in (fig.17f)

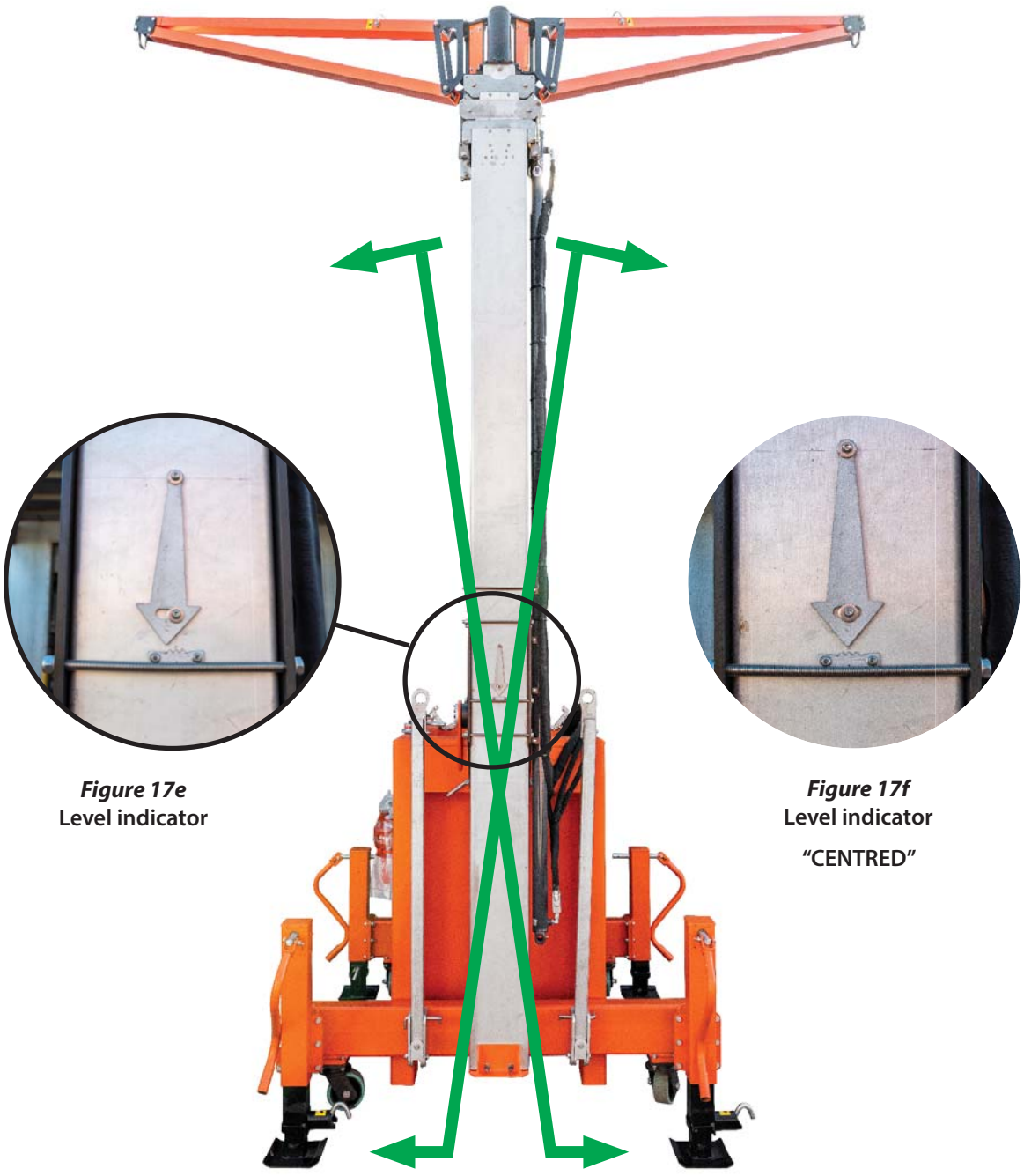


Figure 17e
Level indicator

Figure 17f
Level indicator
"CENTRED"

5.5-5 RAISING THE MAST (ANCHOR POINT) HEIGHT.

Failure to follow these instructions can result in property damage, serious injury and/or Death.

DANGER!

Be aware of any overhead power lines or other hazards, as the aluminium structure is highly conductive of electricity. Failure to follow these procedures could result in serious injury or death!

Ensure a Safety Zone of 2 metres around system during operation. Only the operator is allowed within this safe zone during operation. The operator is required to wear an approved HARD HAT and approved SAFETY GLASSES during operation.

To Raise the Mast (ANCHOR POINT) height, follow the instruction located on the control panel.

STEP 1:

Pull Emergency Stop button to the on / out position, switch battery isolator to on position.

Isolation switch in OFF position

Turn Isolation switch to ON position

Whilst the Emergency Stop is in the on position the Warning Beacon will flash. When operating the hydraulics, a warning buzzer will sound.

STEP 2:

To Raise the mast (ANCHOR) height, Press and hold button, Marked "Extend". Press until the Mast (ANCHOR) is at the desired height Re. (fig. 17g)

Figure 17g
Extend button

CAUTION:

With Arms and SRLs attached, caution must be taken when raising to prevent contact with surrounding equipment.

STEP 3:

Adjust the anchor arm position over the working area as shown (Re: 5.5-1 Anchor Arm Rotation Setup Instruction page 14)

STEP 4:

Use the tag line to pull the SRL snap hook down to connect into each workers harness D-Ring.

STEP 5:

Following all applicable work at heights regulations, climb to the elevated work surface and proceed with the work at hand following all approved established procedures.

DO NOT go outside the Safe Working Zone as shown on Page 7

At no time shall any worker climb to any point such that their harness D-ring is higher than the system anchor point.

No person shall use this equipment without receiving proper training as outlined in Section 6. All users must fully read and understand this manual and any other instruction manual(s) related to the system being used.

5.6 LOWERING THE ANCHOR POINT HEIGHT

STEP 1:

To lower the anchor point height, follow the instructions in the control panel. Press and hold button, Marked "Retract". Press until the Mast (ANCHOR) is at the lowest point Re. (fig 17h)

Figure 17h **Retract button**

The system can be moved around a job site without having the lower the Mast to Transport position. If the system is being taken onto on public roadways or at speeds above of 8 kilometres per hour the mast MUST be lowered to the transport position and all equipment secured.

5.7 LOWERING MAST to Transport (horizontal) Position

Figure 17i

Note: The anchor point height must be lowered to the lowest position first.

When lowering the mast from vertical to transport (horizontal) position in the 360° FREE rotation position.

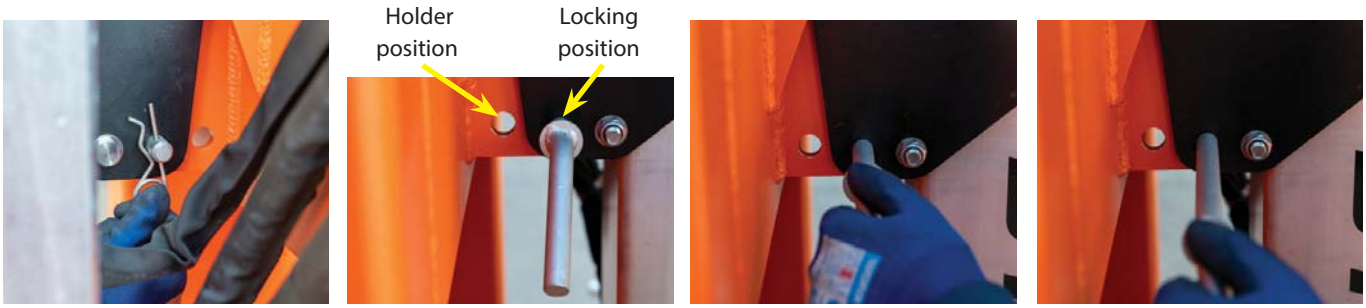
NOTE: Before lowering the mast to the transport position, rotate the anchor arms so they are both locked and pointing 90° to the unit base sides (As per Fig 17i) This will prevent the arms from swinging downwards due to gravity while lowering.

Warning caution must be taken while lowering the mast in the 360° FREE rotation position. Serious injury may occur with contact to the anchor arms and/or SRL's while lowering the system.

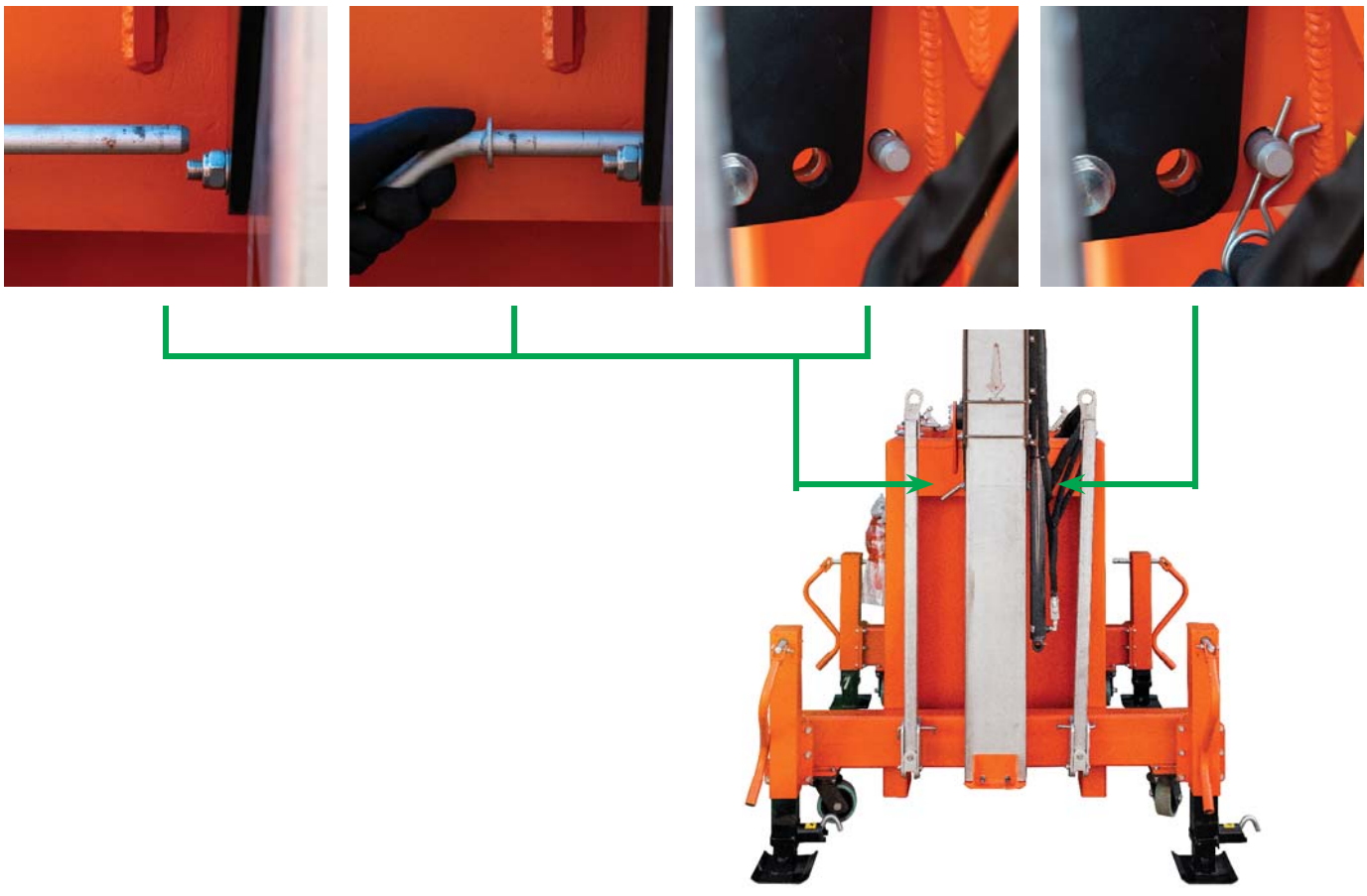
The operator is required to wear a approved HARDHAT and approved SAFETY GLASSES during operation.

STEP1:

Before moving the mast to the horizontal position, remove the locking pin from the Locking Position.



Insert the the locking pin into the holder position close to the welds (holding position) and replace the retaining pin on the right hand side.



DANGER!

Be aware of any overhead power lines or other hazards, as the aluminium structure is highly conductive of electricity. Failure to follow these procedures could result in serious injury or death!

Ensure a Safety Zone of 2 metres around system during operation. Only the operator is allowed within this safe zone during operation. The operator is required to wear an approved HARD HAT and approved SAFETY GLASSES during operation.

To lower the Mast (Horizontal / Transport) position, follow the instruction located on the control panel.

STEP 2:

Pull Emergency Stop button to the on / out position, switch battery isolator to on position.

Isolation switch in OFF position

Turn Isolation switch to ON position

Whilst the Emergency Stop is in the on position the Warning Beacon will flash. When operating the hydraulics, a warning buzzer will sound.

STEP 3:

To lower the Mast (Horizontal / Transport) position follow the instructions in the control panel. Press and hold button, Marked "Tilt down". Re. (fig 17j)

Figure 17j **Retract button**

Lower the mast until it rests on the rubber pad, located above the warning beacon Re Fig. 17k.
Lower the mast to a position where the SRL"s and the Anchor arms can be removed safely.

Whilst the Emergency Stop is in the on position the Warning Beacon will flash. When operating the hydraulics, a warning buzzer will sound.

CAUTION: With the SRL's attached to the arms, caution must be taken when lowering to prevent contact with surrounding equipment.

Figure 17k **Rubber pad**

5.8 STOWING THE ANCHOR ARMS and returning them to storage position

STEP 1:

Remove the Tag line from the SRL , then remove the SRL from the anchor. Remove rotation lock tag line. Roll up tag lines their reels and stow with SRL in storage area of the unit ***(Repeat steps with the second jib arm, if second SRL is installed)***.




STEP 2:

Remove the jib arm extension pin, set aside for future use



STEP 3:

Collapse the jib arm towards the body of the unit, then lift and replace arm into transport cradle .




STEP 4:

Remove the stowed pin from the jib arm clamp move the clamp to the lock position and replace the pin and retaining clip




STEP 5:

Install the jib arm extention pin and rtaining clip. **Repeat steps 2 to 5 for 2nd arm**



5.9: TRANSPORT/MOVING

THE SYSTEM CAN BE MOVED AROUND A WORK SITE UNDER THE FOLLOWING CONDITIONS;

1. The Anchor point arm must be lowered to the lowest position.
2. Speed does not exceed 8Km/h.

DANGER!

Be aware of any overhead power lines or other hazards, as the aluminium structure is highly conductive of electricity. Failure to follow these procedures could result in serious injury or death!

6. TRAINING

Any worker using this equipment must receive appropriate training from their employer on all equipment involved prior to operating. All users must read and fully understand this manual and any other instruction manual(s) relating to the system being used, or have the instructions fully explained to them, before using this equipment.

In addition to training specific to this equipment, all users must be properly trained in the use of any accessories used with the system, as well as fall protection, confined space safety, and any other applicable training related to the work being performed, in compliance with local regulations.

7. INSPECTION

Before use a Walk around must be performed, ensure equipment is secure, battery is fully charged and check hydraulic oil level, this is done when the mast is in the transport position, add oil if needed. Use an AW-32 grade Hydraulic oil if required.

The system must be inspected by a Competent Person before each use, and periodically on a scheduled basis.

Any problems must be reported immediately to your supervisor, and the equipment tagged "Out of Service" to prevent further use until it has been repaired.

When checking or re-filling the hydraulic reservoir, hold the hexagonal coupling nut (below cap) and twist cap anti-clockwise to unscrew and remove the cap.

7.1 DAILY INSPECTION

A Competent Person must inspect the system before each use. Report any problems or concerns to your supervisor, do not use the equipment until equipment has been cleared for use.

Perform a walk around, ensure equipment is secure, battery is fully charged and check hydraulic oil level, this is done when the mast is in the transport position, add oil if needed. Use an AW-32 grade Hydraulic oil if required.

7.2 DETAILED or ANNUAL INSPECTION

At least annually, and more frequently if subjected to harsh conditions or extensive use, the system MUST BE given a detailed Inspection by a competent person.

Record the results and maintain an Inspection Log for each unit using the sample Inspection Log sheet provided at the back of this manual. Please make photocopies of this sample to record all inspection results.

NOTE: Any time the involvement of a factory authorized service centre is required for repairs; please provide photocopies of all previous Inspection Log sheets for the system to assist with diagnosis and processing of any warranty claims.

Please obtain a Returned Goods Authorization number from the service centre before returning any equipment for service.

7.3 CLEANING AND LUBRICATION

If required, clean and lubricate the system components as outlined in Section 8.1 prior to performing the inspection.

7.4 PHYSICAL DAMAGE

Inspect the system and all accessories for physical damage; bent parts, caster damage, loose or missing hardware or parts, and missing, or illegible labels. Replacement labels for all BTS Products are available from your dealer by ordering the part number shown on each label.

The Anchor Arm assembly contains an Overload Indicator that identifies mis-use of the system that exceeds normal service loads. This feature confines any system damage resulting from overloading to a specific area. System overloading will be indicated by elongation of the arm tube in the area shown in Figure 21a. In the event of a fall the overload indicator may break. The resistance of the fuse plates deploying, slows down the decend of the worker, at the same time it minimizes the impact the worker is exposed to.

Verify that no activation of the Overload Indicator has occurred during previous use or transport, the jib arms will not assemble correctly if deployment has accured. Remove system from service if there is any deformation of the Overload Indicator. While minor cosmetic damage will not affect the structural integrity of the system, a seriously damaged unit MUST BE removed from service and repaired by an authorized service centre prior to further use.

Any system accessories not manufactured by BTS must be installed, inspected, maintained and operated as instructed in the Operators Manual provided by the respective manufacturer at the time of purchase.

Overloading of the Davit will result in elongation of the jib arm Extension Tube in this area.

Figure 21a

Overload Indication.

7.5 POST FALL ARREST INSPECTION PROCEDURE.

In the event of a fall the system must be removed from service and thoroughly inspected by a competent person. Use the Inspection log located at the back of this manual. Items to look for are Bent and/or Broken parts and Hydraulic system leaks. Before returning to service the system must be authorized for use by a qualified person.

8. MAINTENANCE, LUBRICATION & STORAGE

This equipment has been designed to provide many years of trouble free service, and requires little in the way of routine maintenance.

Any loose fasteners should be tightened, contact a BTS authorized service centre for replacement parts or structural repair if necessary.

8.1 CLEANING THE SYSTEM

Basic cleaning should be performed at least annually as part of the annual inspection, or more frequently as required when used under harsh conditions.

Use a solution of warm water and a mild detergent to clean the System. Do not use solvents or other cleaners to clean the base, as this may result in damage to the powder coat finish.

8.2 LUBRICATION

Lubricate sliding parts as required with graphite, or TFE based dry film lubricant.

If necessary, disassemble, clean and lubricate moving parts with a good quality automotive wheel bearing grease.

Replacement parts are available if required from BTS or your local dealer.

Figure 22

8.3 STORAGE

If stored in an area exposed to the wind, the equipment should be anchored using suitable ground anchors and tie-downs to prevent system movement or overturning due to wind loading. Always inspect before using equipment that has been stored for any extended period of time.

8.4 PARTS CONSIDERED NORMAL WEAR AND TEAR FOR WARRANTY PURPOSES

Cables, battery and system labels, are considered subject to normal wear and tear during use and are not covered under warranty, except in cases of material or manufacturing defects.

9. SPECIFICATIONS

The Cube Base is constructed of mild steel.

The Mast is principally constructed of High grade 6061-T6 Aluminum, Plates and brackets are made from 6061-T6 Aluminum or mild steel.

Shipping Weight (EST.):

Pt# 70720S	2,300 kgs

10. RESCUE RECOVERY

The following instructions layout procedure for RESCUE of a worker.

Under no circumstances shall workers be lifted into position using the Hydraulic system. Workers are to "attached" to an approved SRL that is connected to the anchor point, then following safe work procedure climb/ascend to the upper work structure/surface.

There are five (5) options for rescuing a fallen/injured worker;

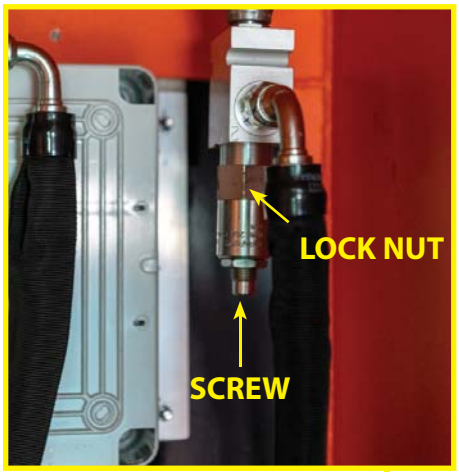
1. If the system is operational use the Hydraulic Control to SAFELY lower the worker to the ground.
2. Ladder (if reasonable).
3. Scissor Lift (if available).
4. Self Descending SRL
5. **If the system is NOT operational, following the instructions below to facilitate rescue:**

Worker has fallen and system is NOT operational.

In the event a worker falls and the system is not operational (whether it be from lockout procedure, existing safe working procedure or mechanical failure), the following instruction will allow support workers on the ground to safety lower the injured worker to the ground or to a height that they can be safely reached.

1. Release, relief valve.

Extreme caution must be taken in doing this to ensure the injured worker does not impact the ground or surrounding equipment.



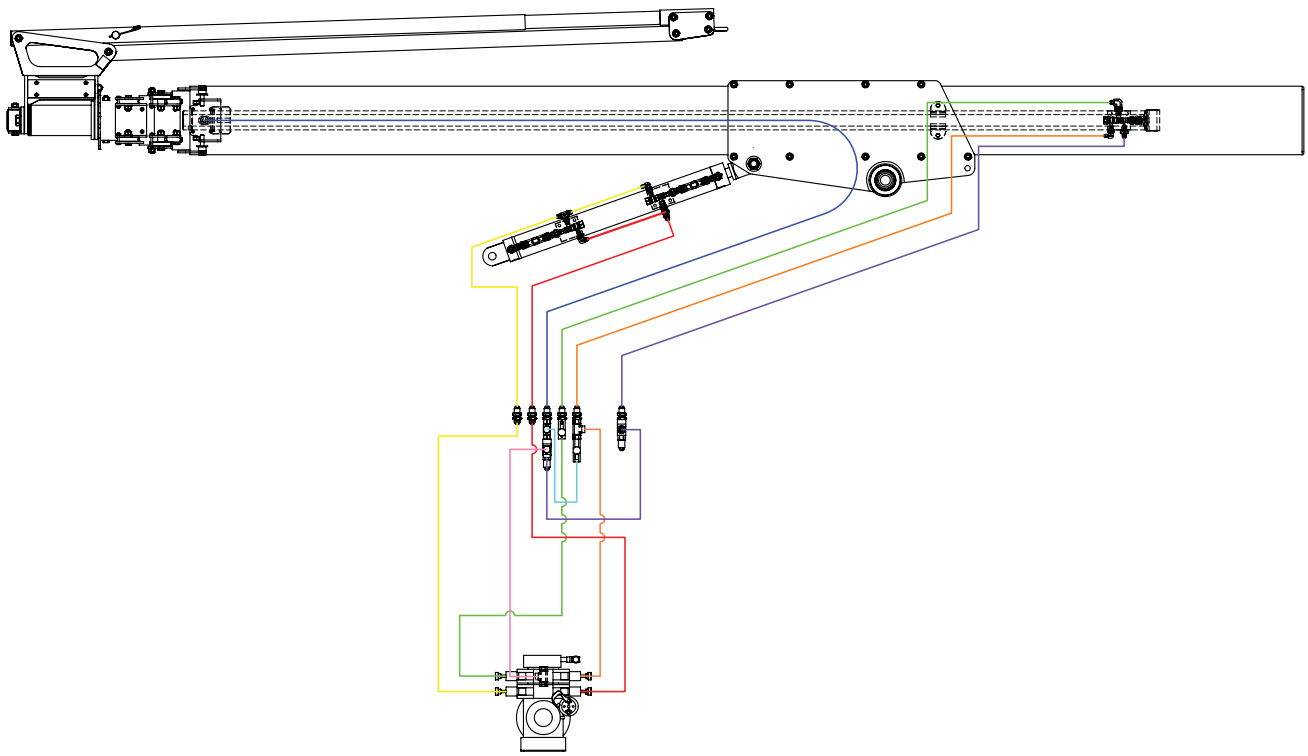
Relief valve located at the top of the hydraulic/Battery Compartment

Operating the relief valve

This valve on the right hand side is the one that can manually release the telescopic mast if it is stuck up and the unit has lost power. To retract the mast manually loosen the lock nut using a 19mm spanner, then slowly unscrew the bolt using a 6mm Hex (Allen) key, counting the rotations as you unwind until the mast starts to slowly retract.

When the mast has fully retracted tighten the screw back up to the previous setting with the 6mm Hex key and lock the locking nut with the 19mm spanner

11. HYDRAULIC CIRCUIT



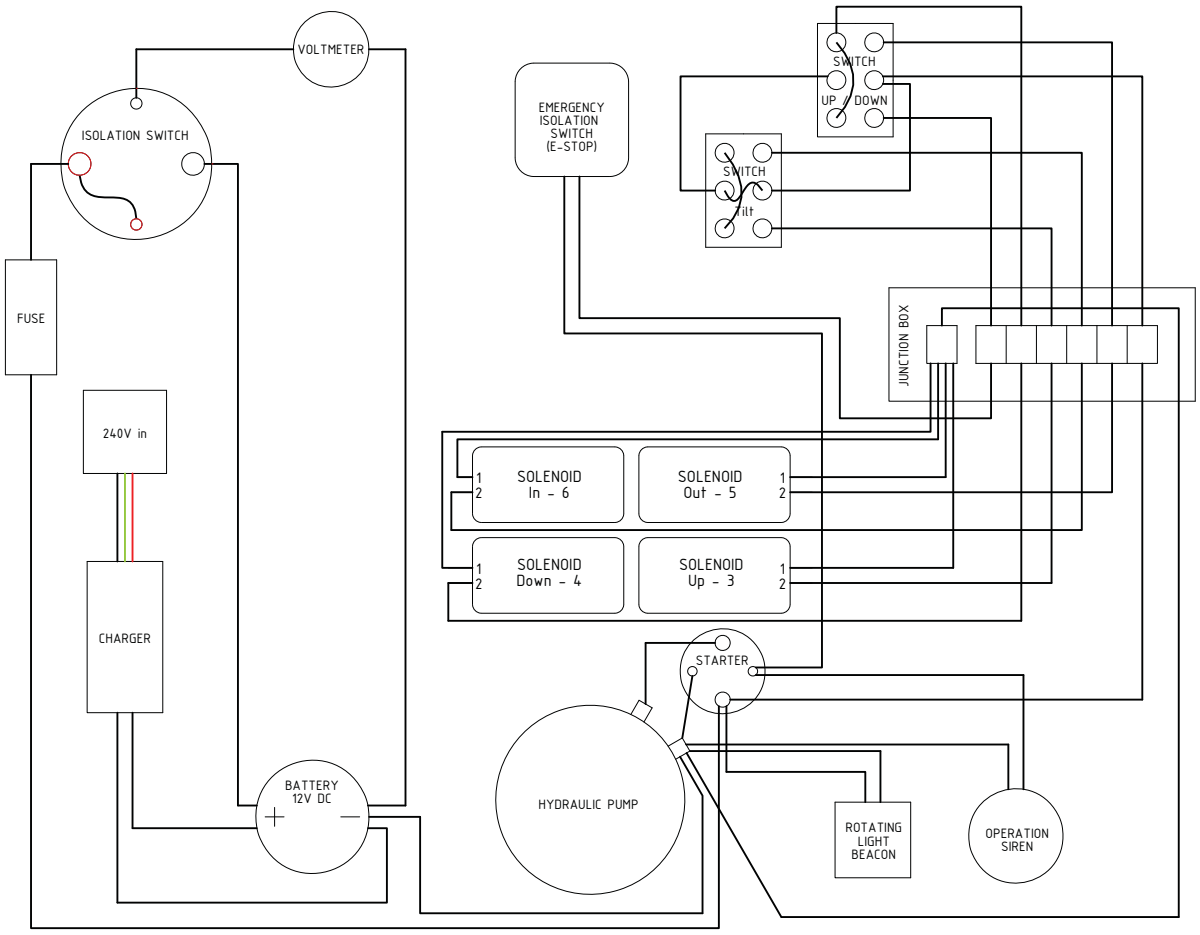
Hydraulic oil used in this system is a Synthetic All Season Hydraulic Fluid B.

All Hydraulic Lines are a Single wire braid hose.

12. ELECTRIC SCHEMATIC

The electrical system is a 12 VDC system equipped with a battery charger. The battery charger converts 240VAC to 12VDC to charge the battery.

Using the 80-amp Battery charger this system can be fully charged in 1-2 hrs.



13. LABELS

AIRHOOK MAX PRO

Code # LBL-AHMP-1530

AIRHOOK MAX PRO

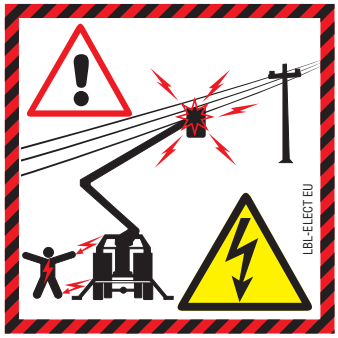
Code # LBL-AHMP-70

BTSTECH.COM.AU

Code # LBL-WEB-60

BTSTECH.COM.AU

Code # LBL-WEB-40



Code # LBL-ELECT

Code # LBL-BTS500

Code # LBL-LIFT POINT

Code # LBL-BTS700-OG

Code # LBL- FORKLIFT

Code # LBL-ESTOP

Code # LBL-PINCH POINT

Code # SSID_AIRHOOK-MP

Code # AHMPRO-2

14. RISK ASSESSMENT

RISK SCORE: 1 Low - 5 High		
Description	**Risk**	**Level**
1. Electrical		
Battery / Wires	Risk of Shock	1
2. Operation		
Tipping Hazard Due to Uneven ground.	Risk of Injury /Damage	4
Hydraulic line failure.	Risk of Failure	2
SRL Tag lines becoming tangled/snagged while lifting to operating position.	Risk of Injury /Damage	1
3. Pinch Areas		
Mast Pivot Point.	Risk of Injury	3
Mast Bottom Guide.	Risk of Injury	3
Mast Extrusions	Risk of Injury	1
4. Crush Areas		
Mast Resting Point.	Risk of Injury	3
Hydraulic Control Box.	Risk of Injury	2
5. Over Head Areas		
Arms rotating while lifting.	Risk of Injury	2
Mast Vertical Guide.	Risk of Injury	2
Over head Power lines.	Risk of Injury / Shock	4
Overhead structures / equipment.	Risk of Damage	3

Recommendations;

1. **UNDER NO CIRCUMSTANCES ARE PERSONNEL PERMITTED TO "RIDE" ON SYSTEM WHILE IN MOTION.**
2. Follow manufacture's instructions on proper use and operation.
3. System CAN ONLY be used with manufactures authorized accessories and/or equipment.
4. Have a Qualified Person replace battery and inspect wiring.
5. Ensure a Safety Zone of 2 metres around unit during operation. Only operator is allowed within this zone during operation.
6. Be aware of your surrounding, over head power lines, other structures and/or equipment.

15. DEFINITIONS

The following terms used in this manual.

ANCHORAGE: "A terminating component of a fall protection system or rescue system that is intended to support any forces applied to the system."

AUTHORIZED PERSON: "A person assigned by the employer to perform duties at a location where the person will be exposed to a fall hazard."

COMPETENT PERSON: "An individual designated by the employer to be responsible for the immediate supervision, implementation, and monitoring of the employer's managed fall protection program who, through training and knowledge is capable of identifying, evaluating, and addressing existing and potential fall hazards, and who has the employer's authority to take prompt corrective action with regard to such hazards."

QUALIFIED PERSON: "A person with a recognized degree or professional certificate and with extensive knowledge, training, and experience in the fall protection and rescue field who is capable of designing, analysing, evaluating, and specifying fall protection and rescue systems to the extent required by this standard*."

FALL ARREST: "The action or event of stopping a free fall or the instant where the downward free fall has been stopped.

FALL EXPOSURE ZONE: "An area of fall exposure on a roof or slope."

FALL PROTECTION: "Any equipment, device, or system that prevents an accidental fall from elevation or that mitigates the effect of such a fall."

FALL RESTRAINT: "The technique of securing an authorized person to an anchorage using a lanyard short enough to prevent the person's centre of gravity from reaching the fall hazard."

HARNESS, FULL BODY: "A body support designed to contain the torso and distribute the fall arrest forces over at least the upper thighs, pelvis, chest, and shoulders.

MAXIMUM ARREST FORCE (MAF): "The peak force measured by the test instrumentation during arrest of the test weight in the dynamic tests set forth in this standard."

PERSONAL FALL ARREST SYSTEM (PFAS): "An assembly of components and subsystems used to arrest a person in a free fall."

POSITIONING: "The act of supporting the body with a positioning system for the purpose of working with hands free."

RESCUE: "The process of removing a person from danger, harm, or confinement to a safe location."

SELF RETRACTING LIFELINE (SRL): "A device containing a drum wound line that automatically locks at the onset of a fall to arrest the user, but that automatically pays out from and retracts onto the drum during normal movement of the person to whom the line is attached. After onset of a fall, the device automatically locks the drum and arrests the fall."

WORKING LOAD LIMIT (CAPACITY): "The maximum weight that a component, system, or subsystem is designed to hold."

16. INSPECTION LOG

System Model Number: _____

System Serial Number: _____

Date of Manufacture (dd/mm/yy): _____

Purchase Date (dd/mm/yy): _____

INSPECTION ITEM	PASS	FAIL	DETAILS / LOCATION of DAMAGE	DISPOSITION (REPAIRED / SCRAPPED)	APPROVED FOR USE BY:
Physical Damage to Base, Supporting Tubes					
Damaged, loose, corroded or Missing Hardware or Connectors					
Missing or Illegible Labels					
Loose or damaged Anchor Points or Hardware					
Check Overload Indicator for evidence of unintended overloading of the system (See Section 7.4)					
Check Hydraulic hoses for “nicks”, “cuts” and /or leaks					
Check Hydraulic Oil Reservoir; ensure that Oil Level is at the Maximum level when the system is down.					
Battery electrolyte					

Date of Inspection:_____

Inspected By:_____

Please make copies of the form and maintain an inspection log file/binder.

The information set out in this manual has been compiled from supplier reference data including third party sources. BTS believes that the information is accurate and reliable, though we do not make or give any warranty (other than implied by statute which may not be excluded) with respect to the information. By using this information, the user undertakes not to hold BTS liable or responsible in any way whatsoever in relation or consequential to such use.