

# **IC1000 OPERATOR'S MANUAL**

**Contents**

1.0 SAFETY GUIDELINES ..... 4

    1.1 INTRODUCTION ..... 4

    1.2 OPERATOR..... 4

    1.3 SAFETY EQUIPMENT..... 4

    1.4 GENERAL ..... 4

    1.5 SYSTEM SUPPORT ..... 5

    1.6 STEEL WIRE ROPE ..... 5

    1.7 POWER SUPPLY GUIDELINES..... 6

    1.8 CONTROLS..... 6

    1.9 OPERATOR’S SUPPORT/WORK PLATFORM..... 6

    1.10 ENVIRONMENTAL HAZARDS ..... 7

    1.11 HAZARDOUS ACTIVITIES: WELDING ..... 7

    1.12 CORROSIVE ATMOSPHERE ..... 7

    1.13 SAFETY LABELS / INSTRUCTIONS..... 8

2.0 GENERAL OPERATION GUIDELINES..... 9

3.0 WIRE ROPE INSPECTION AND SERVICE ..... 10

    3.2 REMOVING AN OLD WIRE ROPE ..... 10

    3.3 INSTALLING NEW WIRE ROPE ..... 11

    3.4 WIRE ROPE GUIDE ASSEMBLY ..... 11

    3.5 TRANSFER CHAIN ASSEMBLY ..... 11

4.0 TENSION HOLDER ASSEMBLY..... 12

    4.1 INSPECTION..... 12

    4.2 SERVICE ..... 12

5.0 WIRE ROPE DRUM AND AUTOMATIC EMERGENCY BRAKE ..... 12

    5.2 INSPECTION..... 13

    5.3 SERVICE ..... 13

6.0 WIRE ROPE LEVEL WINDING SYSTEM ..... 13

    6.2 INSPECTION..... 13

    6.3 SERVICE ..... 14

7.0 TRANSMISSION ..... 14

    7.1 INSPECTION..... 14

7.2	SERVICE .....	14
8.0	OVERLOAD SWITCH.....	14
8.2	INSPECTION.....	14
8.3	SERVICE .....	15
9.0	AIR HOIST MOTOR.....	15
9.2	INSPECTION.....	15
9.3	SERVICE .....	15
9.4	TROUBLESHOOTING AIR MOTOR.....	15
10.0	OILER AND FILTER .....	16
10.2	INSPECTION AND SERVICE .....	16
11.0	FRAME.....	16
11.2	INSPECTION AND SERVICE .....	16
12.0	STORING AND TRANSPORTING .....	16

## 1.0 SAFETY GUIDELINES

Read and follow this safety check list. It includes all safety requirements of State and National codes as well as the recommendations of Sky Climber Europe. Follow all applicable Federal, State and Local codes and regulations pertaining to safety; they are minimum standards for the safe operation of SkyClimber equipment.

### 1.1 INTRODUCTION

Sky Climber Hoists and accessories are designed and manufactured to the highest standards in the industry for your safety. CAREFULLY FOLLOWING THE INSTRUCTIONS IN THIS MANUAL WILL REDUCE THE RISK OF ACCIDENTS WHILE USING THIS PRODUCT. It is the operator's responsibility to be sure that anyone using this equipment is fully familiar with this Manual before using the Sky Climber hoist and related equipment. Once the equipment leaves Sky Climber's control, the operator is responsible for its safe use, operation, and maintenance.

### 1.2 OPERATOR

1.2.1 Operators who operate suspended equipment must be:

- Mentally and physically able to withstand the stress of working at elevations.
- Able to read and understand this manual and follow its instructions.

1.2.2 If an operator is subject to seizures or loss of physical control, he shall not work at elevations

1.2.3 Operators must be safety conscious, responsible, and not under the influence of alcohol, drugs or other substances.

### 1.3 SAFETY EQUIPMENT

1.3.1 All persons using suspended access equipment must at all times wear safety harnesses attached by lanyards and rope grabs to independently hung lifelines. Do not disconnect/remove safety belts, harnesses or lanyards until you are safely on the ground or until completely disembarked from suspended devices to a safe location.

1.3.2 Use a short lanyard, and maintain the rope grabs high on the lifeline as practical.

### 1.4 GENERAL

1.4.1 Know and understand the operation of this equipment. Be sure that all persons who service, erect, dismantle or use this equipment are thoroughly familiar with, and follow all the safety rules in this Manual. Make certain that they also comply with all Federal, State and Local codes and regulations that apply to this equipment and its safe use.

1.4.2 Training in the use of Sky Climber equipment is available. Contact Sky Climber for details.

1.4.3 Safety Helmets shall be worn at all times that an overhead hazard exists when servicing, erecting, disassembling, or using this equipment.

1.4.4 Provide protection for operators from collision with overhead obstacles and falling objects.

1.4.5 Provide protection below the suspended equipment to prevent injury to personnel from falling objects.

1.4.6 Keep all persons from beneath suspended equipment.

1.4.7 Never work alone on a suspended platform or where aid is not immediately available in case of an emergency. Maintain contact with your supervisor at all times.

1.4.8 Do not exceed the rated capacity of the platform.

1.4.9 Before and after using, check all parts for proper function and damage to component parts. Do not use a damaged or improperly functioning work cage. The supervisor should assign a competent person to conduct the inspections.

1.4.10 In the case of apparent difficulty in the machine, steel wire rope, platform etc., notify your nearest authorized Sky Climber representative, and do not use the equipment until it is repaired or replaced.

- 1.4.11 All suspended access equipment must be handled with care. Impose loads on the platform gently.
- 1.4.12 Use only Sky Climber genuine spare parts for your Sky Climber equipment. Do not alter any SkyClimber baskets or accessories.
- 1.4.13 When at work station or when getting on or off a suspended working platform, prevent the platform from moving away from the building or structure by securing the suspended platform to the building face or structure. Before moving the platform always disconnect it from the building face. Hardware may be damaged and personal injury may result if platform is not disconnected from the building before it is raised or lowered.

## 1.5 SYSTEM SUPPORT

- 1.5.1 Make certain the roof, parapet or cornice will support the load imposed by the suspended platform. Do not secure to a weak or questionable structure. When in doubt, consult a professional engineer and/or the building owner's qualified representative.
- 1.5.2 Make certain the supporting devices, such as: "A"-frame, parapet clamp, cornice hook or roof beam will support the suspended platform load with a minimum of 4:1 safety factor. In case of doubt, consult a professional rigger/engineer.
- 1.5.3 Tie-backs shall be used on all supporting devices. Tie-backs must be perpendicular to the building facade, kept tight and attached to a structural member being capable of supporting the entire suspended load as well as the support system. Note: Davits or other direct connections to structure that are designed by a Professional Engineer may not require additional tiebacks.
- 1.5.4 Always use the correct type and size of wire rope clamps. Steel wire will slip through oversize clamps. Undersize clamps will damage the steel wire rope.
- 1.5.5 Never use a fluid or free-flowing material in a container as counterweight. Always use a solid material (with weight marking), that can be properly secured to the outrigger. Sandbags or liquid-filled containers shall never be used as counterweight.
- 1.5.6 The nut-type used for assembling suspension systems shall be of the self-locking type.
- 1.5.7 Never move a suspension support or roof beam with the platform being suspended. The platform shall be lowered onto a solid surface and the suspension wires shall be slack before the suspension supports are to be moved.

## 1.6 STEEL WIRE ROPE

- 1.6.1 Comply with codes, regulations and industrial standards which forbid or warn against the use of kinked, bird-caged or damaged steel wire rope. Inspect the steel wire rope for wear and damage prior to use and during operation. Steel wire rope is susceptible to serious damage if not handled in accordance with these and other instructions in this Manual. Exposure to concentrated acids, caustic material, corrosion, fire, electricity, undue heat or abuse damages the steel wire rope. When such an exposure has occurred, replace the steel wire rope immediately.

WARNING: The use of kinked, birdcaged or excessively worn or damaged steel wire rope is unlawful. Such use may result in injury or death to yourself or others.

- 1.6.2 Use Sky Climber specified steel wire rope, clamps, thimbles and other work associated components.
- 1.6.3 Ensure the wire rope is long enough to reach the lowest possible landing.
- 1.6.4 Steel wire rope must be rigged to remain vertical, with suspension points directly above the hoist entry guide or lead-in device at all times.
- 1.6.5 Tighten wire rope clamps in accordance with the clamp manufactures guidelines.
- 1.6.6 Special precautions must be taken to protect the steel wire rope when welding. See section 1.11 for list of precautions.

- 1.6.7 Wire rope fittings such as terminators, fist grips (aka: 'j-clips or double-saddle clips'), shackles, other connectors, and swage fittings all must be checked for proper torque/tightness at initial loading, and at the beginning of each work shift.
- 1.6.8 Examine wire rope for damage when operating the hoist on each ascent and descent.

## **1.7 POWER SUPPLY GUIDELINES**

- 1.7.1 Be sure your power supply conforms to hoist manufacturer's recommendations.
- 1.7.2 Do not allow the electrical power supply cable / air hose to become tangled with any obstruction or the suspension ropes when raising or lowering the suspended equipment. Make certain the electrical cord/air hose is of sufficient length to allow full travel of the suspended equipment.
- 1.7.3 Make sure that the electrical power source is grounded to a point of sufficient low resistance.
- 1.7.4 Use only approved connector plugs and power supply cords with strain relief, correctly assembled from hoist to power supply. Verify ground continuity, and use a ground fault interrupter (as required by code in your location). Consult local safety authorities for further information.
- 1.7.5 Ensure that all metal parts, outlets, junction boxes and other components that might come in contact with live conductors are properly grounded.
- 1.7.6 Always use a power cable cord with ground fault interrupter when using electrically driven hand tools on a suspended platform. Verify that the hand tools are properly earthed.
- 1.7.7 Before using air powered hoists, check the air supply pressure setting of the pressure regulator. The pressure setting should be equal to the working pressure indicated on the air motor decal.
- 1.7.8 Use only approved connector plugs and air hoses with strain relief, correctly assembled from hoist to air distribution yoke.
- 1.7.9 Use an air hose of sufficient cross-section.
- 1.7.10 Use air hoses that are in good working condition.
- 1.7.11 In case the permissible noise level of 79dB is exceeded ear protection is necessary.

## **1.8 CONTROLS**

- 1.8.1 Before switching on the main power: check all hoist controls and verify that they are in the "neutral" or "off" position.
- 1.8.2 Before moving the platform, verify that all the persons on or close to the platform are standing clear and are aware you are going to raise or lower the platform before moving.
- 1.8.3 Before raising or lowering the platform: check that the controls are operating as indicated on the control panel. Activating the "UP" button / lever has to initiate the upward movement. If this is not the case: call for a service mechanic.

WARNING: Always wait for the hoist to come to a complete stop before changing direction of movement, otherwise this may result in loss of control.

## **1.9 OPERATOR'S SUPPORT/WORK PLATFORM**

- 1.9.1 Check basket bolts daily and verify that the bolts are still in position and tightened firmly.
- 1.9.2 Never operate a suspended work-cage or platform without having the guard-rails, toe boards, bumpers, lifelines, lanyards and safety harnesses in position.
- 1.9.3 When operating the platform keep it as level as possible. If necessary operate one hoist in order to re-establish the level position.
- 1.9.4 When suspended do not climb or stand on guard-rails, toe boards, or platform supported objects. Do not reach over the ends or sides of the platform. Do not use ladders or scaffolding that are put on the platform deck for reaching out to higher levels.
- 1.9.5 Do not permit oil, grease, or slippery material to accumulate on climbing or gripping surfaces.
- 1.9.6 Do not attempt to bridge from one platform to another, nor to any other structure or other equipment. Embarking/disembarking of the platform is only allowed at ground or roof level.

- 1.9.7 Do not attempt to transfer a work platform to another “drop” while suspended. Only transfer the platform from one suspension location to another when it is lowered and standing on a level and solid surface.
- 1.9.8 In order to prevent damage to the aluminum structure every contact with caustic materials, acids fluids and fumes is strictly prohibited. Select wooden or fiberglass-made platforms for working in a caustic environment.

## **1.10 ENVIRONMENTAL HAZARDS**

WARNING: To avoid contact and shock hazard, scaffolds and tools should not be used in the vicinity of energized power lines or electrical lines.

- 1.10.1 Refer to federal, state and local codes and regulations when working in the vicinity of electrical overhead power lines. Consult the local power company for safe operating procedures before rigging.
- 1.10.2 Do not use long-handled tools when working close to electric power lines.
- 1.10.3 Verify that there are no obstructions in the vertical travel zone of the platform. Always keep a good look-out when raising or lowering the platform. If you run into an obstruction immediately stop the platform and inspect the platform and obstruction for possible damage and/or hang up. Proceed in a safe direction to clear the obstruction.

WARNING: Take care not to overload the system or get in a slack suspension wire situation when running into an obstacle.

- 1.10.4 When using a hoist in or near a Marine (or corrosive/salty) environment, more frequent inspections are required. In these applications a thorough 4-hours interval inspection of the hoists, steel wire rope, fittings and equipment has to be executed. Make sure to replace all the components that get degraded by corrosion or wear.

WARNING: Electric powered hoists are not rated for operating in an explosion hazardous environment. Select an air powered hoist.

## **1.11 HAZARDOUS ACTIVITIES: WELDING**

- 1.11.1 During welding, the electrocution hazard and the risk of the welding current passing through the suspension steel wire ropes shall be eliminated by taking the following precautions:
  - 1.11.1.1- Use an insulated thimble to attach each steel wire rope to its suspension point. Electrically insulate the extra steel wire rope stored on the roof to prevent grounding, or terminate the suspension rope at the insulated thimble.
  - 1.11.1.2- Cover the steel wire rope with insulating material 4ft above and 4 ft below the wire rope guide.
  - 1.11.1.3- Connect a ground conductor from the platform to the work piece. The size of this conductor shall be equal to, or greater than the size of the stinger lead. NOTE: This must be a secondary conductor and shall not be in series with the primary conductor between the welder and the work piece.

## **1.12 CORROSIVE ATMOSPHERE**

- 1.12.1 When Sky Climber hoists are being used in corrosive work-associated atmospheres such as acid washing, the hoist and its supporting steel wire rope shall be protected from direct contact with the corrosive solutions and agents. Each day, on the final descent, the steel wire rope shall be washed with a neutralizing solution and re-lubricated. Stainless steel wire rope, which is far more resistant to corrosion deterioration, can be obtained from Sky Climber.
- 1.12.2 Daily examination of the full supporting length of wire rope is mandatory.

## 1.13 SAFETY LABELS / INSTRUCTIONS

1.13.1 The Sky Climber equipment shall be labeled as follows:

**SKY CLIMBER**

MODEL#: IC-1000

LOAD LIMIT  
1000 LBS GROSS


ROPE SPECIFICATIONS:  
5/16" DIA., 5X26 FC XIP RRL  
GALVANIZED  
350' MAXIMUM LENGTH

AIR SPECIFICATIONS  
PRESSURE: 120 PSI @ 60 CFM

FOR ADDITIONAL INFORMATION  
REFER TO THE OPERATOR'S  
MANUAL

3431-305

**WARNING**



Before putting up, taking down, or using this suspended scaffold **CHECK WITH A COMPETENT PERSON AS TO ITS SAFE USE**

There are many ways **YOU CAN BE hurt or even KILLED** using scaffolds

**REVIEW THE SAFETY GUIDELINES WITH A COMPETENT PERSON PRIOR TO USE**

111-507

**WARNING**

INDEPENDENT VERTICAL LIFE LINES WITH REQUIRED LANYARDS & ROPE GRAB DEVICES ARE TO BE USED BY EACH OCCUPANT ON THIS EQUIPMENT.

WIRE ROPES MUST BE EVENLY AND NEATLY SPOOLED ON THE HOIST DRUM. UNEVEN SPOOLING COULD CAUSE JERKING AND SHOCK LOADING OF THE WIRE ROPE, SCAFFOLD AND RIGGING

THE HOISTING EQUIPMENT ON THE STAGE IS NOT WATERPROOF. SUBMERGING IN WATER COULD CAUSE THE HOIST AND BRAKES TO FAIL.

FOR TWO POINT SUSPENSION SCAFFOLDS THE RIGGING DEVICES MUST BE PLACED THE SAME DISTANCE APART AS THE SCAFFOLD WIRE ROPES. THE WIRE ROPES MUST REMAIN PARALLEL AND PLUMB TO AVOID SIDE LOADS THAT WILL DISLodge THE RIGGING.

READ AND UNDERSTAND THE OPERATORS MANUAL

3431-306

**WARNING**

BEFORE AND AFTER USING, CHECK ALL PARTS FOR PROPER FUNCTION AND DAMAGE TO COMPONENT PARTS. DO NOT USE A DAMAGED OR IMPROPERLY FUNCTIONING PLATFORM.

- ANY PARTS THAT HAVE BEEN EXPOSED TO EXCESSIVE HEAT, AS IN THE CASE OF FIRE, SHOULD BE IMMEDIATELY REMOVED FROM SERVICE AND DESTROYED DUE TO LOSS OF STRUCTURAL STRENGTH.
- DO NOT PERMIT OIL, GREASE, OR SLIPPERY MATERIAL TO ACCUMULATE ON PLATFORM DECK SURFACE.
- THE TOTAL COMBINED WEIGHT OF EACH MAN AND ALL MATERIALS SHOULD NOT EXCEED THE RATED WORKING LOAD.
- DO NOT USE THE PRODUCT IF THE DECKING SURFACE IS DAMAGED OR HAS DETERIORATED, IF WOOD IS USED, PERIODICALLY COAT WOOD DECKING WITH A CLEAR WOOD PRESERVATIVE. DO NOT PAINT WOOD DECKING.
- DO NOT ALLOW UNSTABLE OBJECTS, SUCH AS BARRELS, BOXES, LOOSE BRICK, TOOLS AND DEBRIS TO ACCUMULATE ON WORK SURFACE.
- DO NOT APPLY IMPACT LOADS TO ANY PARTS. NEVER ATTEMPT TO STRAIGHTEN A DEFORMED SIDE RAIL OR DECKING MEMBER.
- NEVER CLIMB ONTO A PLATFORM FROM A LADDER UNLESS BOTH THE PLATFORM AND THE LADDER ARE SECURED FROM MOVEMENT.
- DO NOT USE LADDERS OR OTHER DEVICES TO GAIN GREATER HEIGHTS.
- DO NOT USE ACIDS OR OTHER CORROSIVE SUBSTANCES ON A PLATFORM WITHOUT CONSULTING THE PLATFORM MANUFACTURER.
- DO NOT USE A METAL PLATFORM WHERE CONTACT MAY BE MADE WITH ELECTRICAL LINES.
- DO NOT OPERATE PLATFORM WITHOUT PROPERLY WEARING AND ATTACHING PERSONAL SAFETY EQUIPMENT TO AN INDEPENDENT LINE.
- KNOW AND UNDERSTAND PROPER OPERATING PROCEDURES FOR SUSPENDED ACCESS PLATFORMS AS CALLED OUT IN THE "SCAFFOLD INDUSTRY ASSOCIATION CODE OF SAFETY PRACTICES FOR SUSPENDED POWER SCAFFOLDS", AND LOCATED IN THE MANUFACTURING MANUAL
- IF YOU HAVE ANY QUESTIONS, CONTACT SKYCLIMBER, I.L.C., (800) 255-4629.

106-230

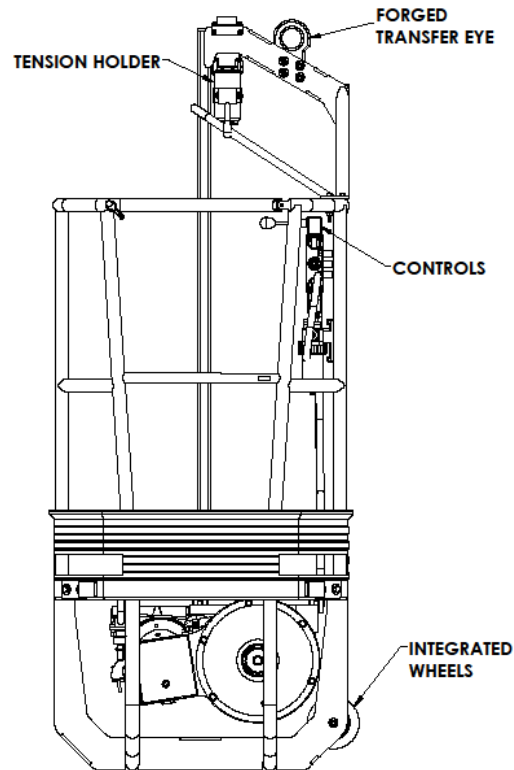


## **2.0 GENERAL OPERATION GUIDELINES**

- 2.1 Use the instructions in this manual and those provided with equipment to assemble the scaffold and rigging equipment.
- 2.2 Every component of the rigging system must be able to support the load. All structural members must be examined by an engineer or someone who is trained and capable of whether the structure is capable of withstanding the loads applied. The structure must be able to support a wire rope load of 4 times the maximum rated load capacity of the hoist. The gross load of equipment, material, workers, and any other mass supported by each wire rope must not exceed the rated capacity of hoist.
- 2.3 Clearly identify or remove obstructions in vertical path of travel. All power lines within 10ft of suspended scaffold system should be de-energized and locked out. All equipment users need to be aware of all cranes or other lifts on the structure/Jobsite. Identify any other hazards causing a potential hazard.
- 2.4 Install rigging device to the structure so that the suspension line hangs plumb and passes straight through the wire rope guide.
- 2.5 Independent safety lines, attached to anchorages separate from the suspension rope, should be provided for each worker.
- 2.6 Connect to a power supply with fairlead side towards the face of the structure.
- 2.7 Release the tension holder and while pulling the wire rope operate the down switch until enough wire rope is released to reach the rigging point. Maintain tension on the wire rope and tighten the tension holder. Next operate basket in up position to apply tension to the wire rope. The wire rope should be taunt before entering and exiting the stage.
- 2.8 When using a two point suspended scaffold, ensure the suspension points match up with the basket hoists. Release the tension holder assembly when the basket is suspended and ensure that the wire rope is winding correctly on the drum assembly.
- 2.9 All persons using the equipment should be trained in its use and know all local, state, and federal regulations related to the use of suspended scaffolding, general safety and health precautions, and personal protective and life saving equipment.
- 2.10 Any parts that have been exposed to excessive heat, as in the case of fire, should be immediately removed from service and destroyed, due to loss of structural strength.
- 2.11 Do not use this product in cantilever applications.
- 2.12 Do not allow unstable objects or debris to accumulate on the work surfaces. Tools, materials, and equipment should be secured and stored when not being used.
- 2.13 Never attempt to straighten a deformed/damaged part of work cage.

## IC1000 BASKET

**WARNING:** Refer to the general operating instructions before using any equipment. Ensure that all equipment has passed inspections and the gates are closed before operating basket.



### 3.0 WIRE ROPE INSPECTION AND SERVICE

3.1 Refer to OSHA 1926.1413 – Wire Rope Inspection.

### 3.2 REMOVING AN OLD WIRE ROPE

3.2.1 While the IC1000 basket is on the ground, run the versa valve in the down direction while pulling the wire rope through the rope guide, until all of the wire rope is off the drum.

3.2.2 When the hook is free from the drum flange, rotate the drum into the 6 o'clock position, and then disengage the hook through the hole in the drum flange.

3.2.3 Remove the tension holder handle and half of the tension holder assembly. Then, thread the hook through the rope guide. Note: The rope guide assembly can remain in place during this process.

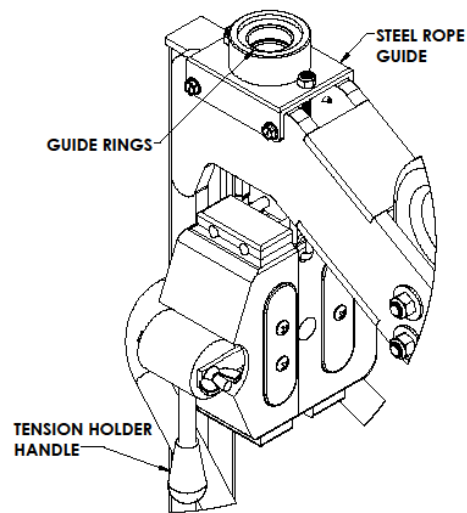
**WARNING:** When the drum is moving, keep hands and all clothing free from drum.

### 3.3 INSTALLING NEW WIRE ROPE

Contact your Skyclimber dealer for information on swaging a new wire rope hook.

- 3.3.1 Use the reverse order for removing an old wire rope to install the new wire rope. Be sure when the tension holder handle is reassembled, it is in the proper orientation so that when the handle is in the down position it tightens the tension holder.
- 3.3.2 After the drum hook is properly installed, wind the wire rope on the drum using the UP direction of the versa valve. Make sure the first wrap of the wire rope is tight against the drum flange and every other wrap after is tight to the previous. It is important that the wire rope be wound tight and evenly around the drum.

### 3.4 WIRE ROPE GUIDE ASSEMBLY



- 3.4.1 The wire rope guide is designed to help stabilize the unit during operation.
- 3.4.2 The guide rings have a hardened steel insert, which is designed to have minimal adverse effects on wire rope.
- 3.4.3 The wire rope guide should be inspected before each use and if the guide rings are worn, they should be replaced before use.

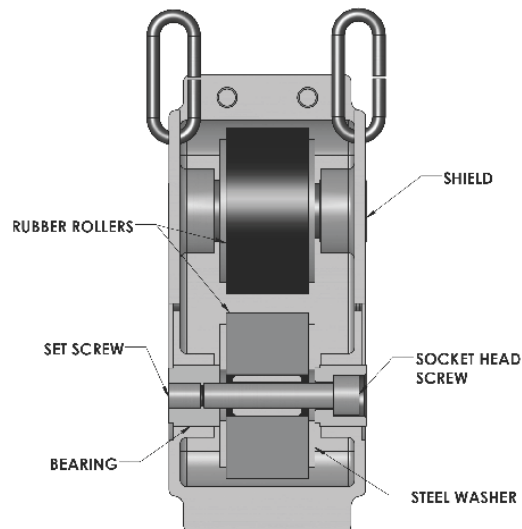
### 3.5 TRANSFER CHAIN ASSEMBLY



- 3.5.1 The forged transfer eye is used to suspend the weight of the basket and worker in order to complete a mid-air transfer.

- 3.5.2 Run the transfer chain through the transfer eye. Secure the tail end of the chain back to itself using two shackles on each side of the transfer eye.
- 3.5.3 Attach the sling hook and rigging hook to a structure that will support the total suspended weight.
- 3.5.4 Lower the basket until the load is transferred to the chain and there is sufficient slack in the primary rope.
- 3.5.5 Move the wire rope to the new suspension point.
- 3.5.6 Raise the basket until there is tension on the wire rope and sufficient slack on the transfer chain.
- 3.5.7 Remove the transfer chain assembly.

#### 4.0 TENSION HOLDER ASSEMBLY



#### 4.1 INSPECTION

- 4.1.1 Without disassembling the tension holder, visually inspect the rubber rollers daily. (If definite signs of wear are visible, then further examination is required.)
- 4.1.2 Every 30 days or at the first signs of wear, disassemble the tension holder and inspect the rollers further for deep grooves or flat spots. Ensure all four rollers spin freely and the bearings are free and lubricated.
- 4.1.3 If no further service is required, reassemble the rollers and tension holder so that the handle tightens in the down position.

#### 4.2 SERVICE

- 4.2.1 For bearing lubrication, remove the 4 bearing shields, located on each side of the roller assemblies. Apply bearing grease to each bearing and then replace shields.
- 4.2.2 For bearing and roller replacement, contact your local Skyclimber dealer.

#### 5.0 WIRE ROPE DRUM AND AUTOMATIC EMERGENCY BRAKE

- 5.1 The wire rope drum collects and releases wire rope during the Up and Down functions of the basket. The automatic emergency brake is designed to stop the descent of the basket if the

transmission fails. NOTE: If an over speed condition occurs, the break can be reset by running the basket in the UP direction. (Immediately following an emergency brake engagement, the brake and transmission must be inspected by a qualified service technician before returning to service.

WARNING: When at the bottom of a drop, maintain a minimum of 4 wire wraps around the drum.

## 5.2 INSPECTION

5.2.1 Every time a wire rope is replaced, inspect the drum for damage. Before the basket is sent to a jobsite and every 30 days after, the automatic emergency brake should be inspected. NOTE: All inspections should be performed by qualified personnel only.

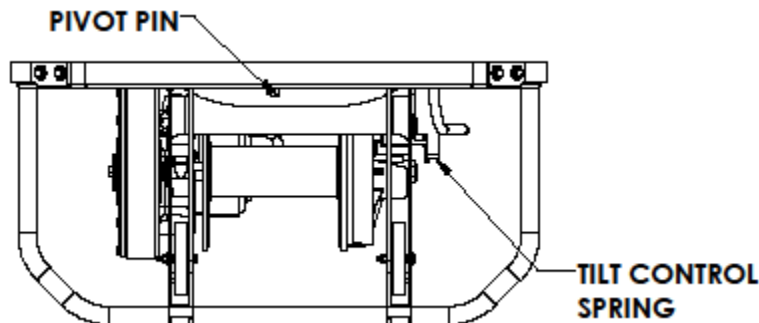
5.2.2 Remove the inspection plate from drum flange, and ensure that the disc moves freely back and forth. There should be a 1/16" gap between the disc and the drum flange and should also return to original position when spun clockwise. The inspection plate should then be reinstalled if everything is correct. Note: Inspection plate is sized for this application.

## 5.3 SERVICE

5.3.1 Contact your local Skyclimber representative, if the drum or automatic emergency brake require attention.

## 6.0 WIRE ROPE LEVEL WINDING SYSTEM

6.1 When the basket is suspended, the level winding system ensures the wire rope spools evenly on the drum. The spring allows the drum to tilt and ensure the wire rope stays perpendicular to the drum during the winding process.



## 6.2 INSPECTION

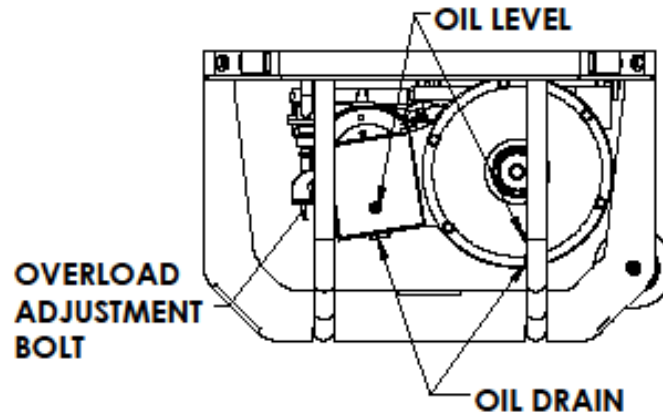
6.2.1 Daily the operator should inspect the wire rope spooling on the drum to make sure it is stored properly.

6.2.2 Every 30 days, inspect the drum base for damage. Check the tilt control assembly and pivot pins for damage. Ensure the pivot pins are secured properly with snap rings. Check the tilt control assembly to make sure it resists the tilt of the drum.

## 6.3 SERVICE

- 6.3.1 Contact your local Skyclimber representative, if the tilt control assembly or drum base requires attention.

## 7.0 TRANSMISSION



### 7.1 INSPECTION

- 7.1.1 Every 30 days, (sooner if needed) check the oil level of both sections in the transmission through the inspection holes. Use Mobile SHC 634 gear oil, (No substitutes), to fill both sections, when the oil level is below the inspection holes. Using the same inspection holes check the bronze gear for excessive wear. The bronze gear teeth have a width of 1/16" when brand new. If the width of the teeth is decreasing and becoming sharp, it is time to replace the gear. Contact local Skyclimber representative for replacing gear.
- 7.1.2 Every 12 months a complete oil change of both sections is required, (sooner if needed). Drain the oil from both sections and replace with Mobile SHC 634 gear oil. Use one full quart to fill both sections.

### 7.2 SERVICE

- 7.2.1 Contact your local Skyclimber representative, if the transmission requires attention.

## 8.0 OVERLOAD SWITCH

- 8.1 The overload switch prevents the wire rope, rigging, and hoist from becoming overloaded.

### 8.2 INSPECTION

- 8.2.1 Before installation on a new job, or every 30 days, the overload switch should be inspected for proper use. Inspection should be conducted by trained personnel.
- 8.2.2 With the basket hanging from an adequate rigging beam, load the stage with the rated working load as shown on the label. With the basket connected to proper air supply, the basket should lift

the load. Next add approximately 100 lbs, and now the overload switch should prevent travel in the up direction.

### 8.3 SERVICE

- 8.3.1 If the overload switch is not properly set, adjust the bolt one turn at a time until the proper setting is reached. Once the bolt is set at the appropriate height retightened the jam nut. If further service is required contact your local Skyclimber representative.

### 9.0 AIR HOIST MOTOR

- 9.1 The air motor is a vane type motor rated at 1 hp, at 120 psi and 60 cfm air supply. The air supply line needs to have at least a 3/4" I.D. hose in order to achieve maximum horse power.

### 9.2 INSPECTION

- 9.2.1 At any point while air motor is running and the operator notices any unusual behavior, it should be referred to a trained or knowledgeable person for further inspection. For unusual behavior, reference trouble shooting air motor.
- 9.2.2 Before installation at a new jobsite or every 30 days, the air motor should be inspected by a trained or knowledgeable person. Check the cover fasteners, make sure they are secure. Inspect the housing for any signs of damage. Ensure all hoses are secure and not damaged.

### 9.3 SERVICE

- 9.3.1 Contact your local Skyclimber representative, if the air motor requires further attention.

### 9.4 TROUBLESHOOTING AIR MOTOR

<b>Air motor is losing power and running slowly</b>	
Improper air supply	Ensure that air supply is at least 120 psi and 60 cfm.
Too much or not enough air oil	Check the air lubricator oil level, make sure it is clean, and properly adjusted. (4-6 drops/minute)
Plugged air filter	Clean air filter
Badly worn vanes or worn rotor bearing	Return for service.
<b>Air motor running sluggish in down direction</b>	
Too much air oil	Adjust lubricator properly and run in down direction to discharge excess oil.
<b>Air motor will not move in either direction</b>	
Check for visible wear or scoring on parts	Return for service
Swollen vanes	Return for service

## **10.0 OILER AND FILTER**

- 10.1 The filter helps remove moisture and dirt from air supply. The oiler lubricates the air for the motor.

WARNING: Oiler and filter are intended to be used with industrial compressed air systems. Do not exceed rated temperature or pressure.

## **10.2 INSPECTION AND SERVICE**

- 10.2.1 Disconnect air supply before proceeding. Daily, drain the filter by loosening drain screw on the bottom of filter. After water has drained, reset the drain screw. Ensure oiler has sufficient oil and the drip rate is set correctly.
- 10.2.2 Every 30 days, remove and clean the filter screen. (Sooner if needed because of extreme conditions) Remove the filter bowl and empty. With the filter bowl off, remove the filter baffle from bottom of filter and remove filter. Clean filter with thinner or solvent and then blow the filter dry. Replace air filter and retightened baffle, DO NOT over tighten. Set oil drip rate to 4-6 drops/minute. Connect to air supply and run air motor full throttle in UP direction. While air motor is running adjust the drip rate by loosening/ tightening on top of oiler. Loosening the screw increases the drip rate an tightening the screw decreases the drip rate.

## **11.0 FRAME**

- 11.1 The frame is constructed using high strength aluminum allows and welded using heliarc-welded joints. Also, integrated into the frame design are wheels and a forged transfer eye.

WARNING: DO NOT use heat to clean debris from frame. If welds are cracked, frame is damaged, or transfer eye is damaged contact your local Skyclimber representative.

## **11.2 INSPECTION AND SERVICE**

- 11.2.1 The operator should inspect the frame and transfer eye daily for any damage. DO NOT use basket if damage is noticed.
- 11.2.2 Before installing on a new jobsite or every 30 days, inspect the frame and transfer eye thoroughly for damage. Remove debris from joints and inspect for damage. Remove floor mat and clean, replaced if needed.

## **12.0 STORING AND TRANSPORTING**

- 12.1 Always store in an upright position, and in a clean dry environment. If the unit has been exposed to the elements for an extended period of time then a thorough inspection of entire unit should be conducted by a trained or knowledgeable person. Every 30 days, connect unit and run for short period of time to lubricate internal components.



12.2 When transporting unit, always secure in an upright position. To avoid damage during transportation of unit, straps or bands should be placed across toeboards.