



## This manual is based on Serial Number(s):

SJIII 3215	10 001 094 & Above
SJIII 3219	22 067 625 & Above
SJIII 3220	60 004 661 & Above
<b>SJIII 3226</b>	27 020 827 & Above
SJIII 46XX	70 020 612 & Above

Please refer to the website (www.skyjack.com) for older Serial Numbers.

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The Safety Alert Symbol identifies important safety messages on aerial platform, safety signs in manuals or elsewhere. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.



This Safety Alert Symbol means attention!

Become alert! Your safety is involved.



DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

# / CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

#### **IMPORTANT**

IMPORTANT indicates a procedure essential for safe operation and which, if not followed, may result in a malfunction or damage to the aerial platform.

Original instructions in English.



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**SKYJACK** is continuously improving and expanding product features on its equipment, therefore, specifications and dimensions are subject to change without notice.

## **Aerial Platform and Mobile Elevating Work Platform Definition**

A mobile device that has a positionable platform supported from ground level by a structure.

## **Purpose of Equipment**

The SKYJACK SJIII DC Electric series aerial platforms are designed to transport and raise personnel, tools and materials to overhead work areas.

#### **Use of Equipment**

The aerial platform is a highly maneuverable, mobile work station. Work platform elevation and elevated driving must only be done on a firm, level surface.

#### Manual

The operating manual is considered a fundamental part of the aerial platform. It is a very important way to communicate necessary safety information to users and operators. A complete and legible copy of this manual must be kept in the provided weather-resistant storage compartment on the aerial platform at all times.

#### Operator

The operator must read and completely understand both this operating manual and the safety panel label located on the platform and all other warnings in this manual and on the aerial platform. Compare the labels on the aerial platform with the labels found within this manual. If any labels are damaged or missing, replace them immediately.

## **Service Policy and Warranty**

SKYJACK warrants each new SJIII Series work platform to be free of defective parts and workmanship for the first 24 months. Any defective part will be replaced or repaired by your local SKYJACK dealer at no charge for parts or labor. Contact the SKYJACK Service Department for warranty statement extensions or exclusions.

#### **Optional Accessories**

The SKYJACK aerial platform is designed to accept a variety of optional accessories. These are listed under "Standard and Optional Features" in Table 4.1.

Operating instructions for these options (if equipped) are located in Section 3 of this manual.

For options not listed under "Standard and Optional Features," contact the SKYJACK Service Department at

: 44-1691-676-235 : 44-1691-676-238

Include the model and serial number for each applicable aerial platform.

## **Scope of this Manual**

- a. This manual applies to the CE version of the SJIII Series aerial platform models listed on Table 4.1.
- b. CE marked equipment is compliant with the Machinery Directive 2006/42/EC and EMC Directive 2014/30/EU.
- c. Operators are required to conform to nati onal, state or territorial/provincial and local health and safety regulations applicable to the operation of this aerial platform.





Failure to comply with your required responsibilities in the use and operation of the aerial platform could result in death or serious injury!

## **Operator Safety Reminders**

A study conducted by St. Paul Travelers showed that most accidents are caused by the failure of the operator to follow simple and fundamental safety rules and precautions.

You, as a careful operator, are the best insurance against an accident. Therefore, proper usage of this aerial platform is mandatory. The following pages of this manual should be read and understood completely before operating the aerial platform.

Common sense dictates the use of protective clothing when working on or near machinery. Use appropriate safety devices to protect your eyes, ears, hands, feet and body.

Any modifications from the original design are strictly forbidden without written permission from SKYJACK.

#### **Electrocution Hazard**

This aerial platform is not electrically insulated. Maintain a Minimum Safe Approach Distance (MSAD) from energized power lines and parts as listed below. The operator must allow for the platform to sway, rock or sag. This aerial platform does not provide protection from contact with or proximity to an electrically charged conductor.

DO NOT USE THE AERIAL PLATFORM AS A GROUND FOR WELDING.
DO NOT OPERATE THE AERIAL PLATFORM DURING LIGHTNING OR STORMS.
DO NOT OPERATE THE AERIAL PLATFORM NEAR POWER LINES. MAINTAIN A MINIMUM SAFE APPROACH DISTANCE (MSAD) FROM ENERGIZED POWER LINES.







# **Minimum Safe Approach Distance**

## **CE Guidance Note**

"Avoidance of danger from overhead lines"

Adhere strictly to the governmental rulings and regulations applicable in your country.

FAILURE TO AVOID THIS HAZARD WILL RESULT IN DEATH OR SERIOUS INJURY!

60023AE-CE



## **Safety Precautions**

Know and understand the safety precautions before going on to next section.



## **WARNING**

Failure to heed the following safety precautions could result in tip over, falling, crushing, or other hazards leading to death or serious injury.

- KNOW all national, state or territorial/provincial and local rules which apply to your aerial platform and jobsite.
- TURN main power disconnect switch "O" off when leaving the aerial platform unattended. Remove the key to prevent unauthorized use of the aerial platform.
- WEAR all the protective clothing and personal safety devices issued to you or called for by job conditions.
- DO NOT wear loose clothing, dangling neckties, scarves, rings, wristwatches or other jewelry while operating this lift.



 AVOID entanglement with ropes, cords or hoses.



 AVOID falling. Stay within the boundaries of the guardrails.



 DO NOT raise the aerial platform or operate elevated in windy or gusty conditions that exceed the limits specified in Section 4, Table 4.5.



 DO NOT increase the lateral surface area of the platform. Increasing the area exposed to the wind will decrease aerial platform stability. Avoid tenting.



 DO NOT elevate or drive elevated on a slope. Elevated driving must be done on a firm, level surface.



 DO NOT drive elevated on a soft or uneven surface.



- DO NOT elevate the aerial platform if it is not on a firm, level surface.
- DO NOT drive elevated near depressions or holes of any type,loading docks, debris, drop-offs or surfaces that may affect the stability of the aerial platform.



with Holes or Drop-Offs Is Absolutely NECESSARY, elevated driving shall not be allowed. Position the aerial platform horizontally only with the platform fullylowered. After ensuring that all 4 wheels or outriggers (if equipped) have contact with a firm, level surface, the aerial platform can be elevated. After elevation, the drive function must not be activated.



 DO NOT ascend or descend a grade when elevated. When fully-lowered, ascend or descend grades up to maximum rated inclines listed in Table 4-3a and Table 4-3b.





## **Safety Precautions (Continued)**

Know and understand the safety precautions before going on to next section.

- DO NOT operate on surfaces not capable of holding the weight of the aerial platform including the rated load, e.g. covers, drains, and trenches.
- DO NOT operate an aerial platform that has ladders, scaffolding or other devices mounted on it to increase its size or work height. It is prohibited.



 DO NOT exert side forces on aerial platform while elevated.



 DO NOT use the aerial platform as a crane. It is prohibited.



 DO NOT sit, stand or climb on the guardrails. It is prohibited.



 DO NOT climb on scissor arm assembly. It is prohibited.



AVOID overhead obstructions.
 Be aware of overhead obstructions or other possible hazards around aerial platform when lifting or driving.



 AVOID crushing hazards. Be aware of crushing hazards when lifting or driving. Keep all body parts inside the aerial platform.



 DO NOT raise the aerial platform while the aerial platform is on a truck, fork lift or other device or vehicle.



 DO NOT lower the platform unless the area below is clear of personnel and obstructions.



 ENSURE that there are no personnel or obstructions in the path of travel, including blind spots.



- BE AWARE of blind spots when operating the aerial platform.
- DO NOT use with improperly inflated/damaged tires or wheels. Refer to Section 2: Wheel/Tire Assembly.



- ENSURE ALL tires are in good condition and lug nuts are properly tightened.
- DO NOT alter or disable limit switches or other safety devices.





## **Safety Precautions (Continued)**

Know and understand the safety precautions before going on to next section.

 DO NOT use the aerial platform without guardrails, locking pins and the entry gate(s) in place.



 DO NOT place materials on the guardrails or materials that exceed the confines of the guardrails unless approved by Skyjack.

 DO NOT use under influence of alcohol or drugs.



- STUNT driving and horseplay are prohibited.
- DO NOT exceed the rated capacity of the aerial platform.



DO NOT distribute load unevenly.



 DO NOT operate if aerial platform is not working properly or if any parts are damaged or worn.



 DO NOT leave aerial platform unattended with key in key switch.



 DO NOT position the aerial platform against another object to steady the platform.



## **Safety Precautions (Continued)**

Know and understand the safety precautions before going on to next section.

#### **Fall Protection**

The guardrail system provides fall protection for the occupants. If additional fall protection is required, by an employer or the authority having jurisdiction, Skyjack recommends the use of a fall restraint system to keep an occupant within the confines of the platform, and thus not expose the occupant to any fall hazard requiring a fall arrest. When used, lanyards should only be attached to dedicated attachment points on the platform.

All personal fall protection equipment must comply with applicable governmental regulations and must be inspected and used in accordance with the manufacturer's recommendations.

All personal fall protection equipment must be attached only to approved anchorage points within the platform.



Entering and exiting the aerial platform should only be done using the three points of contact.

- · Use only equipped access openings.
- Enter and exit only when the aerial platform is in the fully retracted position.
- Do use three points of contact to enter and exit the platform. Enter and exit the platform from the ground only. Face the aerial platform when entering or exiting the platform.
- Three points of contact means that two hands and one foot or one hand and two feet are in contact with the aerial platform or the ground at all times during entering and exiting.



An operator should not use any aerial platform that:

- does not appear to be working properly.
- has been damaged or appears to have worn or missing parts.
- has alterations or modifications not approved by the manufacturer.
- has safety devices which have been altered or disabled.
- has been tagged or locked out for non-use or repair.

Failure to avoid these hazards could result in death or serious injury.

## **Jobsite Inspection**

- Do not use in hazardous locations.
- Perform a thorough jobsite inspection prior to operating the aerial platform, to identify potential hazards in your work area.
- Be aware of moving equipment in the area. Take appropriate actions to avoid collision.

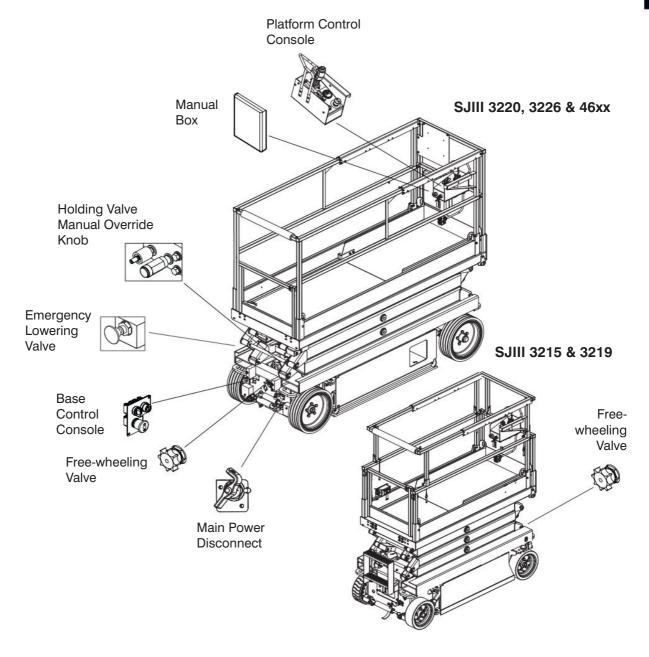
## 2.1 Familiarization of SJIII Series



Aerial Platform Familiarization should be given only to individuals who are QUALIFIED And TRAINED to operate an aerial platform.

Do not operate this aerial platform without proper authorization and training. Failure to avoid this hazard could result in death or serious injury.

It is the responsibility of the operator to read, completely understand and follow all instructions and warnings contained in this operating manual and on the aerial platform.





## 2.2 Component Identification

The following descriptions are for identification, explanation and locating purposes only.

#### 2.2-1 Main Power Disconnect Switch

This switch is located at the rear of the base.

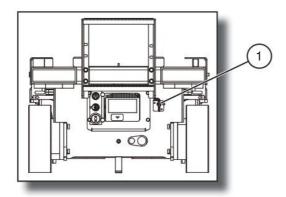


Figure 2-1. Main Power Disconnect Switch

 Main Power Disconnect Switch - This switch, when in "O" off position, disconnects power to all circuits. Switch must be in "I" on position to operate any circuit. Turn switch "O" off when transporting aerial platform.

#### 2.2-2 Tilt Alarm

The aerial platform is equipped with a device which senses when the aerial platform is out of level in any direction. When activated, it disables drive and lift functions of the aerial platform and an alarm produces an audible sound accompanied by the amber light (if equipped).



If the tilt alarm sounds and the platform does not, or only partially raises, immediately lower the platform completely and ensure that the aerial platform is on a firm level surface.

## 2.2-3 Load Sensing System

This system is a safety device that will prevent any normal movement of the aerial platform from a stationary working position after the rated load is reached and exceeded. Refer to Table 4.5 for maximum platform capacities.

#### · When 90% of the rated load is reached:

The red power indicator light on the platform control console flashes.

#### When the rated load is reached:

An audible alarm sounds for approximately 2 seconds, 5 times per minute.

#### · When the rated load is exceeded:

The flashing light and audible alarm continue and all electrically controlled aerial platform movement functions stop. To resume normal operation, remove the overload from the platform.

# If the aerial platform comes in contact with an overhead obstruction:

The platform could become overloaded and all functions would stop. Release of the platform from this situation can only be effected by use of the emergency lowering system. Refer to Section 2.6.

#### NOTE

After reaching full extension and upon lowering, the aerial platform could stop and take an overload reading. Return the controller to the neutral center position, and release the enable trigger switch. If the aerial platform is overloaded, the flashing light and audible alarm continue and all electrically controlled aerial platform movement functions stop. To resume normal operation, remove the overload from the platform.



#### 2.2-4 Base Control Console

This control console is located at the rear of the base. It contains the following controls:

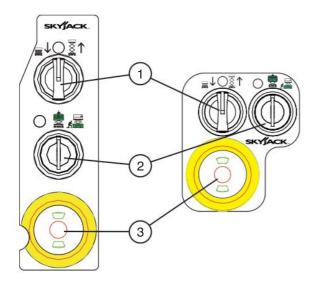


Figure 2-2. Base Control Console

- Lower/Neutral/Raise Switch This switch controls "

  ↑" raising or "

  ↓" lowering of platform.
- 2. Off/Platform/Base Key Switch This three-way switch allows the operator to turn "O" off power to aerial platform or to activate either "\( \begin{align\*} \begin{align\*} \text{platform} \\ \text{or} \\ \text{or} \\ \text{base controls.} \end{align\*}
- Emergency Stop Button This button "
   ", when depressed, disconnects power to the control circuit.

## 2.2-5 Disc Brake System

The brake system is located at the rear of the base. The brakes must be manually disengaged before pushing, winching or towing. Refer to Section 2.5-2 for procedure on how to release brakes manually. The system contains the following controls:

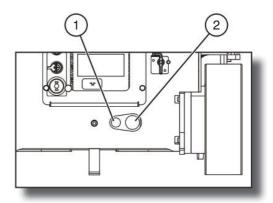
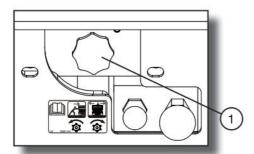


Figure 2-3. Disc Brake System

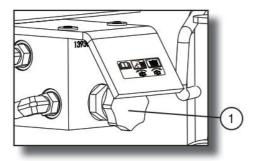
- 1. Brake auto reset valve plunger
- 2. Brake hand pump



## 2.2-6 Free-wheeling Valve



Models 3220, 3226, and 46xx



Models 3215 and 3219

Figure 2-4. Free-wheeling Valve

1. Free-wheeling Valve - The free-wheeling valve is located at the front and/or rear of the aerial platform (depending on the model). Refer to Section 2.5-1 for procedure on how to release the free-wheeling valve.

## 2.2-7 Emergency Lowering System

This emergency lowering system allows platform lowering in the event of an emergency or an electrical system failure. Refer to Section 2.6 for the emergency lowering procedure. The system contains the following controls:

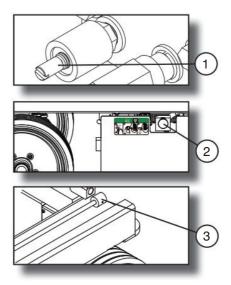


Figure 2-5. Emergency Lowering System

- Holding Valve Manual Override Knob Located on the holding valve at the bottom of each lift cylinder.
- Emergency Lowering Valve Located at the rear of the hydraulic/electric tray.
- 3. Access Rod (3226, 4626 & 4632) Located at the left side of the base.

## 2.2-8 Lowering Warning System

A lowering warning system automatically stops the lowering function before reaching the fully retracted position and sounds an alarm.



#### 2.2-9 Platform Control Console

This removable control console is mounted at the right front of the platform. It contains the following controls:

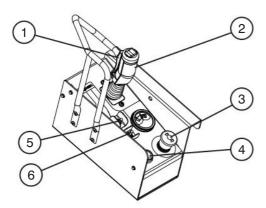


Figure 2-6. Platform Control Console

- 1. Lift/Drive/Steer Enable Trigger Switch This momentary "switch energizes the controller. It must be held depressed continuously while engaging either the lift/drive or steer functions.
- Lift/Drive/Steer Controller This one-hand lever controls lift/drive and steer motions. Internal springs return it to neutral when controller is released.
- 3. Emergency Stop Button/Operation Light This button "O", when depressed, disconnects power to the control circuit. The operation light indicates upper control availability and overload status. When the light is continuously illuminated, upper controls are available. When the light is flashing, it signals an overload function. Refer to Section 2.2-3.

- 4. Horn Pushbutton This "pushbutton sounds an automotive-type horn.
- 5. Inclined Drive/Level Drive Switch (If Equipped)
  - This switch selects "inclined drive (low speed/high torque) or "level drive (high speed/low torque).

#### NOTI

Inclined drive (low speed/high torque) is not available on models 3215 and 3219.

6. Lift/Off/Drive Switch - Selecting "O" off position disconnects power from both lift and drive circuits.

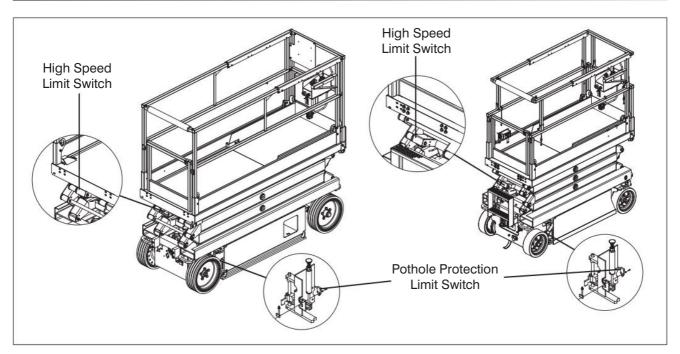
Selecting "If position energizes the lift circuit.

Selecting "drive position energizes the drive circuit.



Skyjack scissor lifts are to be operated from the operator's position on the platform with the control box secured on the mounting bracket at the front right portion of the platform. Operation of the unit from the ground is permissible only when maintaining the lift or, in limited circumstances, when an obstruction precludes the safe operation of the lift from the operator's position on the platform. Operation from the ground is to be performed as set forth in the Operating Manual.





## 2.3 Visual & Daily Maintenance Inspections

Begin the visual and daily maintenance inspections by checking each item in sequence for the conditions listed in this section.



#### WARNING

To avoid injury, do not operate an aerial platform until all malfunctions have been corrected.



#### **WARNING**

To avoid possible injury, ensure aerial platform power is off during your visual and daily maintenance inspections.



#### CAUTION

Ensure aerial platform is on a firm, level surface.

#### NOTE

While performing visual and daily inspections in different areas, be aware to also inspect limit switches, electrical and hydraulic components.

#### 2.3-1 Labels

Refer to Section 5 - Labels in this manual and determine that all labels are in place and are legible.

#### 2.3-2 Electrical

Maintaining the electrical components is essential to good performance and service life of the aerial platform.

Inspect the following areas for chafed, corroded and loose wires:

- · base to platform cables and wiring harness
- battery tray wiring harnesses
- hydraulic/electrical wiring harnesses

## 2.3-3 Limit Switches

Ensure limit switches are properly secured with no signs of visible damage and movement is not obstructed.

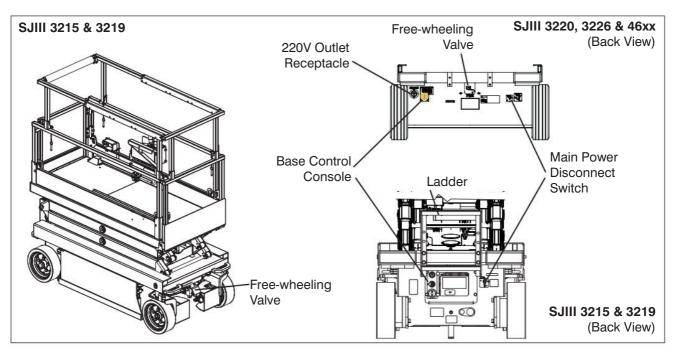
## 2.3-4 Hydraulic

Maintaining the hydraulic components is essential to good performance and service life of the aerial platform.

Perform a visual inspection around the following areas:

- hoses and fittings
- all hydraulic cylinders
- all hydraulic manifolds
- · the underside of the base
- ground area under the aerial platform





#### 2.3-5 Entrance Side

#### Main Power Disconnect Switch

- Ensure all cables are secure and switch is in proper working condition.

## Base Control Switches

 Ensure there are no signs of visible damage and all switches are in their neutral positions.

### Free-wheeling Valve Knob (SJIII 3215 & 3219 - Front Side)

- Ensure there are no loose or missing parts and there is no visible damage.

#### Brakes

- Ensure there are no loose or missing parts and there is no visible damage.

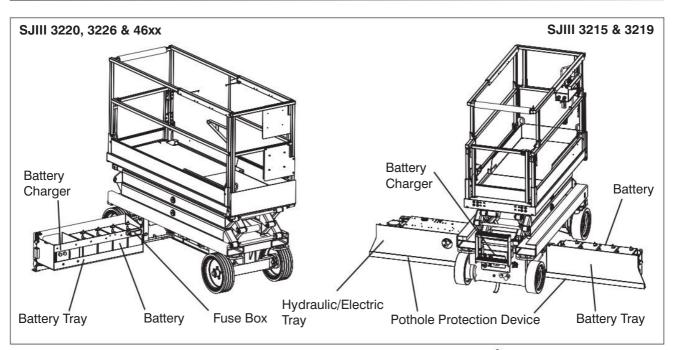
## • 220V Outlet Receptacle

Ensure receptacle is free from dirt and obstructions.

#### Ladder

- Ensure there are no loose or missing parts and there is no visible damage.





## 2.3-6 Battery Tray Side

#### Pothole Protection Device

 Ensure mechanisms have no sign of visible damage and are free from dirt and obstructions.

## Battery Tray

Ensure tray latch is secure and in proper working order.

## Battery Charger

(SJIII 3215 & 3219 - Entrance Side)

- Ensure charger is secure and shows no visible damage.

## Battery

Proper battery condition is essential to good performance and operational safety. Improper fluid levels or damaged cables and connections can result in component damage and hazardous conditions.



Explosion hazard. Keep flames and sparks away. Do not smoke near batteries.





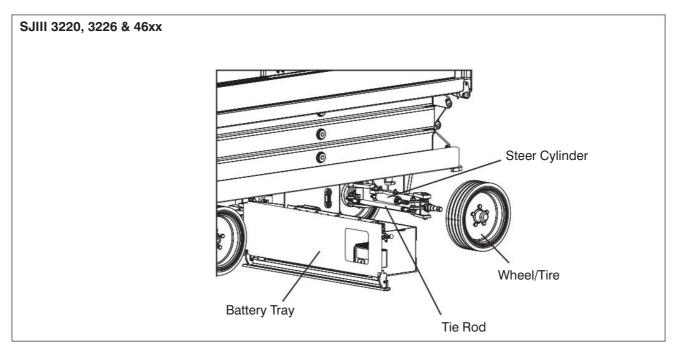
Battery acid is extremely corrosive -Wear proper eye and facial protection as well as appropriate protective clothing. If contact occurs, immediately flush with cold water and seek medical attention.

- 1. Check battery case for damage.
- Clean battery terminals and cable ends thoroughly with a terminal cleaning tool or wire brush.
- 3. Ensure all battery connections are tight.
- If applicable, check battery fluid level. If plates are not covered by at least 13 mm of solution, add distilled or demineralized water.
- 5. Replace battery if damaged or incapable of holding a lasting charge.



Use original or manufacturer-approved parts and components for the aerial platform.





## Steer Cylinder Assembly

 Ensure steer cylinder assembly is properly secured and there are no loose or missing parts.

## Wheel/Tire Assembly

The aerial platform is either equipped with solid rubber tires or foam-filled tires. Tire and/or wheel failure could result in an aerial platform tip-over. Component damage may also result if problems are not discovered and repaired in a timely fashion.

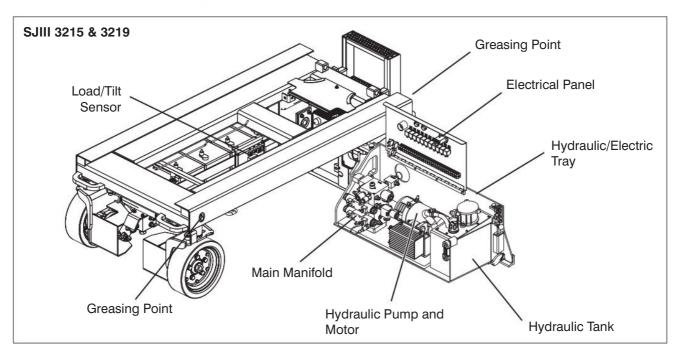
- Check all tire treads and sidewalls for cuts, cracks, punctures and unusual wear.
- Check each wheel for damage and cracked welds.
- Check each lug nut for proper torque to ensure none are loose.
- Check wheel motor assembly for loose or missing parts and signs of visible damage.
- Ensure wheels are aligned and true vertically and horizontally.

# NARNING

Intermixing tires of different types or using tires of types other than those originally supplied with this equipment can adversely affect stability. Therefore, replace tires only with the exact Skyjack-approved type. Failure to operate with matched approved tires in good condition may result in death or serious injury.

- Tie Rod (SJIII 3220, 3226 & 46xx)
  - Ensure there are no loose or missing parts, tie rod end studs are locked and there is no visible damage.
- Greasing Points
  - Ensure greasing points have no sign of visible damage and are free from dirt and obstructions.





#### 2.3-7 Hydraulic/Electric Tray Side

Ensure tray latch is secure and in proper working order.

#### Pothole Protection Device

 Ensure mechanisms have no sign of visible damage and are free from dirt and obstructions.

## Hydraulic Tank

- Ensure hydraulic filler cap is secure.
- Ensure tank shows no visible damage and no evidence of hydraulic leakage.

## Hydraulic Oil

- Ensure platform is fully lowered, and then visually inspect the sight gauge located on the side of the hydraulic oil tank.
- The hydraulic oil level should be at or slightly above the top mark of the sight glass.

## Hydraulic Pump and Motor

- Ensure there are no loose or missing parts and there is no visible damage.

#### Electrical Panel

- Ensure panel is properly secured and there is no visible damage.
- Ensure there are no loose wires or missing fasteners.

#### Main Manifold

- Ensure all fittings and hoses are properly tightened and there is no evidence of hydraulic leakage.
- Ensure there are no loose wires or missing fasteners.

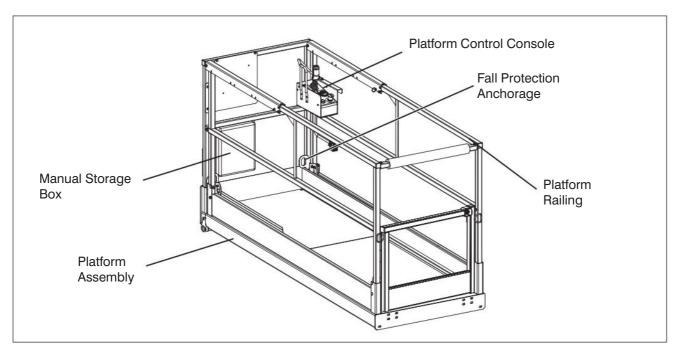
### Load/Tilt Sensor

 Ensure load/tilt sensor is properly secure and there is no visible damage.

# Emergency Lowering Access Rod (If Equipped)

- Ensure rod is properly secured and there is no visible damage.





## 2.3-8 Platform Assembly



Ensure that you maintain three points of contact to mount/dismount platform.

- 1. Use the ladder of aerial platform to access platform.
- 2. Close the gate.
  - Ensure there are no loose or missing parts and there is no visible damage.
  - Ensure all fasteners are securely in place.
  - Ensure all railings are properly positioned and secured.
  - Ensure gate is in good working order.

#### Fall Protection Anchorage(s)

- Ensure anchorage(s) are secure and there is no visible damage.

## • AC Outlet on Platform

 Ensure outlet has no visible damage and free from dirt or obstructions.

#### Platform Control Console

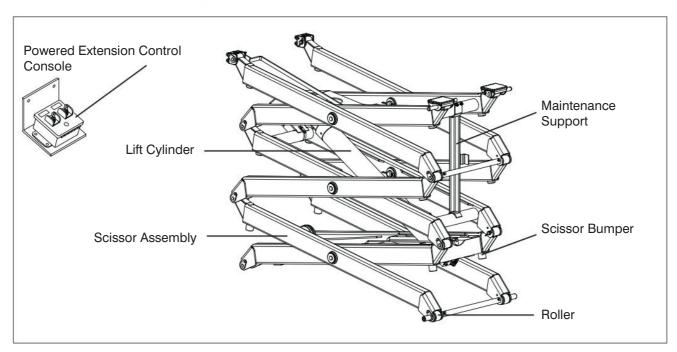
- Ensure all switches and controller are returned to neutral and are properly secured.
- Ensure there are no loose or missing parts and there is no visible damage.

#### Manuals

Ensure a copy of operating manual is enclosed in manual storage box.

- Check to be sure manual storage box is present and in good condition.
- Ensure manuals are legible and in good condition.
- Always return manuals to the manual storage box after use.





## Powered Extension Control Console (If Equipped)

- Ensure all switches are returned to neutral and are properly secured.
- Ensure there are no loose or missing parts and there is no visible damage.



Ensure that you maintain three points of contact to mount/dismount platform.

3. Use the ladder to dismount from platform.

## 2.3-9 Lifting Mechanism

 Raise the platform (refer to Section 3.8-4) until there is adequate clearance to swing down the maintenance support (refer to Section 3.12).

## • Maintenance Support

- Ensure maintenance support is properly secured and shows no visible damage.

## • Scissor Assembly

- Ensure scissor assembly shows no visible damage and no signs of deformation in weldments.
- Ensure all pins are properly secured.
- Ensure cables and wires are properly routed and shows no signs of wear and/ or physical damage.

#### Scissor Bumpers

 Ensure bumpers are secure and shows no sign of visible damage.

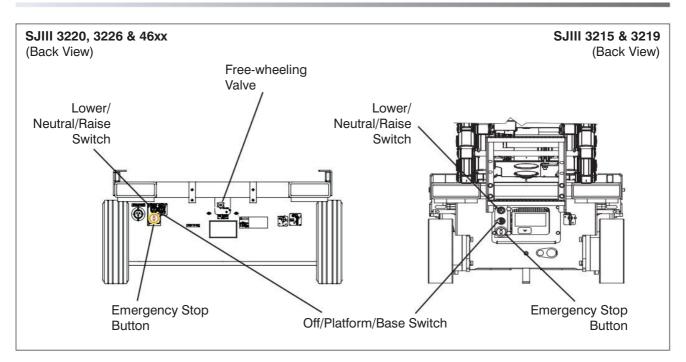
#### Rollers

- Ensure rollers are secure and there is no visible damage.
- Ensure rollers' path of travel are free from dirt and obstructions.

## Lift Cylinder(s)

- Ensure each lift cylinder is properly secured, there are no loose or missing parts and there is no evidence of damage.
- Ensure all fittings and hoses are properly tightened and there is no evidence of hydraulic leakage.
- 2. Raise the platform until there is adequate clearance to swing up the maintenance support.
- 3. Swing up maintenance support into storage bracket.
- 4. Fully lower the platform.





#### 2.4 Function Tests

Function tests are designed to discover any malfunctions before aerial platform is put into service. The operator must understand and follow step-by-step instructions to test all aerial platform functions.



Never use a malfunctioning aerial platform. If malfunctions are discovered, aerial platform must be tagged and placed out of service. Repairs to aerial platform may only be made by a qualified service technician.

After repairs are completed, operator must perform a pre-operation inspection and a series of function tests again before putting aerial platform into service.

Prior to performing function tests, be sure to read and understand Section 3.8 - Start Operation.

#### 2.4-1 Test Main Power Disconnect Switch

 At rear of the base, turn main power disconnect switch to "O" off position.

**Result**: Aerial platform functions should not operate.

#### 2.4-2 Base Control Console



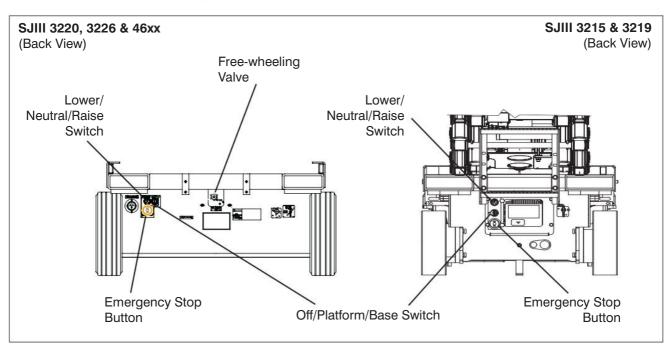
Ensure that you maintain three points of contact when using the ladder to mount/ dismount platform.

- 1. Use the ladder of aerial platform to access platform.
- 2. Close the gate.
- On platform control console, pull out "lemergency stop button.



- 4. Use the ladder to dismount from platform.
- 5. Turn main power disconnect switch to "I" on position.





#### Test Base Emergency Stop

- 1. Push in base "O" emergency stop button and attempt to raise or lower the platform.

  Result: Platform raising and lowering functions should not operate.
- 2. Pull out base "O" emergency stop button.
- Test Off/Platform/Base Switch



Be aware of overhead obstructions or other possible hazards around the aerial platform when lifting.

 Select off/platform/base key switch "O" off position. Attempt to raise or lower the platform.

**Result:** Platform raising and lowering functions should not operate.

2. Select off/platform/base key switch to

"\$\rightarrows" platform position. Attempt to raise or lower the platform.

**Result:** Platform raising and lowering functions should not operate.

3. Select and hold off/platform/base key switch to "a" base position. Attempt to raise or lower the platform.

**Result:** Platform raising and lowering functions should operate.

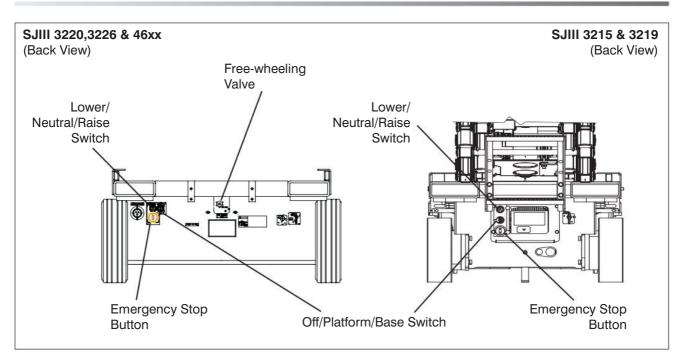
## • Test Lower/Neutral/Raise Switch

1. Select and hold off/platform/base key switch to "\( \) base position and "\( \) \( \) raise the platform with lower/neutral/raise switch.

Result: Platform should rise.

Result: Platform should lower.





#### • Test Emergency Lowering

- 1. Raise the platform.
- 2. Turn main power disconnect switch to off position.
- 3. Locate holding valve manual override knob at the base of each lift cylinder. Depress and turn counterclockwise. If necessary, use access rod that is located on the base of the aerial platform.
- 4. On hydraulic/electric tray, pull out and hold emergency lowering valve to fully lower the platform.

Result: The platform should lower.

5. To restore normal operation, depress and turn holding valve manual override knobs clockwise.

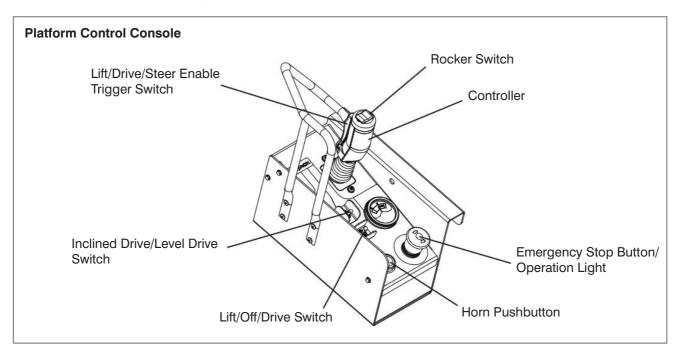
#### Test Free-wheeling

- 1. Ensure path of intended motion is clear.
- 2. Release the brake manually (refer to Section 2.5-2).
- 3. Turn free-wheeling valve knob counterclockwise to a fully opened position and attempt to push/pull the aerial platform.

Result: Platform should move.

- 4. Turn free-wheeling valve knob clockwise to a fully closed position for normal operation.
- 5. Reengage the brake (refer to Section 2.5-2).





#### 2.4-3 Platform Control Console

- 1. Ensure base "O" emergency stop button is pulled out.
- 2. Select off/platform/base key switch to "platform position.
- 3. Ensure main power disconnect switch is in "|" on position.



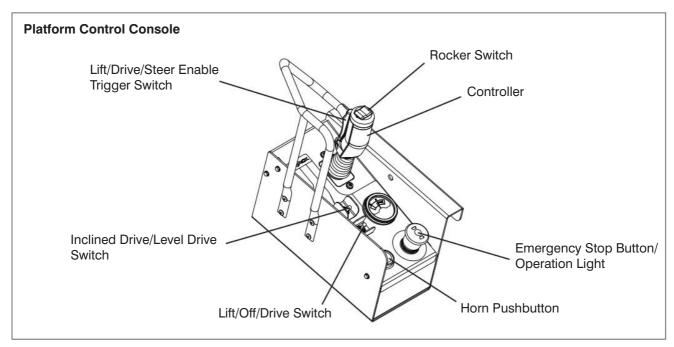
Ensure that you maintain three points of contact when using the ladder to mount/ dismount platform.

- 4. Use the ladder of aerial platform to access platform.
- 5. Close the gate.
- 6. On platform control console, pull out "emergency stop button.
- Test Platform Emergency Stop
  - 1. Push in "o" emergency stop button and attempt to activate any platform function.

**Result:** All selected platform functions should not operate.

- Test Enable Trigger Switch
- 1. Pull out "O" emergency stop button.
- Without activating "A" enable trigger switch, attempt to activate any platform function.
   Result: All platform functions should not operate.
- Test Steering
- 1. Select lift/off/drive switch to "this" drive position.
- 2. Activate and hold "A" enable trigger switch.
- Press rocker switch on top of controller handle to "left and "right.
   Result: Steer wheels should turn left and right.





- Test Driving
- 1. Ensure path of intended motion is clear.
- 2. Activate and hold "A" enable trigger switch.
- 3. Slowly move controller handle in "\[ \bigcap\] " forward direction until aerial platform begins to move, and then return handle to center position.

  Result: Aerial platform should move in forward direction, and then come to a stop.
- Slowly move controller handle in "↓" reverse direction until aerial platform begins to move, and then return handle to center position.
   Result: Aerial platform should move in reverse direction, and then come to a stop.
- Test Brakes



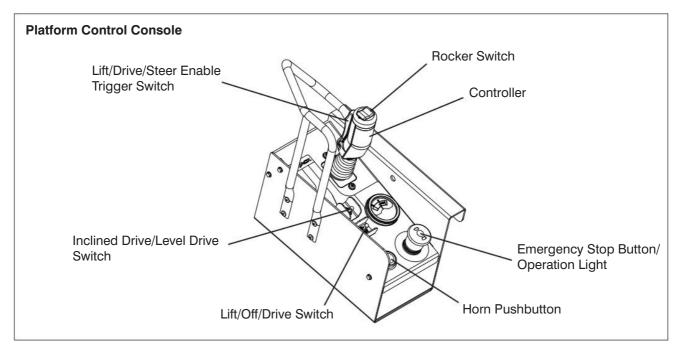
Brakes will engage instantly when you release the controller handle, causing aerial platform to stop immediately.

- 1. Ensure path of intended motion is clear.
- 2. Activate and hold "A" enable trigger switch.
- 3. Drive aerial platform "" forward and then "" backward. Test brake by releasing controller handle.

**Result:** Aerial platform should come to a stop. If aerial platform pulls to one side while stopping, do not operate aerial platform until brake adjustments have been checked.

**Result:** Aerial platform should come to an instant and abrupt stop. If aerial platform does not stop immediately, or if aerial platform pulls to one side while stopping, do not operate aerial platform until brake adjustments have been checked.





Test Platform Raising/Lowering



Be aware of overhead obstructions or other possible hazards around the aerial platform when lifting.

- 2. Activate and hold "A" enable trigger
- Push controller handle and raise the platform to an approximate height of 0.5 meter.

Result: Platform should rise.

 Pull controller handle and lower the platform fully.

Result: Platform should lower.

#### Test Lowering Warning

 Raise the platform until approximately a height of 3 to 4 meters is reached then attempt to fully lower the platform.

**Result:** Platform should stop lowering at a height of 2.5 meters high and an alarm should sound.

2. Release controller handle.

- 3. Fully lower the platform.
- Test Horn
  - 1. Push "born pushbutton.

    Result: Horn should sound.
- Test Pothole Sensor



Ensure that you maintain three points of contact to mount/dismount platform.

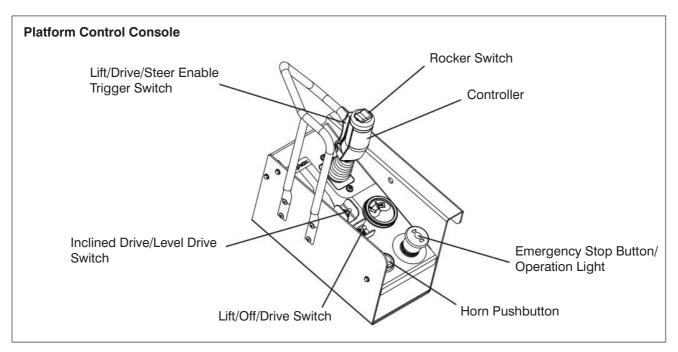
- 1. Use the ladder to dismount from platform and place a block, approximately 3.75 cm, under the hydraulic/electric tray.
- 2. Use the ladder of aerial platform to access platform.
- 3. Close the gate.
- 4. Raise the platform until approximately a height of 2 meters is reached and attempt to drive forward or reverse.

**Result:** Aerial platform should not move forward or backward.

5. Repeat the steps above with block placed under battery tray.

**Result:** Aerial platform should not move forward or backward.





Test Elevated Drive Speed



## **WARNING**

Be aware of overhead obstructions or other possible hazards around the aerial platform when lifting.

- 1. Ensure path of intended motion is clear.
- 2. Raise the platform until approximately a height of 2 meters is reached and attempt to drive forward or reverse.

**Result:** Aerial platform should move slower than when it was in stowed position.

Verify Load Sensing Module Self-Check



#### **WARNING**

Be aware of overhead obstructions or other possible hazards around the aerial platform when lifting.

- 1. Pull out platform "emergency stop button.
  - **Result:** Beeper should sound for approximately 1 second and light should turn on.

- 3. Activate and hold "" enable trigger switch.
- Push controller handle and raise the platform to an approximate height of 1 meter.
- 5. Attempt to lower the platform using the following steps:
  - a. Push in platform "o" emergency stop button.
  - b. Activate and hold "" enable trigger switch.
  - c. Pull controller handle and attempt to lower the platform.
  - d. Pull out platform "o" emergency stop button.
     Result: Platform should not lower and beeper should sound

lower and beeper should sound continuously.

6. Depress "o" emergency stop button, release controller handle, pull out "o" emergency stop button, activate and hold "o" enable trigger switch and pull controller handle to fully lower.



## 2.5 Winching and Towing Procedures

This section provides the operator with procedures about towing and winching and on how to manually release the brakes.



## **WARNING**

Ensure platform is fully lowered before winching or towing. Sudden motion could cause the aerial platform to become unstable. Death or serious injury could result.



## WARNING

In emergency situations where aerial platform functions are not available and lowering is impeded by an obstacle, utmost care must be taken to move aerial platform far enough to clear the obstacle. In such cases, operation must be extremely smooth with no sudden movements and must not exceed a speed of 50 mm/sec.



## **WARNING**

When pushing, winching or towing, do not exceed 3.2 km/h.



## **WARNING**

Do not push, winch or tow aerial platform onto a slope, or brake the towing vehicle rapidly. Do not pull aerial platform down an incline towards a winch.

## 2.5-1 To Release Free-wheeling Valve

 Ensure aerial platform is on level ground. Chock or block the wheels to keep aerial platform from rolling.

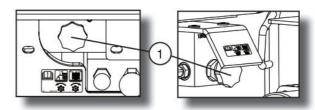


Figure 2-7. Free-wheeling Valve

 Free-wheeling Valve - Turning valve knob counterclockwise (item 1) to a fully opened position allows fluid to flow through the wheel motors, thus providing "free-wheeling."



## **WARNING**

The free-wheeling valve must be closed tightly (clockwise) for normal operation.



## 2.5-2 To Release Brakes Manually



## **WARNING**

Do not manually disengage brakes if the aerial platform is on a slope.

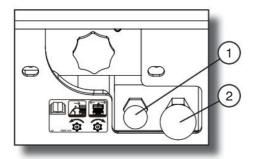


Figure 2-8. Brakes



## **WARNING**

Brakes must be manually disengaged for pushing, winching or towing.

- 1. Ensure aerial platform is on level ground. Chock or block wheels to keep aerial platform from rolling.
- 2. Turn main power disconnect switch to "O" off position.
- 3. Locate the brake manifold at the rear of the base.
- 4. Push in brake auto reset valve plunger (item 1).
- Grasp brake hand pump (item 2) and rapidly depress until firm resistance is felt. The brakes are now released.

6. Remove wheel chocks or blocks, then push, winch or tow aerial platform to desired location.



#### WARNING

Brakes must be reengaged immediately after reaching the desired location.

- 7. Position aerial platform on a firm and level surface.
- 8. Chock or block wheels to prevent aerial platform from rolling.
- 9. Reengage the brake by pulling out the brake auto reset valve plunger.
- 10. Close the free-wheeling valve.



# 2.6 Emergency Lowering Procedure

This section guides the operator on how to use the emergency lowering system. This system allows platform lowering in the event of an emergency or an electrical system failure.



Keep clear of scissors mechanism when using emergency lowering valve.

- 1. Remove any obstructions from a lowering platform.
- Extension platform(s) may need to be retracted or aerial platform may need to be moved to clear obstruction. Refer to Section 2.5 for winching and towing procedures.

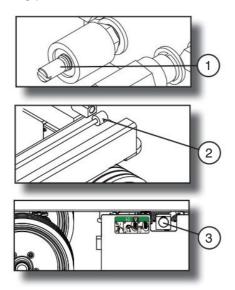


Figure 2-9. Emergency Lowering System

- 3. Turn main power disconnect switch to off position.
- Locate the holding valve manual override knob (item 1) at the base of each lift cylinder. Depress and turn counterclockwise. If necessary, use emergency lowering access rod (item 2) that is located on aerial platform base.
- 5. On hydraulic/electric tray, pull out and hold emergency lowering valve (item 3) to lower platform.
- 6. To restore normal operation, depress and turn holding valve manual override knobs clockwise.



## 3.0 Operation

This section provides the necessary information needed to operate the aerial platform. It is important that the user reads and understands this manual before operating the aerial platform.

#### 3.1 General

In order for this aerial platform to be in good working condition, it is important that the operator meets the necessary qualifications and follow the maintenance and inspection schedule referred to in this manual.

## 3.1-1 Operator Qualifications

- Only trained and authorized personnel shall be permitted to operate an aerial platform.
- Safe use of this aerial platform requires the operator to understand the limitations and warnings, operating procedures and operator's responsibility for maintenance. Accordingly, the operator must understand and be familiar with this operating manual, its warnings and instructions, and all warnings and instructions on the aerial platform.
- The operator must be familiar with employer's work rules and related government regulations and be able to demonstrate the ability to understand and operate this make and model of aerial platform in the presence of a qualified person.

## 3.1-2 Operator's Responsibility for Maintenance



Maintenance must be performed by trained and competent personnel who are familiar with mechanical procedures.

Death or serious injury could result from the use of an aerial platform that is not properly maintained or kept in good working condition.

- The operator must be sure that the aerial platform has been properly maintained and inspected before using it.
- The operator must perform all the daily inspections and function tests found in Table 4.6, even if the operator is not directly responsible for the maintenance of this aerial platform.

### 3.1-3 Maintenance and Inspection Schedule

- The inspection points covered in Table 4.6 indicate the areas of the aerial platform to be maintained or inspected and at what intervals the maintenance and inspections are to be performed.
- The actual operating environment of the aerial platform may affect the maintenance schedule.



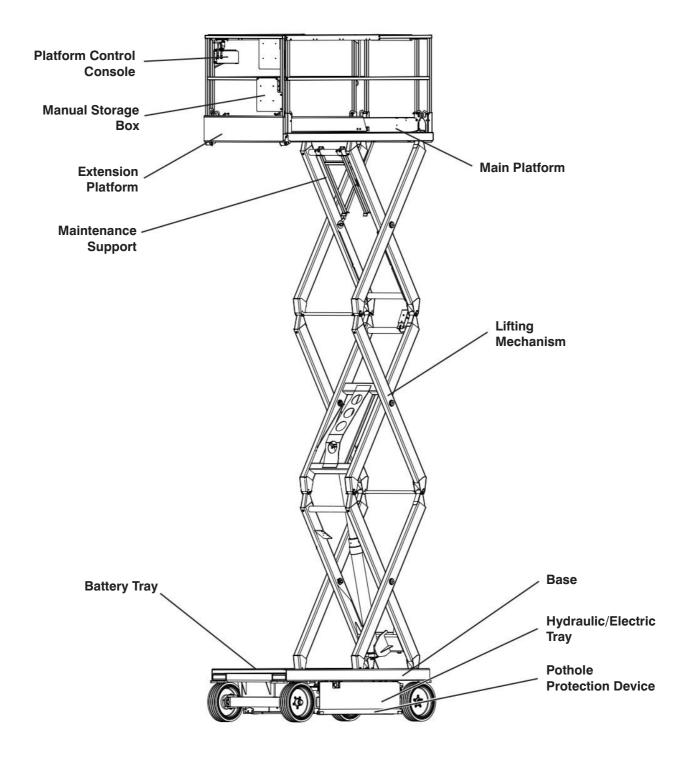
Use original or manufacturer-approved parts and components for the aerial platform.

#### 3.1-4 Owner's Inspections

It is the responsibility of the owner to arrange daily, quarterly (or 150 hours) and annual inspections of the aerial platform. Refer to Table 4.6 for recommended maintenance and inspection areas and intervals. A record of annual inspection is kept on a label located on the scissor assembly. Refer to Table 4.2 in this manual.

Major Components Section 3 - Operation

# 3.2 Major Components



SKYJACK SJIII Series Aerial Platform

### 3.3 Major Assemblies

The aerial platform consists of three major assemblies: base, lifting mechanism and platform.

#### 3.3-1 Base

The base is a rigid, one-piece weldment which supports two swing out trays.

#### SJIII 3215 & 3219:

One tray contains the hydraulic and electrical components. The other tray contains four (4) 6 volt batteries. The charger is located at the rear of the aerial platform. The front axle has two hydraulic motor-driven wheels, steerable by a hydraulic cylinder. The rear axle is fixed and has non-driven, spring-applied, hydraulically released brake.

#### SJIII 3220, 3226, 4620, 4620 & 4632:

One tray contains the hydraulic and electrical components. The other tray contains battery charger and four (4) 6 volt batteries. The front axle has two non-driven wheels, steerable by a hydraulic cylinder. The rear axle has two hydraulic motor-driven wheels with spring-applied, hydraulically released brakes.

## 3.3-2 Lifting Mechanism

The lifting mechanism is constructed of formed steel or tube sections making up a scissor-type assembly. The scissor assembly is raised and lowered by single-acting hydraulic lift cylinders with holding valves. A pump, driven by an electric motor, provides hydraulic power to the lift cylinders.

## 3.3-3 Platform

The platform is constructed of a tubular support frame, a skid-resistant "diamond plate" deck surface and 1.1 m hinged guardrails with 0.15 m toe boards and midrails. The platform can be entered from the rear through a spring-returned gate with latch. The platform is also equipped with a manual extension platform. An AC outlet is also located on the platform.

### 3.4 Serial Number Nameplate

The serial number nameplate, located at the rear of the aerial platform, lists the following:

- Model number
- Serial number
- Capacity and maximum number of persons permissible on the platform
- Maximum wind speed
- Maximum manual force
- Machine weight
- · Drive height
- Platform height
- System pressure
- Lift pressure
- Wheel load
- Voltage
- Maximum incline
- Year of manufacture

## 3.5 Component Identification

The following descriptions are for identification, explanation and locating purposes only.

#### 3.5-1 Electrical Panel

This panel is located in the hydraulic/electric tray. It contains the following controls:

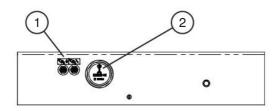


Figure 3-1. Electrical Panel

- Circuit Breaker Resets In the event of power overload or positive circuit grounding, the circuit breaker pops out. Push the breaker back in to reset.
- **2. Hourmeter** This gauge records accumulated operating time of the aerial platform.

## 3.5-2 Battery Charger

The charger is located at the rear of the base or inside the battery tray. Refer to Section 3.13-2 for battery charging operation.

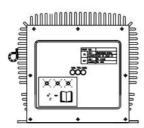


Figure 3-2. Battery Charger

#### 3.5-3 Pothole Protection Device

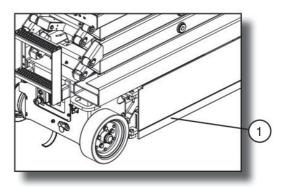


Figure 3-3. Pothole Protection Device

1. Pothole Protection Device - This device consists of a set of mechanically actuated steel weldments located under the hydraulic/electric tray and battery tray. These weldments will automatically rotate for reduced ground clearance when elevating the aerial platform. If the pothole protection device has not fully lowered, the drive function will be disabled.



### WARNING

Crushing Hazard - Personnel on ground must stay clear of pothole protection device.



#### **WARNING**

Do not drive elevated in areas where electrical cords or debris are in the path of travel.

#### Maintenance of the Pothole Protection Device

As with all safety devices, periodic inspection and maintenance is required to ensure the proper operation of the pothole protection device. This mechanism is designed to reduce ground clearance and assist in the stability of an elevated aerial platform in the event the aerial platform encounters a "drop-off" or "pothole." The nature of this safety feature relies on maintaining a consistent ground clearance, therefore, if the aerial platform ever does come to rest on the pothole device, the platform should be immediately lowered and "locked out" to prevent further use until a complete inspection of the mechanism is performed by a qualified technician.

## 3.5-4 Maintenance Support

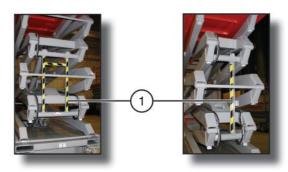


Figure 3-4. Maintenance Support

 Maintenance Support - The maintenance support is a safety mechanism designed to support the scissor assembly. When properly positioned it can support the scissor assembly and empty platform. The maintenance support must be used when inspection and/or maintenance is to be performed within the lifting mechanism. Refer to Section 3.12 for procedure on how use and store the maintenance support.



## **WARNING**

The maintenance support must be used when inspection and/or maintenance or repairs are to be performed within the lifting mechanism. Failure to use this safety mechanism could result in death or serious injury.



## **WARNING**

Do not reach through the scissor assembly when the platform is raised without the maintenance support properly positioned. Failure to avoid this hazard could result in death or serious injury.

#### 3.5-5 Manual Storage Box

This weather-resistant box is mounted on the platform railings. It contains the operating manual, EC declaration and other important documents. The operating manual for this make and model of aerial platform must be stored in this box.



## 3.5-6 Folding Guardrail System

This system, when folded down, reduces the height of the retracted aerial platform for transporting and traveling through doorways only. Refer to Section 3.9 for guardrail folding procedure.

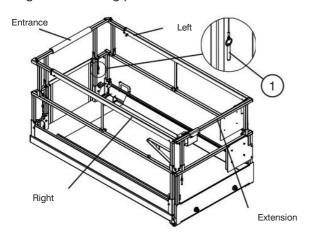


Figure 3-5. Folding Guardrail System

1. Guardrail Locking Pin with Lanyard - This pin is used to lock the guardrail in place.



## WARNING

The scissor assembly must be fully lowered before raising or lowering the guardrails.

## 3.5-7 Fall Protection Anchorage

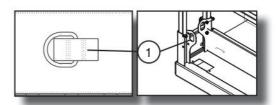


Figure 3-6. Fall Protection Anchorage

 Fall Protection Anchorage - Use this as an attachment point for a fall restraint system. Do not attach anchorage connectors to any other point on the platform. Do not use this to lift, anchor, secure or support the platform or any other apparatus or material.



## **WARNING**

The fall protection anchorage is to be used for restraint, within the limits of the platform, only.

# 3.6 Component Identification (Optional Equipment/Attachments)

This section describes the components that are optional to aerial platforms.

# 3.6-1 Powered Extension Control Console (If Equipped)

This control console is mounted on one of the extension platform guardrails. It contains the following controls:

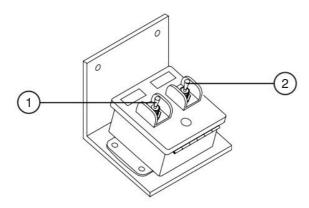


Figure 3-7. Powered Extension Control Console

- 1. Enable Switch This switch, when activated and held, allows the extension platform extend/retract switch functions to operate.
- 2. Extend/Retract Switch This switch, when activated, "extends or retracts the powered extension platform. Refer to Section 3.8-9 on how to extend/retract the powered extension platform.

## 3.6-2 Motion Alarm (If Equipped)

The alarm produces an audible sound when any control function is selected. On aerial platforms with certain options, a flashing amber light will accompany this alarm.

## 3.6-3 Using Optional Control Box with Long Cable from Ground:



Skyjack scissor lifts are to be operated from the operator's position on the platform with the control box secured on the mounting bracket at the front right portion of the platform. Operation of the unit from the ground is permissible only when maintaining the lift or, in limited circumstances, when an obstruction precludes the safe operation of the lift from the operator's position on the platform. Operation from the ground is to be performed as set forth in the Operating Manual.

- 1. Before operating this aerial platform, perform the following steps:
  - Visual and daily maintenance inspections (see Section 2.3)
  - Function tests (see Section 2.4).
- 2. Ensure the platform is in the fully-stowed (lowered) position.  $\Delta$

**!** WARNING

To protect against unintended movement of the aerial platform, push in the emergency stop button after you have arrived at your desired location.

 Disconnect and remove platform control console from the mounting bracket at the front right portion of the platform.



Ensure that you maintain three points of contact when using the ladder to mount/ dismount platform.

## Operation from the Ground:

 The control box with long cable may be connected to the lower base control connector or to the platform control connector.

#### NOTE

For some models, the connection is located beneath an access panel which requires that the scissor assembly be raised to access it.

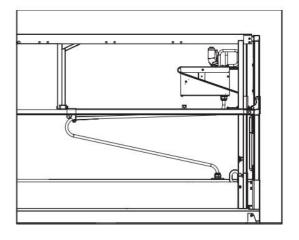


Figure 3-8. Control Box with Long Cable

## NARNING

- Ensure the operator and control box console are properly oriented in the direction the aerial platform is facing (see Figure 3-9).
- Do not drive the aerial platform toward yourself.
- Avoid crushing hazards; stand clear from the aerial platform and out of the direction of travel.
- During loading/unloading operations using a ramp, ensure all personnel (including operator) stand away from the direction of any potential fall-over of the aerial platform from the ramp or movement of the aerial platform down the ramp.
- Ensure that the control box with long cable does not become entangled with the aerial platform or any surrounding objects.
- 5. Perform a thorough jobsite inspection prior to operating the aerial platform to identify potential hazards in your work area.

- Cordon-off the pathway in which you intend to travel.
- 7. Ensure there are no personnel in the intended path of travel.
- 8. Notify those around the pathway that you will be moving the aerial platform.
- 9. Use a spotter to guide movement where necessary. Ensure the spotter remains at a safe distance.
- 10. Once safely reached your destination, push in emergency stop button and turn main power disconnect switch to "O" off position.



Ensure that you maintain three points of contact when using the ladder to mount/ dismount platform.

11. Mount the platform control console to mounting bracket at the front right portion of the platform.

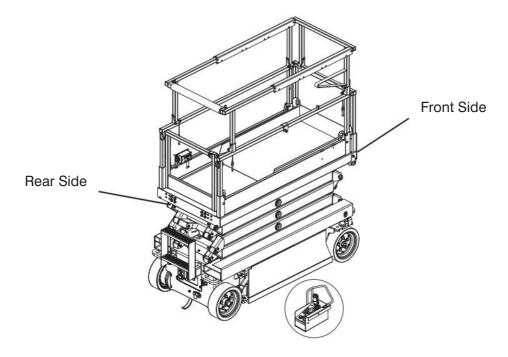


Figure 3-9. Control Box with Long Cable Outside Platform

## 3.7 Operator's Responsibility

It is the responsibility of the operator, prior to each work shift, to perform the following:

### 1. Visual and Daily Maintenance Inspections

- are designed to discover any damage of components before the aerial platform is put into service.
- are done before the operator performs the function tests.



## **WARNING**

Failure to locate and repair damage, and discover loose or missing parts may result in an unsafe operating condition.

#### 2. Function Tests

 are designed to discover any malfunctions before the aerial platform is put into service.

#### **IMPORTANT**

The operator must understand and follow the step-by-step instructions to test all aerial platform functions.

The operator should make a copy of the Operator's Checklist (see Table 4.7) and fill out the visual and daily maintenance inspections and the function tests sections while performing the items outlined in Section 2.3 and Section 2.4.

#### **IMPORTANT**

If aerial platform is damaged or any unauthorized variation from factory-delivered condition is discovered, aerial platform must be tagged and removed from service.

Repairs to the aerial platform may only be made by a qualified service technician. After repairs are completed, the operator must perform visual and daily maintenance inspections & function tests again.

Scheduled maintenance inspections shall only be performed by qualified service technician (see Table 4.6).



Section 3 - Operation Start Operation

#### 3.8 Start Operation

Carefully read and completely understand the operating manual and all warnings and instruction labels (refer to Section 5 - Labels) on the aerial platform.



## **WARNING**

Do not operate this aerial platform without proper authorization and training. Failure to avoid this hazard could result in death or serious injury.

Before operating this aerial platform, perform the following steps:

- Visual and daily maintenance inspections (see Section 2.3)
- 2. Function tests (see Section 2.4)
- 3. Jobsite inspection

It is the responsibility of the operator to perform a jobsite inspection and avoid the following hazardous situations:

- · holes or drop-offs
- · ditches or soft fills
- floor obstructions, bumps or debris
- overhead obstructions
- electrical cords, hoses and high voltage conductors
- hazardous locations
- inadequate surface support to withstand all load forces imposed by the aerial platform
- · wind and weather conditions
- the presence of unauthorized personnel
- other possible unsafe conditions



#### WARNING

An operator should not use any aerial platform that:

- does not appear to be working properly.
- has been damaged or appears to have worn or missing parts.
- has alterations or modifications not approved by the manufacturer.
- has safety devices which have been altered or disabled.

Failure to avoid these hazards could result in death or serious injury.

#### 3.8-1 To Activate Base Control Console



## WARNING

Ensure that you maintain three points of contact when using the ladder to mount/ dismount platform.

- 1. Use the ladder of aerial platform to access platform.
- Close the gate.
- 3. On platform control console, pull out "emergency stop button.



- 4. Use the ladder to dismount from platform.
- 5. Turn main power disconnect switch to "|" on position.
- On base control console, pull out "

  "emergency stop button.

## 3.8-2 To Raise or Lower Platform Using Base Control Console



#### WARNING

Be aware of overhead obstructions or other possible hazards around the aerial platform when lifting.



## WARNING

Do not lower the platform unless the area is clear of personnel and obstructions.

- Activate base control console (refer to Section 3.8-1).
- 2. Select and hold off/platform/base key switch to " base position.
- 3. Select and hold lower/neutral/raise switch to either "♣↑" raise or "₩□↓" lower position. Release switch to stop.

Lowering Warning System - A lowering warning system automatically stops lowering function before reaching fully retracted position and sounds the alarm. After the operator has released down controls and taken time to check that no person is near the scissors, the lowering function can be reactivated.

#### 3.8-3 To Activate Platform Control Console

- 1. Turn main power disconnect switch to "\" on position.
- 2. On base control console, pull out "O" emergency stop button.
- Select off/platform/base key switch to "platform position.





Ensure that you maintain three points of contact when using the ladder to mount/ dismount platform.

- 4. Use the ladder of aerial platform to access platform.
- 5. Close the gate.
- 6. On platform control console, pull out "emergency stop button.



3.8-4 To Raise or Lower Platform Using Platform Control Console



## WARNING

Be aware of overhead obstructions or other possible hazards around the aerial platform when lifting.



#### **WARNING**

Do not lower the platform unless the area below is clear of personnel and obstructions.

1. Activate platform control console (refer to Section 3.8-3).

- 2. Select lift/off/drive switch to "at lift position.
- 3. Activate and hold "A" enable trigger switch.
- Move controller handle forward or backward until desired height is reached.

#### NOTE

Lowering is not proportional.

Lowering Warning System - A lowering warning system automatically stops the lowering function before reaching the fully retracted position and sounds the alarm. After the operator has released the down controls and taken time to check that no person is near the scissors, the lowering function can be reactivated.

Return controller to neutral center position to stop.
 Release "A" enable trigger switch.



## **WARNING**

To protect against unintended movement of the aerial platform, push in the emergency stop button after you have arrived at your desired location or elevation.

#### NOTE

If the tilt alarm sounds and the platform does not, or only partially raises, immediately lower the platform completely and ensure that the aerial platform is on a firm level surface. Section 3 - Operation Start Operation

## 3.8-5 To Drive Forward or Backward



## **WARNING**

Be aware of blind spots when operating the aerial platform.



## WARNING

Ensure that there are no personnel or obstructions in the path of travel, including blind spots.

- 1. Activate platform control console (refer to Section 3.8-3).
- 2. Select lift/off/drive switch to "u" drive position.
- 3. Activate and hold "a" enable trigger switch.
- 4. Move controller handle "" forward/up or "" backward/down to desired speed and direction of aerial platform travel.
- Return controller to neutral center position to stop.
   Release "A" enable trigger switch.



## WARNING

To protect against unintended movement of the aerial platform, push in the emergency stop button after you have arrived at your desired location or elevation.

#### 3.8-6 To Steer

- 1. Activate platform control console (refer to Section 3.8-3).
- 2. Select lift/off/drive switch to "T" drive position.
- 3. Activate and hold "d" enable trigger switch.
- 4. Press "Tocker switch on top of controller handle in either direction to steer.

#### NOTE

Steering is not proportional. Driving and steering may be active at the same time.

## 3.8-7 To Select Level Drive or Inclined Drive Mode (If Equipped)

#### 1. Level Drive Mode

Select level drive mode when traveling on flat surface.

To activate level drive mode, select inclined drive/ level drive switch to "\(\begin{align\*}\)" level drive (high speed/ low torque) position.



Aerial platform must be in fully retracted position when operated on any grade. Driving while elevated on any grade may result in death or serious injury.

#### 2. Inclined Drive Mode

Select inclined drive mode when climbing grades or when loading or unloading the aerial platform.

To activate inclined drive mode, select inclined drive/level drive switch to " inclined drive (low speed/high torque) position.



## **WARNING**

To protect against unintended movement of the aerial platform, push in emergency stop button after you have arrived at your desired location or elevation.

## 3.8-8 To Extend/Retract Manual Extension Platform



Crushing Hazard - Extension platform must not be retracted manually from the ground.

- To extend/retract manual extension platform, remove retaining locking pins and push/pull extension platform using the push bar or sliding handrails to one of four or five desired locking positions.
- 2. Upon extension or retraction, reinsert locking pins. Insert pin on one side of aerial platform in front of upright bar and the pin on the other side of aerial platform behind the upright bar to prevent accidental movement, in either direction, of manual extension platform during travel or transport. Refer to Figure 3-10 for a configuration example.

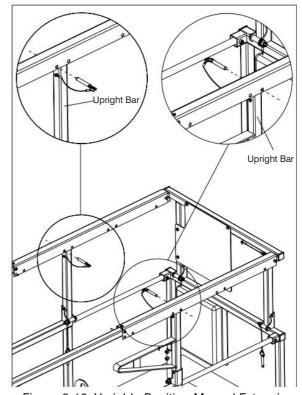


Figure 3-10. Variable Position Manual Extension Platform

Section 3 - Operation Start Operation

# 3.8-9 To Extend/Retract Powered Extension Platform (If Equipped)

- 1. To extend/retract powered extension platform, ensure "emergency stop button is pulled out.
- 2. Select lift/off/drive switch to "\(\bigs\_{\psi}^{\psi}\)" lift position.
- 3. On powered extension control console, press and hold "O" enable switch, then push extend/retract switch to "extend position. Release switch to stop.
- 4. To retract extension platform, press and hold "O " enable switch, then push extend/retract switch to " retract position. Release switch to stop.



To protect against unintended movement of the aerial platform, push in emergency stop button after you have arrived at your desired location or elevation.

#### 3.8-10 Shutdown Procedure

- 1. Completely lower the platform.
- 2. On platform control console, push in "emergency stop button.



Ensure that you maintain three points of contact when using the ladder to mount/ dismount platform.

- 3. Use the ladder to dismount from platform.
- 4. On base control console, select off/platform/base key switch to "O" off position and remove the key.
- 5. Turn main power disconnect switch to "O" off position.

## 3.9 Guardrail Folding Procedure

When folded down, the folding guardrail system reduces the height of the retracted aerial platform for transporting only.



Any lowered guardrail will create a fall hazard. Remain away from the side of the platform while raising or lowering the guardrails to avoid falling.

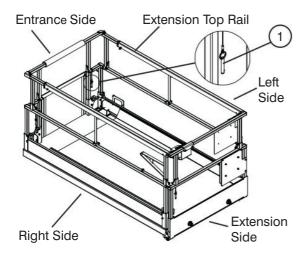


Figure 3-11a. Folding Guardrail System

 Guardrail Locking Pin with Lanyard - This pin is used to lock the guardrail in place.



## **WARNING**

The scissor assembly must be fully lowered before raising or lowering the quardrails.



## **WARNING**

Before operating this aerial platform, check the guardrail system for loose or missing locking pins. The guardrail system must be upright and all pins must be locked in place. Death or serious injury could result if the guardrail system is not upright or properly locked.

### To fold the guardrail system down:

- 1. Ensure aerial platform is on level ground.
- 2. Ensure extension platform is fully retracted.
- 3. Ensure Emergency Stop button is depressed.
- 4. Turn main power disconnect switch to "O" off position.



## **WARNING**

Ensure that you maintain three points of contact when using the ladder to mount/ dismount platform.

- 5. Use the ladder of aerial platform to access platform.
- 6. Close the gate.
- 7. Remove the platform control console and lay it down on the platform.



#### WARNING

Any lowered guardrail will create a fall hazard. Use caution when exiting or entering the platform when the guardrails are lowered.

Remove left and right side pins A and B (if equipped). (Refer to Figure 3-11b):

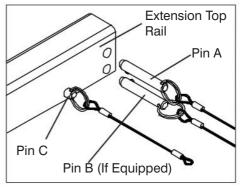


Figure 3-11b. Extension Top Rail Pins



#### WARNING

Ensure pin C is in place and secured to the Extension Top Rail.

9. Remove remaining pins from all sides and carefully fold all guardrails in the following order:

#### SJIII 32xx

Entrance

Use tie wrap to secure entrance bar to left guardrail.

- Right Side
- Left Side
- Extension

Lock extension guardrail into place on the mounting post. Ensure that the detent ball of the pin is all the way through. (Refer to Figure 3-11c)

## SJIII 46xx

- Right Side
- Left Side
- Entrance
- Extension

Lock extension guardrail into place on the mounting post. Ensure that the detent ball of the pin is all the way through. (Refer to Figure 3-11c)

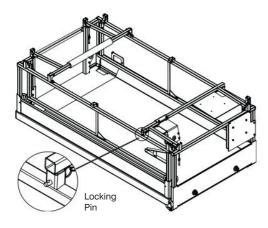


Figure 3-11c. All Guardrails Folded Down



#### **WARNING**

Ensure that you maintain three points of contact when using the ladder to mount/ dismount platform.

#### To raise the guardrail system up:

- 1. Ensure aerial platform is on level ground.
- 2. Ensure extension platform is fully retracted.
- 3. Ensure Emergency Stop button is depressed.
- 4. Turn main power disconnect switch to "O" off position.



## **WARNING**

Any lowered guardrail will create a fall hazard. Use caution when exiting or entering the platform when the guardrails are lowered.



## WARNING

The scissor assembly must be fully lowered before raising or lowering the guardrails.



#### WARNING

Ensure that you maintain three points of contact when using the ladder to mount/ dismount platform.

- Use the ladder of aerial platform to access platform.
- Remove locking pin from mounting post and carefully raise extension guardrail up and lock into place with locking pins ensuring that the detent ball of each pin is all the way through (Refer to Figure 3-11c).
- Carefully raise each guardrail up and lock into place with locking pins ensuring that the detent ball of each pin is all the way through (Refer to Figure 3-11a).
- 8. Mount the platform control console at the front right of the platform. Lock it in place.



#### WARNING

Before operating this aerial platform, check the guardrail system for loose or missing locking pins. The guardrail system must be upright and all pins must be locked in place. Death or serious injury could result if the guardrail system is not upright or properly locked.

Loading/Unloading Section 3 - Operation

## 3.10 Loading/Unloading

Know and heed all national, state or territorial/provincial and local rules which apply to your loading/unloading of aerial platforms.

Only qualified personnel shall operate machinery during loading/unloading.

Be sure vehicle capacity and loading equipment hoists, chains, straps, etc., are sufficient to withstand maximum aerial platform weight.

The transport vehicle must be parked on a level surface and must be secured to prevent rolling while aerial platform is being loaded/unloaded.

## 3.10-1 Lifting



# Only qualified rigger shall operate machinery during lifting.

When it is necessary to lift the aerial platform the following conditions must be met:

- The platform must be fully lowered.
- The hydraulic/electric and battery trays must be closed and securely latched.
- The extension platform must be retracted and secured.
- The platform control console must be secured to the railings or removed.
- The platform must be cleared of all personnel, tools and materials.
- The lifting/rigging must be attached to all four lifting points as illustrated in Figure 3-12.

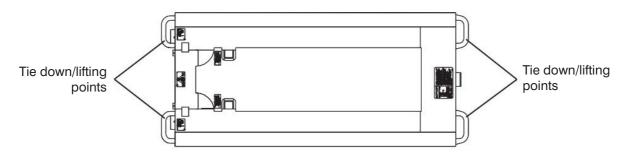


Figure 3-12. Tie Downs/Lifting Points

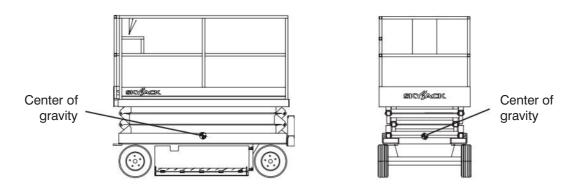


Figure 3-13. Center of Gravity

Section 3 - Operation Loading/Unloading

#### NOTE

The mass of the aerial platform is as per Table 4.3a or Table 4.3b. The center of gravity is approximately located in the middle of the aerial platform, front to back and side to side, as illustrated in Figure 3-13. Vertically, the center of gravity is approximately just above the base chassis.

## **NOTE**

The aerial platform can be lifted with a forklift from the sides but Skyjack does not recommend this use. Lift with forks in designated pockets as illustrated in Figure 3-14.

#### 3.10-2 Driving

Before driving the aerial platform:

- Ramp or dock capacity must be sufficient to withstand maximum aerial platform weight.
- Ramp should be equipped with side guards to prevent inadvertent fall from the ramp.
- Incline should not exceed aerial platform gradeability (refer to Table 4.3a or Table 4.3b).
- Aerial platform brake must be checked for proper operation.
- Aerial platform speed should be on high torque setting (if equipped).



When transporting, the aerial platform must be secured to the truck or trailer deck. Tie downs are available as illustrated in Figure 3-12.

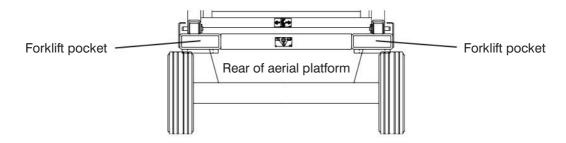


Figure 3-14. Forklift Pockets

# 3.11 Moving the Aerial Platform Through a Doorway

## N WARNIN

## This procedure is suitable for level ground only.

 Confirm that the height/width of the doorway is sufficient to allow the aerial platform to pass through.

## **NOTE**

If it is necessary to fold the guardrails, refer to Section 3.9 for guardrail folding procedure.

- 2. Perform a thorough jobsite inspection prior to operating the aerial platform to identify potential hazards in your work area.
- 3. Cordon-off the pathway which you intend to travel.
- 4. Position the aerial platform to allow all future motion, including through the doorway, to be in a forward direction.
- 5. Turn main power disconnect switch to "O" off position.
- Use the ladder of aerial platform to access platform.



#### WARNING

Ensure that you maintain three points of contact when using the ladder to mount/ dismount platform.

- 7. Close the gate. On platform control console, push in "o" emergency stop button.
- 8. Disconnect and remove platform control console from the platform.
- 9. Fold the guardrails if necessary. Refer to Section 3.9 for guardrail folding procedure.
- 10. Use the ladder to dismount from platform.
- 11. Connect platform control console to the connection at the rear of the base.

#### NOTE

For some models, the connection is located beneath an access panel which requires that the scissor assembly be raised to access it.

- 12. Ensure there are no personnel in the intended path of travel.
- 13. Notify those around the pathway that you will be moving the aerial platform.
- 14. Use a spotter to guide movement. Ensure the spotter remains at a safe distance.
- Ensure that platform control console is properly oriented in the direction the aerial platform is facing.
- 16. Turn main power disconnect switch to "|" on position.
- 17. On base control console, pull out "O" emergency stop button.
- Select base/off/platform key switch to "
   platform position.
- 19. On platform control console, pull out "O" emergency stop button.
- 20. Select lift/off/drive switch to "drive position.

  Select inclined drive/level drive to "more inclined drive (low speed/high torque) position for reduced speed.



#### **WARNING**

Do not drive the aerial platform toward yourself.

 Using as low a speed as practical and the operator positioned behind the aerial platform, drive forward through doorway.

- 22. Once safely through doorway, push in "o" emergency stop button and turn main power disconnect switch to "O" off position.
- 23. Disconnect platform control console and return it to the platform.



## **WARNING**

Ensure that you maintain three points of contact when using the ladder to mount/ dismount platform.

24. Return guardrails to upright position if folded. Refer to Section 3.9 for guardrail folding procedure.



## **WARNING**

Before operating this aerial platform check the guardrail system for loose or missing locking pins. The guardrail system must be upright and all pins must be locked in place.

Death or serious injury could result if the guardrail system is not upright or properly locked.

25. Once the platform control console is securely reconnected and guardrails up, normal operation may continue.

## 3.12 Maintenance Support Procedure

This section provides the operator with procedure regarding deployment and storage of maintenance support.

The maintenance support is a safety mechanism designed to support the scissor assembly. When properly positioned, it can support the scissor assembly and empty platform. The maintenance support must be used when inspection and/or maintenance is to be performed within the lifting mechanism.



The maintenance support must be used when inspection and/or maintenance or repairs are to be performed within the lifting mechanism. Failure to use this safety mechanism could result in death or serious injury.

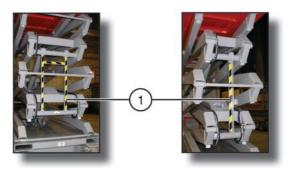


Figure 3-15. Maintenance Support

#### **To Deploy the Maintenance Support**

- 1. Remove all material from platform.
- 2. Raise platform until there is adequate clearance to swing down maintenance support (item 1).
- 3. Swing maintenance support down from storage bracket into a vertical position.
- 4. Remove hands and arms from scissors area.
- Lower platform until bottom end of maintenance support contacts the labeled cross bar and scissors are supported by maintenance support.
- 6. Turn main power disconnect switch to "O" off position.

## To Store the Maintenance Support

- Turn main power disconnect switch to "|" on position.
- 2. Raise platform until there is adequate clearance to swing up the maintenance support.
- 3. Swing bar fully up into storage bracket.
- 4. Lower the platform.



Do not reach through the scissor assembly when the platform is raised without the maintenance support properly positioned. Failure to avoid this hazard could result in death or serious injury.

#### 3.13 Battery Maintenance

This section provides the operator with procedures on how to service and charge the battery. This also provides charger operation instructions.

## 3.13-1 Battery Service Procedures



## **WARNING**

Explosion Hazard - Keep flames and sparks away. Do not smoke near batteries.





## WARNING

Battery acid is extremely corrosive - Wear proper eye and facial protection as well as appropriate protective clothing. If contact occurs, immediately flush with cold water and seek medical attention.

- Turn main power disconnect switch to "O" off position.
- 2. Check battery case for damage.
- Check battery fluid level in each battery. If plates are not covered by at least 13 mm of solution, add distilled or demineralized water.
- 4. Clean battery terminals and cable ends thoroughly with a terminal cleaning tool or wire brush.
- 5. Make sure all battery connections are tight.
- 6. Replace any battery that is damaged or incapable of holding a lasting charge.
- 7. Do not use any batteries other than flooded leadacid batteries of the proper AH rating.



#### WARNING

Use original or equivalent to the original parts and components for the aerial platform.

### 3.13-2 Battery Charging Operation

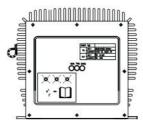


Figure 3-16. Battery Charger



## DANGER

Risk of electric shock - Do not immerse the charger in water. Though the charger is highly resistant to water, it is not designed for immersion and an electric shock can occur.

 Provide adequate ventilation for the batteries and charger. The convection cooled design requires access to cooling air for proper operation. Do not allow blankets or other materials to cover the charger. Although the charger protects itself against overheating, the charger cooling fins should be cleaned if clogged with debris for best performance.



## **WARNING**

There could be a spark during charging. Be careful when using fuels, solvents or other flammables near the charger or batteries.

2. Connect the power supply cord to a properly grounded 100V/50 or 60Hz, 115V/50 or 60Hz, or 230V/50 or 60Hz socket. This charger automatically senses and adjusts to the AC input voltage range.



## **CAUTION**

When changing the input voltage wait until all the LEDs are OFF or wait a minimum of 20 seconds before switching on the new voltage.

 The charging time is affected by numerous factors including battery Amp-Hour capacity, depth of discharge, battery temperature, and battery condition (new, old or defective). Batteries larger than 240 AH can be recharged but will take longer.



## **WARNING**

Do not disconnect the DC output wires near the batteries when the charger is ON. The resulting arcing could cause the batteries to explode. If the charger must be disconnected, first disconnect the AC power supply cord from its outlet, then disconnect the charger DC connections.



## WARNING

Risk of an electric shock - Do not touch un-insulated parts of the charger output wires, battery connector, or battery terminals.



#### WARNING

Visually and manually inspect to verify the DC output wires and terminals are in good working condition before each use.

 The charger will start automatically within four to six seconds. The charger will start even with severely discharged batteries (down to 1V terminal voltage). Once charging starts, the LEDs indicate the charging progress.

## **Charging State LED**

State of charge	1 <sup>ST</sup> LED	2 <sup>ND</sup> LED	3 <sup>RD</sup> LED
0 to 50%	Blinking	Off	Off
50% to 75%	On	Blinking	Off
75% to 100%	On	On	Blinking
100%	On	On	On

60133AA

The charger goes into an equalizing charge mode after the batteries are charged and all 3 LEDs are "ON". The charger will continue to charge at a low current then shut off automatically when complete. If all 3 LEDs blink together, there is a problem.

Take proper action according to the following instructions:

#### 3 LEDs blink once simultaneously:

Output connection error. Check the battery and charger connection. The output may not be connected to the batteries or the connections to the batteries may have corroded or loosened. The output may be shorted due to improper connection to the batteries or pinched wires. The output may be connected in reverse polarity to the batteries. The charger is not damaged by any of these problems.

#### 3 LEDs blink twice simultaneously:

The charger is indicating that the AC voltage is too low or too high. Check the AC input voltage.

### 3 LEDs blink three times simultaneously:

Charger is overheated. No action required. When the charger cools, charging will restart automatically. Check and correct for dirt or other debris on charger that may be reducing cooling.

## 3 LEDs blink four times simultaneously:

Input or output over current. No action required, charger will correct and restart automatically.

#### 100% LED lamp blinks:

Charger 18 hour timer has timed out due to battery problem.

## Batteries do not fully charge.

If the batteries are charged overnight, make sure the AC supply is not being switched off at night with other building items. Check battery condition and for dead cells or reduced capacity. Replace charger only if other problems are not found.

## The AC line circuit breaker or fuse is blown.

A defective circuit breaker or fuse, an overloaded circuit, or a charger problem can cause this condition. Try connecting the charger to a different AC outlet (on a different circuit) in the building. If the AC supply checks good, the charger should be replaced.

Notes

**Table 4.1 Standard and Optional Features** 

MODELS	3215	3219	3220	3226	4620	4626	4632			
STANDARD EQUIPMENT										
Base control console	*	*	*	*	*	*	*			
Color coded and numbered wiring system	*	*	*	*	*	*	*			
DC power (VDC)	24	24	24	24	24	24	24			
Dual holding brakes	*	*	*	*	*	*	*			
Forklift pockets/tie downs/lifting lugs	*	*	*	*	*	*	*			
Hinged railing system				*		*	*			
Joystick proportional control for drive/lift	*	*	*	*	*	*	*			
Fall Protection Anchorage (s)	*	*	*	*	*	*	*			
Lowering warning system	*	*	*	*	*	*	*			
Maximum drive height	Full Height	Full Height	Full Height	Full Height	Full Height	Full Height	Full Height			
Operator horn	*	*	*	*	*	*	*			
Overload sensing system	*	*	*	*	*	*	*			
Platform control console	*	*	*	*	*	*	*			
Pothole protection	*	*	*	*	*	*	*			
Roll out deck extension (m)	0.9	0.9	0.9	0.9	1.2	1.2	1.2			
Spring loaded half height gate	*	*	*	*	*	*	*			
Swing out trays for easy access	*	*	*	*	*	*	*			
Tilt alarm with drive/lift cut out	*	*	*	*	*	*	*			
Low voltage battery protection	*	*	*	*	*	*	*			
Analog control system	*	*	*	*	*	*	*			
Wiring for AC outlet on platform	*	*	*	*	*	*	*			
	OPTIONA	L EQU	IPMENT							
1.8m Powered extension platform			*		*					
All motion audible alarm	*	*	*	*	*	*	*			
Flashing light	*	*	*	*	*	*	*			
Hinged railing system	*	*	*		*	2				
Shop air line to platform	*	*	*	*	*	*	*			
Spring loaded full gate entry	*	*	*	*	*	*	*			
250 Ah batteries	*	*	*	*	*	*	*			
Pipe racks	*	*	*	*	*	*	*			
Drywall/board carrier	*	*	*	*	*	*	*			

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Tables Section 4

Table 4.2 Owner's Annual Inspection Record

	<u>^</u>										
E++		Model Number:				Serial N	umber:_				
*		20	20	20	20	20	20	20	20	20	
**	† P 🔼	SKYJACK									

1001AB

This decal is located on the scissor assembly. It must be completed after an annual inspection has been completed. Do not use the aerial platform if an inspection has not been recorded in the last 6 months.

	Pictorial	Description
*		Inspection Date
**	† P 🔼	Inspector Signature

Section 4 Tables

**Table 4.3a Specifications and Features** 

MODEL	3215	3219	3220	3226		
Weight *	1120 kg	1312 kg	1594 kg	1890 kg		
Overall Width	0.8	1 m	0.83 m			
Overall Length	1.8	0 m	2.3	4 m		
Platform Size (Inside)	0.66 m	x 1.63 m	0.70 m	x 2.10 m		
Height						
Working Height	6.60 m	7.80 m	8.10 m	9.90 m		
Platform Elevated Height	4.60 m	5.80 m	6.10 m	7.90 m		
Stowed Platform Height	0.88 m	0.99 m	0.97 m	1.14 m		
Stowed Height (Railings Up)	1.99 m	2.10 m	2.08 m	2.26 m		
Stowed Height (Railings Down)	1.63 m	1.75 m	1.73 m	1.91 m		
Drive Height		FU	JLL			
Standard Operating Times						
Lift Time (No Load)	17 s	18 s	27 s	49 s		
Lower Time (No Load)	36 s	39 s	40 s	57 s		
Lift Time (Rated Load)	21 s	20 s	35 s	56 s		
Lower Time (Rated Load)	21 s	25 s	25 s	42 s		
Chassis						
Normal Drive Speed	4.30	km/h	3.70 km/h	3.40 km/h		
Elevated Drive Speed	1.00	km/h	1.00 km/h	1.09 km/h		
High Torque Drive Speed	N	/A	1.90 km/h	2.10 km/h		
Gradeability (Ramp Angle)	23	3%	25	5%		
Tires (Solid Rubber)	12 x	4 x 8	16 x 5 x 12			
Hydraulic Oil						
Туре		ATF De	exron III			
Tank Capacity (Liters)	10	).9	2	4		

130AG

#### Note:

Emission sound pressure level does not exceed 70 dB(A).



<sup>\*</sup> Weight with standard 0.91 m extension platform. Refer to serial nameplate for specific applications.

Tables Section 4

**Table 4.3b Specifications and Features** 

MODEL	4620	4626	4632
Weight *	1922 kg	2170 kg	2300 kg
Overall Width		1.17 m	
Overall Length		2.32 m	
Platform Size (Inside)		1.1 m x 2.1 m	
Height			
Working Height	8.10 m	9.90 m	11.70 m
Platform Elevated Height	6.10 m	7.90 m	9.70 m
Stowed Platform Height	1.00 m	1.20 m	1.20 m
Stowed Height (Railings Up)	2.13 m	2.27 m	2.47 m
Stowed Height (Railings Down)	1.79 m	1.93 m	2.00 m
Drive Height		Full	
Standard Operating Times		w	
Lift Time (No Load)	24 s	48 s	50 s
Lower Time (No Load)	48 s	45 s	62 s
Lift Time (Rated Load)	34 s	57 s	62 s
Lower Time (Rated Load)	31 s	31 s	47 s
Chassis			
Normal Drive Speed		3.10 km/h	
Elevated Drive Speed		1.00 km/h	
High Torque Drive Speed		1.90 km/h	
Gradeability (Ramp Angle)		25%	
Tires (Solid Rubber)		16 x 5 x 12	
Hydraulic Oil			
Туре		ATF Dexron III	
Tank Capacity (Liters)		24	

131AK

## Note:

Emission sound pressure level does not exceed 70 dB(A).

<sup>\*</sup> Weight with standard 1.20 m extension platform. Refer to serial nameplate for specific applications.

Section 4 Tables

**Table 4.4 Floor Loading Pressure** 

		Total Aerial Platform	Tota	l Aerial Platform	Load
MODEL		Weight	Wheel	LCP**	OUP**
		kg	kg	kPa (kN/m²)	kPa (kN/m²)
3215	min*	1120	448	685.9	7.7
3213	max*	1347	539	742.4	9.2
3219	min*	1312	525	743.4	9.0
3219	max*	1539	615	782.0	10.6
3220	min*	1594	616	758.5	8.5
3220	max*	1950	780	896.5	11.5
3226	min*	1890	746	827.5	10.0
3220	max*	2091	836	896.5	11.5
4620	min*	1922	744	1316.9	7.0
4020	max*	2568	1021	1530.6	9.5
4626	min*	2170	853	1420.3	8.0
4020	max*	2627	1075	1544.4	10.1
4632	min*	2300	921	1434.1	8.6
4032	max*	2620	1048	1537.5	9.8

133AE

\*\* LCP - Locally Concentrated Pressure is a measure of how hard the aerial platform presses on the areas in direct contact with the floor. The floor covering (tile, carpet, etc.) must be able to withstand more that the indicated values above.

**OUP - Overall Uniform Pressure** is a measure of the average load the aerial platform imparts on the whole surface directly underneath it. The structure of the operating surface (beams, etc.) must be able to withstand more than the indicated values above.

#### **NOTE:**

**The LCP** or **OUP** that an individual surface can withstand varies from structure to structure and is generally determined by the engineer or architect for that particular structure.

<sup>\*</sup> min - Total aerial platform weight with no options

max - Aerial platform weight + all options + full capacity

Tables Section 4

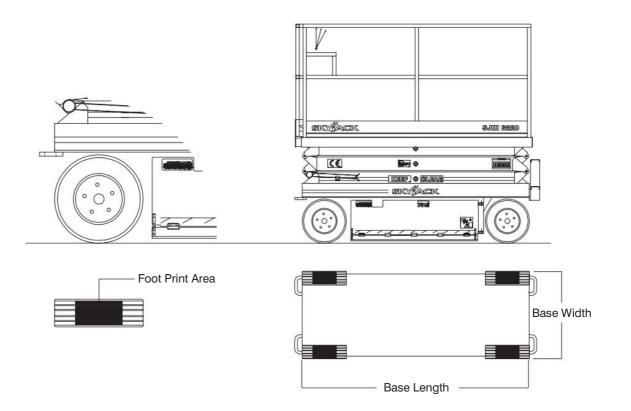
## Floor Loading Pressure

## **Locally Concentrated Pressure (LCP):**

**Overall Uniform Pressure (OUP):** 

Foot Print Area identified by test.

Base Area = Length x Width





Intermixing tires of different types or using tires of types other than those originally supplied with this equipment can adversely affect stability. Therefore, replace tires only with the exact Skyjack-approved type. Failure to operate with matched approved tires in good condition may result in death or serious injury.

Section 4 Tables

Table 4.5 Maximum Platform Capacities (Evenly Distributed)

MODEL	Manual Extension Platform				Pov	Powered Extension Platform				Tilt Cutout			
MODEL	Total C	apacity	Extension	Extension Capacity		apacity	Extension Capacity		Wind Speed	Setting (Degrees)			
3215	227 kg	2 Persons	113 kg	1 Person	N/A		No Wind	1.5 x 3.5					
3213	227 kg	1 Persons	113 kg	1 Person		14	9.4 m/s	1.5 x 5.5					
3219	227 kg	2 Persons	113 kg	1 Person		N	No Wind	1.5 x 3.5					
3219	227 kg	1 Persons	113 kg	1 Person	N/A				9.4 m/s	1.0 x 0.0			
3220	408 kg	2 Persons	113 kg	1 Person	363 kg 2 Persons		136 kg	1 Person	No Wind	1.5 x 3.5			
3226	227 kg	2 Persons	113 kg	1 Person	N/A			No Wind	1.5 x 3.5				
4620	590 kg	3 Persons	136 kg	1 Person	590 kg	3 Persons	136 kg	1 Person	12.5 m/s	1.5 x 3.5			
4626	454 kg	3 Persons	136 kg	1 Person		N	No Wind	1.5 x 3.5					
4020	454 kg	2 Persons	136 kg	1 Person	N/A				9.4 m/s	1.5 x 5.5			
4632	317 kg	2 Persons	113 kg	1 Person		N/A			No Wind	1.5 x 3.5			
4032	317 kg	1 Person	113 kg	1 Person		N/F		N/A			9.4 m/s	1.0 x 3.3	

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This aerial platform is equipped with a load sensing system. Do not exceed the rated capacity of the aerial platform. Failure to avoid this will prevent operation of all normal controls/functions of the aerial platform. To resume normal operation remove the additional loads.

Tables Section 4

## **General Maintenance**

Before attempting any repair work, disconnect the battery by turning the main power disconnect switch to "O" off position. Preventive maintenance is the easiest and least expensive type of maintenance.

**Table 4.6 Maintenance and Inspection Schedule** 

Frequency	Daily	3 months or 150 hours	Yearly	Frequency	Daily	3 months or 150 hours	Yearly		
Visual and Daily Maintenance Inspections				Fall Protection Anchorage (s)	А				
Labels	А			AC Outlet on Platform	А				
Electrical	А			Platform Control Console	А				
Limit Switches	A			Manuals	А				
Hydraulic	А			Powered Extension Control Console (If Equipped)	А	1			
Entrance Side				Lifting Mechanism		B*†			
Main Power Disconnect Switch	А			Maintenance Support	А				
Base Control Switches	А			Scissor Assembly	А	1			
Free-wheeling Value Knob	А			Scissor Bumpers	А				
Brakes	А			Rollers	А				
220V Outlet Receptacle	А			Lift Cylinder(s)	А	I			
Ladder	А			Function Tests					
Battery Tray Side				Test Main Power Disconnect Switch	А				
Pothole Protection Device	А			Base Control Console		1			
Battery Tray	Α			Test Base Emergency Stop	Α				
Battery Charger	Α	B*+	.	Test Off/Platform/Base Switch	А				
Battery	А	] •	·	Test Lower/Neutral/Raise Switch	А				
Steer Cylinder Assembly	А			Test Emergency Lowering	А				
Wheel/Tire Assembly	А			Test Free-wheeling	А				
Tie Rod (Conventionals)	Α			Platform Control Console					
Greasing Points	А			Test Platform Emergency Stop	А				
Hydraulic/Electric Tray Side				Test Enable Trigger Switch	А	B*†			
Pothole Protection Device	Α			Test Steering	А				
Hydraulic Tank	А			Test Driving	А				
Hydraulic Oil	А			Test Brakes	А				
Hydraulic Pump and Motor	А		Test Platform Raising/Lowering		А				
Electrical Panel	А			Test Lowering Warning	А	]			
Main Manifold	А			Test Horn	А	]			
Load/Tilt Sensor	А			Test Pothole Sensor	А				
Emergency Lowering Access Rod (If Equipped)	А			Test Elevated Drive Speed	А				
Platform Assembly	А			Verify Load Sensing Module Self-Check	А				

60598AG-CE

- A Perform Visual and Daily Maintenance Inspections & Functions Test. Refer to Section 2.3 and Section 2.4 of this manual.
- **B** Perform Scheduled Maintenance Inspection. Refer to Service & Maintenance manual.
- \* Maintenance must be performed only by trained and competent personnel who are familiar with mechanical procedures.
- † Refer to Skyjack's website @ www.skyjack.com for latest service bulletins prior to performing quarterly or yearly inspection.



Use original or equivalent to the original parts and components for the aerial platform.

Section 4 **Tables** 

## **Table 4.7 Operator's Checklist**



Serial Number:											
Model:											
Hourmeter Reading:					Operator's Name (Printed):						
Date:											
Time:	Operator's Signature:										
									100		
Each item shall be inspected using the appr	•		ion o	f the S	Skyjack operating manual.						
As each item is inspected, check the appropriate of the control of	priate b	ox.			INCRECTION EDECUENCY						
P - PASS					INSPECTION FREQUENCY  FREQUENTLY						
F - FAIL					DAILY						
R - REPAIRED					ANNUALLY						
NA - NOT APPLICABLE					BI-ANNUALLY						
THE THE TAIL ELECTRICAL	т. т				BI / IIIIO/ILEI		_	_	_		
V	N/A	Р	F	R		N/A	Р	F	R		
Visual and Daily Maintenance Inspections		-	_		Fall Protection Anchorage (s)		-5				
Labels	-				AC Outlet on Platform	$\vdash$		$\vdash$			
Electrical Limit Switches	-	_		$\vdash$	Platform Control Console	$\vdash$	_	$\vdash$	_		
	-				Manuals	Щ					
Hydraulic Entrance Side	-			-	Powered Extension Control Console (If Equipped Lifting Mechanism	-	di di		0 15		
Main Power Disconnect Switch	1 1	-		$\vdash$	Maintenance Support	Н		$\vdash$	<u> </u>		
Base Control Switches	+ +	_			Scissor Assembly	-			-		
Free-wheeling Valve Knob	+ +	5 (			Scissor Bumpers		0 /	$\vdash$	10 10		
Brakes	+ +	-		H	Rollers				<del>                                     </del>		
220V Outlet Receptacle	+ +	-		-	Lift Cylinder(s)	$\vdash$		$\vdash$			
Ladder	1			H	Function Tests			_	2 2		
Battery Tray Side	+ +	-		Н	Test Main Power Disconnect Switch						
Pothole Protection Device	1	-			Base Control Console	Н	-				
Battery Tray	1				Test Base Emergency Stop		8 1		14 15		
Battery Charger	1 1			М	Test Off/Platform/Base Switch	Н					
Battery	1 1				Test Lower/Neutral/Raise Switch		N 1				
Steer Cylinder Assembly	1 1				Test Emergency Lowering						
Wheel/Tire Assembly					Test Free-wheeling	П					
Tie Rod (Conventionals)					Platform Control Console						
Greasing Points				П	Test Platform Emergency Stop	$\Box$					
Hydraulic/Electric Side					Test Enable Trigger Switch						
Pothole Protection Device					Test Steering				15 15 15 151		
Hydraulic Tank					Test Driving						
Hydraulic Oil					Test Brakes						
Hydraulic Pump and Motor					Test Platform Raising/Lowering	S 50					
Electrical Panel					Test Lowering Warning						
Main Manifold					Test Horn						
Load/Tilt Sensor					Test Pothole Sensor	10 TO					
Emergency Lowering Access Rod (If Equipped)					Test Elevated Drive Speed						
Platform Assembly					Verify Load Sensing Module Self-Check						
								6060	00AG-CE		

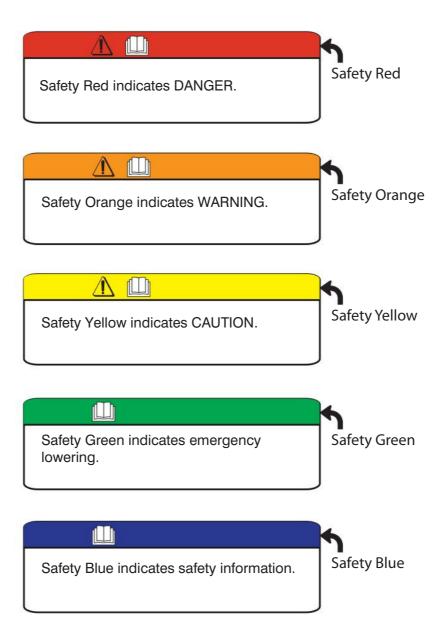
Note:

Make a copy of this page or visit the Skyjack web site: www.skyjack.com for a printable copy.



Notes	
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## **Label Legend**



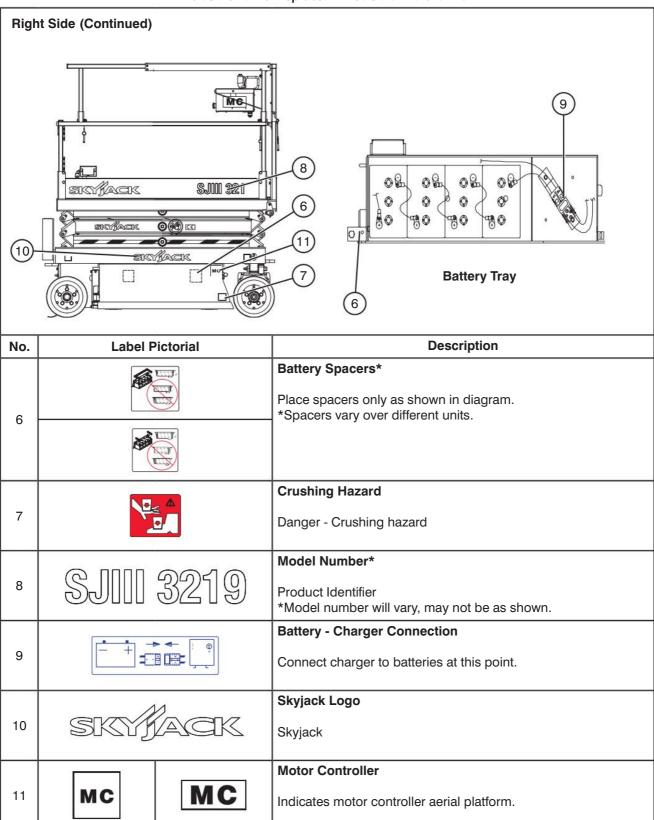
Labels Section 5

## Labels and Nameplates - Models 3215 & 3219

# **Right Side** SKYKACK SKYHACK No. **Label Pictorial** Description Skyjack Logo Skyjack 1 "CE" CE CE rating mark 2 **Caution Tape Stripe** Caution stripe 3 Wheel Load Indicates rated wheel load. 4 **Keep Clear** Keep clear. Stay away from aerial platform when in operation. 5

Section 5 Labels

## Labels and Nameplates - Models 3215 & 3219



Labels Section 5

## Labels and Nameplates - Models 3215 & 3219

## **Front Side** 2 6 No. **Label Pictorial** Description **Crushing Hazard** 1 Danger - Crushing hazard **Caution Tape Stripe** 2 Caution stripe **Maintenance Support** 3 Deploy maintenance support here. Refer to the Operating manual for Free-wheeling Procedure. 4 Open free-wheeling valve by turning counterclockwise. Close free-wheeling valve by turning clockwise. Lift and Tie Down Points 5 Only use these points for lifting or tying down. **Emergency Lowering Procedure** Refer to Operating manual. 1. Turn main power disconnect switch to off position. 2. To open lift cylinder holding valve located at the bottom of the 6 cylinder: (A) push (B) turn knurled knob counterclockwise. 3. To lower the platform, pull out emergency lowering valve located on the outside of the hydraulic tray. **Motor Controller** MC 7 Indicates motor controller aerial platform.

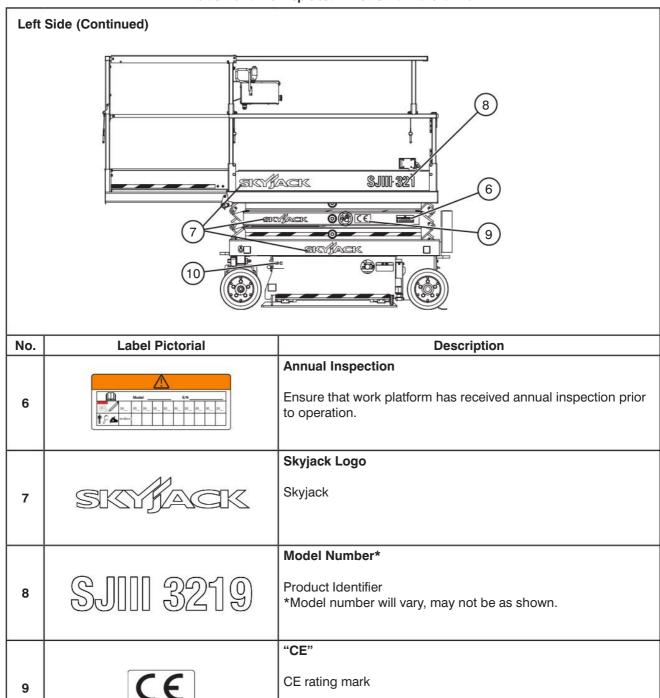
#### Labels and Nameplates - Models 3215 & 3219

## Left Side 4 SKYHACK **⊚**∰ (€ 2 **Label Pictorial** No. Description **Caution Tape Stripe** 1 Caution stripe Wheel Load\* 2 Indicates rated wheel load. \*Wheel load will vary with each model. **Crushing Hazard** 3 Danger - Crushing hazard **Keep Clear** 4 Keep clear. Stay away from aerial platform when in operation. **Emergency Lowering Procedure** Refer to Operating manual. 1. Turn main power disconnect switch to off position. 2. To open lift cylinder holding valve located at the bottom of the 5 cylinder: (A) push (B) turn knurled knob counterclockwise. 3. To lower the platform, pull out emergency lowering valve

located on the outside of the hydraulic tray.



#### Labels and Nameplates - Models 3215 & 3219



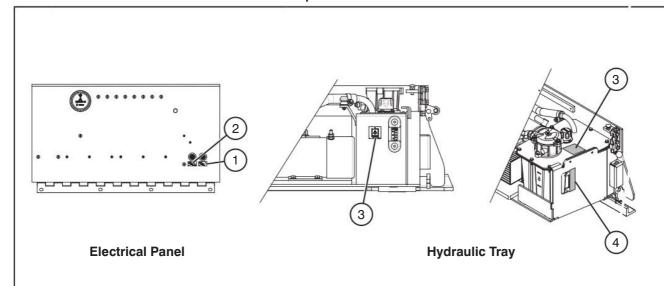
**Motor Controller** 

Indicates motor controller aerial platform.



10

#### Labels and Nameplates - Models 3215 & 3219



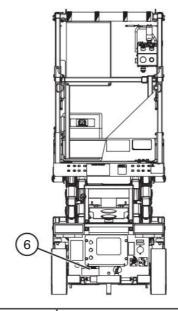
No.	Label Pictorial	Description		
1	4	Ground Circuit Breaker  Push to reset ground circuit breaker.		
2		Power Circuit Breaker  Push to reset power circuit breaker.		
3		Hydraulic Oil ATF Dexron III  Replace hydraulic fluid with ATF Dexron III only.		
4	SK-VIA-CK-	Hydraulic Oil Level		

#### Labels and Nameplates - Models 3215 & 3219

## **Back Side Label Pictorial** No. Description **Base Control Console** Select " $\equiv \downarrow$ " to lower or " $\stackrel{\frown}{\boxtimes} \uparrow$ " raise platform. " platform to enable platform controls, "O" off to 1 disable controls or " base to enable base control console. to disable controls. Serial Plate\* Product identification and specifications 2 \*Serial plates will vary, may not be as shown. **Connect Platform AC Supply** 3 Connect AC power supply here for platform accessory outlet. **Charger Information** ce 8, @. 4 SKYJACK Charger specification information and operation status; consult manual. **Main Power Disconnect** 5 Rotate clockwise to turn on main power; rotate counterclockwise to turn off main power; insert padlock to lock in position.

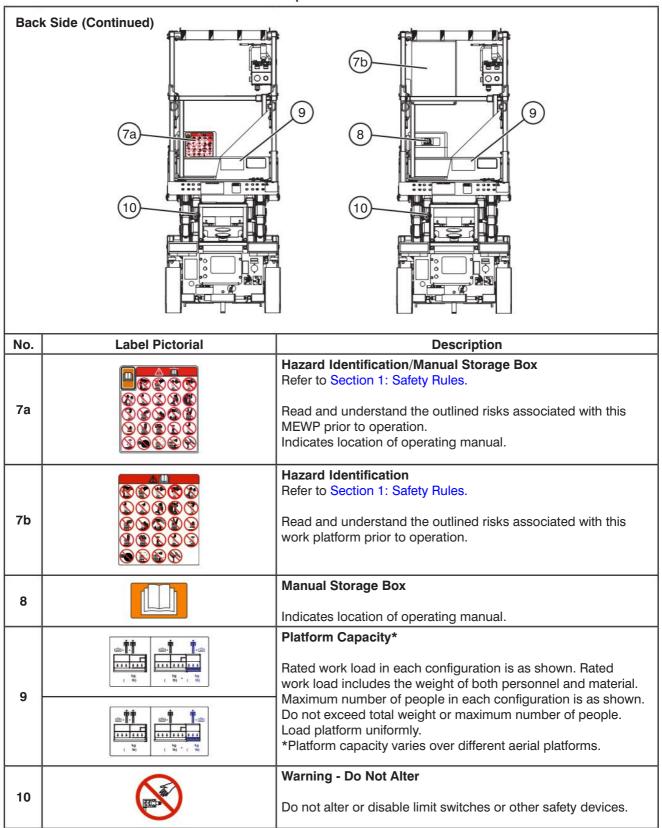
#### Labels and Nameplates - Models 3215 & 3219

# Back Side (Continued)



No.	Label Pictorial	Description	
6		Winching/Towing/Pushing Procedure Refer to Operating manual.  1. Block or chock wheels to prevent aerial platform from rolling.  2. Turn main power disconnect switch to off position.  3. Locate brake valve and pump.  4. Push in black knob.  5. Pump by pushing red knob in and out until firm resistance is felt. Brake is now released.  6. Open free-wheeling valve by turning counterclockwise.  7. Push/tow/winch to desired location.  8. Block or chock wheels to prevent aerial platform from rolling.  9. Reset brake by pulling out black knob.  10. Close free-wheeling valve by turning clockwise.	

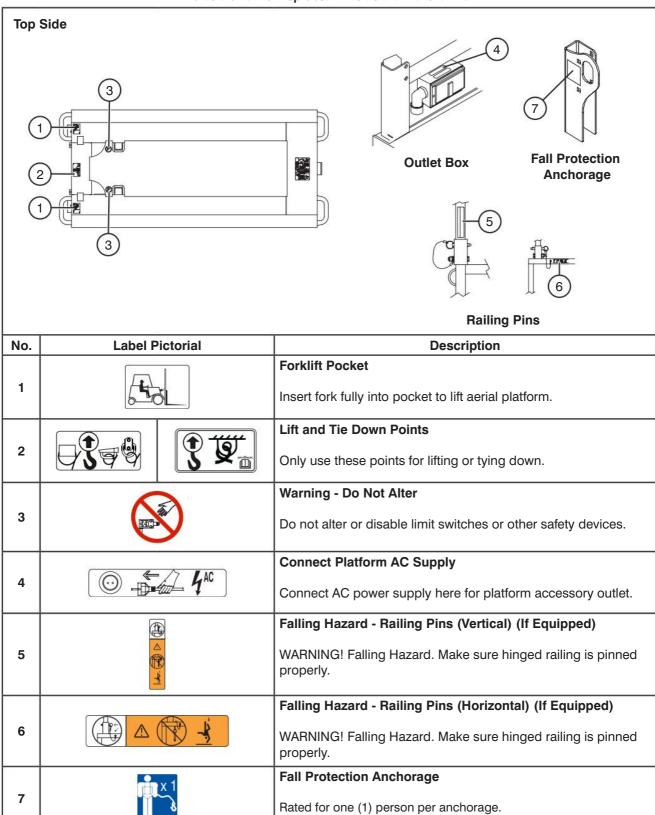
#### Labels and Nameplates - Models 3215 & 3219



#### Labels and Nameplates - Models 3215 & 3219

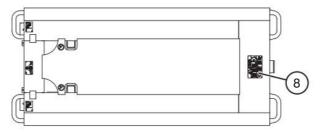
# **Back Side (Continued)** Cylinder No. **Label Pictorial Description Operator's Daily Inspection** Refer to the Operating manual. Perform visual inspection and function tests at the beginning 11 of each shift. Refer to Section 4: Maintenance and Inspection Schedule. **No Jewelry** Caution - Do not wear jewelry. 12 **Horizontal Load Rating\*** Apply no more than the indicated side load. Operate below 13 indicated wind speed only. N (lb) \*Horizontal load rating will vary, may not be as shown. **Caution Tape Stripe** Caution stripe 14 **Orifice Installed** 15 Orifice installation warning

#### Labels and Nameplates - Models 3215 & 3219



#### Labels and Nameplates - Models 3215 & 3219

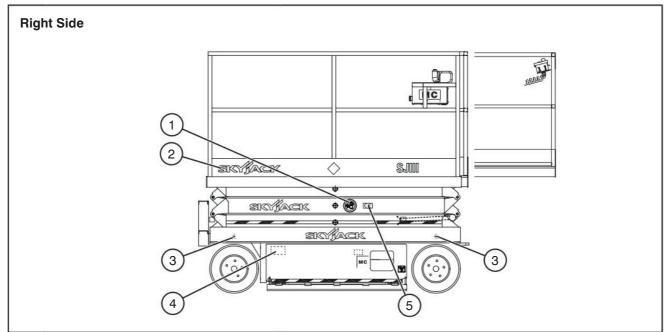
#### **Top Side (Continued)**



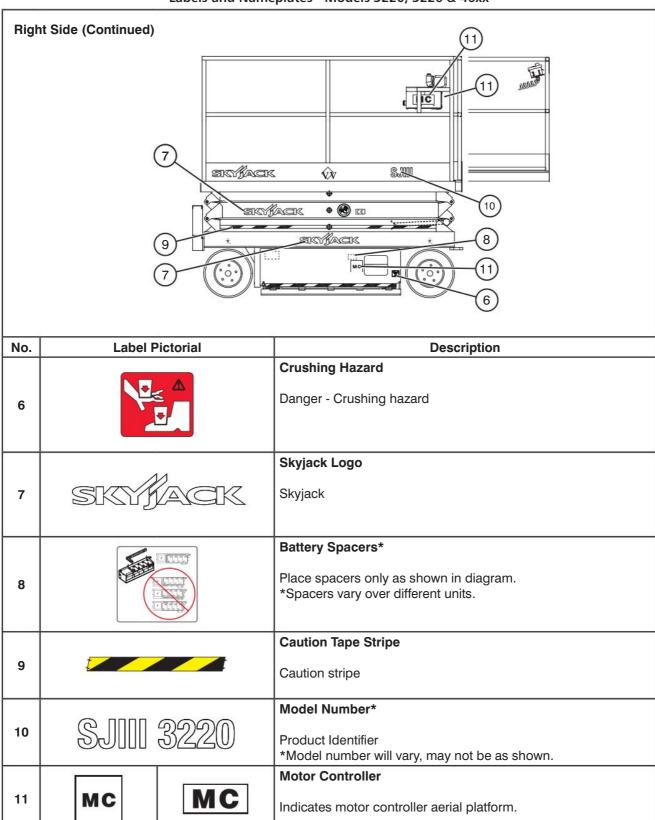
No.	No. Label Pictorial Description	
No. 8	Label Pictorial	How to engage maintenance support for inspection or maintenance. Refer to Operating manual.  1. Raise platform until there is adequate clearance to swing down maintenance support.  2. Swing maintenance support down from storage bracket into a vertical position. Lower platform until the bottom end of maintenance support rests on the lower cross bar.  3. Maintenance support is now secured.  (A) Turn main power disconnect switch to off position.  (B) Perform inspection/maintenance.  4. Turn main power disconnect switch to on position.  5. Raise platform until there is adequate clearance to swing up maintenance support.  6. Swing maintenance support up and place into storage bracket.  7. Ensure platform is fully lowered.

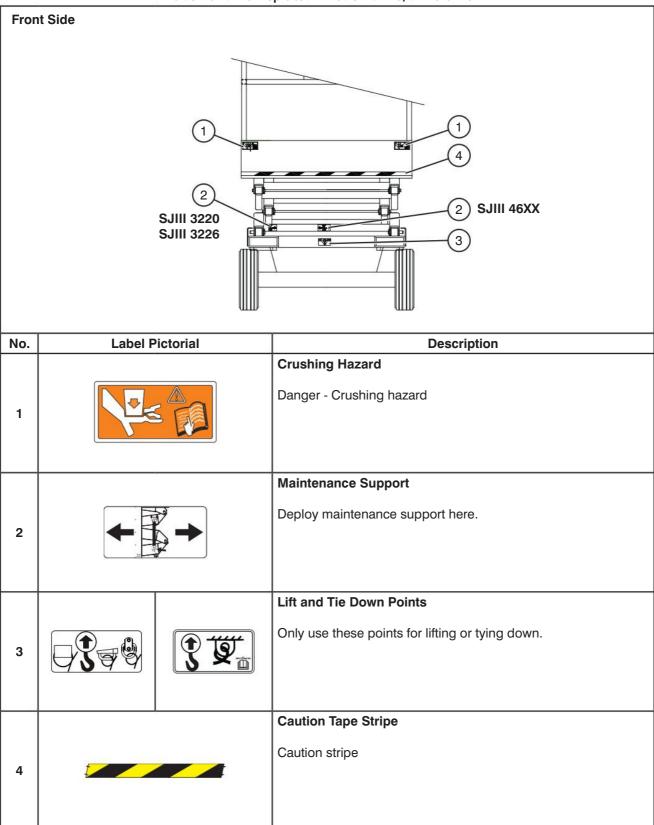
#### Labels and Nameplates - Models 3215 & 3219

# **Platform Control Console Label Pictorial** No. Description **Platform Control Console** Squeeze "A" trigger to enable controller. Operate "Trocker switch to steer. SKYJAC Move controller handle forward to " arise or backward to " $\blacksquare$ " lower platform. Move controller handle "" forward to drive forward or "" backward to drive reverse. Select "" inclined drive (low speed/high torque) or "" level drive (high speed/low torque) mode. 1 Select " $\begin{tabular}{l} \begin{tabular}{l} \be$ Select "" to sound horn. Push "O" to disable controls. The operation light illuminates to indicate upper control availability and overload status. When light is " flashing, it signals an overload function. Read " operating manual.

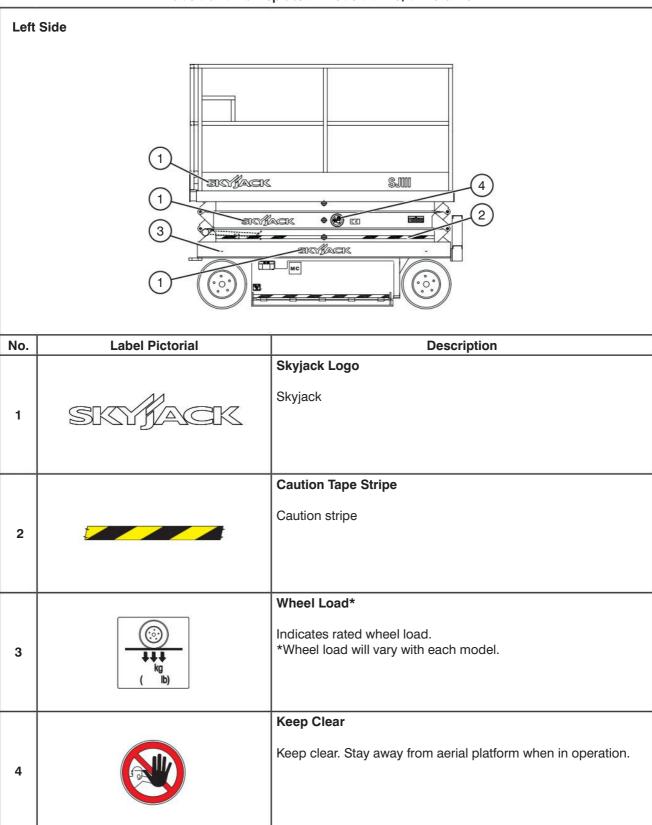


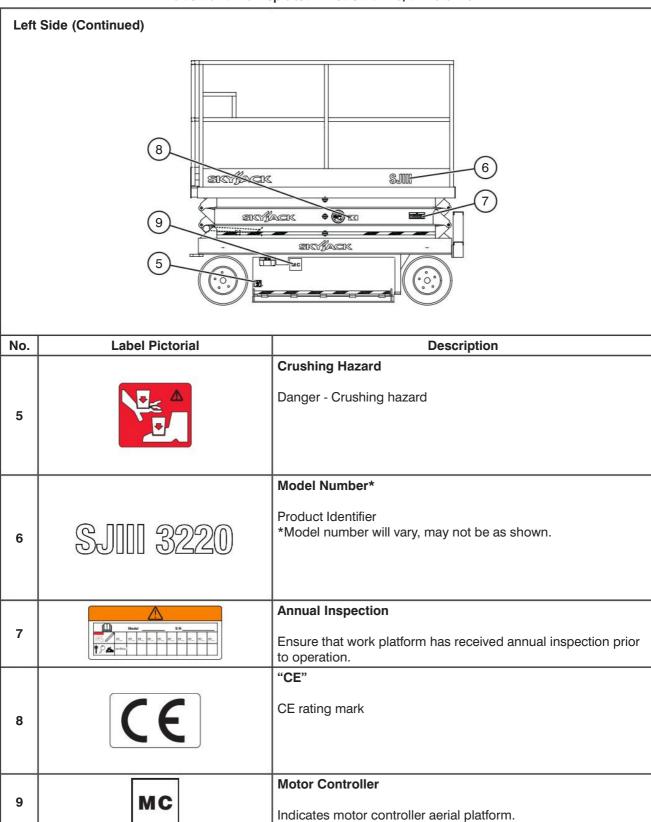
No.	Label Pictorial	Description		
1		Keep Clear Keep clear. Stay away from aerial platform when in operation.		
2	SKYJACK	Skyjack Logo Skyjack		
3	( b)	Wheel Load* Indicates rated wheel load. *Wheel load will vary with each model.		
4		Fuse Location  Fuse location		
5	CE	"CE" CE rating mark		



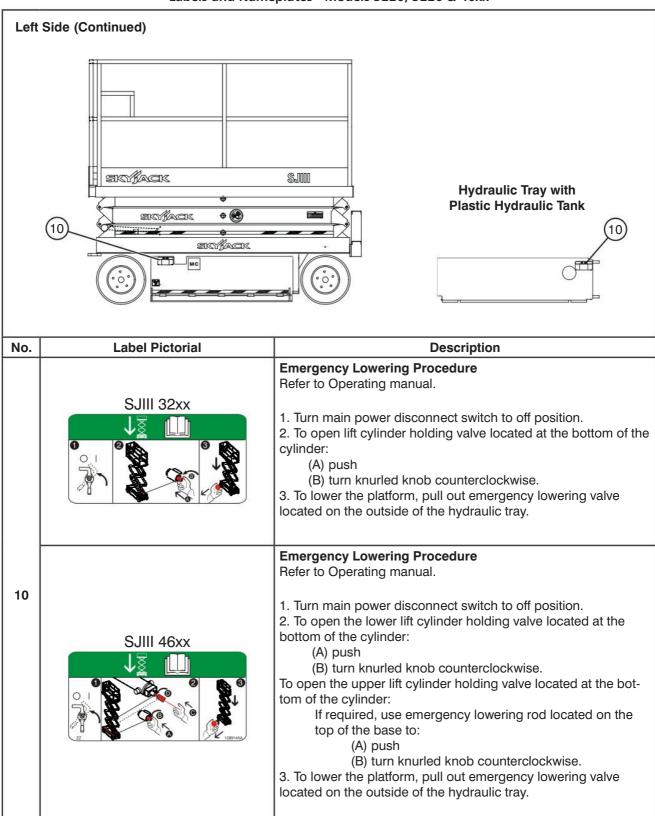




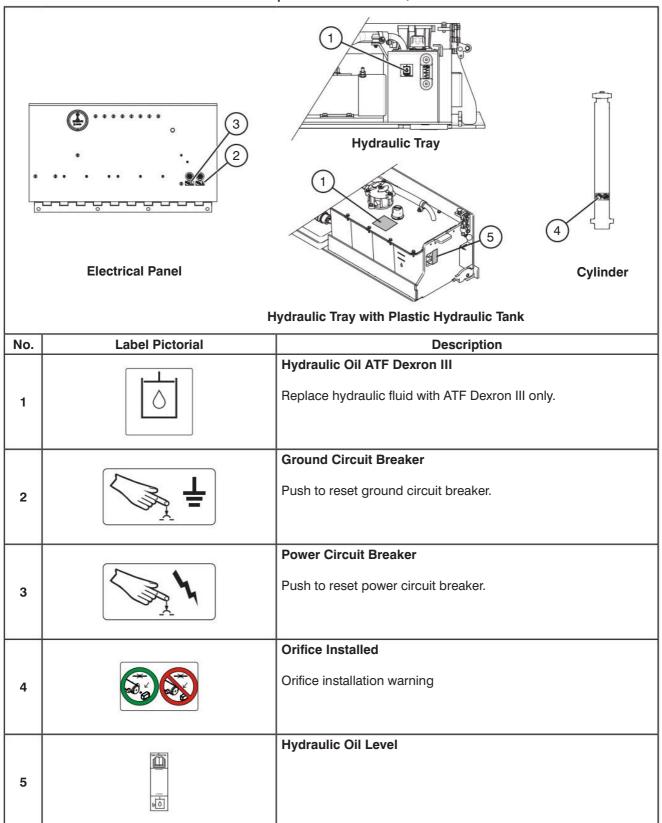


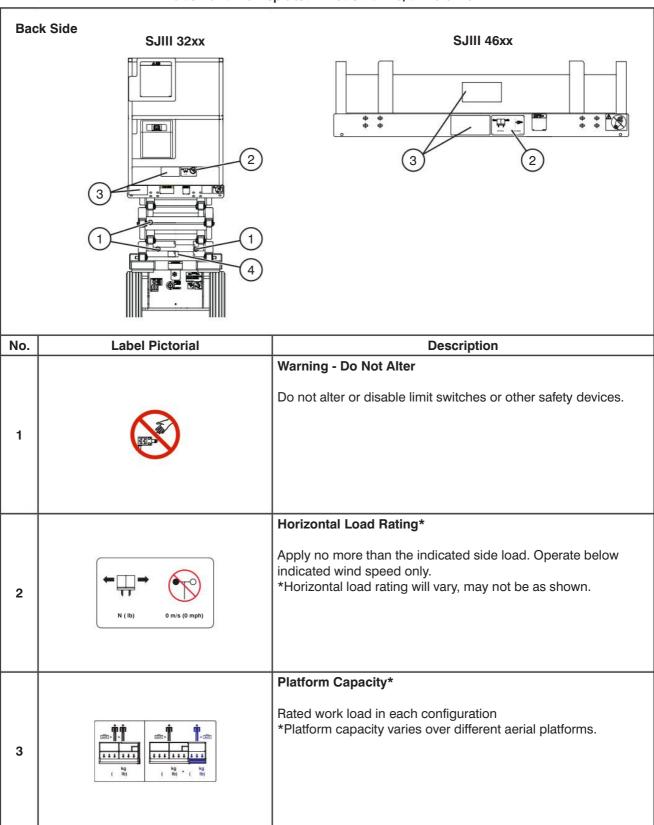










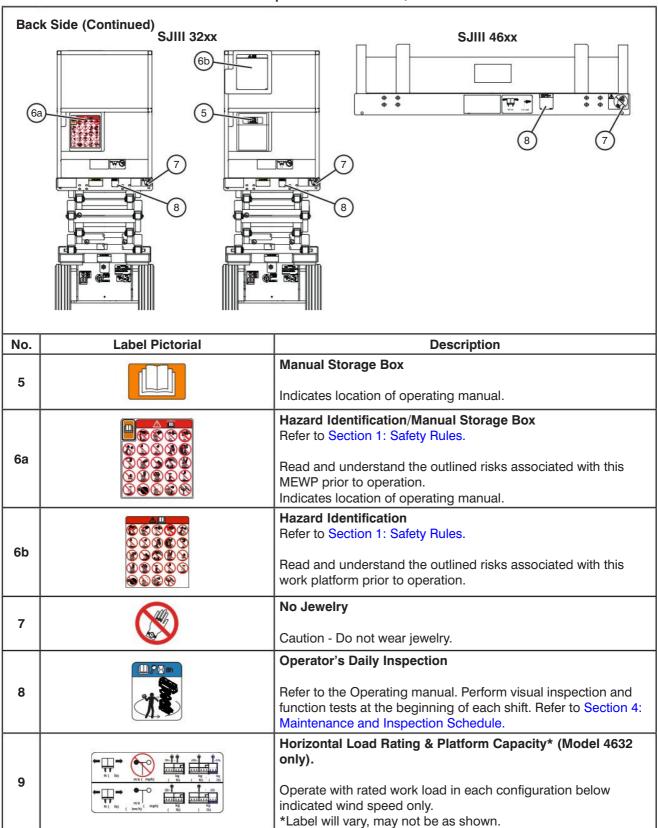


#### Labels and Nameplates - Models 3220, 3226 & 46xx

### **Back Side (Continued)** No. **Label Pictorial** Description **Emergency Lowering Procedure** Refer to Operating manual. SJIII 32xx 1. Turn main power disconnect switch to off position. 2. To open lift cylinder holding valve located at the bottom of the cylinder: (A) push (B) turn knurled knob counterclockwise. 3. To lower the platform, pull out emergency lowering valve located on the outside of the hydraulic tray. **Emergency Lowering Procedure** Refer to Operating manual. 4 1. Turn main power disconnect switch to off position. 2. To open the lower lift cylinder holding valve located at the bottom of the cylinder: SJIII 46xx (A) push (B) turn knurled knob counterclockwise. To open the upper lift cylinder holding valve located at the bottom of the cylinder: If required, use emergency lowering rod located on the top of the base to: (A) push (B) turn knurled knob counterclockwise. 3. To lower the platform, pull out emergency lowering valve

located on the outside of the hydraulic tray.

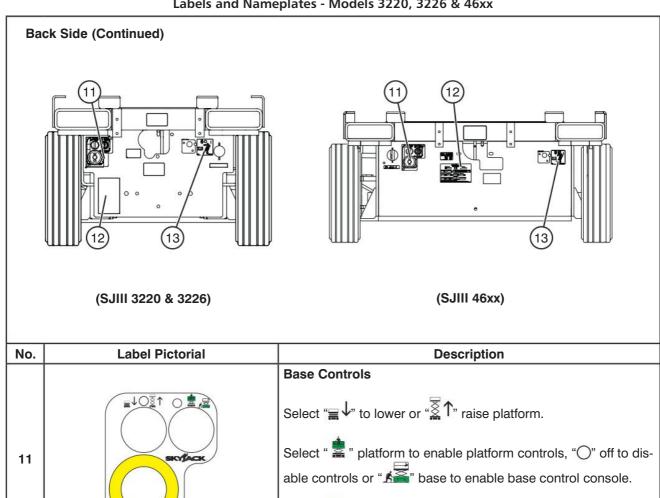




#### Labels and Nameplates - Models 3220, 3226 & 46xx

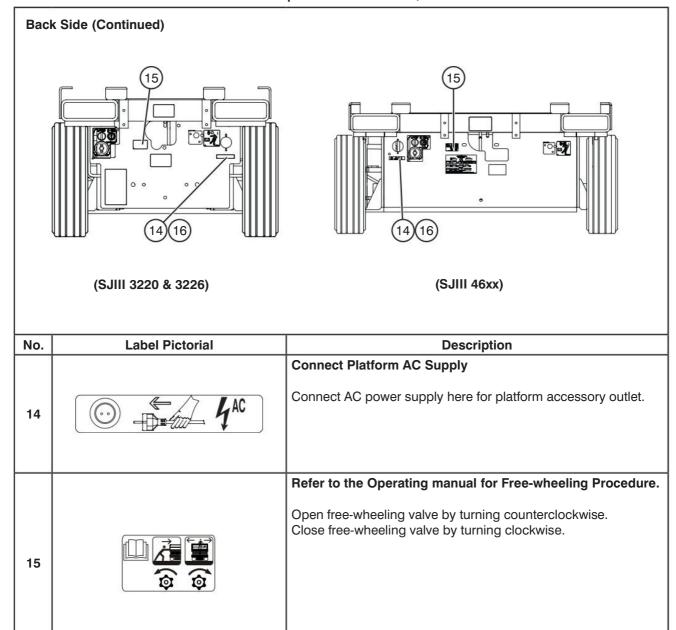
# SJIII 32xx SJIII 46xx

No.	Label Pictorial	Description	
10		Winching/Towing/Pushing Procedure Refer to Operating manual.  1. Block or chock wheels to prevent aerial platform from rolling.  2. Turn main power disconnect switch to off position.  3. Locate brake valve and pump.  4. Push in black knob.  5. Pump by pushing red knob in and out until firm resistance is felt. Brake is now released.  6. Open free-wheeling valve by turning counterclockwise.  7. Push/tow/winch to desired location.  8. Block or chock wheels to prevent aerial platform from rolling.  9. Reset brake by pulling out black knob.  10. Close free-wheeling valve by turning clockwise.	



		Base Controls
11	SKY JACK	Select " " to lower or " " raise platform.  Select " " platform to enable platform controls, " " off to disable controls or " " base to enable base control console.  Push " " to disable controls.
12	Made in USA  Woode nursher S.J III  Capacity and renderson currier of persons Vallage.  Ib s Persons e-equipment V  Mechan weight Drive height  Ib ft  Typesense Persons to Renderson height  Spales pressure LT pressure  Wheel load  pail Ib  System pressure LT pressure  Wheel load  pail Ib  System pressure LT pressure  Wheel load  to pail Ib  System pressure LT pressure  Wheel load  to pail Ib  System pressure LT pressure  Wheel load  to pail Ib  System pressure LT pressure  Wheel load  to pail Ib  System pressure LT pressure  Wheel load  to pail Ib  System pressure LT pressure  Wheel load  to pail Ib  System pressure LT pressure  System pressure L	Serial Plate*  Product identification and specifications *Serial plates will vary, may not be as shown.
13		Main Power Disconnect  Rotate clockwise to turn on main power, rotate counterclockwise to turn off main power, insert padlock to lock in position.

#### Labels and Nameplates - Models 3220, 3226 & 46xx

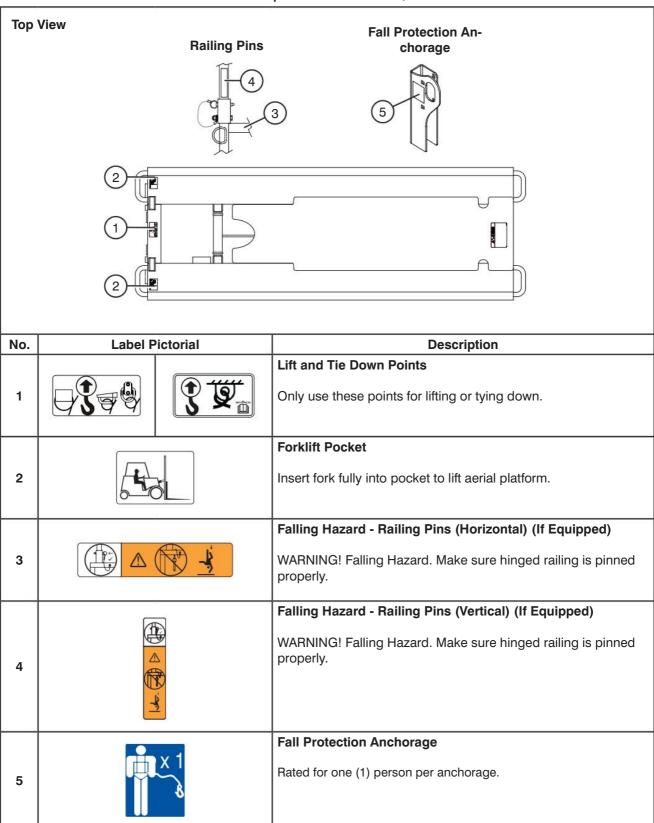


**Connect Air Supply (If Equipped)** 

Connect platform air supply here.



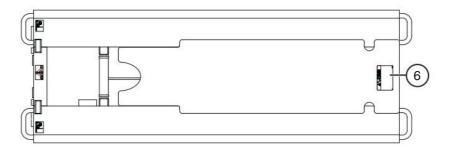
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#### Labels and Nameplates - Models 3220, 3226 & 46xx

#### Educis dia Nullicpiates Models 5220, 5220 & 4000

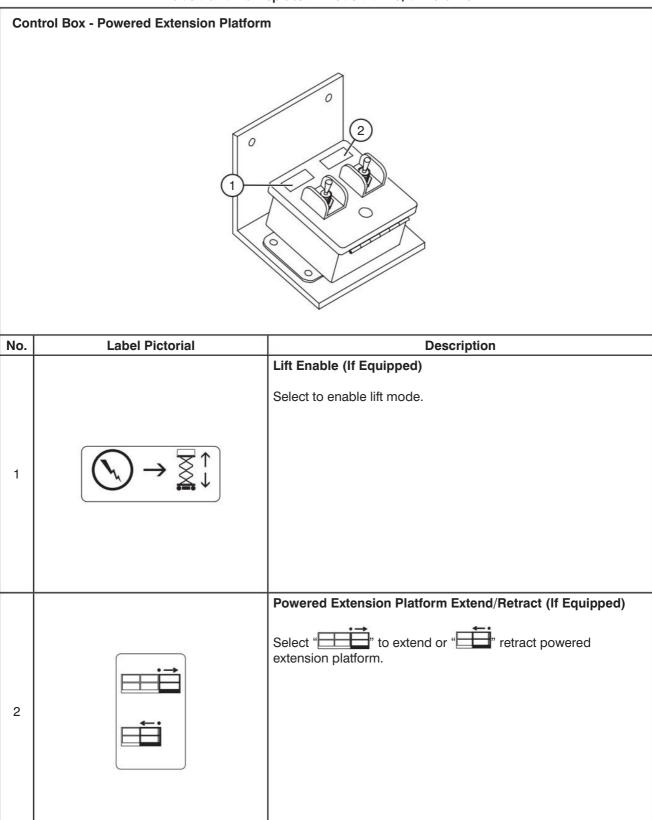
**Top View (Continue)** 



No.	Label Pictorial	Description	
No.	Label Pictorial	How to engage maintenance support for inspection or maintenance. Refer to Operating manual.  1. Raise platform until there is adequate clearance to swing down maintenance support.  2. Swing maintenance support down from storage bracket into a vertical position. Lower platform until the bottom end of maintenance support rests on the lower cross bar.  3. Maintenance support is now secured.  (A) Turn main power disconnect switch to off position.  (B) Perform inspection/maintenance.  4. Turn main power disconnect switch to on position.  5. Raise platform until there is adequate clearance to swing up maintenance support.  6. Swing maintenance support up and place into storage bracket.	
		7. Ensure platform is fully lowered.	

#### Labels and Nameplates - Models 3220, 3226 & 46xx

# **Platform Control Console Label Pictorial** No. Description **Platform Control Console** Squeeze "A" trigger to enable controller. Operate "Trocker switch to steer. SKYJAC Move controller handle forward to " arise or backward to " $\blacksquare$ " lower platform. Move controller handle "\[ \displaystyle\]" forward to drive forward or "\[ \displaystyle\]" backward to drive reverse. Select "" inclined drive (low speed/high torque) or "" level drive (high speed/low torque) mode. 1 Select " $\mathbb{Z}^{\uparrow}$ " lift, " $\mathbb{O}$ " off or " $\mathbb{I}$ " drive mode. Select "" to sound horn. Push "O" to disable controls. The operation light illuminates to indicate upper control availability and overload status. When light is " flashing, it signals an overload function. Read " operating manual.



Skyjack Features Section 6

#### **6.0 Skyjack Features**

Your Skyjack machine may be equipped with the following features:



Having equipment with features and functionality that allow you and your customers to do more is a vital part of the utilization equation. Skyjack offers a range of accessory products to further expand a given products adaptability and your power to offer a truly flexible rental choice.

