

# SAFETY RULES

## ⚠Warning

All personnel shall carefully read, understand and follow all safety rules and operating instructions before operating or performing maintenance on any Snorkel aerial work platform.

### Electrocution Hazard



**THIS MACHINE IS NOT INSULATED!**

### Tip Over Hazard



**NEVER** elevate the platform or drive the machine while elevated unless the machine is on a firm, level surface.

### Collision Hazard



**NEVER** position the platform without first checking for overhead obstructions or other hazards.

### Fall Hazard



**NEVER** climb, stand, or sit on platform guardrails or midrail.

**USE OF THE AERIAL WORK PLATFORM:** This aerial work platform is intended to lift persons, their tools and materials used for the job. It is designed for repair, assembly, stockpicking jobs, etc., and assignments at workplaces above head height (ceilings, cranes, roof structures, buildings, shelving, etc.). All other uses of the aerial work platform are prohibited and the rules below must be adhered to!

**THIS AERIAL WORK PLATFORM IS NOT INSULATED!** Refer to applicable national standards for safe approach distances.

Exceeding the specified permissible maximum load **is prohibited!** See “Platform Capacity” on page 6 for details.

The use and operation of the aerial work platform as a lifting tool or a crane **is prohibited!**

**NEVER** exceed the manual force allowed for this machine. See “Manual Force” on page 6 for details.

**DISTRIBUTE** all platform loads evenly on the platform.

**NEVER** operate the machine without first surveying the work area for stationary or moving obstacles and surface hazards such as holes, drop-offs, bumps, curbs, or debris; and avoiding them. **NEVER** strike or bump into stationary or moving obstacles while driving or raising, lowering, or extending the platform.

**USE THREE POINTS OF SUPPORT** when entering or exiting the platform. For example, use two hands and one foot when climbing into the platform.

**PLATFORM** passengers should watch their hands and fingers for pinch points while holding on the guardrails while the platform is moving.

**OPERATE** machine only on surfaces capable of supporting wheel loads.

**NEVER** operate the machine when wind speeds exceed this machine’s wind rating. See “Beaufort Scale” on page 7 for details.

Do not operate the aerial platform in windy or gusty conditions. Do not add anything to or take anything into the aerial platform that will increase the wind loading such as billboards, banners, flags, etc.

**IN CASE OF EMERGENCY** push EMERGENCY STOP switch to deactivate all powered functions.

**IF ALARM SOUNDS** while platform is elevated, STOP, carefully lower platform. Move machine to a firm, level surface.

Climbing up the railing of the platform, standing on or stepping from the platform onto buildings, steel or prefab concrete structures, etc., **is prohibited!** **NEVER** exit or enter the platform when it is elevated.

Dismantling the entry gate or other railing components **is prohibited!** Always make certain that the entry gate is closed!

**It is prohibited** to keep the entry gate in an open position when the platform is raised!

To extend the height or the range by placing of ladders, scaffolds or similar devices on the platform **is prohibited!**

**NEVER** perform service on machine while platform is elevated without blocking elevating assembly.

**INSPECT** the machine thoroughly for cracked welds, loose or missing hardware, hydraulic leaks, loose wire connections, and damaged cables or hoses before using.

**VERIFY** that all labels are in place and legible before using.

**NEVER** use a machine that is damaged, not functioning properly, or has damaged or missing labels.

To bypass any safety equipment **is prohibited** and presents a danger for the persons on the aerial work platform and in its working range.

**NEVER** charge batteries near sparks or open flame. Charging batteries emit explosive hydrogen gas.

Modifications to the aerial work platform **are prohibited** or permissible only at the approval by **Snorkel**.

**AFTER USE**, secure the work platform from unauthorized use by turning the keyswitch off and removing key.

The driving of MEWP’s on the public highway is subject to national traffic regulations.

Certain inherent risks remain in the operation of this machine despite utilizing proper design practices and safeguarding.

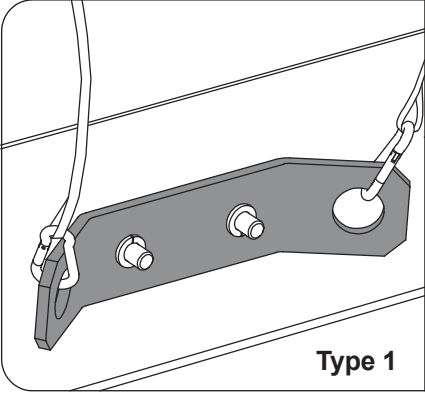
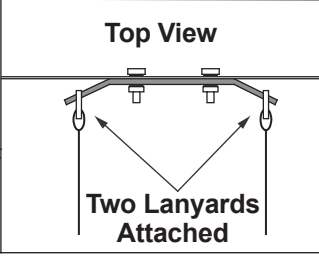
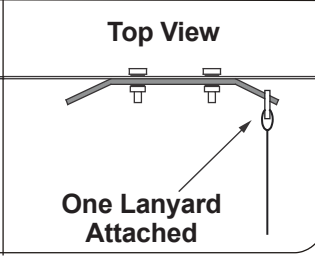
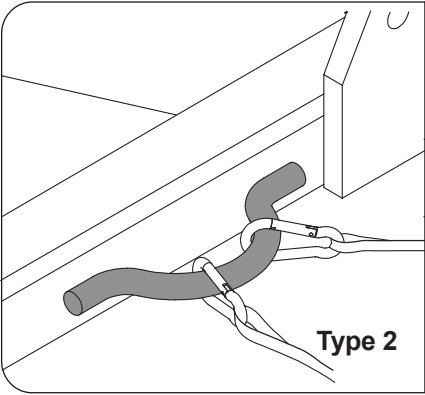
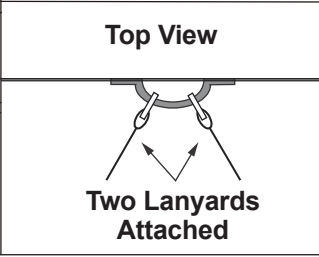
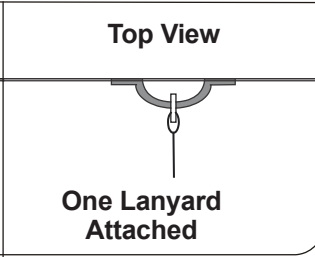
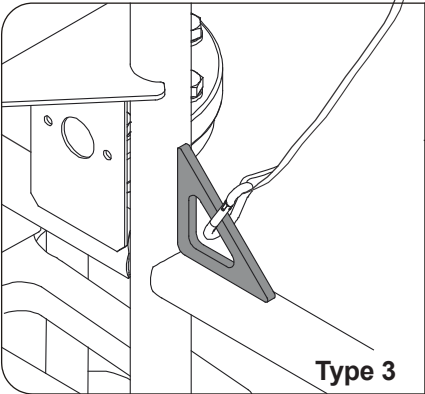
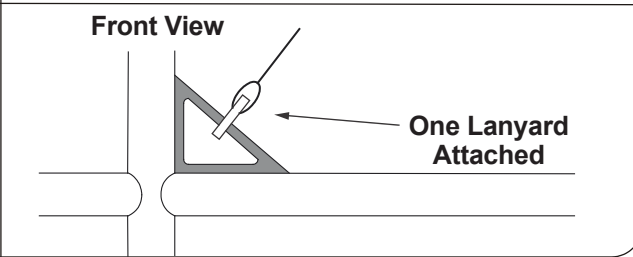
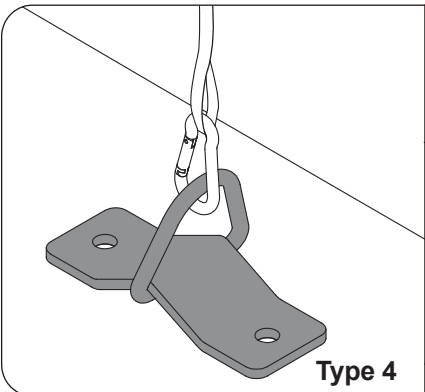
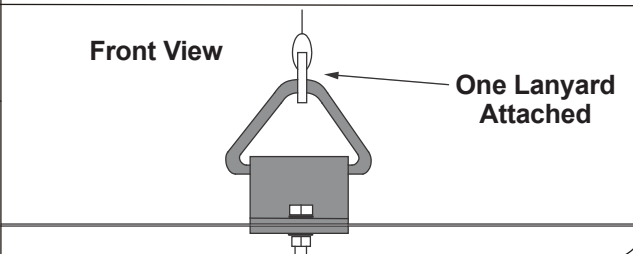
Care must be taken to ensure that the machines meets the requirements of stability during use, transportation, assembly, dismantling when out of service, testing, or foreseeable breakdowns.

In the event of an accident or breakdown see “Emergency Lowering” on page 15, do not operate the aerial platform if it is damaged or not functioning properly. Qualified maintenance personnel must correct the problem before putting the aerial platform back into service.

## Fall Restraint Lanyard Anchor Points

All fall restraint lanyard anchor points on Snorkel aerial work platforms have been tested with a force of 61.3 kN (3,650 lbs) per person.

See below examples of anchor points used on Snorkel machines with their corresponding per person rating.

 <p><b>Type 1</b></p>	<p>Anchor point Type 1 is rated for one lanyard attachment per loop. Refer to machine "Specifications" and platform decals for maximum number of platform occupants.</p>	
<p><b>Top View</b></p>  <p><b>Two Lanyards Attached</b></p>	<p><b>Top View</b></p>  <p><b>One Lanyard Attached</b></p>	
 <p><b>Type 2</b></p>	<p>Anchor point Type 2 is rated for two lanyard attachments per loop. Refer to machine "Specifications" and platform decals for maximum number of platform occupants.</p>	
<p><b>Top View</b></p>  <p><b>Two Lanyards Attached</b></p>	<p><b>Top View</b></p>  <p><b>One Lanyard Attached</b></p>	
 <p><b>Type 3</b></p>	<p>Anchor point Type 3 is rated for one lanyard attachment per loop. Refer to machine "Specifications" and platform decals for maximum number of platform occupants.</p>	
<p><b>Front View</b></p>  <p><b>One Lanyard Attached</b></p>		
 <p><b>Type 4</b></p>	<p>Anchor point Type 4 is rated for one lanyard attachment per loop. Refer to machine "Specifications" and platform decals for maximum number of platform occupants.</p>	
<p><b>Front View</b></p>  <p><b>One Lanyard Attached</b></p>		

NOTE: There can be more anchor points in the platform than the maximum number of occupants allowed in the platform. Refer to the machine specifications for the correct occupancy rating before use.

**Introduction**

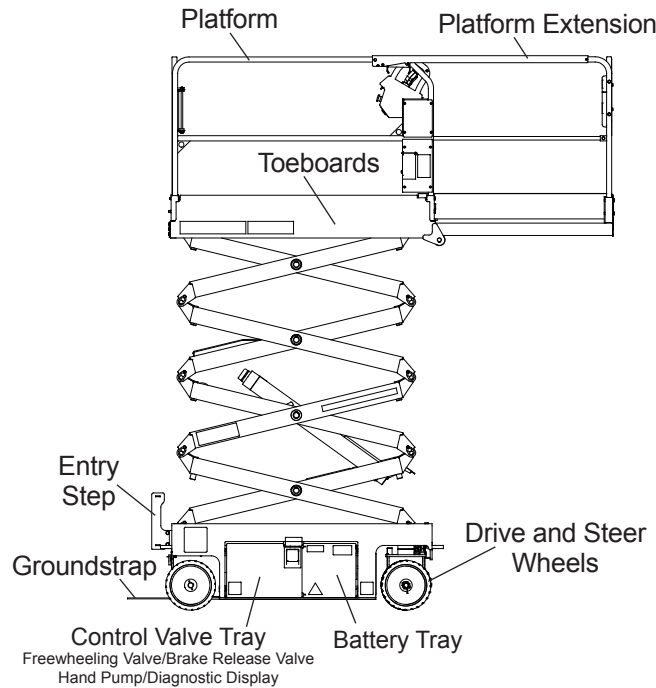
This manual covers the S3215E, S3219E, S3220E, S3226E, S4726E, and S4732E Aerial Work Platforms.

This manual must be stored on the machine at all times.

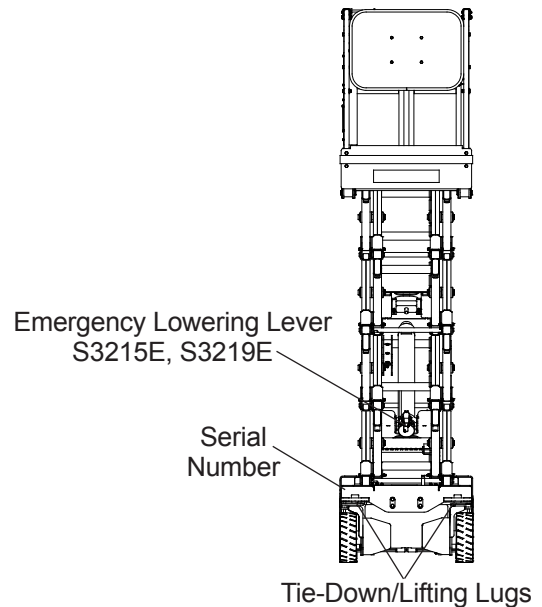
Read, understand and follow all safety rules and operating instructions before attempting to operate the machine.

When contacting Snorkel for service or parts information, be sure to include the MODEL and SERIAL NUMBERS from the equipment nameplate. Should the nameplate be missing, the SERIAL NUMBER is also stamped on the front of the chassis.

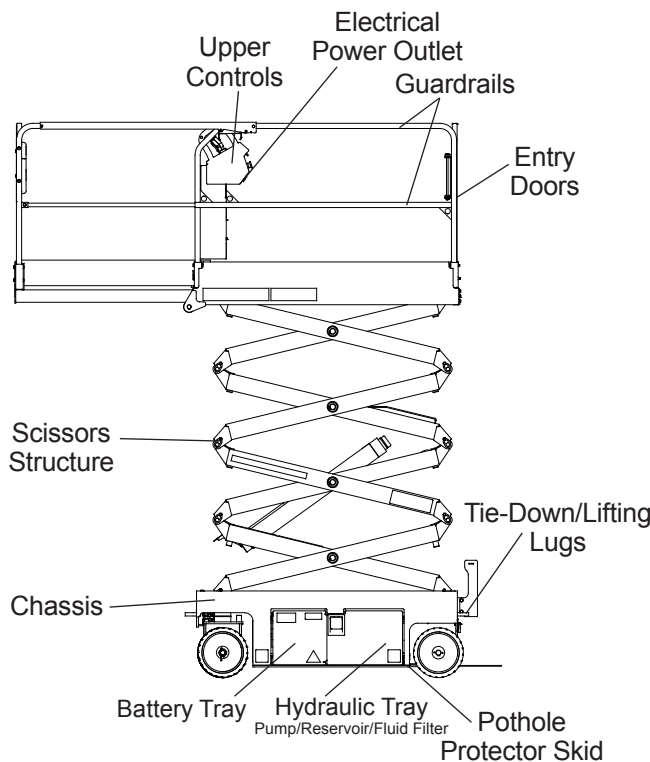
**Component Identification**



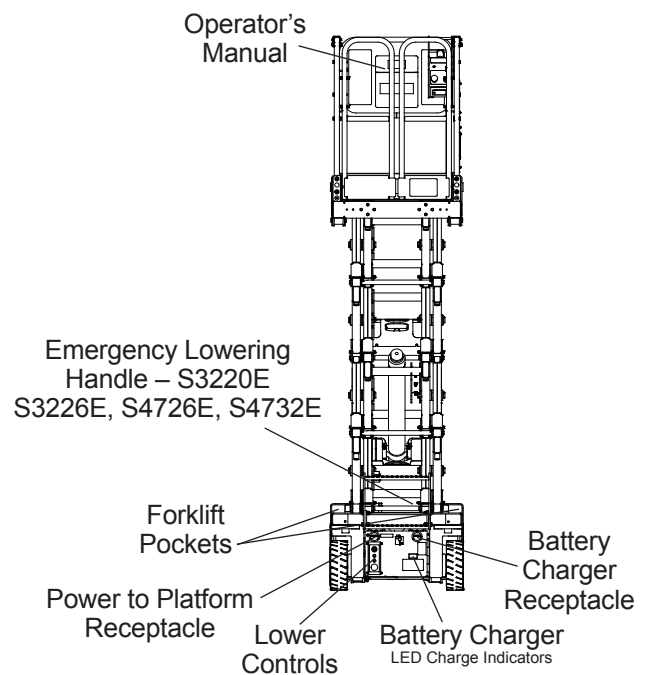
**Right Side**



**Front**



**Left Side**



**Rear**

## Special Limitations

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### Special Limitations

Travel with the platform raised is limited to creep speed range. Elevating the platform is limited to firm, level surfaces only.

#### **Danger**

**The elevating function shall ONLY be used when the work platform is level and on a firm surface.**

**The work platform is NOT intended to be driven over uneven, rough, or soft terrain.**

### Platform Capacity

The maximum platform capacity for the aerial platform is stated in the "Specifications" on pages 22-27.

#### **Danger**

**DO NOT exceed the maximum platform capacity or the platform occupancy limits for this machine.**

### Manual Force

Manual force is the force applied by the occupants to objects such as walls or other structures outside the work platform.

Refer to the platform capacity decal on the machine for specific maximum allowable manual force information.

The maximum allowable manual force varies depending on wind speed.

#### **Danger**

**DO NOT exceed the maximum amount of manual force for this machine.**

### Drive/Lift Pothole Protector Interlock

The aerial platform drive and lift functions are interlocked through a limit switch inside the chassis that senses whether or not the pothole protection linkage is locked into position. The drive/lift pothole interlock operates when the platform is elevated approximately 1.8 m (6').

If an obstruction under the skids, or some other impairment prevents the skids from locking into position, the drive and steer functions will not operate.

Lower the platform and remove the obstruction when the drive/lift pothole protector interlock alarm sounds.

### Drive/Lift Level Sensor Interlock

The aerial platform drive and lift functions are interlocked through a level sensor system. The drive/lift level sensor interlock operates when the platform is elevated approximately 1.8 m (6').

If the chassis is tilted too far out of level, the drive and lift functions will not operate and an intermittent tone alarm will sound. Refer to the machine specifications for the level sensor factory setting.

Lower the platform and drive to a level surface when the drive/lift level sensor alarm sounds.

The drive/lift level sensor system is for added protection and does not justify operating on anything other than firm, flat, level surfaces.

### Lowering Alarm

When the joystick is moved out of neutral to lower the platform, the alarm emits a loud beeping sound to warn personnel in the work area to stand clear.

#### **Danger**

**Pinch points exist on the scissors structure. Death or serious injury will result if the scissors structure lowers onto personnel within the scissors arms or under the raised platform. Stand clear while raising and lowering the platform.**

Be careful when lowering the platform. Keep hands and fingers away from the scissors structures components.

### Lowering Interrupt

When the platform is lowered to about 1.8 m (6') lowering stops, the flashing light is constant on and the alarm sounds in fast short beeps. The platform will not lower for five seconds regardless of the control position to allow personnel to clear the area of the scissors before the platform completely lowers.

Center the control in neutral to reset the lowering function, then continue to lower the platform.

When the platform is below 1.8 m (6') and the control is moved to lower the platform, there is a 1.5 second delay before movement begins.

### Overload Protection

When the load in the platform is near or at rated capacity, an alarm will sound and the red light on the lower controls will flash.

The alarm and light warn the operator that the platform is close to becoming overloaded. All functions remain fully operational.

#### **Danger**

**The aerial platform can tip over if it becomes unstable. Death or serious injury will result from a tip-over accident. Do not exceed the capacity values indicated on the platform rating placard.**

If the platform is overloaded, when it is elevated just past 1.8 m (6'), a control module will stop the lift and drive functions and the alarm will slowly beep and the warning light will be on. The platform can still be lowered to remove the excess load using the upper controls or the emergency lowering system only.

If the platform is elevated just past 1.8 m (6') and material is added to the platform overloading it, a control module will stop the lift, drive and lower functions. The alarm will

slowly beep and the warning light will be on. In this case, remove the load in excess of rated capacity to return to normal operation.

If the emergency lowering lever/handle is activated when the platform is overloaded, the lower controls will not operate and the LCD will display “Function Locked Emergency Lowering Detected.” In this case, remove the load in excess of rated capacity and enter the pass code on the LCD keypad to return to normal operation.

**Beaufort Scale**

Never operate a machine when wind speeds exceed the machines maximum wind speed rating [Beaufort scale 6]. Refer to Figure 1.

BEAUFORT RATING	WIND SPEED				GROUND CONDITIONS
	m/s	km/h	ft/s	mph	
3	3,4~5,4	12,25~19,4	11.5~17.75	7.5~12.0	Papers and thin branches move, flags wave.
4	5,4~8,0	19,4~28,8	17.75~26.25	12.0~18	Dust is raised, paper whirls up, and small branches sway.
5	8,0~10,8	28,8~38,9	26.25~35.5	18~24.25	Shrubs with leaves start swaying. Wave crests are apparent in ponds or swamps.
6	10,8~13,9	38,9~50,0	35.5~45.5	24.5~31	Tree branches move. Power lines whistle. It is difficult to open an umbrella.
7	13,9~17,2	50,0~61,9	45.5~56.5	31.~38.5	Whole trees sway. It is difficult to walk against the wind.

Figure 1 – Beaufort Scale