# **Snorkel**

# S2255RT S2755RT



## CE

# OPERATOR'S MANUAL

Part Number 15286-1 November 2022 Rev H Original Instructions

ANSI/CSA/CE/AS/NZS Replaces August 2022



The aerial platform is not electrically insulated. Death or serious injury will result from contact with, or inadequate clearance from, an energized conductor.

Do not go closer than the minimum safe approach distance as defined by the Minimum Safe Approach Distance section in Chapter 3–Safety.

Regard all conductors as energized.

Allow for electrical wire sag and aerial platform sway.

If the platform, scissors structure, or any part of the aerial platform contacts a high-voltage electrical conductor, the entire machine can become electrically charged.

If that happens, remain on the machine and do not contact any other structure or object. This includes the ground, adjacent buildings, poles, and any other objects that are not part of the aerial platform.

Such contact could make your body a conductor to the other object, creating an electrical shock hazard resulting in death or serious injury.

If an aerial platform is in contact with an energized conductor the platform operator must warn ground personnel in the vicinity to stay away. Their bodies can conduct electricity creating an electrical shock hazard resulting in death or serious injury.

Do not approach or leave the aerial platform until the electricity has been turned off.

Do not attempt to operate the lower controls when the platform, scissors structure, or any part of the aerial platform is in contact with a high-voltage electrical conductor or if there is an immediate danger of such contact.

Personnel on or near an aerial platform must be continuously aware of electrical hazards, recognizing that death or serious injury can result from contact with an energized conductor.

#### California

#### **Proposition 65 Warning**

Battery posts, terminals, and related accessories contain lead and lead components, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

#### California

#### Proposition 65 Warning

Diesel and gasoline engine exhaust and some of its constituents are known by the State of California to cause cancer, birth defects or other reproductive harm.





Do NOT Go Closer Than The Minimum Safe Approach Distance



Do NOT Drive an Elevated MEWP on Soft, Uneven or Sloping Surfaces



Do NOT Operate a Stowed MEWP Within 4ft (1.2m) of Any Drop-off or Hole



Do NOT Raise The Platform Without **First Checking For Obstructions** 



Do NOT Operate an MEWP From Trucks, Trailers, or Similar Equipment





Do NOT Leave the MEWP With The Key In It



Do NOT Operate Outside During a Thunderstorm



Do NOT Operate an Elevated



Do NOT Use The MEWP As a Lifting Tool or Crane



Do NOT Lower The Platform Without Checking For Obstructions



Do NOT Exceed The Platform **Extension Deck Capacity** 



Do NOT Engage In Any Form of Horseplay



Do NOT Operate an MEWP While Physically Impaired



Do NOT Operate in Windy or Gusty Conditions



Do NOT Operate a Stowed



Do NOT Exceed The Maximum Allowable Manual Side Force



**Do NOT Allow Ground Personnel** Near the MEWP During Operation



Do NOT Exceed The Platform Main Deck Capacity



Do NOT Operate an MEWP With Tires That Are in Poor Condition



Do NOT Strike or Bump Stationary Objects With an Elevated MEWP



Do NOT Add Anything That Will Increase Wind Loading



Do NOT Operate an Elevated MEWP MEWP on Rough or Uneven Terrain MEWP on Rough or Uneven Terrain Within 4ft (1.2m) of Any Drop-off or Hole



Do NOT Operate The MEWP Without Sufficient Clearance



Do NOT Carry Loads That **Extend Beyond The Guardrails** 



Do NOT Climb on The MEWP



Do NOT Operate an MEWP That is Damaged or Not Functioning Properly



Do NOT Strike or Bump Stationary **Objects With a Stowed MEWP** 

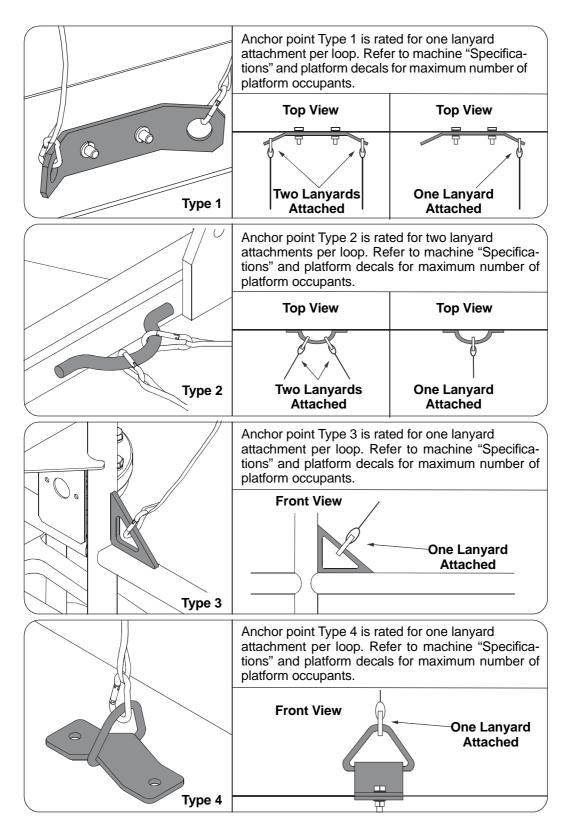




## **Fall Restraint Lanyard Anchor Points**

All fall restraint lanyard anchor points on Snorkel aerial work platforms have been tested with a force of 3,650 lbs (16.3 kN) per person.

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

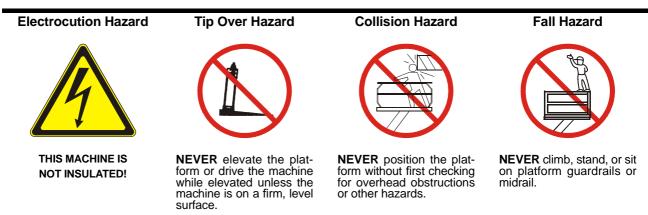


NOTE: There can be more anchor points in the platform than the maximum number of occupants allowed in the platform. Refer to the machine specifications for the correct occupancy rating before use.

## **SAFETY RULES**

## **A**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.



**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" 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" 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. Grasp the handrails, not the doors, with one hand on each side. Use two hands and one foot on the step when climbing into and out of 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" 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." 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.

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**Limited Warranty** 

## **Aerial Platform Features**

The aerial platform is a scissor stack-supported elevating work platform used to raise personnel, their tools, and material to the workstation. The stacks are raised and lowered with hydraulic cylinders. Hydraulic motors on the drive wheels provide power to move the aerial platform.

The standard machine includes the following features:

- Proportional lift and drive controls
- Foam filled tires
- Hour meter
- Horn
- · Flashing light
- Drive motion alarm
- Platform overload system
- Tie-down/lifting lugs
- Tilt Alarm
- Diagnostic center display
- Emergency bleed down system
- Three fall protection anchors
- Five year limited warranty

The aerial platform has been manufactured, when applicable, to conform to all applicable requirements of the following organizations:

- Occupational Safety and Health Administration (OSHA)
- American National Standards Institute (ANSI)

#### Options

The following options may be provided on the machine:

- Airline to platform
- All motion alarm
- European conformity (CE) compliance
- Australian/New Zealand Standards (AS/NZS) compliance
- Canadian Standards Association (CSA) compliance
- Snorkel OnSite telematics

#### **Operator's Manual**

This manual provides information for safe and proper operation of the aerial platform. Some information in this manual refers to options that may or may not be on your machine. Read and understand the information in this Operator's Manual before operating the aerial platform on the job.

Additional copies of this manual may be ordered from Snorkel. Supply the model and manual part number from the front cover to assure that the correct manual will be supplied.

All information in this manual is based on the latest product information at the time of publication. Snorkel reserves the right to make product changes at any time without obligation.

#### **Safety Alerts**

A safety alert symbol is used throughout this manual to indicate danger, warning, and caution instructions. Follow these instructions to reduce the likelihood of personal injury and property damage. The terms danger, warning, and caution indicate varying degrees of personal injury or property damage that can result if the instruction is not followed.

## 

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is to be used in the most extreme situations.

## 

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

## 

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.

#### Notes

Notes are used to provide special information or helpful hints to assist in aerial platform operation, but do not indicate a hazardous situation.

#### Operation

The aerial platform has built-in safety features and has been factory tested for compliance with Snorkel specifications and industry standards. However, any personnel lifting aerial platform can be potentially dangerous in the hands of untrained or careless operators.

## **A**Warning

The potential for an accident increases when the aerial platform is operated by personnel who are not trained and authorized. Death or serious injury could result from such accidents. Read and understand the information in this manual and on the placards and decals on the machine before operating the aerial platform on the job.

Training is essential and must be performed by a qualified person.

- Become proficient in knowledge and actual operation before using the aerial platform on the job.
- The operator must be trained and authorized to perform any functions of the aerial platform.
- Operation of the aerial platform must be within the scope of the machine specifications.

The operator bears ultimate responsibility for following all manufacturer's instructions and warnings, regulations and safety rules of their employer and/or any state or federal law.

#### Maintenance

Complete machine inspection consists of periodic visual and operational checks, along with periodic minor adjustments that assure proper performance. Daily inspection will prevent abnormal wear and prolong the life of all systems. The inspection and maintenance schedule should be performed at the specified intervals and after prolonged periods of storage before returning the machine to service. Inspection and maintenance shall be performed by personnel who are trained and familiar with mechanical and electrical procedures.

Every person who maintains, inspects, tests, or repairs the aerial platform must be qualified to do so. Following the daily prestart inspection in this Operator's Manual will help keep the aerial platform in optimum working condition. Other maintenance functions must be performed by maintenance personnel who are qualified to work on the aerial platform.

## 

Welding current can be very intense. Damage to electronic components may result. Connect the ground clamp as close as possible to the area being welded. Disconnect battery cables and any microprocessors and engine control modules before welding on the machine.

If it becomes necessary to weld aerial platform components as a method of repair, take all precautions to prevent damage to electronic circuitry and devices on the machine. This includes, but may not be limited to, disconnecting battery cables and electronic devices.

Do not modify this aerial platform without prior written consent of the Snorkel Engineering Department. Modification may void the warranty, adversely affect stability, or affect the operational characteristics of the aerial platform.

#### Manual of Responsibilities – ANSI

All owners and users of the aerial platform must read, understand, and comply with all applicable regulations as stated in ANSI A92.20. Ultimate compliance to ANSI and OSHA regulations is the responsibility of the user and their employer.

ANSI publications clearly identify the responsibilities of all personnel who may be involved with the aerial platform. A reprint of the "Manual of Responsibilities for Manufacturers, Dealers, Owners, Users, Supervisors, Operators, Occupants, Lessors, Lessees and Brokers of ANSI/SIA A92.22-2020 Safe Use & ANSI/ SIA A92.24-2018 Training Requirements for the Use, Operation, Inspection, Testing and Maintenance of Mobile Elevating Work Platforms (MEWP)" is available from Snorkel dealers or from the factory upon request.

Copies are also available from: Scaffold & Access Industry Association 400 Admiral Boulevard Kansas City, MO 64106 USA

#### MEWP Safe Use – AS/NZS

All owners and users of the aerial platform must read, understand, and comply with all applicable regulations as stated in AS/NZS 2550.10:2006. Ultimate compliance is the responsibility of the user and their employer.

#### AS/NZS 1418.10 Commissioning

Per AS/NZS 1418.10, a machine has been commissioned upon return to Snorkel of a satisfactory completed Pre-Delivery and Inspection Record (PDIR). The PDIR inspection is performed by Snorkel, or it's agent, before the machine is delivered to the customer. A completed PDIR form can be obtained, by request, from the sales agent.

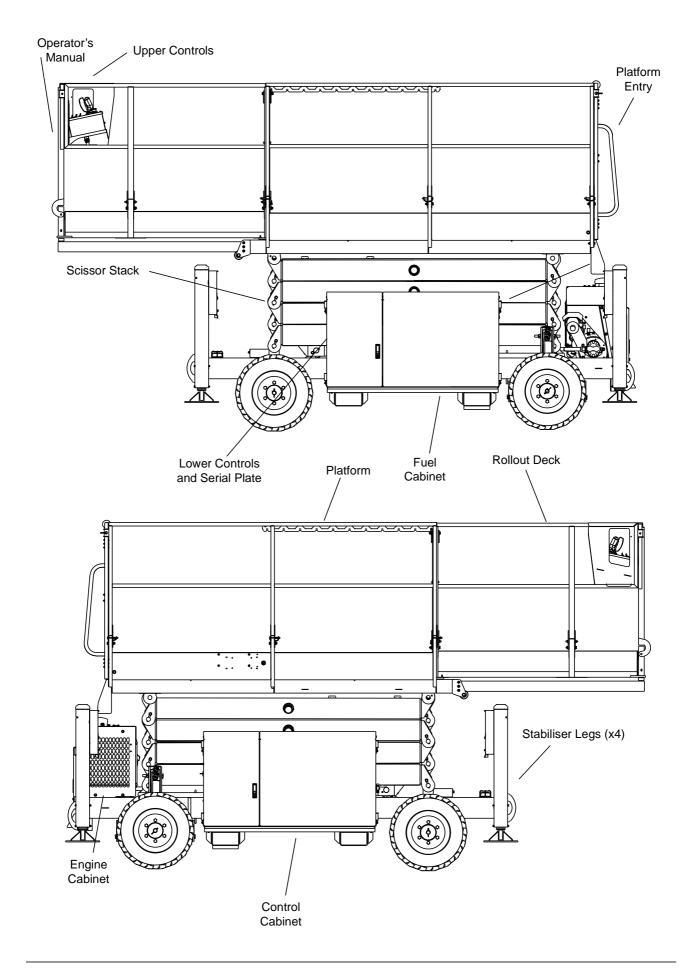
#### **Additional Information**

For additional information contact your local dealer or Snorkel at:

Snorkel International P.O. Box 1160 St. Joseph, MO 64502-1160 USA 1-800-255-0317 http://www.snorkellifts.com

Regional contact information is located on the back cover of this manual.

## **Component Identification**



## **General Specifications – S2255RT**

SPECIFICATIONS	S2255RT			
Normal working height	Wheels	8.1m	26' 7"	
	Stabilisers	8.5m	27' 11"	
Platform floor height	Wheels	6.1m	20'	
	Stabilisers	6.5m	21' 4"	
Rollout deck size		1.2m	47"	
Drive speed	Below 2.4m	0 to 5.2kph	0 to 3.3mph	
	Above 2.4m	0 to 0.64kph	0 to 0.4mph	
Safe working load (Rollout deck NOT extended)	-		925lb	
Safe working load	Main deck	300kg	661lb	
(Rollout deck extended)	Rollout deck	120kg	265lb	
Platform size	I	2.73 x 1.4m	8' 11" x 4' 7"	
Stowed height	Hand rails up	2.35m	7' 8"	
	Hand rails folded down	1.55m	5' 1"	
Overall length	3.3m	11' 0"		
Overall width		1.45m	4' 9"	
Gradeability		35%		
Lift time		24 - 29 second	ls	
Lower time		40 - 42 second	ls	
Turning radius	Inner	2.5m	8.2'	
	Outer	4.75m	15.6'	
Maximum wind speed	12.5m/s	45kph	28mph	
Insulation rating		Nil		
Tyres	Poly filled loader lug	23" x 8.9" x 12"		
Overall weight		2410kg	5313lb	
Ground clearance	Minimum	170mm	7"	
	Mid cabinet	260mm	10.2"	
Maximum sound level at platfo	86db			
Maximum outrigger load	1420kg	3130lb		
Maximum wheel load	1420kg	3130lb		
Maximum chassis inclination	3 ° sidewa	to 4.3m +0.4m/-0.2m ys above 4.3m ore & aft		
Maximum manual force	400N			

## **General Specifications – S2755RT**

SPECIFICATIONS	S2755RT			
Normal working height	Wheels	9.9m	32' 6"	
	Stabilisers	10.4m	34' 1"	
Platform floor height	Wheels	7.9m	25' 11"	
	Stabilisers	8.4m	27' 7"	
Rollout deck size		1.2m	47"	
Drive speed	Below 2.4m	0 to 5.2kph	0 to 3.3mph	
	Above 2.4m	0 to 0.64kph	0 to 0.4mph	
Safe working load (Rollout deck NOT extended)	-		750lb	
Safe working load	Main deck	180kg	396lb	
(Rollout deck extended)	Rollout deck	120kg	265lb	
Platform size		2.73 x 1.4m	8' 11" x 4' 7"	
Stowed height	Hand rails up	2.5m	8' 3"	
	Hand rails folded down	1.75m	5' 8"	
Overall length	3.3m	11' 0"		
Overall width		1.45m	4' 9"	
Gradeability	35%	1		
Lift time	24 - 29 secon	ds		
Lower time		40 - 42 secon	ds	
Turning radius	Inner	2.5m	8.2'	
	Outer	4.75m	15.6'	
Maximum wind speed	Maximum wind speed 12.5m/s		28mph	
Insulation rating		Nil		
Tyres	Poly filled loader lug	23" x 8.9" x 12"		
Overall weight		2750kg	6063lb	
Ground clearance	Minimum	170mm	7"	
	Mid cabinet	260mm	10.2"	
Maximum sound level at platfo	86db			
Maximum outrigger load	1470kg	3240lb		
Maximum wheel load	1470kg	3240lb		
Maximum chassis inclination	2 ° sidewa	to 5.5m +0.6m/-0.3m ys above 5.5m ore & aft		
Maximum manual force	400N			

## **General Specifications – S2255BE**

SPECIFICATIONS	S2255BE			
Normal working height	Wheels	8.1m	26' 7"	
	Stabilisers	8.5m	27' 11"	
Platform floor height	n floor height Wheels		20'	
	Stabilisers	6.5m	21' 4"	
Rollout deck size		1.2m	47"	
Drive speed	Below 2.4m	0 to 5.2kph	0 to 3.3mph	
	Above 2.4m	0 to 0.64kph	0 to 0.4mph	
Safe working load (Rollout deck NOT extended)	-		925lb	
Safe working load	Main deck	300kg	661lb	
(Rollout deck extended)	Rollout deck	120kg	265lb	
Platform size		2.73 x 1.4m	8' 11" x 4' 7"	
Stowed height	Hand rails up	2.35m	7' 8"	
	Hand rails folded down	1.55m	5' 1"	
Overall length	3.3m	11' 0"		
Overall width	1.45m	4' 9"		
Gradeability		35%		
Lift time		24 - 29 second	ds	
Lower time		40 - 42 second	ls	
Turning radius	Inner	2.5m	8.2'	
	Outer	4.75m	15.6'	
Maximum wind speed	aximum wind speed 12.5m/s		28mph	
Insulation rating		Nil		
Tyres	Poly filled loader lug	23" x 8.9" x 12"		
Overall weight		2750kg	6063lb	
Ground clearance	Minimum	170mm	7"	
	Mid cabinet	260mm	10.2"	
Maximum sound level at platfo	86db	•		
Maximum outrigger load	1625kg	3584lb		
Maximum wheel load	1625kg	3584lb		
Maximum chassis inclination	&	to 4.5m / 4 ° fore aft. iys at 4.5m		
Maximum manual force	400N			

## **General Specifications – S2755BE**

SPECIFICATIONS	S2755BE			
Normal working height	Wheels	9.9m	32' 6"	
	Stabilisers	10.4m	34' 1"	
Platform floor height	Wheels	7.9m	25' 11"	
	Stabilisers	8.4m	27' 7"	
Rollout deck size		1.2m	47"	
Drive speed	Below 2.4m	0 to 5.2kph	0 to 3.3mph	
	Above 2.4m	0 to 0.64kph	0 to 0.4mph	
Safe working load (Rollout deck NOT extended)	Main deck	340kg	750lb	
Safe working load	Main deck	220kg	485lb	
(Rollout deck extended)	Rollout deck	120kg	265lb	
Platform size		2.73 x 1.4m	8' 11" x 4' 7"	
Stowed height	Hand rails up	2.5m	8' 3"	
	Hand rails folded down	1.75m	5' 8"	
Overall length	3.3m	11' 0"		
Overall width		1.45m	4' 9"	
Gradeability	35%			
Lift time		24 - 29 second	ds	
Lower time		40 - 42 second	ds	
Turning radius	Inner	2.5m	8.2'	
	Outer	4.75m	15.6'	
Maximum wind speed	12.5m/s	45kph	28mph	
Insulation rating		Nil		
Tyres	Poly filled loader lug	23" x 8.9" x 12"		
Overall weight	•	2950kg	6490lb	
Ground clearance	Minimum	170mm	7"	
	Mid cabinet	260mm	10.2"	
Maximum sound level at platfo	86db	•		
Maximum outrigger load	1665kg	3663lb		
Maximum wheel load	1665kg	3663lb		
Maximum chassis inclination	&	to 5.5m / 4 ° fore aft. ays at 5.5m		
Maximum manual force		400N		

Knowledge of the information in this manual, and proper training, provide a basis for safely operating the aerial platform. Know the location of all controls and how they operate to act quickly and responsibly in an emergency.

Safety devices reduce the likelihood of an accident.

- Ÿ Never disable, modify, or ignore any safety device.
- Y Safety alerts in this manual indicate situations where accidents may occur.

If any malfunction, hazard or potentially unsafe condition relating to capacity, intended use, or safe operation is suspected, stop aerial platform operation and seek assistance.

The operator bears ultimate responsibility for following all manufacturer's instructions and warnings, regulations and safety rules of their employer and/or any state or federal law.

#### **Electrocution Hazards**

The aerial platform is made of metal components and is not insulated. Regard all conductors as energized. Do not operate outside during a thunderstorm.

#### Minimum Safe Approach Distance – ANSI

Minimum safe approach distances to energized power lines and their associated parts must be observed while operating the aerial platform.

## 

The aerial platform is not electrically insulated. Death or serious injury will result from contact with, or inadequate clearance from, an energized conductor. Do not go closer than the minimum safe approach distance as defined by ANSI. ANSI publications define minimum distances that must be observed when working near bus bars and energized power lines. Table 1 and Figure 3 are reprinted courtesy of Scaffold Industry Association, ANSI/SIA A92.6.

Voltage Range	Minimum Safe Approach Distance		
(Phase to Phase)	Feet	Meters	
0 to 300V	Avoid Contact		
Over 300V to 50kV	10	3.05	
Over 50kV to 200kV	15	4.60	
Over 200kV to 350Kv	20	6.10	
Over 350kV to 500kV	25	7.62	
Over 500kV to 750kV	35	10.67	
Over 750kV to 1000kV	45	13.72	

Table 1 – Minimum Safe Approach Distance

#### Minimum Safe Approach Distance – AS/NZS

Minimum safe approach distances to energized power lines and their associated parts must be observed while operating the aerial platform.

## 

The aerial platform is not electrically insulated. Death or serious injury will result from contact with, or inadequate clearance from, an energized conductor. Do not go closer than the minimum safe approach distance as defined by national safety regulations.

AS/NZS 2550.10:2006 define minimum distances that must be observed when working near overhead power lines on poles and overhead power lines on towers. Refer to the clearance requirements decals on the machine to determine safe approach distances (refer to Figure 1).

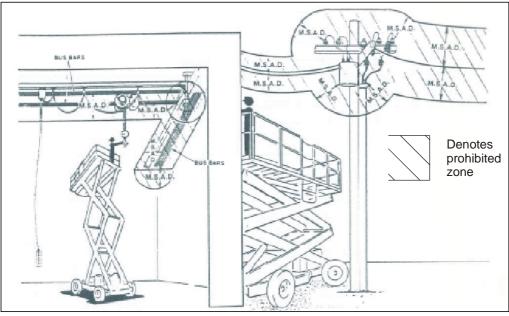


Figure 3 – Minimum Safe Approach Distance

	v	While in Operating Mode
	Special Provisions	
EWPA Overhead Power Lines on Poles NO GO ZONE Orthe pattern of the presidentiation in the patient for the presidentiation in the patient for t	For Operating Elevating Work Participant Seeking to Operating the No.1 No.1	Overhead Power Lines on Towe For the platforms or the person located in the platform Spatier Angeline Advert Power Line Spatier
Briver within an task task Briver 3-64m an Task task Briver d Tas From the Borton of Power Lines Special Provisions Lines Cons Anno Anno Anno Anno Anno Anno Anno A	No.2 commercely work. Obtain written permission from the power authority No.3 DD NDT commerces work until a pre-start.	Between Between of See Special Provisions Dpon Am Am
Ana Ballin GARI Liter	skolyb meeting and nik assamment have been completed. The term "goopse" is defined as a sudiety observer who is a person competent for the sale task of observing and warring significations and other electrical power lines and other electrical apprentia.	
	Note: These special provisions are not applicable to workers in or engaged by companies in the	A A A A A A A A A A A A A A A A A A A

Figure 1 – Minimum Safe Approach Distance

#### **Platform Capacity**

The maximum unrestricted rated load capacity and the maximum number of occupants for the aerial platform are stated on machine decals, placards, and in the machine specifications in this manual.

## 

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 machine decals, placards, and in the machine specifications in this manual.

#### **Manual Force**

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

## 

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 maximum allowable manual force indicated on the machine decals, placards, and in the machine specifications in this manual.

The maximum allowable manual force is limited to 45 lbs (200 N) of force per occupant, with a maximum of 90 lbs (400 N) for all occupants.

#### Wind Speeds

Do not add anything to the aerial platform that will increase the wind loading such as billboards, banners, flags, etc.

## ADanger

The aerial platform can tip over if it becomes unstable. Death or serious injury will result from a tipover accident. Do not operate the machine in wind speeds of 28 mph (12.5 m/s) or greater.

Do not operate the aerial platform in windy conditions with wind gusts or steady wind speeds of 28 mph (12.5 m/s) or greater. Refer to Figure 2.

#### **Prestart Inspection**

Perform a prestart inspection before each shift as described in Chapter 7. Do not use the aerial platform on the job unless you are trained and authorized to do so.

#### **Work Place Inspection and Practices**

Do not use the aerial platform as a ground connection when welding.

- Ϋ The welding ground clamp must be attached to the same structure that is being welded.
- Ϋ Electrical current flow can be very intense, causing serious internal damage to some components.

Inspect the area before and during aerial platform use. The following are some potential hazards that may be in the work place:

- ÿ Debris
- ÿ Slopes
- Ϋ Drop-offs or holes
- Ϋ Bumps and floor obstructions
- γ Overhead obstructions
- ÿ Unauthorized persons
- γ High voltage conductors
- Ÿ Wind and weather conditions
- Inadequate surface and support to withstand load forces applied by the aerial platform in all operating configurations

Before using the aerial platform in any hazardous (classified) location, make certain it is approved and of the type required by ANSI/NFPA 505 for use in that particular location.

Know and understand the job site traffic-flow patterns and obey the flagmen, road signs and signals.

BEAUFORT	WIND SPEED				GROUND CONDITIONS	
RATING	m/s	km/h	ft/s	mph	GROUND CONDITIONS	
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 2 – Beaufort Scale

While operating the aerial platform, a good safety practice is to have qualified personnel in the immediate work area to:

- ÿ Help in case of an emergency
- ÿ Operate emergency controls as required
- ÿ Watch for loss of control by platform operator
- Y Warn the operator of any obstructions or hazards that may not be obvious to them
- Watch for soft terrain, sloping surfaces, drop-offs, etc. where stability could be jeopardized
- Watch for bystanders and never allow anyone to be under, or to reach through the scissors structure while operating the aerial platform

## ADanger

Pinch points may exist between moving components. Death or serious injury will result from becoming trapped between components, buildings, structures, or other obstacles. Make sure there is sufficient clearance around the machine before moving the chassis or platform. Allow sufficient room and time to stop movement to avoid contact with structures or other hazards.

Always look in the direction of movement.

- Prive with care and at speeds compatible with the work place conditions.
- ÿ Use caution when driving over rough ground, on slopes and when turning.
- Ϋ Do not engage in any form of horseplay or permit riders any place other than in the platform.

Secure all accessories, containers, tools and other materials in the platform to prevent them from accidentally falling or being kicked off the platform. Remove all objects that do not belong in or on the aerial platform.

Never steady the platform by positioning it against another platform.

## 

The potential for an accident increases when operating an aerial platform that is damaged or malfunctioning. Death or serious injury could result from such accidents. Do not operate the aerial platform if it is damaged or malfunctioning.

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.

#### Operation

Use three points of support when entering or exiting the platform. Grasp the handrails, not the doors, with one hand on each side. Use two hands and one foot on the step when climbing into and out of the platform.

Make sure the area below the platform is free of personnel before lowering.

Keep both feet positioned firmly on the platform floor.

- Ϋ Operate the controls slowly and deliberately to avoid jerky and erratic operation.
- Ϋ Always stop the controls in neutral before going in the opposite direction.

Do not dismount while the aerial platform is in motion or jump off the platform.

Properly stow the aerial platform and secure it against unauthorized operation at the end of each work day, before transporting, or if it is left unattended.

#### **Tip-Over and Falling Hazards**

Operate the aerial platform only on a firm, flat, level surface capable of withstanding all load forces imposed by the aerial platform in all operating conditions. Refer to the General Specifications chart for the maximum wheel load and drive/lift level sensor interlock information. Raise the platform only when the aerial platform is on level ground.

The aerial platform can tip over if it becomes unstable. Death or serious injury will result from a tip-over accident. Do not drive or position the aerial platform for elevated use near any drop-off, hole, slope, soft or uneven ground, or other tip-over hazard. Do not raise the platform outdoors in wind speeds above 28 mph (12.5 m/s).

Do not operate the aerial platform within 4' (1.2 m) of any drop-off or hole.

Do not raise the platform in winds above 28 mph (12.5 m/s). Do not add anything to the aerial platform that will increase the wind loading such as billboards, banners, flags, etc.

It is best not to transfer from the platform to another structure or from the structure to the platform, unless that is the safest way to do the job. Judge each situation separately taking the work environment into account. If it is necessary to transfer from the platform to another structure the following guidelines apply:

- 1. If you are using a fall restraint, transfer your anchorage from one structure to the other before stepping across.
- 2. Remember that you might be transferring to a structure where *personal fall arrest* is required.
- 3. Use the platform entrance, do not climb over or through the guardrails.

Never operate the aerial platform without all parts of the guardrail system in place and the entry doors closed. Make sure that all protective guards, cowlings, and doors are securely fastened.

Do not exceed the platform capacity nor the platform-extension capacity as indicated on the platform rating placard on the platform. Do not carry loads that extend beyond the platform guardrails without prior written consent from Snorkel. Do not operate the aerial platform from trucks, trailers, railway cars, floating vessels, scaffolds, or similar equipment unless the application is approved in writing by Snorkel.

Do not use the aerial platform as a crane, hoist, jack or for any purpose other than to position personnel, tools, and materials.

Do not climb on the guardrails or use ladders, planks, or other devices to extend or increase the work position from the platform.

Take care to prevent rope, electrical cords, and hoses, etc., from becoming caught in or on the aerial platform.

- i If the platform or scissors structure becomes caught on an adjacent structure or other obstacle and is prevented from normal motion, reverse the control to free the platform.
- Ϋ If control reversal does not free the platform, evacuate the platform before attempting to free it.

#### **Electrical System**

Charge the batteries in a well-ventilated area free of flame, sparks, or other hazards that might cause fire or explosion.

Do not operate any of the aerial platform functions while the battery charger is plugged in.

## 

Batteries give off hydrogen and oxygen that can combine explosively. Death or serious injury could result from a chemical explosion. Do not smoke or permit open flames or sparks when checking the batteries.

Battery acid can damage the skin and eyes. Serious infection or reaction could result if medical treatment is not given immediately. Wear face and eye protection when working near the batteries. Thoroughly rinse away any spilled fluid with clean water.

- Y Batteries contain sulfuric acid that can damage your eyes or skin on contact.
- Ÿ Wear a face shield, rubber gloves, and protective clothing when working around batteries.
- ÿ If acid contacts your eyes, flush immediately with clear water and get medical attention.
- $\ddot{\textbf{Y}}~$  If acid contacts your skin, wash off immediately with clear water.

#### **Hydraulic System**

The hydraulic system contains hoses with hydraulic fluid under pressure.

## 

Hydraulic fluid escaping under pressure can have enough force to inject fluid into the flesh. Serious infection or reaction will result if medical treatment is not given immediately. In case of injury by escaping hydraulic fluid, seek medical attention at once.

Do not place your hand or any part of your body in front of escaping hydraulic fluid. Use a piece of cardboard or wood to search for hydraulic leaks.

#### **Placards and Decals**

The aerial platform is equipped with placards and decals that provide instruction for operation and accident prevention. Do not operate the aerial platform if any placards or decals are missing, damaged, or illegible.

#### **General Safety Rules**

This aerial work platform is intended to lift persons, their tools and materials used for the job. It is designed for repair, assembly, and assignments at workplaces above head height (ceilings, cranes, roof structures, buildings, etc.). Uses or alterations to the aerial work platform must be approved by Snorkel.

This aerial work platform is not insulated. Refer to applicable national/governmental/local regulations for safe approach distances.

Exceeding the specified permissible maximum load is prohibited.

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.

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 and lowering the platform.

Use three points of support when entering or exiting the platform. Grasp the handrails, not the doors, with one hand on each side. Use two hands and one foot on the step when climbing into and out of 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 the machine's wind rating.

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

In case of an emergency, push the emergency stop button to deactivate all powered functions.

If an alarm sounds while the platform is elevated, stop and carefully lower platform. Move the 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.

For AS/NZS operators, no person shall access or egress from the platform in the elevated position (except in an emergency) unless the requirements of AS2550.10 have been met. For full requirements refer directly to AS2550.10

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 the platform is elevated without blocking the scissors structure.

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 placards and decals are in place and legible before using the machine.

Never use a machine that is damaged, not functioning properly, or has damaged or missing placards and decals.

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.

Driving MEWP's on public highways is subject to national traffic regulations.

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

Fall protection anchors are provided in the platform and the manufacturer recommends the usage of a fall restraint or fall arrest device as required by national or local regulations and standards.

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 Chapter 10 – Emergency Operation. 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.

#### **Engine and Fuel Handling Precautions**

Refer to the engine manufacturer's Operator's Manual for complete information on safe engine operation, maintenance, and specifications.

## 

Engine exhaust contains carbon monoxide, a poisonous gas that is invisible and odorless. Breathing engine exhaust fumes will cause death or serious illness. Do not run the engine in an enclosed area or indoors without adequate ventilation.

Operate dual fuel machines on LPG fuel when indoors to reduce exhaust fumes and carbon monoxide.

Be careful not to run the diesel fuel tank empty. Bleed the fuel system if air enters the lines between the tank and the injection pump.

## Chapter 4 – Safety Devices

#### **Safety Device Information**

For emergency operation controls and procedures see the Emergency Operation chapter, in this manual.

The devices listed in this chapter are safety devices. They are on the machine to increase safety in the workplace for both the operator and other people near the machine.

## **A**Warning

Do not bypass, disable, modify or ignore any of these devices. Check them carefully at the start of each work shift to see that they are in working order (see daily inspection & maintenance) chapter. If any is found to be defective, remove the S2255RT / S2755RT from service immediately until a qualified service technician can make repairs.

#### **Emergency Stop Switches**

#### **Upper Controls**



#### Figure 4.1 – Upper Controls Emergency Stop Switch

Press the large red Emergency Stop button in and the entire machine stops, the machine turns off and nothing moves. This switch must be out (on) to control the S2255RT / S2755RT from the platform (pull the switch and it will pop out).

Push the emergency stop button inward when the upper controls are not in use to protect against un-intentional operation.

#### Note

In order for the emergency stop switch at the platform to have an effect, the Platform/Ground key selector switch (on the lower control box) must be set to platform.

#### Lower Controls



#### Figure 4.2 – Lower Controls Emergency Stop Switch

Press the large red Emergency Stop button in and the entire machine stops, the machine turns off and nothing moves. The emergency stop switch must be out (on) for anything on the S2255RT / S2755RT to work (pull the switch and it will pop out).

Push the emergency stop button inward when the lower controls are not in use to protect against un-intentional operation.

#### Alarms

When an alarm occurs the buzzer in the lower control box will sound. The upper alarm will only sound if the upper controls are selected and active.

The different alarm sound patterns are shown in the table below.

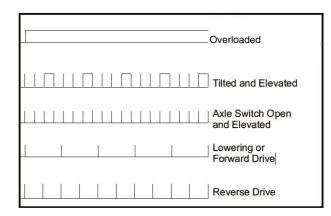


Figure 4.3 – Alarm Sound Patterns

#### Lowering

The lowering alarm warns people near the machine that the platform is coming down and the scissor arm assembly is closing.

#### Drive (reverse)

The DRIVE (reverse) alarm alerts people that the S2255RT / S2755RT is traveling backwards along the ground. This alarm beeps twice as fast as the DRIVE (forward) alarm.

#### Drive (forward)

The DRIVE forward alarm alerts people that the S2255RT / S2755RT is traveling forward along the ground. The alarm beeps half as fast as the DRIVE (reverse) alarm.

#### Load Sensing System

As soon as the scissor stack rises from its stowed position the overload protection system becomes active.

ÿ If **90%** of rated capacity is reached in the platform the overload light will illuminate.

This is a **warning** to the operator that the platform is reaching rated capacity. Normal function will remain and the machine can continue to be used.

Y If 100% of the rated capacity is reached in the platform the overload light will continue to be illuminated and an alarm will sound.

This is a **warning** to the operator that rated capacity has been reached and the platform load must be reduced. Normal function will remain to allow the platform to be positioned to remove some load from the platform.

#### Note

The machine should not be operated continuously with the overload alarm sounding.

if 110% of rated capacity is reached in the platform the overload light will continue to be illuminated and an alarm will continue to sound and all functions will be disabled.

The operator must remove load from the platform.

Normal function will resume once the platform load has been reduced below 110% continuously for at least two (2) seconds.



Figure 4.4 – Platform Overload Light

#### Level Sensor

The level sensor alarm warns the S2255RT / S2755RT operator that the machine is not level.

When you hear this alarm, immediately lower the platform completely down. When the platform is completely down, determine and correct the cause of the tilt before raising the platform again.

#### Note

While the alarm is sounding it is not possible to drive the S2255RT/ S2755RT nor raise the platform.

#### **Dual Tilt Limits**

The machine is equipped with Dual tilt limits; this gives the machine a greater tilt limit at low scissor elevations and a smaller tilt limit at higher scissor elevations. The Dual tilt limit is applicable on both wheels and stabilisers. The change in tilt limit is automatic and no user intervention is needed.

The Auto Level function will aim to bring the platform as close to level as possible regardless of the tilt limit. When the Auto Level function finishes if the level is within the tilt limits the controller will turn on the lift enable light.

If the scissor stack is raised from a lower elevation through the changeover height and the tilt would be outside the tighter tilt limits the unit will automatically stop lifting further and sound the tilt alarm. If this occurs stow the machine and re-level it.

Refer to the specification sections or the serial plate for the specific tilt limits.

## **Primary Fall Restraint System**



Figure 4.5 – Fall Restraint

The handrails, including mid-rail and toe board combined with the gate, form a Fall Restraint System. The System Prevents the operator from reaching the Fall Hazard. Ensure that all handrails are located correctly with each other and that all pins and bolts are in place.

If any part of the Fall Restraint System is not in place the System is compromised and the operator must review the Risk and Hazard analysis and determine ways to provide adequate fall protection e.g. the use of Fall Restraint Harnesses, Lanyards and Anchors.

## Safety Prop

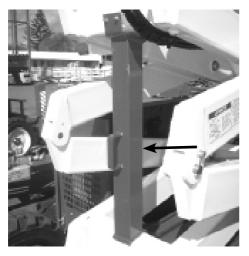


Figure 4.6 – Safety Prop

Always raise the safety prop then lower the scissor arm assembly onto the safety prop before reaching into the scissor arm assembly for any reason.

## **Swinging Gate**



Figure 4.7 – Swinging Gate

The swinging gate should be closed all times except when someone is entering or leaving the platform.

## **Interlock Switch**



Figure 4.8 – Joystick Interlock Switch

The interlock switch must be squeezed and held to activate the joystick. The interlock switch prevents the joystick from moving the platform if something accidentally pushes the joystick. Do not attempt to disable the interlock switch in any way.

## **Bubble Level**

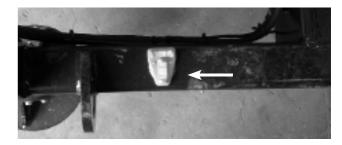


Figure 4.9 – Bubble Level

## **Operator Horn**



Figure 4.10 – Operator Horn

The operator horn is used primarily to get the attention of people on the ground when you are working aloft. for the horn to work, the following switches on the ground control box, must be set as indicated.

MAIN POWER	ON
EMERGENCY STOP	ON (out)
SELECTOR	• •

#### Stabilisers



Figure 4.11 – Stabilisers

The stabiliser controls are on the upper left side of the platform control box. The stabilisers are used to level the S2255RT / S2755RT. *Note* 

The S2255RT / S2755RT must be on a firm surface capable of withstanding all load forces imposed by the aerial platform in all operation conditions before the stabilisers are used. For complete stabiliser operating procedures see the Operations chapter.

#### **Rough Terrain Scissor Interlock Tests**

All Snorkel scissor lifts in the Snorkel SRT, SR & S/RT series are fitted with a very important safety feature, a 'Stabiliser/axle/scissor Interlock' system that prevents the stabilisers being moved while the platform is elevated, and prevents the platform being raised if the rear axle is oscillated and the stabilisers are not set or the machine is tilted.

The correct operation of the stabiliser/scissor Interlock is critical to ensure that the Scissor is operated safely and with minimum risk.

Detailed instructions on how to carry out the tests to ensure that these functions are working correctly are provided at the beginning of the Pre-Operational Inspection chapter in this manual.

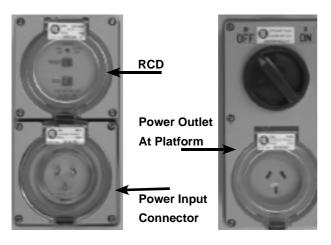
#### Enable Switch (Lower Controls Only)

The enable switch must be operated in conjunction with the platform moving function you select. The purpose of this switch is to prevent the platform from moving if something or someone accidentally pushes one of the platform moving controls.



Figure 4.12 – Enable Switch

## **RCD/ELCB Outlet (Option)**



#### Figure 4.13 – RCD/ELCB AC Outlet

The RCD (Residual Current Device) is located at the ground and will protect against short circuits to earth. When there is a short circuit the RCD will shut down the 230V AC power to the platform outlet. To reset the outlet disconnect the power tool lead from the platform box and reset the RCD at the ground, if the problem

persists call a trained service technician.

#### **Electrical Power Outlet (Option)**

Connect a source of 110 volt AC or 240 volt AC power to the power-input connector on the right side of the chassis.

Some machines may have an electrical outlet at the platform, but no power-input connector on the chassis. In that case, power is supplied by an optional AC generator. An external power source is not required.

With the machine running, place the AC generator switch in the generator position to provide electrical power to the electrical outlet at the platform and to the outlet on the end of the generator housing.

Plug an electrical tool into the receptacle at the platform and at the generator and try to operate the tool to verify proper operation of the outlet.

The outlet is equipped with a ground fault circuit interrupter (GFCI) or an RCD, depending on the load requirements. Use the following procedure to test the GFCI.

1. Push the test button (refer to Figure 7.8).

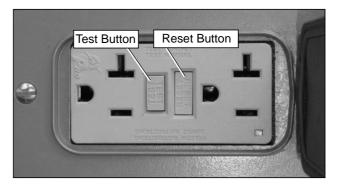


Figure 4.14 – Electrical Power Outlet

- 2. Plug an electrical tool into the outlet and verify the power is off.
  - If the power was off, push the reset button to restore power.
  - If the power was on, repair or replace the receptacle.

#### **Flashing Light**

The flashing light alerts people that the S2255RT / S2755RT is present and that the machine is moving. The light flashes at about one (1) flash per second any time the machine is running. There is no ON/OFF switch for the flashing light, it cannot be turned off while the S2255RT / S2755RT is running.

#### **Fall Restraint Lanyard Anchor Points**

There are three (3) Fall Restraint Anchor points on the floor of the platform on the S2255RT / S2755RT. Two (2) behind the roll-out deck when retracted, one (1) behind the roll-out deck when extended.

**ADanger** The Fall Restraint Anchor points are rated for Fall Restraint only. A Fall Arrest System must not be attached. Death or serious injury could result from use of a Fall Arrest System.

The anchor points are positioned such that a Fall Restraint Lanyard can be set short enough to prevent the operator reaching the fall hazard (when not all guardrails are in place) while still allowing some freedom of movement.

Note

These anchors are not for lifting or tying down the machine.

You should attach your fall protection to the anchors if work rules require it.



Figure 4.15 – Fall Restraint Points

## Chapter 5 – Gauges and Displays

The aerial platform is equipped with several gauges to monitor the condition of the machine before and during operation.

#### **Diagnostic Center Display**

The diagnostic center LCD display (refer to Figure 5.1) is located on the lower part of the lower control panel.



Figure 5.1 – Lower Controls

When the battery disconnect is in the on position and the emergency stop button is enabled at the lower controls, the LCD display shows:

• The accumulated aerial platform operating time.

This display is also used by service technicians to troubleshoot and diagnose errors that may occur with the machine operating system.

#### Platform Overload/Lift Enable Lights

There is a platform overload and a lift enable light on the lower control panel (refer to Figure 5.1) and on the upper control panel (refer to Figure 5.2).



Figure 5.2 – Upper Controls

If the aerial platform chassis is out of level more than the machine specified slope sensor alarm setting when the scissor stack is raised or extended, an alarm will sound and the lift enable light will no longer illuminate.

If the platform is at capacity or if platform capacity is exceeded, the platform overload light on the lower and upper control panels will illuminate.

#### Warning Light

There is one warning light on the middle of the upper control panel (refer to Figure 5.2). The warning lights indicate messages to the machine operator as indicated:

• Red – Stop the operation of the machine as quickly as possible to reduce damage to the motor.

#### Hydraulic Oil Tank



Figure 5.3 Hydraulic Oil Tank

## **Chapter 6 – Controls**

## 

Pinch points may exist between moving components. Death or serious injury will result from becoming trapped between components, buildings, structures, or other obstacles. Make sure all personnel stand clear while operating the aerial platform.

- V Controls to position the platform are located on the lower control box on the chassis and on the upper control box in the platform.
- Ϋ Controls to drive the aerial platform are located on the upper control box only.

#### **Battery Disconnect**

The battery disconnect switch is at the rear of the platform, on the left side of the hydraulic cabinet (refer to Figure 6.1).



Figure 6.1 – Battery Disconnect

The battery disconnect switch removes electrical power from all electrically controlled functions when in the off position.

γ Place the switch in the on position to operate any electrically controlled function.

## 

Only authorized personnel should operate the aerial platform. Unqualified personnel may cause injury to coworkers or property damage. Lock the battery disconnect switch in the off position before leaving the aerial platform unattended.

Y Lock the battery disconnect switch in the off position to prevent unauthorized use of the aerial platform.

#### **Lower Controls**

The lower controls (refer to Figure 6.2) are located at the right rear of the chassis. Only platform functions can be operated from the lower controls.

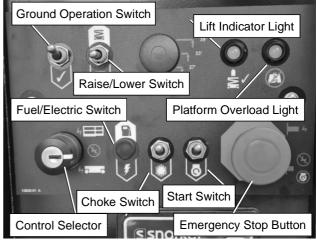


Figure 6.2 – Lower Controls

The following are located on the lower control panel:

- ÿ Emergency stop button
- Ÿ Control selector
- Υ Ground operation switch
- Ÿ Platform raise/lower switch
- Ϋ Platform overload protection light
- ÿ Lift Indicator light
- ÿ Choke switch
- Ϋ́ Start switch
- ÿ Fuel/electric switch

#### **Emergency Stop Button**

The emergency stop is a two-position red push button.

- Ϋ Push the button inward to disconnect power to all control circuits.
- $\ddot{\textbf{Y}}$  Pull the button outward to restore power.

#### **Control Selector**

Insert the key into the control selector

- i In the middle position, aerial platform functions will not operate from the lower or upper controls. The upper controls will not operate while the control selector is in the lower position.
- Y Turn the switch to the upper controls position to operate the aerial platform functions from the upper controls, or turn the switch to the lower controls position to operate the aerial platform functions from the lower controls.

#### **Ground Operation Switch**

Hold the switch downward conly in the lower controls position to enable the platform raise/lower switch functions.

#### **Platform Raise/Lower Switch**

The platform raise/lower switch is used to raise or lower the platform. The switch is spring returned to the center off position.

γ Hold the switch upward to raise the platform.

- Ÿ Hold the switch downward to lower the platform.
- Υ An alarm will sound as the platform lowers.

#### Lift Indicator Light

The platform can be raised only when this light is lit. When this light is not lit the platform will not rise because: the platform is not level, or the stabilisers are not set properly.

#### **Platform Overload Indicator Light**

All movement is prevented when the light is illuminated. The platform load must be reduced before the machine will operate.

#### **Choke Switch**

(Option gasoline engines only) Hold the choke switch down at any time you start a gasoline engine that is at ambient air temperature (a cold engine).

**Glow Plug:** (Diesel engines only) This is a momentary contact switch. Press it down and hold, for no longer than 20 seconds, then release it just before starting the engine for an engine that is at ambient air temperature (a cold engine).

#### **Start Switch**

Press and hold this switch DOWN to operate the starter motor of the machine.

#### **Fuel/Electric Switch**

Before starting, set the FUEL switch to Fuel (up) or Electric (down) depending on your machine set up and which you want to use.

#### **Upper Controls**

The upper controls (refer to Figure 6.3) are located on the control panel in the platform. The upper control pendant is located at the right front of the platform. Platform and drive functions can be operated from the upper controls.

## AWarning

The potential for an accident increases from improperly driving or steering the aerial platform. Death or serious injury could result from such accidents. Make sure the upper control panel is securely fastened inside the platform and facing the front of the machine.

Avoid driving the platform with the upper controls facing the rear or side of the machine. In this position the machine is difficult to control because the drive and steer control movements and their resulting machine movements will not correspond.

Only operate the upper controls when the upper control panel is securely fastened inside the platform and facing the front of the machine. Some machines may have an optional removable upper control panel. Remove the pin to remove the panel from the guardrails.

The following are located on the upper control panel:

- ÿ Emergency stop button
- Ϋ Drive/lift selector switch
- γ Drive range switch

- Ÿ Joystick to control platform lift, drive, and steer
- Ϋ Horn button
- Ϋ Platform overload protection light
- Ϋ́ Choke switch
- Y Start switch
- Ϋ Fuel/electric switch

#### **Emergency Stop Button**

The emergency stop (refer to Figure 6.3) is a two-position, red push button on the front of the upper control panel.

- Ϋ Push the button inward to disconnect power from all control circuits at the upper controls.
- ÿ Pull the button outward to restore power.
- Push the emergency stop button inward when the upper controls are not in use to protect against unintentional operation.

#### Note

On ANSI machines, the lower controls override the upper controls. If the upper control emergency stop button is engaged, the lower controls can still be used to operate the aerial platform. On CE/AS/NZS machines, if one emergency stop is engaged the machine will not operate.

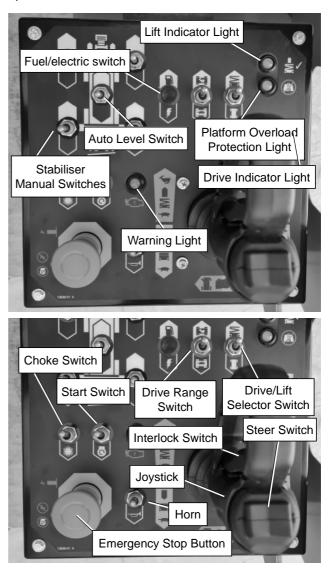


Figure 6.3 – Upper Controls

#### **Drive/Lift Selector Switch**

The drive/lift selector switch (refer to Figure 6.3) is used to select either machine drive or lift functions. Both functions can not be operated at the same time.

- Place the drive/lift selector switch in the drive position to drive the aerial platform using the joystick. The platform will not raise or lower while driving.
- Place the drive/lift selector switch in the lift position to raise and lower the platform using the joystick.

#### Joystick

Use the joystick (refer to Figure 6.3) to operate the following functions:

- ÿ Aerial platform steering
- Ϋ́ Aerial platform drive and speed
- Ÿ Platform raise/lower and speed

Movement of the joystick in a given direction produces a corresponding movement of the aerial platform. The steering and drive functions may be operated separately or simultaneously.

#### **Interlock Switch**

The joystick has an interlock switch in the handle (refer to Figure 6.3).

- Ϋ Engage the interlock by grasping the joystick and pulling the switch toward the handle.
- γ Engage the interlock to activate the steering, drive, stabiliser or lift functions.

#### **Steer Switch**

The steer switch (refer to Figure 6.3) is a momentary contact, rocker switch on top of the drive joystick. This switch controls the two front wheels to steer the aerial platform.

- Y To steer to the right, engage the interlock switch on the joystick and hold down the right side of the steer switch.
- Ϋ To steer to the left, engage the interlock switch on the joystick and hold down the left side of the steer switch.

#### Note

The steering wheels are not self-centering. Set the steering wheels straight ahead after completing a turn.

#### **Drive Range Switch**

The drive range switch (refer to Figure 6.3) has two positions to select drive wheel operation:

- ÿ High (Rabbit) for normal driving conditions
- Y Low (Turtle) for driving on grades up to 35 percent that require low speed and high torque operation, where high range is not sufficient to climb the grade.

#### **Horn Button**

The horn button (refer to Figure 6.3) is on the front of the upper control panel.

Press the button to sound the horn.

#### **Stabiliser Manual Switches**

Each switch corresponds to one (1) of the stabilisers (if stabilisers are fitted) Pull a switch backward to lower a stabiliser, push it forward to raise the stabiliser.

#### Auto Level/Stow Switch

Select either auto level or auto stow, to raise or lower the stabilisers automatically (if stabilisers are fitted).

#### Lift Indicator Light

The platform can be raised only when this light is lit. When this light is not lit the platform will not rise because: the platform is not level, or the stabilisers are not set properly.

#### **Drive Indicator Light**

The platform can be driven when the light is lit. When it is not lit, the platform will not drive because with the platform raised the base is not level or with the platform raised the axle switches are not set.

#### Warning Light

This indicator light should go off when the machine is started. Stop the machine immediately if this light comes on when the machine is running.

#### **Platform Overload Indicator Light**

All movement is prevented when the light is illuminated. The platform load must be reduced before the machine will operate.

#### **Choke Switch**

(option gasoline engines only) press and hold the switch in anytime you start a gasoline engine that is at ambient air temperature ( a cold engine).

**Glow Plug:** (diesel engines only) this is a momentary contact switch. Press it down and hold for no longer than 20 seconds then release it just before starting the engine for an engine that is at ambient air temperature (a cold engine).

#### **Start Switch**

Press and hold this switch DOWN to operate the starter motor of the machine.

#### **Fuel/Electric Switch**

Before starting, set the FUEL switch to Fuel (up) or Electric (down) depending on your machine set up and which you want to use.

## Chapter 7 – Prestart Inspection

Potential service and safety problems may be detected by inspecting the aerial platform. This chapter includes information on properly inspecting the aerial platform and includes a prestart inspection check list at the end of this chapter to ensure that no areas are overlooked.

## 

The potential for an accident increases when operating an aerial platform that is damaged or malfunctioning. Death or serious injury could result from such accidents. Do not operate the aerial platform if it is damaged or malfunctioning.

Perform a prestart inspection at the beginning of each shift, before using the aerial platform on the job. The inspection site must have a smooth and level surface.

#### Note

Carefully read, understand and follow all safety rules, operating instructions, labels and National Safety Instructions/Requirements.

#### **Operator's Manual**

The manual holder is located on the front handrail of the platform (refer to Figure 7.1).



Figure 7.1 – Operator's Manual Holder

To inspect the operator's manual and manual holder:

- 1. Make certain the Operator's Manual holder is securely fastened in place.
- 2. Check to see that the proper Operator's Manual is in the holder.
- 3. Check to see that the manual is complete with all pages intact and in readable condition.
- Make certain ANSI publication "Manual of Responsibilities for Dealers, Owners, Users, Operators, Lessors and Lessees of ANSI/SIA A92.6-2006 Self-Propelled Elevating Work Platforms" is in the manual holder.

#### Safety Prop

Always use the safety prop when the platform is raised before inspecting or performing service or maintenance procedures on the machine.

## 

Pinch points exist on the scissors structure. Death or serious injury will result if the scissors structure drops onto personnel working within the scissors arms or under the raised platform. Properly position the safety prop before reaching through the scissors structure.

Use the following procedure to properly position the safety prop:

- 1. Remove all tools and material from the platform.
- 2. Using the lower controls, raise the platform until the open height between the arm pins is wide enough to position the safety prop.
- 3. Lift the safety prop into position to the support position (refer to Figure 7.2).



Figure 7.2 – Safety Prop in Support Position

- 4. Remove hands and arms from the scissors structure area.
- 5. Lower the platform until the scissors are supported by the safety prop.

Use the following procedure to stow the safety prop:

- 1. Using the lower controls, raise the platform until the open height between the arm pins is wide enough to move the safety prop.
- 2. Lift the saftey prop back to the stowed position (refer to Figure 7.3).



Figure 7.3 – Safety Prop in Stowed Position

3. Using the lower controls completely lower the platform.

#### **Cables and Wiring Harness**

To inspect the cables and wiring harness:

- 1. Visually inspect all cables and wiring for wear and/ or physical damage such as loose connections, broken wires, and frayed insulation.
- 2. Check the wiring in areas where a change in routing direction may cause them to become pinched.
- 3. Make sure the cables and wires are properly routed to avoid sharp edges, pinching, and scuffing.

#### **Hydraulic System**

Hydraulic power is supplied from a single stage hydraulic pump with an AC electric motor.

## 

Hydraulic fluid escaping under pressure can have enough force to inject fluid into the flesh. Serious infection or reaction will result if medical treatment is not given immediately. In case of injury by escaping hydraulic fluid, seek medical attention at once.

The hydraulic reservoir, pump, and filter are located in the hydraulic cabinet on the right side of the chassis.

#### Fluid Level

To inspect the fluid level:

1. Make sure the aerial platform is fully stowed on a level surface. Open the cabinet and visually check to make sure the fluid is visible on the full/add sticker (refer to Figure 7.4).



Figure 7.4 – Hydraulic Tank

## 

Not all hydraulic fluid is suitable to use in the hydraulic system. Some have poor lubricating characteristics and may increase component wear. Only use hydraulic fluid as recommended.

2. If necessary, add fluid of the proper type.

#### Note

The need to regularly add fluid indicates a leak that should be corrected.

3. Replace the cap making sure it is secured in place.

#### Hoses, Tubes, and Fittings

To inspect the hoses, tubes and fittings:

1. Inspect all hydraulic hoses, tubes, and fittings for wear, leakage, or damage (refer to Figure 7.5).

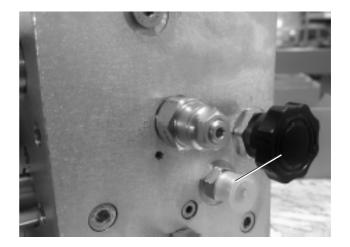


Figure 7.5 – Free Wheeling Valve

- 2. Make sure the hoses are properly routed to avoid sharp edges, kinking, and scuffing.
- 3. Inspect the tubes for dents or other damage that may restrict fluid flow.
- 4. Make sure all hoses and tubes are held firmly in their support brackets.
- 5. Check under the chassis for fluid that has leaked. Hydraulic fluid leaks are easily visible on the ground.

#### **Free-Wheeling Valve**

The free-wheeling valve is on the main manifold in the hydraulic cabinet. (refer to Figure 7.5).

Check the free-wheeling valve to make sure it is in its normal operation position (closed).

#### **Diagnostic Center Display**

To test the diagnostic center display from the lower controls:

- 1. Turn the battery disconnect switch to the on position.
- 2. Pull the emergency stop button outward to the on position.
- 3. The display on the LCD screen should indicate:
  - Ÿ The accumulated aerial platform operating time.

#### **Tires and Wheels**

Visually inspect the tires and wheels (refer to Figure 7.6) to make sure they are suitable for service.



Figure 7.6 – Tires and Wheels

To inspect the tires and wheels:

- 1. Visually inspect the tires. They should be smooth without any cuts, gouges, or missing rubber that might affect aerial platform stability.
- 2. Check the wheels to see that the fasteners are in place and are not damaged or loose.

#### **Lower Control Station**

With no personnel or materials in the platform, test the operation of each control from the lower controls (refer to Figure 7.7).



Figure 7.7 – Lower Controls

#### **Operating Controls**

Use the following procedure to operate and test the machine from the lower controls:

- 1. Turn the battery disconnect switch on.
- 2. Pull the emergency stop switch outward to the on position.
- 3. Switch the control select switch downward in the lower controls position.

### 

Pinch points may exist between moving components. Death or serious injury will result from becoming trapped between components, buildings, structures, or other obstacles. Make sure all personnel stand clear of the aerial platform while performing the prestart inspection.

## AWarning

The potential for an accident increases when operating an aerial platform that is damaged or malfunctioning. Death or serious injury could result from such accidents. Do not operate the aerial platform if it is damaged or malfunctioning.

- 4. Test the operation of the platform raise/lower switch in both directions.
- 5. Place the battery disconnect switch in the off position. The platform should not raise or lower with the disconnect in this position.

#### **Emergency Stop**

To test the emergency stop button from the lower controls:

- 1. Push the emergency stop button inward to turn off electrical power.
- 2. Test the lower control functions to make sure they do not operate with the emergency stop in this position.

#### Lowering Alarm

To test the lowering alarm from the lower controls:

- 1. Raise the platform approximately 10' (3 m).
- 2. Lower the platform and make sure the alarm sounds.

#### **Stabiliser Interlock Test**

Perform this test using the lower controls.

All Snorkel scissor lifts in the Snorkel 'SRT, SR and S/ RT Series are fitted with a very important safety feature, a 'Stabiliser/axle/scissor Interlock' system that prevents the stabilisers being moved while the platform is elevated, and prevents the platform being raised if the rear axle is oscillated and the stabilisers are not set or the machine is tilted.

The correct operation of the Stabiliser/scissor Interlock is critical to ensure that the Scissor is operated safely and with minimum risk.

## 

To ensure the interlock system is functioning correctly before operating the scissor the following test must be carried out prior to operation each day, in conjunction with all other relevant daily pre-operational checks:

#### Stabiliser locked out when platform is elevated test

- 1. Position the machine on a firm level surface.
- 2. From the platform controls, turn on the machine.
- 3. Raise the platform above the elevation switch.
- 4. Operate the right front stabiliser extend switch while watching the stabiliser leg for movement
- 5. If the stabiliser legs moves, release the switch **immediately!** Lower the platform fully, remove the machine from service and fix a Danger Tag warning others that the machine is not to be used. In the first instance contact the owner who will then contact the Snorkel branch or authorised agent to inspect, repair and test the machine before allowing it to be placed back into service.
- 6. Lower the platform to the stowed position

#### Elevation locked out when axles not stowed test

- 7. Park the machine such that one rear wheel is in a depression (approx 100mm deep) such that the axle switch opens. A kerb or gutter may be sufficient.
- 8. Raise the platform above the elevation point (approx 1.5 metres, depending on model).
- 9. At this point, an alarm will sound and further lift or drive will be disabled.
- 10. If there is no alarm and/or the machine continues

to allow lift **stop immediately!** Lower the platform fully, remove the machine from service and affix a Danger Tag warning others that the machine is not to be used. In the first instance contact the Snorkel branch or authorised agent to inspect, repair and test the machine before allowing it to be placed back into service.

- 11. Repeat steps 7-10 for opposite rear wheel.
- 12. Lower the platform to the stowed position.

#### Elevation locked out when tilted test

- Set the machine sideways on a surface of more than 4 degrees and attempt to raise the stack. The tilt sensors should alarm, and the machine should not lift.
- 2. Repeat these steps with the machine facing fore and aft. If the machine does lift, remove from operation, then contact a qualified service technician.
- Set the machine on a surface of less than 4 degrees but more than tilt2 (refer to serial plate under "slope sensor alarm setting side to side") attempt to raise the stack to full height.
- 4. The machine should raise to the height recorded on the serial plate then cut out and the tilt sensors should alarm.
- 5. If the stack raises to full height, remove from operation, then contact a qualified service technician.
- 6. If all steps have been followed and the Stabiliser / Scissor interlock is functioning correctly, the machine can now be used in accordance with the operating instructions provided in the Operators Manual.

#### **Emergency Lowering System**

Use the following procedure to test the emergency lowering system:

## 

Pinch points may exist between moving components. Death or serious injury will result from becoming trapped between components. Stand clear of moving components while test operating the machine.

- 1. Use the lower controls, fully raise the platform. Push the emergency stop button inward.
- 2. The emergency lowering handle is mounted at the rear of the aerial platform (refer to Figure 7.8).



Figure 7.8 – Bleed Down Handle

## 

Pinch points may exist between moving components. Death or serious injury will result from becoming trapped between components. Make sure all personnel stand clear while lowering the platform with the emergency lowering handle.

- 3. Make sure there is nothing in the way to obstruct the platform when it lowers. Stand clear of the scissors structure.
- 4. Stand clear of the scissors structure. Pull outward on the emergency lowering handle at the rear of the machine to lower the platform.
- 5. The platform will begin to lower as the handle is actuated. Release the handle to stop the platform from lowering.

#### Structures

Visually inspect all weldments and related components. It is important to inspect the fasteners that connect the components.

#### Weldments

To inspect the weldments:

- 1. Visually inspect all weldments for abnormal wear, abrasion, or deformation that could cause interference between moving parts.
- 2. Inspect the welds on the structural components. The area to be inspected should be clean and free of dirt and grease.
- Look for visible cracks in the welds and at the weld to parent material joints. A bright light may be used to provide adequate visibility of the inspection area.
- 4. Pay close attention to welds in areas where changes in cross section take place and near the attachment points of highly loaded components.

#### **Rollers and Slide Blocks**

To inspect the rollers and slide blocks:

1. Visually inspect the scissors arm rollers and slide blocks (refer to Figure 7.9). They must be free to move without obstruction. There is one roller and slide block on each side of the chassis.



Figure 7.9 – Scissor Rollers

2. Raise the platform from the lower controls and visually inspect the slide blocks underneath the front of the platform (refer to Figure 7.10). There is one slide block on each side of the platform. The slide blocks must be in good condition and free to move without obstruction.



Figure 7.10 – Slider Blocks

#### Fasteners

To inspect the fasteners:

- 1. Visually inspect all fasteners to see that none are missing or loose.
- 2. Inspect all of the bolts, nuts, rollpins, collars, and snap rings. They should all be present, tight, and not damaged in any way.

#### **Upper Control Station**

Inspect the platform and upper controls only if all functions operated properly from the lower controls.

#### **Guardrail System**

The guardrail system includes (refer to Figure 7.11):

- ÿ A front rail
- γ A mid rail
- ÿ An entry gate
- γ Toeboards around the sides of the platform.



Figure 7.11 – Platform

To inspect the guardrail system:

- 1. Visually inspect all components of the guardrail system. Make sure the rails and toeboards are all in place and free of any damage or deformation.
- 2. Visually check the rail and toeboard welds for cracks.
- 3. Visually check all bolts and nuts fastening the platform and guardrails in place. They must be present and not show any signs of looseness.
- 4. Inspect the entry gate to see that it swings freely and is not deformed in any way. Make sure the door is secure when it is closed.

#### **Platform Extension**

Latch handles on each side of the extension deck secures the extension deck to the main platform deck.

## 

The extension deck is free to move when the extension handle locks are disengaged. Personal injury may result from accidentally extending or retracting the deck. Make certain both extension handle locks are fully engaged when the deck is extended in the working position and when it is stowed. Do not attempt to extend or retract the platform unless the aerial platform is on a level surface.

To inspect the platform extension:

1. Inspect the extension handles and locks (refer to Figure 7.12) on each side of the platform to ensure they release to extend the platform.



Figure 7.12 – Platform Extension Handle

- 2. While facing the front of the platform, grasp the platform extension handles, raise them and push the extension deck forward to extend the deck. Fully lower the handles at the mid or front position and ensure they are locked in their lowered position (refer to Figure 7.12).
- 3. Inspect the rollers on the platform extension. They must be in place, in good condition, and free to move without obstruction.
- Inspect the weldments for deformation and damage. Try to move the rails back and forth to make sure the platform extension deck fully locks in position.
- 5. Visually check the platform welds for cracks.
- 6. While facing the front of the platform, grasp the platform extension handles, raise them and pull the extension deck backward to retract the deck. Fully lower the handles at the stowed position and ensure they are locked in the lowered position (refer to Figure 7.12).
- 7. Make sure the platform extension deck is locked in position.

#### **Operating Controls**

## 

The potential for an accident increases from improperly driving or steering the aerial platform. Death or serious injury could result from such accidents. Make sure the upper control panel is securely fastened inside the platform and facing the front of the machine.

Avoid driving the platform with the upper controls facing the rear or side of the machine. In this position the machine is difficult to control because the drive and steer control movements and their resulting machine movements will not correspond.

Only operate the upper controls when the upper control panel is securely fastened inside the platform and facing the front of the machine.

Use the following procedure to operate and test the machine from the upper controls:

- 1. Make sure the battery disconnect is turned on.
- 2. At the lower controls, pull the emergency stop button outward.
- 3. Turn the control select switch to the upper control position.
- 4. At the upper controls (refer to Figure 7.13), pull the emergency stop button outward, then hold down the choke/glowplug switch for approximately three (3) seconds. Release the choke/glowplug switch and hold down the start switch until the engine starts.



Figure 7.13 – Upper Controls

## 

The potential for an accident increases when operating an aerial platform that is damaged or malfunctioning. Death or serious injury could result from such accidents. Do not operate the aerial platform if it is damaged or malfunctioning.

5. Test the interlock switch by moving the joystick without engaging the interlock switch.

If movement occurs, the interlock is not functioning properly. Do not operate the machine until the problem is corrected.

6. Place the drive/lift selector switch in the drive position and test the operation of the joystick in both directions. The lift functions should not operate with the selector in the drive position.

Squeeze and hold the interlock switch against the joystick. Test the steer switch in both directions using the steering switch.

- Y To steer to the right, hold down the right side of the steer switch.
- Ÿ To steer to the left, hold down the left side of the steer switch.
- 7. Test the operation of the brakes while operating the aerial platform from the upper controls. The brakes are engaged when:

- ÿ the joystick interlock is released.
- $\ddot{\gamma}~$  the drive/lift selector switch is in the lift position.
- $\ddot{\mathbf{Y}}$  the emergency stop button is pushed down.

Placing the drive/lift selector in the drive position, engaging the interlock and moving the joystick, releases the brakes.

8. Place the drive/lift selector switch in the lift position and test the operation of the joystick in both directions. The drive functions should not operate with the selector in the lift position.

Squeeze and hold the interlock switch against the joystick. Test the joystick in both directions.

- Υ To raise the platform, push the joystick forward.
- Ϋ To lower the platform, pull the joystick backward.

#### **Emergency Stop**

To test the emergency stop button from the upper controls:

- 1. Push the emergency stop button inward to turn off all power.
- 2. Verify that the upper control platform and drive functions do not operate.

#### **Horn Button**

The horn is operational when the machine is set up for operation from the upper control panel.

Press the horn button to ensure that it sounds to warn personnel in the area.

#### Lowering Alarm

To test the lowering alarm from the upper controls:

- 1. Raise the platform approximately 10' (3 m).
- 2. Lower the platform and make sure the alarm sounds.

#### **Drive Alarm**

Drive in both the forward and reverse directions to ensure that the alarm sounds to warn personnel in the area that the aerial platform is in motion.

#### **Flashing Light**

The machine may be equipped with an optional flashing light located under the upper control box.

To inspect the flashing light:

- 1. At the lower controls, pull the emergency stop button outward and turn the control select switch to either the lower or upper control position.
- 2. Operate any control function and visually check to see that the light is flashing approximately one flash per second.

#### Note

There is not an off switch for the flashing light.

#### **Placards and Decals**

To inspect the placards and decals:

- 1. Inspect all safety and operational placards and decals. Make certain they are in place, in good condition, and are legible.
- 2. Clean the placards and decals with soap and water, and a soft cloth if the words or pictures cannot be seen.

#### **A**Caution

Solvents may contain hazardous ingredients. Follow the manufacturer's label for proper use and disposal. Wear protective gloves and splash-proof safety glasses when using solvents.

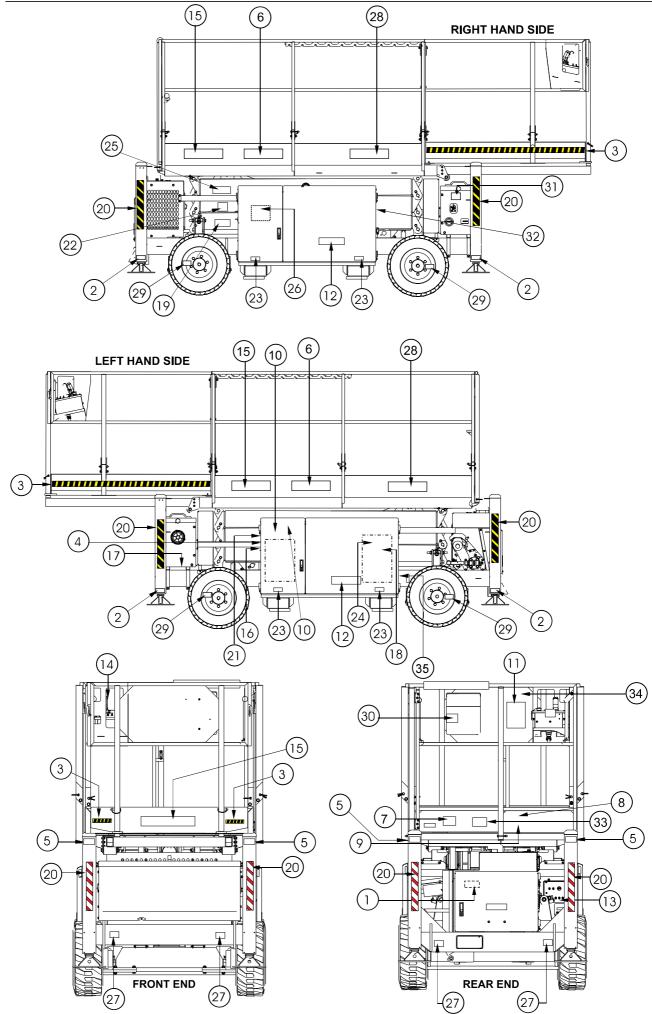
- 3. Remove wet paint overspray with a natural biodegradable solvent and a soft cloth.
- 4. Replace any missing, damaged, or illegible placards or decals before operating the aerial platform.

Placard and decal kits are available from Snorkel.

Safety related placards and decals are illustrated on the following pages. Refer to the appropriate decal page in the machine parts manual for specific operational and safety placards and decals.

## **Placards And Decals**

ltem	Part No	Q†y	Description
	38   4		Decal, Engine Fuse/Relays
2	50 453-000	4	Decal, Foot Crushing Hazard
3	96924-9	4m	Decal, Warning Stripes Yellow/Black
4	2833-4		Decal, Serial Number Plate
5	3	4	Decal, Pinch Point, Small
6	3903-	2	Decal, S2255RT
6	3903- 2	2	Decal, S2755RT
7	2699-		Decal, Rated Load S2255RT
7	12699-8		Decal, Rated Load S2755RT
8	007-3298		Decal, Machine Tip Over Hazard
9	45198-6		Decal, Limit Switch Sign
10	476706	2	Decal, Danger Explosive Fumes
	12574		Decal, Safety Checklist
12	511099-000	2	Decal, Snorkel I50mm High
3	3839-0		Decal, Lower Control Box
4	3838-0		Decal, Upper Control Box
Ι5	5   0 -000	3	Decal, Snorkel 100mm High
16	605726		Decal, Diesel Fuel Only
17	12753		Decal, Emergency Bleed Down
18	12814		Decal, Hydraulic Fluid
19	583656		Decal, Safety Prop Use
20	96924-9	3.6m	Decal, Warning Stripes Yellow/Black
21	300699		Decal, Operators Checklist
22	032-3897		Decal, Must Not Operate
23	621486	4	Decal, Forklift
24	302950		Decal, Hydraulic Oil Level
25	300700		Decal, Beware Descending Platform
26	15078		Decal, Emergency Operation
27	0083427	4	Decal, Lifting/Tie Down
28	511067-000	2	Decal, www.snorkellifts.com
29	0372061	4	Decal, Bolt Torque
30	562426		Decal, Operators Manual Enclosed
31	3089-2		Decal, 24V DC (When 24V Option Fitted)
32	3089-		Decal, Diesel (When 24V Option Fitted)
33	3640-3		Decal, Fall Restraint Point
34	1843		Decal, Keep Clear Of Powerlines
35	0182586		Decal, Noise Level



## **Prestart Inspection Checklist**

Item	Inspect For	P	F	R
Operator's Manual	In manual holder, all pages readable and intact			
Electrical System				
Battery fluid level	Proper level			
Battery terminals	Clean, connectors tight			
Battery charger	Proper operation			
Cables and wiring harness	No wear or physical damage			
Hydraulic System				
Fluid level	Visible on full/add sticker with platform stowed			
Hoses, tubes and fittings	No leaks, all fittings tight			
Free-wheeling valve	In normal operation position, closed			
Diagnostic Center Display	Displays operating time/battery power			
Tires and Wheels	Good condition			
Lower Control Station				
Operating controls	Proper operation			
Emergency stop	Shuts off lower controls/proper operation			
Lowering alarm	Sounds when platform lowers			
Lowering interrupt – CE/AS/NZS	Sounds when platform lowers/proper operation			
Stabiliser Interlock	Proper operation			
Emergency Lowering	Proper operation			
Safety Prop	No damage or deformation			
Flashing Light – option	Proper operation			
Pipe Rack – option	No damage or deformation. Proper operation			
Panel Carrier – option	No damage or deformation. Proper operation			
Snorkel Guard – option	No damage or deformation. Proper operation			
Bumpguard – option	No damage or deformation. Proper operation			
Airline to platform – option	No damage or deformation. Proper operation			
Inverter – option	No damage or deformation. Proper operation			
Structures				
Weldments – Chassis/platform/etc.	Welds intact, no damage or deformation			
Rollers and slide blocks	In place, no damage or deformation			
Fasteners	In place, tight, and no damage			
Upper Control Station				
Guardrail system	Welds intact, no damage or deformation			
	All fasteners in place, no loose or missing parts			
Platform extension/latch handles	Proper operation, no damage or deformation			
Brakes	Proper operation			
Operating controls	Proper operation			
Emergency stop	Shuts off upper controls			
Lowering alarm	Sounds when platform lowers			
Drive motion alarm	Sounds when aerial platform drive function is operated			
Battery condition indicator	Proper operation			
Horn	Sounds when activated			
Placards and Decals	In place and readable			

Maintenance Table Key: P = Pass, F = Fail, R = Repaired

Performed by:

Date:

Model:

Serial Number:\_\_\_\_

The aerial platform may be operated from either the lower or upper controls.

## 

The aerial platform is not electrically insulated. Death or serious injury will result from contact with, or inadequate clearance from, an energized conductor. Do not go closer than the minimum safe approach distance as defined by ANSI or national safety regulations.

Pinch points may exist between moving components. Death or serious injury will result from becoming trapped between components, buildings, structures, or other obstacles. Make sure there is sufficient clearance around the machine before moving the chassis or platform. Allow sufficient room and time to stop movement to avoid contact with structures or other hazards.

The aerial platform can tip over if it becomes unstable. Death or serious injury will result from a tip-over accident. Operate the aerial platform on a firm, flat, level surface. Avoid travel speeds and/or rough terrain that could cause sudden changes in platform position. Do not drive or position the aerial platform for elevated use near any drop-off, hole, slope, soft or uneven ground, or other tip-over hazard. Do not operated the aerial platform in unapproved locations or wind conditions. Do not raise the platform in wind speeds above 28 mph (12.5 m/s).

The platform rated work load is the total weight of the personnel and equipment that may be lifted in the platform.

The work loads are stated on the platform rating placard at the entrance to the platform.

## 

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.

Capacity values indicate the rated lifting capacity and do not indicate aerial platform stability.

The operator bears ultimate responsibility for ensuring that the aerial platform is properly set up for the particular conditions encountered.

#### **Preparing for Operation**

Use the following procedure to prepare the aerial platform for operation:

- 1. Perform a prestart inspection (refer to Chapter 7).
- 2. Place the battery disconnect switch in the on position.
- 3. Close the cabinet doors if they are open.

#### **Lower Controls**

Only the platform raise and lower functions may be operated from the lower controls. The lower controls may be used for initial set up of the aerial platform, and for testing and inspection.

Use the following procedure to raise or lower the platform using the lower controls.

1. Pull the emergency stop button outward (refer to Figure 8.1).

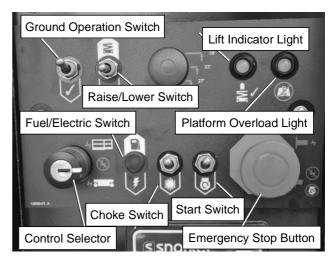


Figure 8.1 – Lower Controls

- 2. Insert the key into the control selector switch and turn the switch to the lower controls position.
- 3. Hold down the choke/glowplug switch for approximately three (3) seconds. Release the choke/ glowplug switch and hold down the start switch until the engine starts.
- 4. Hold the ground operation switch and hold the platform raise/lower toggle switch up to raise the platform and down to lower it.
- 5. Release either switch to stop movement.

#### **Upper Controls**

The upper controls may be used for driving and positioning the aerial platform while on the job.

Before operating the upper controls, properly set up the aerial platform as described under Preparing for Operation.

Use the following procedure to operate the aerial platform from the upper controls:

- 1. From the lower controls, pull the emergency stop button outward (refer to Figure 8.1).
- 2. Insert the key into the control selector switch and turn the switch to the upper controls position.

Note

The upper controls will not operate while the control selector is in the lower position.

- 4. Enter and exit the platform using three points of support. Grasp the handrails, not the doors, with one hand on each side. Use two hands and one foot on the step when climbing into and out of the platform.
- 5. From the upper controls, pull the emergency stop button outward (refer to Figure 8.2).

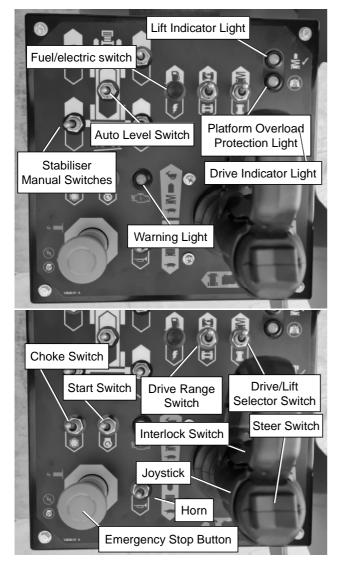


Figure 8.2 – Upper Controls

 hold down the choke/glowplug switch for approximately three (3) seconds. Release the choke/ glowplug switch and hold down the start switch until the engine starts.

Push the emergency stop button inward when the upper controls are not in use to protect against unintentional operation.

## 

Pinch points may exist between moving components. Death or serious injury will result from becoming trapped between components, buildings, structures, or other obstacles. Maintain at least 39" (1 m) clearance around the machine before moving the chassis or platform. Allow sufficient room and time to stop movement to avoid contact with structures or other hazards.

#### Platform

Use three points of support when entering or exiting the platform. Grasp the handrails, not the doors, with one hand on each side. Use two hands and one foot on the step when climbing into and out of the platform.

Use care when entering and exiting the platform to avoid slipping and/or falling. Securely close the entry doors when the platform is occupied.

## 

The potential for an accident increases when the fold down rails are lowered. Death or serious injury will result in such accidents. Do not elevate the platform with the fold down rails lowered. Use extreme care when moving the aerial platform while the fold down rails are lowered.

If the machine is equipped with fold down guardrails, be sure they are up and their hardware is securely tightened, anytime the machine is not being transported.

#### **Raising and Lowering**

The raise speed is proportional to the joystick position. The farther the joystick is moved, the faster the platform raises. There is only one lowering speed.

- 1. Place the drive/lift selector switch (refer to Figure 8.2) in the lift position.
- 2. Squeeze and hold the interlock switch against the joystick.
  - Ϋ To raise the platform, slowly push the joystick forward until the desired height is reached.
  - Ϋ To lower the platform, pull the joystick backward.

#### Lowering Interrupt – CE/AS/NZS

When the platform is lowered to about 6' (1.8 m) 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 joystick position.

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

When the platform is below 6' (1.8 m) 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.

#### 

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 6' (1.8 m), 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 6' (1.8 m) 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.

#### Extending

The platform can be extended and securely locked into position.

Use the following procedure to extend the platform:

1. Enter the platform and secure the doors.

## 

The extension deck is free to move when the extension handle locks are disengaged. Personal injury may result from accidentally extending or retracting the deck. Make certain both extension handle locks are fully engaged when the deck is extended in the working position and when it is stowed. Do not attempt to extend or retract the platform unless the aerial platform is on a level surface.

2. While facing the front of the platform, grasp the platform extension handles, raise them and push the extension deck forward to extend the deck. Fully lower the handles at the mid or front position and ensure they are locked in their lowered position (refer to Figure 8.3).



Figure 8.3 – Platform Extension Handle

3. Try to move the rails back and forth to make sure the platform extension deck is locked in position.

Use the following procedure to retract the platform:

1. Enter the platform and secure the doors.

## 

The extension deck is free to move when the extension handle locks are disengaged. Personal injury may result from accidentally extending or retracting the deck. Make certain both extension handle locks are fully engaged when the deck is extended in the working position and when it is stowed. Do not attempt to extend or retract the platform unless the aerial platform is on a level surface.

- 2. While facing the front of the platform, grasp the platform extension handles, raise them and pull the extension deck backward to retract the deck. Fully lower the handles at the stowed position and ensure they are locked in the lowered position (refer to Figure 8.3).
- 3. Try to move the rails back and forth to make sure the platform extension deck is locked in position.

#### Fold Down Guardrails

The platform may have fold down guardrails to pass the machine under low height obstructions.

## 

The potential for an accident increases when the fold down rails are lowered. Death or serious injury will result in such accidents. Do not elevate the platform with the fold down rails lowered. Use extreme care when moving the aerial platform while the fold down rails are lowered.

Use the following procedure to lower the platform guardrails.

- 1. Remove all materials from the platform floor.
- 2. Remove the pins from the top rail at the rear of the platform. Remove the pins from the bottom of the uprights at the rear of the platform and fold the doors/ rails forward to the floor of the platform.
- 3. Remove the pins from the top rail at the front of the platform. Fold the rails backward to the floor of the platform.
- 4. Remove the pins from the bottom of the extension deck uprights on the right side of the platform. Fold the right side guardrails to the floor of the platform.
- 5. Remove the pins from the bottom of the main deck uprights on the right side of the platform. Fold the right side guardrails to the floor of the platform.
- 6. Remove the pins from the bottom of the extension deck uprights on the left side of the platform. Fold the left side guardrails to the floor of the platform.
- 7. Remove the pins from the bottom of the main deck uprights on the left side of the platform. Fold the left side guardrails to the floor of the platform.
- 8. Reverse this procedure to reposition the rails.

#### **Driving and Steering**

## 

The aerial platform can tip over if it becomes unstable. Death or serious injury will result from a tip-over accident. Do not drive an elevated aerial platform on soft, uneven, or sloping surfaces. Do not drive on grades that exceed 35 percent.

A fully stowed machine may be operated on grades up to 35 percent.

## 

Death or serious injury could result from improperly driving or steering the aerial platform. Read and understand the information in this manual and on the placards and decals on the machine before operating the aerial platform on the job.

Use the following procedure to operate the drive and steer functions.

- 1. Place the drive/lift selector switch (refer to Figure 8.2) in the drive position.
- 2. Squeeze and hold the interlock switch against the joystick.
- 3. Push the drive joystick forward to move the chassis forward. Pull the joystick backward to move the chassis backward. The drive speed is proportional to the joystick position.
- 4. To stop drive motion, return the joystick to neutral.

#### Note

To make an emergency stop push the emergency stop button inward to apply the parking brakes.

- The steer switch is a momentary contact, rocker switch on top of the drive joystick. This switch controls the two front wheels to steer the aerial platform.
  - Y To steer to the right, hold down the right side of the steer switch.
  - Υ To steer to the left, hold down the left side of the steer switch.

#### Note

Holding the steer switch down too long may result in a sharp turn. This is especially true when driving and steering at the same time. It may be easier to turn the wheels in small increments using a series of quick taps on the steer switch.

6. Set the steer wheels straight ahead after completing a turn. The steering wheels are not self-centering.

#### **Drive Range Switch**

The drive range switch has two positions to select drive wheel operation:

ÿ High (Rabbit) – for normal driving conditions.

Y Low (Turtle) – for driving on grades up to 35 percent that require low speed and high torque operation, where high range is not sufficient to climb the grade.

In high the machine will travel up to 3.3 mph(5.2 km/h) when the platform is raised less than 8' (2.4 m) and up to 0.4 mph (0.64 km/h) when the platform is raised above 8' (2.4 m). Place the drive range switch in high for normal machine operation.

### 

The extension deck is free to move when the extension handle locks are disengaged. Personal injury may result from accidentally extending or retracting the deck. Make certain both extension handle locks are fully engaged when the deck is extended in the working position and when it is stowed. Do not attempt to extend or retract the platform unless the aerial platform is on a level surface.

Place the drive range switch in low, with the platform fully lowered and the extension deck locked in the stowed position, before driving up a ramp to load the machine for transport.

If driving the machine, come to a complete stop before switching from Low to High drive range.

#### **Drive Speeds**

The drive speed is proportional to the joystick position. The farther the joystick is moved, the faster the travel speed.

Always slow down before traveling over rough terrain or any sloped surface.

Drive speed ranges are interlocked through limit switches that sense the platform position.

- $\ddot{y}$  When the platform is elevated below approximately 6' (1.8 m) the aerial platform may be driven with the full range of drive speeds.
- $\ddot{\gamma}$  When the platform is elevated above 6' (1.8 m) only the slowest drive speed will work.

## 

The potential for an accident increases when safety devices do not function properly. Death or serious injury could result from such accidents. Do not alter, disable, or override any safety device.

Do not use the aerial platform if it drives faster than 0.4 mph (0.64 km/h), which is 7' 7" (5.3 m) in 30 seconds, when elevated above 6' (1.8 m).

#### **Drive/Lift Pothole Protector Interlock**

The aerial platform drive and lift functions are interlocked through a limit switch 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 6' (1.8 m). 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 is engaged.

#### **Drive/Lift Level Sensor Interlock**

When the platform is elevated above 6' (1.8 m), drive and lift functions are interlocked through a level sensor system.

The drive and lift functions will not operate and an alarm will sound if the chassis is tilted more than the factory preset level sensor value. The setting for the degree of slope, side-to-side and front-to-rear, varies depending on the requirements of the applicable governing body (ANSI, CSA, CE, AS, NZS) that the machine was manufactured to conform to.

Refer to the machines General Specifications for the drive/ lift level sensor interlock level sensor values.

If the drive/lift level sensor interlock shuts off the platform raise and drive functions, lower the platform and drive to a level surface.

#### **Electrical Power Outlet**

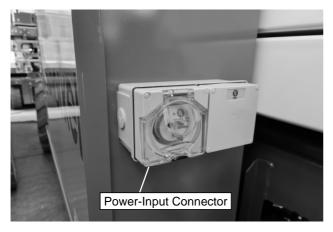


Figure 8.4 – Rear of Chassis

To use the outlet, plug a source of power into the power-input connector. Unplug the source of power before moving the aerial platform.

#### After Use Each Day

- 1. Ensure that the platform is fully lowered.
- 2. Park the machine on a firm level surface, preferably under cover, secure against vandals, children and unauthorized operation.
- 3. Turn the controls selector switch to OFF and remove the key to prevent unauthorized operation.

#### Stabilisers

The platform must be fully lowered to enable the stabilisers to operate.

Once the platform is raised the stabilisers cannot be set or adjusted.

Before operating the stabilisers check to see that the ground conditions under the four (4) stabiliser pads is firm, stable and unobstructed.

## 🛦 Danger

If the platform is up and the ground compresses unevenly under different stabiliser pads the machine might fall over causing serious injury or death. Check the level bubbles frequently during operation. If any movement of the bubble(s) occurs, immediately lower the platform and readjust the stabilisers to re-center the bubble(s) in the markers.

When using the stabilisers always check that all four (4) are firmly on the ground and that they are clear of manhole covers, drains, etc, which may collapse. If the ground is at all soft, suitable dunnage should be placed under the feet to spread the weight. If you are at all unsure regarding the load bearing situation consult a competent person.

## A DANGER

Death or serious injury can result if the machine tips over. Do not use the stabilisers to gain extra working height, they are not designed for that purpose. At least one (1) of the stabilisers should raise the S2255RT/S2755RT above the ground. Use the other three (3) to level the machine as necessary.

The S2255RT/S2755RT will not drive unless all four (4) stabilisers are completely raised i.e. If any one (1) of the stabilisers is even slightly lowered the drive function is disabled.

#### **Operating The Stabilisers Manually**

#### To set the stabilisers

Ϋ The engine must be running and the machine set for platform control box operation.

#### Note

In order to operate any of the stabilisers you must squeeze the interlock switch at the same time as you operate the individual stabiliser switches.

You must do this when raising or lowering the stabilisers.

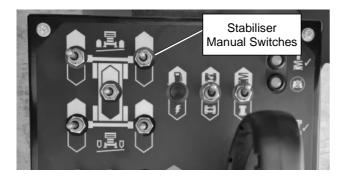


Figure 8.5 – Stabiliser Manual Switches

Pull and hold the stabiliser switches backward one at a time, until all four stabiliser pads contact the ground (see figure 8.5).



Figure 8.6 – Level Bubble

Y Visually check the level bubble to determine which stabilisers must be further extended to level the platform (see figure 8.6).

#### Note

When the bubbles are in the center of the marks the platform is level.

V Lower the appropriate stabilisers just enough to center the bubbles (see figure 8.6). When the lift indicator light (see figure 8.7) comes on, the platform can be safely raised.



#### Figure 8.7 – Stabiliser Manual Switches

#### To raise the stabilisers:

Completely lower the platform. Then push and hold the stabiliser switches forward until all the stabilisers are completely up.



Figure 8.8 – Auto Level Switch

#### **Operating the Auto Level System**

#### Setting the stabilisers automatically

Ϋ The engine must be running and the S2255RT/ S2755RT set for platform control box operation.

#### Note

In order to operate the Auto Level stabiliser switch you must squeeze the joystick trigger at the same time as you operate the Auto Level switch.

You must do this when raising or lowering the stabilisers.



Figure 8.9 – Auto Level Switch

- Press and hold the switch down to the Auto Level position until all movement stops of the lift enable light illuminates. The S2255RT/S2755RT will attempt to automatically level itself.
- Y The lift enable light will illuminate if all 4 feet are in contact with the ground and the machine is level.
- i If a stabiliser foot will not go down sufficiently to make contact with the ground it is possible that the cylinder has reached the end of its stroke. Retract all stabilisers and put suitable dunnage under the feet that did not touch the ground and repeat the second step.

#### Note

Manual or auto leveling is possible any time that stabiliser movement is allowed. For example, the machine can be manually leveled part way and then auto leveled without the necessity of retracting the stabilisers between the two (2) operations.

#### Raising the stabilisers automatically

- Ϋ́ Completely lower the platform.
- Ϋ Press and hold the switch up to the Auto Stow position. The stabilisers will raise to the stowed position.

## The Risks of Operating Scissor Lifts On Outriggers on Ramps and Slopes

There is a risk of scissor lifts with outriggers sliding down ramps, driveways, underground car park entry ramps and outdoor slopes. The contributing factors include newly painted ramps, icy, wet oil and sand covered ramps, grassy and loose surface slopes.

This can occur when the platform is fully lowered or when elevated.

Do not attempt to pack wheel chocks or timber under the outrigger footplates or the tyres.

The outrigger foot plates must be lowered only onto a firm surface that can support the load of the S2255RT/S2755RT and its rated capacity.

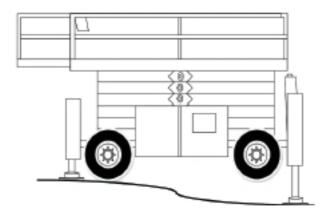


Figure 8.10 – Stabilisers

The positioning of outrigger footplates on stepped level surfaces (capable of supporting the S2255RT/ S2755RT) is acceptable (see figure 8.10 & 8.11)

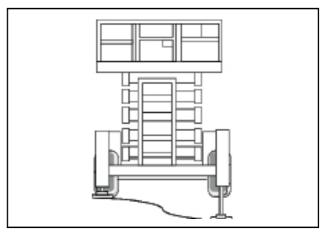


Figure 8.11 – Level Machine

The positioning of outrigger footplates on ramps and slopes creates the risk of the machine sliding down the ramp or slope (see figure 8.12 & 8.13).

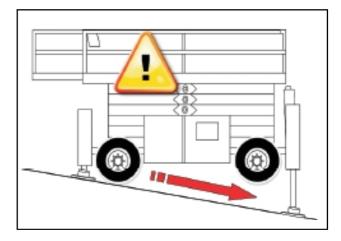


Figure 8.12 – Machine On Slope

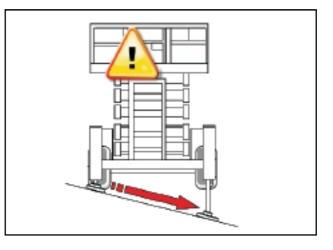


Figure 8.13 – Machine On Slope

A competent person shall assess slope and surface conditions before setting up the machine on a slope.

## **Snorkel OnSite**

Snorkel OnSite is powered by Trackunit telematics. On-Site provides real-time access to machine information such as machine status (on/off), hours, location, and battery level. This data can help identify usage and maintenance trends to maximize operator efficiency. An optional keypad may be used to limit access to only authorized personnel by PIN code or RFID card.

For more information, please refer to the Trackunit information provided with the machine. For Trackunit Technical Support email <u>supportus@trackunit.com</u> or phone 1-844-661-0340. When contacting Trackunit Technical Support, have the Trackunit serial number, (7 digits starting with 3) available to aid in troubleshooting. The serial number can be found on the fleet list or under Fleet/Unit Page/Telematics tab. To prevent unauthorized use and damage, properly stow the aerial platform at the end of each work day. It must also be properly stowed while transporting.

#### Stowing

Use the following procedure to properly stow the aerial platform.

## 

The extension deck is free to move when the extension handle locks are disengaged. Personal injury may result from accidentally extending or retracting the deck. Make certain both extension handle locks are fully engaged when the deck is extended in the working position and when it is stowed. Do not attempt to extend or retract the platform unless the aerial platform is on a level surface.

- 1. Fully retract the platform extension deck and ensure that it is secured in position, with the latch handles fully lowered and the locks fully engaged.
- 2. Fully lower the platform.
- 3. Push the emergency stop button inward on the lower control panel.
- 4. Turn the battery disconnect switch off and lock it.
- 5. Securely close the cabinet doors.

#### Transporting

The aerial platform may be moved on a transport vehicle. Depending on the particular situation, the aerial platform may be lifted with a forklift, driven, winched, or hoisted onto a vehicle such as a truck or trailer. Lifting with a forklift is the preferred method.

The equipment used to load, unload, and transport the aerial platform must have adequate capacity. The empty vehicle weight is listed in Chapter 2 and is stamped on the serial number placard.

The user assumes all responsibility for:

- Ϋ́ Choosing the proper method of transportation.
- Ϋ Choosing the proper selection and use of transportation and tie-down devices.
- Ϋ Making sure the equipment used is capable of supporting the weight of the aerial platform.
- Waking sure all manufacturer's instructions and warnings, regulations and safety rules of their employer, the DOT, and/or any other state or federal law are followed.

#### Lifting With a Forklift

Use the following procedure to lift the aerial platform with a forklift.

- 1. Properly stow the aerial platform.
- 2. Remove all personnel, tools, materials, or other loose objects from the platform.

3. Insert the forklift forks into the pockets at either side of the machine (refer to Figure 9.1).



Figure 9.1 – Forklift Pockets

4. Do not raise the aerial platform higher than necessary to transport it. Drive the forklift slowly and carefully when transporting the aerial platform.

#### Winching

Use a winch to load and unload the aerial platform on ramps that exceed the machine gradeability specification. A winch may also be used when poor traction, uneven surfaces, or stepped ramp transition make driving hazardous.

Use the following procedure to winch the aerial platform onto the transport vehicle.

- 1. Locate the transport vehicle so the aerial platform will not roll forward after it is loaded.
- 2. Remove any unnecessary tools, materials, or other loose objects from the platform.
- 3. Drive the machine to the foot of the loading ramp with the front wheels nearest the ramp. Make sure the machine is centered with the ramps and that the steering wheels are straight.
- 4. Attach the winch to the tie-down lugs (refer to Figure 9.2) on the front of the chassis by looping the chain or cable through the hole in the chassis and back out in between the chassis and the front axle.



Figure 9.2 – Front Tie-Down/Lifting Lugs

#### Driving

## 

The aerial platform can tip over if it becomes unstable. Death or serious injury will result from a tipover accident. Do not drive on ramps that exceed the machine gradeability specification, or where conditions of the ramp could cause driving to be hazardous.

Use a winch to load and unload the aerial platform on ramps that exceed the machine gradeability specification. A winch may also be used when poor traction, uneven surfaces, or stepped ramp transitions make driving hazardous.

Drive the aerial platform onto the transport vehicle if a winch is not available and the ramp incline is within the 35 percent grade capability of the aerial platform.

Use the following procedure to drive the aerial platform onto the transport vehicle.

- 1. Position the transport vehicle so the aerial platform will not roll forward after it is loaded.
- 2. Chock the vehicle wheels so it cannot roll away from the ramp while the aerial platform is loaded.
- 3. Remove any unnecessary tools, materials, or other loose objects from the platform.

## 

The extension deck is free to move when the extension handle locks are disengaged. Personal injury may result from accidentally extending or retracting the deck. Make certain both extension handle locks are fully engaged when the deck is extended in the working position and when it is stowed. Do not attempt to extend or retract the platform unless the aerial platform is on a level surface.

- 4. Fully retract the platform extension deck and ensure that it is secured in position, with the latch handles fully lowered and the locks fully engaged. Fully lower the platform.
- 5. Drive the aerial platform to the foot of the loading ramp with the rear wheels nearest the ramp. Make sure the aerial platform is centered with the ramps and that the steering wheels are straight.
- 6. Place the drive range switch in low (turtle) for climbing or descending a ramp.
- 7. Drive the aerial platform on or off the transport vehicle in a straight line through the grade transitions with minimal turning.

## 

Pinch points may exist between moving components. Death or serious injury will result from becoming trapped between components, buildings, structures, or other obstacles. Make sure there is sufficient clearance around the machine before moving the chassis. Allow sufficient room and time to stop movement to avoid contact with structures or other hazards.

#### Note

To make an emergency stop push the emergency stop button inward to apply the parking brakes.

#### Hoisting

Use a four point sling arrangement attached to the lifting lugs when hoisting the aerial platform. Machine damage can occur if the sling is attached anywhere else.

## 

The potential for an accident increases when the aerial platform is lifted using improper equipment and/or lifting techniques. Death or serious injury could result from such accidents. Use proper equipment and lifting techniques when lifting the aerial platform.

Know the weight of the aerial platform and the capacity of the lifting devices before hoisting.

- Ifting devices include the hoist or crane, chains, straps, cables, hooks, sheaves, shackles, slings, and other hardware used to support the machine.
- Y The empty vehicle weight is stamped on the serial number placard and is listed in Chapter 2.

The user assumes all responsibility for:

- γ Making sure the equipment used is capable of supporting the weight of the aerial platform.
- Y Making sure all manufacturer's instructions and warnings, regulations and safety rules of their employer and/or any state or federal law are followed.

Use the following procedure to hoist the aerial platform onto the transport vehicle:

- 1. Properly stow the aerial platform.
- 2. Inspect the front lifting lugs and the rear lifting lugs to make sure they are free of cracks and are in good condition. There are two lugs on the rear of the chassis and two on the front (see figure 9.3). Have any damage repaired by a qualified service technician before attempting to hoist the machine.



Figure 9.3 – Lifting Lug Points

- 3. Remove all personnel, tools, materials, or other loose objects from the platform.
- 4. Connect the chains or straps to the lifting lugs using bolted shackles. Hooks that fit properly in the lugs and that have latching mechanisms to prevent them from falling out under a slack line condition may also be used.

Do not run the sling cable through the lifting lugs.

- Ϋ Cable damage and/or failure can result from the cable contacting the sharp corners of the lug.
- Ϋ There is no effective way of putting a corner protector in the hole of the lug.
- 5. Use spreader bars of sufficient length to keep the chains, straps, or cables from contacting the scissors structure or platform.
  - When using cables, use rigid corner protectors at any point where the cable contacts on sharp corners to prevent damaging the cable.
  - Ϋ Careful rigging of the spreaders is required to prevent machine damage.
- 6. Adjust the length of each chain or strap so the aerial platform remains level when raised off the ground.
- 7. Use the hoist or crane to carefully raise and position the aerial platform onto the transport vehicle.

#### **Securing for Transport**

Use the following procedure to secure the aerial platform on the transport vehicle.

- 1. Chock the wheels.
- 2. Remove all personnel, tools, materials, or other loose objects from the platform.
- 3. Properly stow the aerial platform.
- 4. Place wood blocks under the front ends of the pothole protection skids to limit excessive loading on the front drive wheel bearings.
- 5. Place the lower controls emergency stop switch in the off position.

6. Turn the battery disconnect switch off.

## 

Ratchets, winches, and come-alongs may produce enough force to damage machine components. Do not over tighten the straps or chains when securing the aerial platform to the transport vehicle.

7. Use chains or straps to securely fasten the aerial platform to the transport vehicle using the front and rear tie-down lugs as attachment points. Proper tie-down and hauling is the responsibility of the carrier.

#### Storage

No service is required when storing, or removing the machine from service, for less than one week.

If the machine functions are not cycled for longer than one week:

- ÿ Grease exposed cylinder rods with a light, white lithium grease.
- γ Periodically charge the batteries.

If the main hydraulic system fails:

- Ϋ The aerial platform may be lowered using the emergency lowering handle.
- Υ The machine may be towed if the drive system fails.
- i Refer to Emergency Lowering, or Towing for the appropriate procedure.

#### **Emergency Lowering**

Use the following procedure to operate the emergency lowering system.

## 

The potential for an accident increases when safety devices do not function properly. Death or serious injury could result from such accidents. Immediately push the emergency stop button inward to disable the control system before using the emergency lowering system in the event of an emergency.

- Immediately push the emergency stop button inward to disable the control system in the event of an emergency.
- 2. Retract the platform extension, if possible.
- 3. The emergency lowering handle for the machine is mounted at the rear of the aerial platform (refer to Figure 10.1).

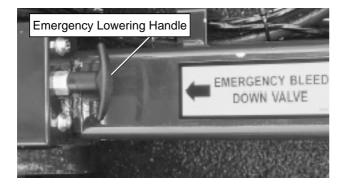


Figure 10.1 – Rear of Machine

## 

Pinch points may exist between moving components. Death or serious injury will result from becoming trapped between components. Make sure all personnel stand clear while lowering the platform with the emergency lowering system.

- 4. Make sure there is nothing in the way to obstruct the platform when it lowers.
- 5. Stand clear of the scissors structure.
  - Ϋ Pull outward on the emergency lowering handle at the rear of the machine to lower the platform.
- The platform will begin to lower as the handle is actuated. Release the handle to stop the platform from lowering.

## 

The potential for an accident increases when safety devices do not function properly. Death or serious injury could result from such accidents. Fully close the emergency lowering valve before operating the aerial platform.

7. Make certain the handle is fully released and the emergency lowering valve is fully closed before operating the aerial platform.

#### Towing

The aerial platform may be pushed or pulled after properly stowing the aerial platform and disengaging the brakes. Use the following procedure to manually disengage the brakes.



#### Figure 10.2 – Battery Disconnect Switch

 $\ddot{Y}$  Turn the battery switch to off (see figure 10.2).



Figure 10.3 – Lower Controls

Ϋ At the ground control box set the emergency stop switch to off, turn the main power switch off and remove the key (see figure 10.3).

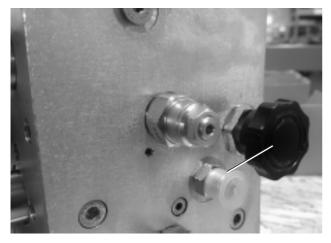


Figure 10.4 – Free Wheeling Valve

Y Inside the hydraulic compartment, open the freewheeling valve by turning it counterclockwise until the knob stops (see figure 10.4).

## A Danger

A runaway S2255RT / S2755RT can cause death or serious injury. At the next step the S2255RT / S2755RT brakes will be released. Do not proceed to the next step unless the machine is on a level surface or the machine is securely attached to another vehicle that has the capacity to safely control the machine on a grade.

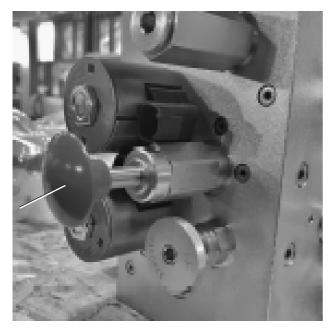


Figure 10.5 – Hand Pump

V Close the brake release valve by turning the knob clockwise fully. Pump the hand pump till it is firm or till the brakes are released. The machine is now ready to be pushed or towed.

## **A** Caution

The S2255RT / S2755RT drive motors will be ruined if the machine is pushed (or pulled) faster than 2 mph (3.2 km/h). Unless personnel safety considerations dictate otherwise, do not push (or pull) faster then 2 mph (3.2 km/h).

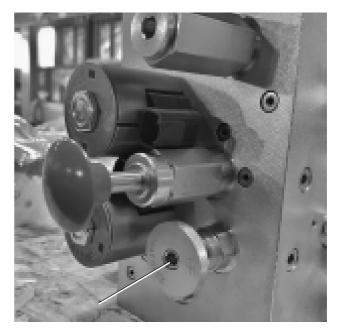


Figure 10.6 – Brake Release Valve

i Once the unit has been safely pushed / towed open the brake release knob by turning it counterclockwise and close the free wheel valve fully (see figure 10.4).

The unit is now ready for normal operation.

## Chapter 11 – Troubleshooting

The troubleshooting chart may be used to locate and eliminate situations where machine operation may be interrupted. If the problem cannot be corrected with the action listed, stow the machine and remove it from service. Repairs must be made by qualified maintenance personnel.

## **Troubleshooting Chart**

Symptom	Possible Cause	Corrective Action
All functions stop working.	Motor or pump failure.	Manually stow the machine using the emergency lowering handle.
	Low fluid level in reservoir.	Check hydraulic fluid level. Add correct type of fluid if necessary.
	Batteries discharged.	Recharge batteries.
	Electrical system malfunction.	Stow the machine and do not operate until repairs are made.
Platform will not raise or lower from lower controls.	Control select/ground operation switch is in the upper control or the off position.	Place the switch in the lower control position.
	Battery disconnect is turned off.	Place the switch in the on position.
	Emergency stop button is pushed inward to the off position.	Pull the emergency stop button outward to the on position.
	Emergency lowering handle is not properly disengaged.	Make sure the handle returns to the normal operating position.
Platform will not raise or lower from upper controls.	Drive/lift selector is in the drive position.	Place switch in the lift position.
	Emergency lowering handle not properly disengaged.	Make sure the handle returns to the normal operating position.
Platform will not raise and alarm is sounding.	Machine is not on a level surface.	Lower the platform and drive to a level surface.
Platform will not raise, or raises slower than normal.	Emergency lowering handle not properly disengaged.	Make sure the handle returns to the normal operating position.
	Platform capacity has been exceeded.	Remove load from platform. Refer to platform capacity placard for maximum capacity.
Platform drifts down.	Emergency lowering handle not properly disengaged.	Make sure the handle returns to the normal operating position.
	Hydraulic system malfunction.	Stow the machine and do not operate until repairs are made.
Platform will not lower.	Safety prop in place.	Stow the safety prop.
Platform will not extend.	Extension handle is not fully en- gaged, releasing the lock.	Lift both extension handles firmly to fully disengaged the locks, before extending the platform.
Drive functions don't work.	Drive/lift selector is in the lift position.	Place the switch in the drive position.
	Machine is not on a level surface or too steep a grade.	Lower the platform and drive to a level surface.
	Free-wheeling valve is open	Fully close the free-wheeling valve.
	Load capacity exceeded.	Remove load from platform. Refer to platform capacity placard for maximum capacity.
	Low hydraulic system pressure.	Stow the machine and do not operate until repairs are made.

Symptom	Possible Cause	Corrective Action
Machine will not climb a 35 percent grade.	Drive range selector is not in the low position.	Place the switch in the low (turtle) position.
Only slow drive speed works.	Platform elevated above 7 to 8 feet (2.1 to 2.4 m).	Normal operation, lower platform to drive machine at faster speed.
	Drive range selector is in the low (turtle) position.	Place the switch in the high (rabbit) position.
Machine will not steer.	Joystick interlock switch not engaged.	Engage the interlock switch before op- erating the steer switch.
Wheels won't turn when winching or pushing.	Brakes are engaged.	Manually release the brakes using the hand pump. Refer to Towing, Chapter 10.
	Free-wheeling valve not in proper position	Refer to Winching, Chapter 9.
Tilt alarm does not work.	Platform is not raised more than 6' (1.8 m).	Normal operation. The tilt alarm is not active until the platform is raised more than 6' (1.8 m).
Battery charger does not indi- cate a reading when charging batteries.	No source of power.	Make sure power source is plugged in and turned on.
	Faulty batteries or charger.	Stow the machine and do not operate until repairs are made.
Hydraulic fluid temperature of 160°F (71°C) or more.	Prolonged driving or platform op- eration.	Stop operation until fluid cools.
	High pressure fluid return to res- ervoir caused by kinked or twisted hose.	Remove the kink or twist from the hose. Let fluid cool before resuming operation.
	Hydraulic system component failure.	Stow the machine and do not operate until repairs are made.
Severe hydraulic leak.	Failure of hose, tube, fitting, seal, etc.	Stow the machine and do not operate until repairs are made.

## Appendix A – Glossary

**aerial platform** – a mobile device that has an adjustable position platform, supported from ground level by a structure.

ambient temperature - the air temperature of the immediate environment.

**authorized personnel** – personnel approved as assigned to perform specific duties at a specific location.

**base** – the relevant contact points of the aerial platform that form the stability support (e.g. wheels, casters, stabilizers).

**battery tray** – a swing-out compartment that holds all, or some, of the machine batteries.

**center of gravity** – the point in the aerial platform around which its weight is evenly balanced.

chassis – the integral part of the aerial platform that provides mobility and support for the scissors structure.

**control valve tray** – a swing-out compartment that holds the control valve, freewheeling valve, hand pump, and the diagnostic display.

**fall protection** – a system to protect against falls that may include either a fall restraint or personal fall arrest system as required by national or local regulations and standards.

**fall restraint** – a system that is used while working on a boom lift within the boundaries of platform guardrails to provide restraint from being projected upward from the platform. This system includes a harness or belt, lanyard, and a lanyard anchor. Although federal regulations, OSHA, ANSI, and Snorkel do not require the use of additional fall protection beyond the platform guardrails on scissor lift aerial platforms, local, state, or employer rules may require their use.

floor or ground pressure – the maximum pressure, expressed in pounds per square inch, a single wheel concentrates on the floor or ground.

**free-wheeling valve** – a needle valve that, when adjusted open, allows hydraulic fluid to flow through the wheel drive motors. This allows the aerial platform to be pushed or towed without damage to the drive motors.

gradeability - the maximum slope that the aerial platform is capable of travel.

ground fault circuit interrupter (GFCI) – a fast-acting circuit breaker that opens to stop electrical circuit flow if it senses a very small current leakage to ground. The GFCI is used to protect personnel against a potential shock hazard from defective electrical tools or wiring.

guardrail system – a vertical barrier around the platform to prevent personnel from falling.

hazardous location – any location that contains, or has the potential to contain, an explosive or flammable atmosphere as defined by ANSI/NFPA 505.

**hydraulic tray** – a swing-out compartment that holds the hydraulic pump, fluid reservoir and the fluid filter.

**level sensor** – a device that detects a preset degree of variation from perfect level. The level sensor is used to sound an alarm if operating on a slope greater than the preset value.

**lower controls** – the controls located at ground level for operating some or all of the functions of the aerial platform.

**manufacturer** – a person or entity who makes, builds or produces an aerial platform.

**maximum travel height** – the maximum platform height or the most adverse configuration(s) with respect to stability in which travel is permitted by the manufacturer.

**maximum wheel load** – the load or weight that can be transmitted through a single wheel to the floor or ground.

MEWP - Mobile Elevating Work Platform.

**Minimum Safe Approach Distance (M.S.A.D.)** – the minimum safe distance that electrical conductors may be approached when using the aerial platform.

**operation** – the performance of any aerial platform functions within the scope of its specifications and in accordance with the manufacturer's instructions, the users work rules, and all applicable governmental regulations.

operator - a qualified person who controls the movement of an aerial platform.

**personal fall arrest system** – a fall protection system that is used while working on an unprotected edge (such as a roof top with no guardrail). This system includes a harness, lanyard or other connecting device, a fall arrestor, an energy absorber or decelerator, an anchorage connector, and a secure anchorage such as a building beam, girders or columns. An aerial platform is not a fall arrest anchorage.

**platform** – the portion of an aerial platform intended to be occupied by personnel with their tools and materials.

**platform height** – the vertical distance measured from the floor of the platform to the surface upon which the chassis is being supported.

**pothole protection interlock** – a safety feature that sounds an alarm and automatically stops the platform raise function if the pothole protection skids are prevented from lowering properly.

**pothole protection system** – a mechanical tip-over prevention system consisting of skids along the bottom of both sides of the chassis which lower as the platform is raised.

**prestart inspection** – a required safety inspection routine that is performed daily before operating the aerial platform.

**qualified person** – a person, who by reason of knowledge, experience, or training is familiar with the operation to be performed and the hazards involved.

**rated work load** – the designed carrying capacity of the aerial platform as specified by the manufacturer.

**safety prop** – a bar that when properly positioned mechanically prevents the platform from lowering.

stow - to place a component, such as the platform, in its rest position.

**turning radius** – the radius of the circle created by the wheel during a 360° turn with the steering wheels turned to maximum. Inside turning radius is the wheel closest to the center and outside turning radius is the wheel farthest from the center.

**unrestricted rated work load** – the maximum designed carrying capacity of the aerial platform allowed by the manufacturer in all operating configurations.

**upper controls** – the controls located on or beside the platform used for operating some or all of the functions of the aerial platform.

wheelbase – the distance from the center of the rear wheel to the center of the front wheel.

**working envelope** – the area defined by the horizontal and vertical limits of travel that the platform may be positioned in.

working height - platform height plus six feet (1.8 meters).



	<b>DECLARATION OF CONFORMITY</b> This declaration is issued under the sole responsibility of the manufacturer			
Manufacturer's Name and Full Address	835	el International LLC 50 Eastgate Road son, NV 89015 USA		
Description and Identification of the Ma	achinery			
Product Description	Mobile elevating work	blatform		
Model	S2255RT , S2755RT			
Serial Numbers	XXXXXX(manufacturer)–(YYMM)-(5-digit sequential starting at 00001)			
This machinery conforms to all the requirements of the Machinery Directive 2006/42/EC		inery Directive 2006/42/EC		
This machinery also conforms to the following Directives	EMC Directive 2014/30/EU			
The following standards have been used	EN 12100: 2010, EN 280: 2013 + A1: 2015, EN 60204-1: 2018			
The machinery has been examined by	(E) Kuiper Certificering	Kuiper Certificering B.V. Van Slingelandt- straat 75, 7331 NM Apeldoorn, The Netherlands		
Notified Body Number	2842			
Certificate Number	KCEC4485			
Name and address of the person au- thorised to compile the technical file (based in the European Community)	Snorkel Europe Ltd Vigo Centre, Birtley R 9DA, UK	oad, Washington, Tyne & Wear, NE38		
Authorised Representative	Snorkel Europe Ltd Vigo Centre, Birtley Road, Washington, Tyne & Wear, NE38 9DA, UK			
Name	Jason Moody			
Function	Head of Engineering	Head of Engineering		
Place of Declaration	Snorkel Europe Ltd Vigo Centre, Birtley R 9DA, UK	oad, Washington, Tyne & Wear, NE38		

Appendix B – EC Declaration of Conformity

## **Appendix C – Inspection Checklists**

## **Prestart Inspection Checklist**

Item	Inspect For	P	F	R
Operator's Manual	In manual holder, all pages readable and intact			
Electrical System				
Battery terminals	Clean, connectors tight			
Cables and wiring harness	No wear or physical damage			
Hydraulic System				
Fluid level	Visible on full/add sticker with platform stowed			
Hoses, tubes and fittings	No leaks, all fittings tight			
Free-wheeling valve	In normal operation position, closed			
Tires and Wheels	Good condition			
Lower Control Station				
Operating controls	Proper operation			
Emergency stop	Shuts off lower controls/proper operation			
Lowering alarm	Sounds when platform lowers			
Lowering interrupt – CE/AS/NZS	Sounds when platform lowers/proper operation			
Emergency Lowering	Proper operation			
Safety Prop	No damage or deformation			
Flashing Light – option	Proper operation			
Pipe Rack – option	No damage or deformation. Proper operation			
Panel Carrier – option	No damage or deformation. Proper operation			
Snorkel Guard – option	No damage or deformation. Proper operation			
Bumpguard – option	No damage or deformation. Proper operation			
Airline to platform – option	No damage or deformation. Proper operation			
Inverter – option	No damage or deformation. Proper operation			
Structures				
Weldments – Chassis/platform/etc.	Welds intact, no damage or deformation			
Rollers and slide blocks	In place, no damage or deformation			
Fasteners	In place, tight, and no damage			
Upper Control Station				
Guardrail system	Welds intact, no damage or deformation			
	All fasteners in place, no loose or missing parts			
Platform extension/latch handles	Proper operation, no damage or deformation			
Brakes	Proper operation			
Operating controls	Proper operation			
Emergency stop	Shuts off upper controls			
Lowering alarm	Sounds when platform lowers			
Drive motion alarm	Sounds when aerial platform drive function is operated			
Battery condition indicator	Proper operation			
Horn	Sounds when activated			
Placards and Decals	In place and readable			

#### Maintenance Table Key: P = Pass, F = Fail, R = Repaired

Performed by:\_\_\_\_\_

Model:\_\_\_\_

\_\_\_\_\_Date:\_\_\_\_\_

\_\_\_\_\_ Serial Number:\_\_\_\_

## Frequent Inspection and Maintenance – Every 90 Days or 150 Hours

Item	Procedure	Information	P/F/
Electrical System			
Batteries	Clean terminals, check electrolyte	Add distilled water	
	levels and cable connections	if necessary	
Cables and wiring harness	Check for wear and damage	,	
Battery charger	Check for proper operation	Ensure batteries are fully charged	
Hydraulic System			
Hydraulic fluid condition	Visually inspect a sample taken from	Above 10°F (-12°C)	
	the center of the reservoir. Do a lab test	ISO VG32	
	if necessary. Flush system and replace	Below 10°F (-12°C)	
	fluid as necessary.	ISO VG15	
Fluid reservoir	Check for leaks		
Return filter	Replace after the first 50 hours, every		
	90 days or 150 hours thereafter		
	Inspect filter for foreign matter that		
	could indicate component wear		
Hoses, tubes, and fittings	Check for leaks, blistering, cracks, etc.		
Fluid level	Fill with proper fluid, visible in sight	See above	
	glass/on dipstick with platform stowed		
Filler cap	Check for wear and securely fasten		
Free-wheeling valve	Fully closed		
Motor and pump assembly	Check for damage and leaks		
motor and pump assembly	Check for proper operation		
Structures			
Weldments	Check for damage and cracked welds		
Slide pads/blocks	Check for wear and proper operation	Do not lubricate	
Fasteners	Verify that all fasteners are in place		
	and are tight		
Scissor pins/king pins	Check for damage and cracked welds		
Wheels and Tires	Check for wear and damage		
	Retorque castle nuts to 250 ft lb		
Steering Cylinder – Fasteners	Check for cylinder damage and leaks		
and Linkage	Check for proper operation		
Scissor Structure	Check for damage and cracked welds		
Pivot pins, snap rings, bolts	Check for wear and damage, or		
and nuts	missing components		
Lift cylinder and valves	Check for wear/damage/leakage and		
Lift Cylinder and valves	proper operation		
Emergency lowering valve	Check for proper operation		
	Check for leaks, blistering, cracks, etc.		
Hoses, tubes, and fittings			_
Cables and wiring harness	Check for wear and damage		
Safety prop	Check for damage and deformation		
Parking Brakes	Check for leaks and proper operation		
			_
			_

## Frequent Inspection and Maintenance – Every 90 Days or 150 Hours

Item	Procedure	Information	P/F/R
Cabinets			
Hinges and latches	Check for damage and proper operation		
Placards and Decals	<b>.</b>		
	Check for damage and readability		
	Order replacements as necessary	Refer to Parts Manual	
Operator's Manual	Proper manual in document holder		
Platform	•		
Guardrail system	Welds intact, no damage or deformation		
	All fasteners in place, no loose or		
	missing parts		
Platform floor	Check for damage and deformation		
	Clean to prevent slip and fall hazards		
Platform extension	Check for damage and deformation		
	Smooth operation		
	Check for proper operation of		
	latch handles		
Swing-down rails-if equipped			
	and that the rails fold down properly.		
Entry doors	Check for damage and deformation		
	Check for proper operation		
Lanyard anchors	Check for wear and damage		
Emergency Lowering System	Check for proper operation		
Lower Controls			
Operating controls	Check for smooth operation and	Refer to Operator's Manual	
- p	proper speed	for function speeds	
Emergency stop	Shuts off power to lower controls		
Lowering alarm–if equipped	Verify that alarm sounds while the		
g a.a	platform is lowering		
Lowering interrupt – CE only	· · ·		
	when it reaches about 1.8 m (6')		
Control selector switch	Check for proper operation	In the lower controls position,	
		the upper controls should not	
		be functional.	
Lift capacity	Check lift function at maximum	Maximum Load	
Entoupuoky	load capacity	S2255RT 420kg (925lbs)	
	loud oupdoily	S2755RT 300kg (660lbs)	
	While the platform is loaded, raise	If the cylinder or holding	
	the platform and with a pen, mark the	valve leaks, remove the	
	chassis next to the slide pad. Mark on	machine from service and	
	the side of the pad toward the front	correct the cause of the	
	of the chassis. Wait for 15 minutes to	hydraulic leak before further	
	determine if the lift cylinder is drifting.	operation.	
	If the slide pad covers the mark, the		
	-		
	cylinder or holding valve is leaking.		

## Frequent Inspection and Maintenance – Every 90 Days or 150 Hours

ltem		Procedure	Information	P/F/R
	Overload system test CE machines only Battery disconnect switch	Check the lift function at 120% maxi- mum load capacity. Start the test with the platform fully lowered. Verify that the lift function cuts out automatically, the alarm sounds and the red light on the control panel flashes before the platform reaches an elevation of approximately 1.8 m (6'). Shuts off all controls	120% Maximum Load S2255RT 420kg (925lbs) S2755RT 300kg (660lbs)	
Uppe	er Controls			
	Operating controls Parking brakes Emergency stop Lowering alarm–if equipped	Check for smooth operation and proper speed Proper operation Shuts off power to upper controls Verify that alarm sounds while the		
	Drive motion alarm	platform is lowering		
	–if equipped	Verify that alarm sounds while chassis is in motion		
	Electrical power outlet	Check for proper operation of outlet and GFCI		
	Travel speed	Verify proper travel speed Low speed 0.4 mph (0.64 km/h) High speed 3.3 mph (5.2 km/h)		
	Horn Battery condition indicator	Check for proper operation Check for proper operation		
Optic	•			
	Flashing light	Check for proper operation		
Roug Test	Jh Terrain Scissor Interlock	All Snorkel scissor lifts in the Snorkel 'SRT, SR and S/RT Series are fitted with a very important safety feature, a 'Stabiliser/axle/scissor Interlock' system that prevents the stabilisers being moved while the platform is elevated, and prevents the platform being raised if the rear axle is oscil- lated and the stabilisers are not set or the machine is tilted. The correct operation of the Stabi- liser/scissor Interlock is critical to ensure that the Scissor is operated safely and with minimum risk.		
		A DANGER To ensure the interlock system is functioning correctly before op- erating the scissor the following test must be carried out prior to operation each day, in conjunction with all other relevant daily pre-op- erational checks: Stabiliser locked out when plat- form is elevated test the stowed position. (Continued on to next page)		

## Frequent Maintenance – Every 90 Days or 150 Hours

lter	n Procedure Information	P/F/R
Ro	ugh Terrain Scissor Interlock Test	
1.	Position the machine on a firm level surface.	
2.	From the platform controls, turn on the machine.	
3.	Raise the platform above the elevation switch.	
4.	Operate the right front stabiliser extend switch while watching the stabiliser leg for movement	
5.	If the stabiliser legs moves, release the switch <b>immediately!</b> Lower the platform fully, remove the machine from service and fix a Danger Tag warning others that the machine is not to be used. In the first instance contact the owner who will then contact the Snorkel branch or authorised agent to inspect, repair and test the machine before allowing it to be placed back into service.	
6.	Lower the platform to the stowed position	
Ele	vation locked out when axles not stowed test	
7.	Park the machine such that one rear wheel is in a depression (approx 100mm deep) such that the axle switch opens. A kerb or gutter may be sufficient.	
8.	Raise the platform above the elevation point (approx 1.5 metres, depending on model).	
9.	At this point, an alarm will sound and further lift or drive will be disabled.	
10.	If there is no alarm and/or the machine continues to allow lift <b>stop immediately!</b> Lower the plat- form fully, remove the machine from service and affix a Danger Tag warning others that the ma- chine is not to be used. In the first instance contact the Snorkel branch or authorised agent to inspect, repair and test the machine before allowing it to be placed back into service.	
11.	Repeat steps 7-10 for opposite rear wheel.	
12.	Lower the platform to the stowed position.	
Ele	vation locked out when tilted test	
13.	Park the machine on ground known to exceed the tilt limit specified on the serial plate.	
14.	Raise the platform above the elevation point (approx 1.5 meters depending on model).	
15.	At this point, an alarm will sound and further lift or drive will be disabled.	
16.	If there is no alarm and/or the machine continues to allow lift <b>stop immediately!</b> Lower the plat- form fully, remove the machine from service and affix a Danger Tag warning others that the ma- chine is not to be used. In the first instance contact the owner who will then contact the Snorkel branch or authorized agent to inspect, repair and test the machine before allowing it to be placed back into service.	
17.	Lower the platform to the stowed position.	
18.	If all steps have been followed and the Stabiliser / Scissor interlock is functioning correctly, the machine can now be used in accordance with the operating instructions provided in the Operators Manual.	

Maintenance Table Key: P = Pass, F = Fail, R = Repaired

Performed by:\_\_

Date: \_\_\_\_\_

Annual Maintenance – Every 500 Hours

ltem		Procedure	Information	P/F/R
Frequent	Maintenance Checklist	Complete Frequent Maintenance		
Hydraulic	c System			
H	ydraulic fluid condition	Drain, flush, and clean hydraulic system. Refill with new fluid.	Above 10°F (-12°C) ISO VG32	
			Below 10°F (-12°C) ISO VG15	
R	eturn filter	Replace	Refer to Parts Manual for filter part number	
S	ystem pressures	Check system relief pressure	System Relief Pressure 3,200 to 3,300 psi (220 to 228 bar)	

Maintenance Table Key: P = Pass, F = Fail, R = Repaired

Performed by:\_\_\_\_\_

Date: \_\_\_\_\_

# **Snorkel**

# **Snorkel Product Warranty Policy**

- 1. Snorkel warrants, its authorized sales and service centers (herein referred to as "SSC"), each new machine manufactured and sold by it to be free from defects in material and workmanship for a period of two (2) years from date of delivery to any customer. The warranty will apply subject to the machine being operated in accordance with the rules, precautions, instructions and maintenance requirements outlined in the relevant Snorkel Operator and Parts/Service manuals. Snorkel further warrants the structural components, specifically the mainframe chassis, turntable, booms and/or scissor arms of each new machine manufactured by it to be free from defects in material and workmanship for an additional period of three (3) years. Any such part or parts which, upon examination by the Snorkel Warranty Department or appointed representative, are found to be defective will be replaced or repaired by Snorkel through local authorized Dealers. The structural warranty specifically excludes adverse effects on the machine structure arising from damage, abuse or misuse of the equipment.
- 2. Machines may be held in an authorized Distributor/ SSC's stock for a maximum period of six (6) months from the date of shipment from Snorkel, before the warranty period is automatically initiated on each machine.
- 3. It is the responsibility of the Distributor/SSC to complete and return to Snorkel a Pre-delivery Inspection Record, Warranty Registration Form, before the act of rental / loan / demonstration of the machine or delivery to an end user. In the case of direct sale to end customers the same responsibility lies with the end customer.
- 4. Any end customer, SSC, distributor or dealer shall not be entitled to the benefits of this warranty and Snorkel shall have no obligations here under unless the "Pre-Delivery and Inspection Record" has been properly completed and returned to the Snorkel Warranty department within fifteen (15) days after delivery of the Snorkel product to the Customer or Dealer's demonstration / rental fleet. Snorkel must be notified, in writing, within ten (10) days, of any machine sold to a Customer from a Dealer/SSC's rental fleet during the warranty period.
- 5. Any part or parts which upon examination by the Snorkel Product Support Department are found to be defective within the specified warranty period, will be replaced or repaired at the sole discretion of Snorkel through its loca Authorized Distributor/SSC, at no charge. Any parts replaced under warranty must be original Snorkel parts obtained through an authorized Snorkel Distributor/SSC unless expressly agreed otherwise in writing and in advance by Snorkel's warranty department.
- 6. All parts claimed under warranty must be held available for return and inspection upon request for a period of 90 days from date of claim submission, it is necessary that all parts are individually tagged or marked with their part number and the warranty claim number. All parts returning should be still in a factory state, free of any alteration to the original design. If the parts are subject to repair it will need to be pre authorized by the Snorkel Product Support Group and or Warranty Department prior to the repair being completed. After 90 days all parts replaced under warranty which have not been returned, to Snorkel should be destroyed. Failure to produce parts requested by the Warranty Administrator for inspection within a period of 14 days will result in the claim being automatically rejected

in full. Materials returned for warranty inspection must have the following procedure:

- $\tilde{\mathbf{Y}}$  Carefully packaged to prevent additional damage during shipping
- $\tilde{\boldsymbol{\gamma}}$  Drained of all contents and all open ports capped or plugged
- $\tilde{\boldsymbol{\gamma}}$  Shipped in a container tagged or marked with the RMA number
- γ Shipped PREPAID (ground service only). Any item(s) returned for warranty by any other means
- $\ddot{\gamma}$  may be refused and returned, unless prior approval is agreed with Snorkel.

# **Snorkel**

## **Snorkel Product Warranty Policy**

- 7. At the direction of the Snorkel Warranty department, any component part(s) of Snorkel products to be replaced or repaired under this warranty program must be returned freight prepaid for inspection. An RMA (Returns material authorization) must be requested from Snorkel Warranty department, a copy to be placed with the returning component part(s).
- 8. All warranty replacement parts will be shipped freight prepaid (standard charges, ground shipping only) from the Snorkel Parts department, Service Department or from the Vendor to Dealer/SSC or Customer. Any other shipping method is the customer responsibility.
- 9. All warranty claims are subject to approval by Snorkel Service department. Snorkel reserves the right to limit or adjust claims with regard to defective parts, labor or travel time based on usual and customary guidelines.
- 10. Reimbursement policy, labor will be paid at 75% of posted hourly shop rate. Travel time will be paid at \$50 per hour up to a maximum of 3 hours. Snorkel will pay 1 hour of troubleshooting time per warranty claim, unless expressly agreed otherwise in writing and in advance by Snorkel's Warranty Department. An annual rate declaration must to be supplied to the Snorkel Warranty administrator by January 31st and will be used as the reimbursable rate for that calendar year.

#### **REPLACEMENT PARTS WARRANTY**

- Ϋ Any part replaced under this limited warranty is not subject to further warranty cover beyond the normal warranty period of the machine upon which the part was installed.
- Y Any replacement parts sold (not delivered under a warranty claim) will be subject to a warranty period of (6) six months from the date of invoice.
- Parts held by an authorized Distributor/SSC are covered under warranty for a period of (12) twelve months from the date of invoice, provided that those parts have been subject to appropriate storage to prevent damage and deterioration (conditional on Snorkel review).

#### **CLAIM PROCEDURE**

The Snorkel Warranty department must be notified within forty-eight hours (48) of any possible warranty situation during the applicable warranty period. Personnel performing major warranty repair or parts replacement must obtain specific approval by the Snorkel Warranty department prior to performing the warranty repair or replacement.

When a Distributor/SSC/Customer perceive a warranty issue to exist the following steps must be adhered to:

- γ Customer/SSC/Distributor to place a purchase order for genuine Snorkel replacement parts.
- Y Snorkel to dispatch parts via the requested method (in line with the required response time).
- Confirmation that a qualified technician is available to replace the part and that this person has been accepted by Snorkel to carry out such work under the warranty of the machine. Failure to do this may nullify the warranty.
- γ Customer/SSC/Distributor to allocate a warranty claim number to the repair.
- Y All correspondence in respect of the claim to be on an official Snorkel warranty claim form as supplied by Snorkel's warranty department.
- Y All warranty claims must be submitted within 30 days of the date of the machine repair.

#### FREIGHT DAMAGE

- Y If a machine is received in a damaged condition, then the damage must be noted on the bill of lading and/or delivery documents and photographs must be taken at the point of delivery, prior to signing acceptance of the consignment.
- Y The freight company and Snorkel must be contacted by the Distributor and a damage claim registered by either party immediately.
- Y The above requirements apply only to freight damage associated with equipment supplied by Snorkel transport. Customer freight issues are excluded from this warranty policy.

# **Snorkel**

# **Snorkel Product Warranty Policy**

#### THIS PRODUCT WARRANTY POLICY SPECIFICALLY EXCLUDES:

- 1. Engines, motors, tires and batteries are manufactured by specialist suppliers to Snorkel, who furnish their own warranty policies. Snorkel will, however, to the extent permitted pass through any such warranty protection to the Distributor/SSC/Customer.
- 2. Any Snorkel product which has been modified or altered outside Snorkel factories without written approval, if such modification or alteration, in the sole judgment of Snorkel Engineering and/or Service Departments, adversely affects the stability, reliability or service life of the Snorkel product or any component thereof.
- 3. Any Snorkel product which has been subject to misuse and abuse, improper maintenance or accident. "Misuse" includes but is not limited to operation beyond the factory-rated load capacity and speeds. "Improper maintenance" includes but is not limited to failure to follow the recommendations contained in the Snorkel Operation, Maintenance, and repair Parts Manuals.
- 4. Normal wear of any Snorkel component part(s). Normal wear of component parts may vary with the type, application or type of environment in which the machine may be used; such as, but not limited to sandblast-ing applications.
- 5. Routine maintenance, routine maintenance items and minor adjustments are not covered by this warranty, including but not limited to hydraulic fluid, filters and lubrication, paint and decals, engine tune-up, brake adjustments etc. Snorkel will not cover leaks from fittings, hoses and any other connection points after the unit has been in service for 90 days or 150 hours of operation which ever comes first.
- 6. Any Snorkel product that has come into direct contact with any chemical or abrasive material.
- 7. Incidental or consequential expenses, losses, or damages related to any part or equipment failure, including but not limited to freight cost to transport the machine to a repair facility, downtime of the machine, lost time for workers, lost orders, lost rental revenue, lost profits, expenses or increased cost. This warranty is expressly in lieu of all other warranties, representations or liabilities of Snorkel, either expressed or implied, unless otherwise amended in writing by Snorkel.
- 8. Snorkel warranty policy does not cover any duties, taxes, environmental fees including without limitation, disposal or handling of tires, batteries and petrochemical items.
- 9. Items specifically excluded are: fuel injectors, motor brushes, glow plugs, contactor tips and springs, filters, lamp bulbs, lamp lenses, coolants, lubricants, brake pads and cleaning materials.
- 10. Failure of replacement parts due to fault misdiagnosis or incorrect fitting by the Distributor/SSC/Customer.

SNORKEL MAKES NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION OF THIS LIMITED WAR-RANTY. SNORKEL MAKES NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND DISCLAIMS ALL LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO INJURY TO PERSONS OR PROPERTY.



## **Snorkel Product Warranty Policy**

Wherever possible the end customer shall obtain all warranty support and make all warranty claims through the local Snorkel authorized Distributor/SSC/Dealer. Warranty support should be from the Distributor/SSC/Dealer from whom the Snorkel product was purchased. Where Snorkel equipment is supplied directly from the factory the end customer, or if unable to contact the Distributor/SSC/Dealer, may contact the Snorkel Warranty Department for further assistance.

#### APPEAL

The buyer may appeal in writing against a rejected or adjusted claim to Snorkel warranty department within a period of 21 days of receiving the rejection or adjustment notice. The appeal should be grounded on express reasons and supported by relevant evidence. Appeals received outside of this time limit will not be considered.

#### SNORKEL WARRANTY SCHEDULE

Warranty Period
2 year parts replacement
5 years parts replacement or repair
12 months from date of invoice, subject to adequate storage/protection
6 months from date of invoice
6 months from warranty registration
Not covered by Warranty

#### Limited Warranty Periods

Manufacturer's Address Snorkel International LLC 8350 Eastgate Road Henderson, NV 89015 USA

Authorised Representative Snorkel Europe Ltd Vigo Centre, Birtley Road Washington, Tyne & Ware, NE38 9DA, UK

Local Distributor / Lokaler Vertiebshändler / Distributeur local El Distribuidor local / Il Distributore locale

> EUROPE, MIDDLE EAST AFRICA & ASIA PHONE: +44 (0) 845 1550 058 FAX: +44 (0) 845 1557 756

NORTH & SOUTH AMERICA PHONE: +1 785 989 3000 TOLL FREE: +1 800 255 0317 FAX: +1 785 989 3070

AUSTRALIA PHONE: +61 1300 700 450 FAX: +61 2 9609 3057

NEW ZEALAND PHONE: +64 6 3689 168 FAX: +64 6 3689 164

