

134 Ogilvie Avenue, Echuca 3564

# Plant Risk Assessment

## Battery powered Slab Scissorlift type Elevating Work Platform

For the following Snorkel models :

S1930, SL20, SL25, SL15, SL19, S2033, S2545, S2646, S3219, S3226E, S3246, S1932, S1930W, S2633

This Hazard Identification & Risk Assessment has been prepared based on several key assumptions:

1. That all examples of these models currently in service are as per their original specification

2. That all examples of these models have not been modified in any way without prior written consent of the manufacturer

3. That all examples of these models are operated and maintained in accordance with the Manufacturer's Instructions and with all applicable statutory requirements

This Hazard Identification & Risk Assessment document has been prepared based on information available at the time of publication and must be reviewed by all stakeholders as required:

o Having regard to the manufacturers approved options

- o Having regard to the general arrangement of miscellaneous equipment or facilities that may be provided on the plant according to the end users requirements or specification
- o According to the particular circumstances under which the plant is used and maintained
- o As new Hazards are identified and/or as risks are reassessed
- o As existing risk control measures are revised or new risk control measures are introduced and implemented
- o As and when work procedures are altered or revised
- o Having regard to any unauthorised alterations or modifications made to the design or operation of the equipment

Northern Hire Group Pty Ltd have made every attempt to identify all reasonably foreseeable operating circumstances in preparing this Assessment, however no guarantee as to the completeness of this Assessment is provided or implied.

It is the responsibility of Owners, Employers and Operators to identify all hazards associated with the use of this equipment specifically applicable to the task to be carried out and to where the equipment is to be used or located. They must assess the risk potential for each of the identified hazards and ensure that all reasonably practicable steps are taken to ensure those risks are effectively controlled.

\*All operators must be trained and competent in the safe use of this particular piece of equipment, and hold appropriate qualifications as required by applicable regulatory requirements \*Operators of the equipment to which this Plant Risk Assessment refers must read and understand the Instructions for Use and Warnings contained within the Operators Manual prior to use \*All Daily Pre-Start Checks, Routine and Periodic Inspections, Maintenance and Repairs to this equipment must be carried out in accordance with the requirements of AS2550.10-2006



## PLANT TYPE:

Battery Powered Slab Scissorlift type Elevating Work Platform

ABN: 64 604 387 671

Applicable Models: S1930, SL20, SL25, SL15, SL19, S2033, S3219, S2545, S2646, S3246, S1932, S1930W, S2633

HAZARD DESCRIPTION	RISK	PRACTICABILITY	RISK C	CONFIRMATION	
GENERAL HAZARDS	ASSESSMENT	Is it practicable to remove or mitigate the risk?	RISK CONTROL MEASURES ALREADY IMPLEMENTED (by Designer, Manufacturer, Importer, Distributor)	SUPPLEMENTARY RISK CONTROL (for action by Management - the person, company or entity legally responsible for the use of the equipment)	Has the necessary action been completed?
Injury - due to use of machine not suitable for the task, and/or operating the equipment without sufficient instruction, training, information or supervision	High	Yes	Operators Manual provides detailed information on use of the machine, including all limitations and associated hazards and risks. Manual warns of use by inexperienced or untrained operators	Prepare a documented system of work ensuring all modes of operation of the machine are covered. Train and instruct the operator, and ensure the Operators Manual is with the machine at all times	
Injury as a result of site specific hazards	High	Yes	General requirements, warnings and list of site specific hazards is detailed in the Operators Manual	Ensure Operators are able to identify all site specific hazards they may encounter and implement actions to ensure they are addressed by appropriate means	
Injury due to inappropriate and/or unauthorised use	High	Yes	Warnings in Operators Manual of the dangers of 'horseplay' and to secure the machine against unauthorised use at the end of each shift. Unit is fitted with a keyswitch for security.	Ensure only trained Operators use the machine and ensure the machine is secured before leaving unattended - remove the key. Do not leave platform elevated when unattended without considering potential wind forces	
Persons injured due to missing, damaged or illegible safety decals and labels	Moderate	Yes	Pre-operational Inspection includes check of decals and Operators Manual provides pictures of each decal for identification	Ensure Pre-operational Inspection is carried out as per manufacturers instructions and is recorded in the Logbook provided on the machine. Maintain/replace decals as req'd	
Persons injured due to unrecognised hazards	Moderate	Yes	Preliminary hazard identification is provided in the Operators Manual	Ensure a specific hazard and risk assessment is carried out relevant to the task and environment, prior to operation of this piece of equipment. Ensure all appropriate risk control measures are implemented and adhered to	
Due to failure to observe or rectify safety upgrades from the manufacturer	Low	Yes		Ensure the owner of the machine is registered with the manufacturer. Periodically check with the manufacturer for the existence of any safety related bulletins or notifications or upgrades and ensure they are implemented. Ensure the manufacturer is notified when the machine is disposed of.	
Persons could be injured if the unit is operated by persons under the influence of drugs and/or alcohol.	High	Yes	AS2550.10 – 2006 clause 5.2 (p) states that personnel shall not be under the influence of drugs or alcohol.	Ensure that operators do not use the aerial device while under the influence of alcohol or drugs.	



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HAZARD DESCRIPTION	RISK	PRACTICABILITY	RISK C	ONTROL
GENERAL HAZARDS (continued)	ASSESSMENT	Is it practicable to remove or mitigate the risk?	RISK CONTROL MEASURES ALREADY IMPLEMENTED (by Designer, Manufacturer, Importer, Distributor)	SUPPLEMENTARY RISK CONTROL (for action by Management - the person, company or enti responsible for the use of the equipment)
Persons could be injured if the operator's performance is inhibited by poor health or medication with side effects.	High	Yes		Instruct the operator that he/she must report to the supervisor if suffering poor health and safe operat performance could be affected.
Persons could be injured if the operator's performance was inhibited by excessive fatigue.	High	Yes		Implement a system to ensure that operators do nexcessive or continuous shifts and manage peak
Persons could be injured if the operator's vision is impaired by sunlight or bright lights in close proximity.	Moderate	Yes		Instruct the operator to in relation to the sighting o
Persons could be injured if the unit is operated during storms.	High	Yes		Ensure that the unit is not operated during storms storms may arise when carrying out the required t applies to machines designed to be used outdoor
Persons could be injured if the unit is operated indoors without adequate ventilation.	High	Yes	Operators Manual contains warning regarding running the engine and/or charging batteries in well ventilated area	Ensure the unit is operated only in well ventilated
Persons could be injured if equipment is operated while not wearing appropriate PPE.	Moderate	Yes	Requirement specified in AS2550.10. Warning in Operators Manual regarding wearing PPE appropriate to the task and environment	Provide specification for appropriate PPE includin safety glasses, hard hat and safety footwear etc a appropriate. Instruct operators on requirements fo Ensure PPE is inspected and certified on a routine
Persons could be injured due to exposure to UV.	Moderate	Yes		Develop and provide specification for appropriate protection and its use. Provide UV protective equi and instruct operators on the requirements for its

Failure of hydraulic cylinder of hose Low Yes requirements. Load holding valves are fitted to cyclinders. are carried of does not made to cyclinders.   resulting in uncontrolled platform Low Yes requirements. Load holding valves are fitted to cyclinders. are carried of does not made to cyclinders.   novement Injury as a result of high pressure oil jet from hydraulic leak Low Yes Operators Manual contains warning to be aware of this Ensure that hazards	
from hydraulic leak Low Yes Operators Manual contains warning to be aware of this hazards	re-operational and routine maintenanc out. Withdraw machine from service if intain selected height or if hydraulic le
Hydraulic filters are fitted. Maintenance manuals detail	personnel are properly trained and aw
Uncontrolled movement due to contamination of hydraulic systemLowYesService intervals for hydraulic filters and hydraulic oil replacementEnsure Main	itenance manual requirements are ca

ELECTRICAL HAZARDS				
Persons could be injured due to contact with or approach to live electrical apparatus	Moderate	Yes	Idistances Decais titled to platform advise minimum	Ensure all persons understand and observe the lir approach. Use only trained and qualified operators
Electric shock due to fault with AC power supply	Moderate	YAS		Ensure that AC power supplies are appropriately p and checked in accordnace with legislative require

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HAZARD DESCRIPTION	RISK	PRACTICABILITY	RISK C	ONTROL
STRUCTURAL FAILURE	ASSESSMENT	Is it practicable to remove or mitigate the risk?	RISK CONTROL MEASURES ALREADY IMPLEMENTED (by Designer, Manufacturer, Importer, Distributor)	SUPPLEMENTARY RISK CONTROL (for action by Management - the person, company or entit responsible for the use of the equipment)
Machine could collapse due to design or manufacturing fault	Low	Yes	with requirements of AS1418.10. Design is registered with	Carry out all Pre-operational safety checks. Routir Periodic Maintenance as required by AS2550.10-2 be carried out by a competent person. Periodically with the manufacturer and industry bodies for the of any Safety Alerts or Service Bulletins.
Structural failure due to overloading	High	Yes	Structure complies with AS1418.10. Hydraulic system relief valve prevents lift if platform is overloaded. Decals on platform show maximum capacity. Operators Manual contains warnings against overloading	Ensure machine is only operated within the specif and operating parameters detailed in Operators M and in accordance with industry standards and reg compliance with AS2550:10-2006. Ensure machin operated by trained personnel
Structural failure due to dynamic loading, or accidental impact with adjacent structures	Moderate	Yes	speeds and all controls return to neutral when released.	Ensure the machine is not operated near drop-offs Ensure function speeds do not exceed the specific out in the Operators Manual. Only trained and exp Operators are to use the machine
Structural failure due to loose or missing pivot pins, retainers and fasteners	High	Yes	Pre-Operational checks detailed in Operators Manual include inspection of these components	Ensure that Pre-operational checks are performed documented
Structural failure due to unauthorised modification, alteration, use or interference	High	Yes	Operators Manual includes warnings prohibiting unauthorised modification or alteration. Keyswitch and Battery disconnect switch are fitted to prevent unauthorised use	Ensure that no modifications or alterations are perf without written consent of the manufacturer. Ensure machine is secured at the end of each shift and the removed
Structural failure due to unit being in poor mechanical condition due to fatigue or wear	High	Yes	Pre-operational checks of all mechanical and structural components are included in Operators Manual	Ensure machine is checked, repaired & maintaine competent person in accordance with manufacture checklist provided in manuals and in compliance v AS2550.10-2006. Use only OEM parts to repair

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HAZARD DESCRIPTION	RISK	PRACTICABILITY	RISK CO	ONTROL
LOSS OF STABILITY/OVERTURNING HAZARDS	ASSESSMENT	MENT Is it practicable to remove or mitigate the risk?	RISK CONTROL MEASURES ALREADY IMPLEMENTED (by Designer, Manufacturer, Importer, Distributor)	SUPPLEMENTARY RISK CONTROL (for action by Management - the person, company or entit responsible for the use of the equipment)
Injury as a result of instabilty or overturning due to use on excessive slope or on ground surface incapable of supporting machine weight and load	High	Yes	is on excessive slope. Operators Manual warns of requirement for ground checks prior to use. Stability tested	Ensure that machine is operated within the rated s guidelines specified on the data plate and in the O Manual. Ensure Tilt sensor interlock is maintained tested as per manufacturers requirements
Overturning due to overloaded platform	High	Yes	Stability and overload tested in accordance with AS1418.10. Hydraulic system relief valve fitted prevents lift if platform is overloaded. Maximum capacity decal fitted on platform	Ensure the Operators do not attempt to lift loads in of the maximum capacity and that they do not plac additional loads in the platform when elevated
Overturning due to use in high winds	High	Yes	12.5 metres/second. Models designed for use only where there is no exposure to wind forces allowed must not be be used where there is a risk of any exposure to wind forces. Maximum allowable wind speed is stated in Operators Manual and on decals fitted to machine. Operators Manual	Ensure the machine is not used in winds exceedin maximum rated speed. If the machine is designed only where there is no exposure to wind forces, en risk of exposure to wind forces is adequately contr Ensure only one operator uses machine when exp wind. Ensure that bluff bodies are not carried in the that will increase the wind loads on the platform
Overturning due to tyre failure or loss of wheel/s	Moderate	Yes	Machine is fitted with solid tyres. Wheels are secured by nuts. Pre-start checks in Operators Manual include these items	Ensure wheel/tyre condition and security are chec regularly according to manufacturers recommenda included in Operators Manual
Overturning due to pushing or pulling objects with platform or by applying excessive manual force to adjacent surfaces	High	Yes	personnel and their equipment. Warnings in manual and	Ensure Operators do not exert manual forces gre specified maximum. Ensure Operators do not use to push or pull objects or as an anchor point to tie

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HAZARD DESCRIPTION	RISK	PRACTICABILITY	RISK C	ONTROL
CONTROL MALFUNCTION & UNCONTROLLED MOTIONS	ASSESSMENT	Is it practicable to remove or mitigate the risk?	RISK CONTROL MEASURES ALREADY IMPLEMENTED (by Designer, Manufacturer, Importer, Distributor)	SUPPLEMENTARY RISK CONTROL (for action by Management - the person, company or entit responsible for the use of the equipment)
Due to control malfunction	Low	Yes	Emergency Stop switches fitted at both control stations. Pre- operational checks of controls and emergency stop switches are included in the Operators Manual	Ensure pre-operational checks are carried out as Operators Manual checklists. Implement regular maintenance in accordance with manufacturers in and AS2550.10-2006 requirements
Due to accidental operation of controls by 'knocking', or inadvertant activation from engagement by tools, hoses, cables, loose clothing etc	High	Yes	Joystick trigger must be pressed for function to occur. Emergency stop switch provided which disables all controls. Lower controls are positioned to minimise risk of inadvertant operation	Ensure operators engage the Emergency Stop sw the desired work location has been reached, as in the Operators Manual. Implement safe working pr to ensure the risk of inadvertant engagement by to hoses, cables and loose clothing etc, is minimised
Due to safety switches being overridden	Low	Yes	Warnings in Operators Manual and decals on machine prohibit alteration or disabling of safety switches or interlocks	Ensure safety devices and interlocks are not tamp Ensure only trained and qualified operators use th equipment.
Control system conflict using emergency power system	Low	Yes	Lower controls override upper controls. Emergency manual lowering does not rely on a power source	Ensure Operators are familiar with the emergency procedures prior to operating the equipment. Ensu personnel are always available to operate emerge controls
As a result of hydraulic hose failure	Low	Yes	All load holding cylinders are fitted with load holding counterbalance valves	Verify operation of all load holding valves during remaintenance
As a result of brake failure	Low	Yes	Brakes are spring applied automatically when machine is not in use	Ensure brake operation is checked during routine maintenance
CRUSHING, SHEARING & TRAPPING HAZARDS				
Crush injury as a result of operation - travelling or raising/lowering	Moderate	Yes	Motion alarm and flashing beacon fitted provide audible and visual warnings	Ensure operators are aware of their surroundings at appropriate speeds. Ensure ground personnel available to operate emergency controls if require they are familiar with them
Due to inadvertant activation of controls	High	Yes	Joystick trigger must be pressed for function to occur. Emergency stop switch provided which disables all controls. Lower controls are positioned to minimise risk of inadvertant operation	Ensure operators engage the Emergency Stop sw the desired work location has been reached, as in the Operators Manual. Implement safe working pro- to ensure the risk of inadvertant engagement by to hoses, cables and loose clothing etc, is minimised
Persons crushed whilst performing routine maintenance	High	Yes	Instructions included in Operators Manual and decal on scissor arms regarding use of Safety Prop. Warnings provided in manual	Train operators and maintenance personnel to be these hazards and implement safe work procedur Safety Prop is always used when performing main
Persons injured due to exposure to pinch/crush/shear points	Low	Yes	Warning decals fitted to all identified locations	Pre-operational checks includes warning decals. I operators are properly trained and experienced
Persons crushed by lowering platform and/or scissor arms	High	Yes	Warning decals fitted. Warning alarm sounds during lowering.	Train operators and maintenance personnel to be these hazards and implement safe work procedur all warning alarms and safety devices are checked routine maintenance and daily inspections

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HAZARD DESCRIPTION	RISK	PRACTICABILITY Is it practicable to remove or mitigate the risk?	RISK CONTROL			
SLIP, TRIP & FALL HAZARDS	ASSESSMENT		RISK CONTROL MEASURES ALREADY IMPLEMENTED (by Designer, Manufacturer, Importer, Distributor)	SUPPLEMENTARY RISK CONTROL (for action by Management - the person, company or entity responsible for the use of the equipment)		
Falling from the platform	High	Yes	Full perimeter handrails provided comly with AS1418.10. Warnings provided in Operators manual regarding climbing on handrails. Non-slip flooring provided	Carry out pre-operational check of handrails for ser fitting. Ensure platform is free of debris that may ca to become slippery. Heed all warnings in manual n climb, sit or stand on or over handrails.		
Operator ejected from platform	High	Yes	Handrails provided comply with AS1418.10.	Operators must ensure platform does not become entangled with adjacent structures. Heed all warnir climb on handrails		
Stepping out of elevated platform onto an adjacent structure	High	Yes	Refer to requirements for elevated platform egress in AS2550.10-2006	Ensure operators do not egress from an elevated p unless a risk assessment has been carried out and AS2550.10-2006 requirements are met		
Use of step ladders or stools in platform to increase access height or reach	High	Yes		Ensure that Operators do not use any means to ga additional height. Ensure selected machine provide sufficient height and reach for the required task		
Fall when accessing elevated platform	High	Yes	Platform is able to accessed at ground level. Steps and handholds are provided	Ensure that operators access the platform only whe fully lowered. Use three points of contact when entering/exiting the platform		
Falling through platform gate	Moderate	Yes	Platform gate is self closing in accordance with AS1418.10 requirements	Carry out pre-operational check of platform entry g proper functioning. Ensure objects in platform canr interfere with correct gate function. Ensure operato deliberately cause gate to remain open		
FALLING OBJECTS						
Ground crew or passers by being struck by			150mm high toe guards provided and platform floor	Barricade area from public access. Ensure materia		

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Ground crew or passers by being struck by falling tools or objects	Moderate	Yes	Barricade area from public access. Ensure material supported on the handrails and do not exceed the of the platform

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HAZARD DESCRIPTION	RISK	PRACTICABILITY Is it practicable to remove or mitigate the risk?	RISK CONTROL		
EMERGENCY PROCEDURES	ASSESSMENT		RISK CONTROL MEASURES ALREADY IMPLEMENTED (by Designer, Manufacturer, Importer, Distributor)	SUPPLEMENTARY RISK CONTROL (for action by Management - the person, company or enti- responsible for the use of the equipment)	
Injuries sustained or exacerbated as a result of incorrect emergency retrieval procedures	Moderate		Operators Manual contains detailed emergency retrieval procedures and instructions for pre-operational checks of emergency controls	Ensure operators and all ground support personn familiar with correct emergency operating procedu	
Injuries exacerbated as a result of working solo	Moderate	Yes		Ensure operators are provided with means of communication where necessary and establish pr ensure regular communication is maintained	

FIRE OR BURNS				
Work in an explosive atmosphere	Moderate	V oc	Warning provided in Operators Manual regarding hazards associated with charging batteries	Ensure machine is not used in a hazardous enviro
During battery maintenance	Low		warning provided in Operators Manual regarding hazards	Ensure battery maintenance is performed by a con person and that appropriate risk control measures implemented including the use of appropriate PPE
Exposure to radiant heat or contact with hot objects or components during maintenance or checks		Yes		Where possible, allow components to cool before preforming maintenance or checks. Wear appropriand take care to avoid direct contact with hot obje components

DRIVING, TRANSPORT & HANDLING				
Injury as a result of accumulation of deterioration during long term storage	Low	Yes		Ensure that an Annual Inspection is comprehensive performed by a competent person before returning machine to service
Injury from unsecured vehicle	Moderate	Yes	Procedures are provided in Operators Manual. Tie down lugs are fitted to the machine and are identified by decals	Ensure the machine is secured in accordance with requirements described in the manual and with re transport regulations
Injury loading/unloading from transport vehicle	Moderate	Yes	Procedures are provided in the Operators Manual	Ensure procedures in the manual are followed. Er loading ramps are adequate to support the machin and that the ramp gradient is less than the maxim machine gradeability. Ensure the transport and ra secured to prevent shifting during loading/unloadi
Injury releasing brakes	Moderate	Yes	Operators Manual includes warnings related to release of brakes	Ensure the machine is secured to prevent it movir brakes are released, prior to releasing them
Injury sustained when lifting the machine	Low	V D C	Data plate on machine and specifications in Operators Manual show the machine gross weight	Ensure the lifting equipment and all rigging is app the task and is in good condition. Use only the des lifting points identified on the machine and in the 0 Manual. Keep all personnel clear during lifting

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