



Book it. Learn it. Live it.

ELEVATED WORK PLATFORM

OSSA CERTIFIED PROGRAM

TRAINING MANUAL

STS# EWP2015 REV2

Registration No. TP EWP 17-1631

Disclaimer

This workbook has been developed by and for the use of iSafety Ltd and its authorized representatives during iSafety instructional courses.

This workbook is not intended nor designed to be a replacement for proper training. Proper training includes the use of standards and methodologies designed to ensure understanding of predetermined course curricula.

No item or aspect of this workbook, be it format, illustrations, text, or combination thereof, may be copied, distributed, or stored within any type of retrieval system without the express written consent of its sole owner, iSafety Ltd.

This document and its contents are protected by standard copyright laws.

Disclaimer

This workbook has been developed by and for the use of iSafety Ltd and its authorized representatives during iSafety instructional courses.

This workbook is not intended nor designed to be a replacement for proper training. Proper training includes the use of standards and methodologies designed to ensure understanding of predetermined course curricula.

No item or aspect of this workbook, be it format, illustrations, text, or combination thereof, may be copied, distributed, or stored within any type of retrieval system without the express written consent of its sole owner, iSafety Ltd.

This document and its contents are protected by standard copyright laws.

TABLE OF CONTENTS

LEARNING OBJECTIVES.....	4
ABBREVIATIONS USED IN THIS COURSE.....	4
LEGISLATION	4
ALBERTA OH&S ACT SECTION 2	5
WORKPLACE FATALITIES	5, 6
INTRODUCTION TO EWP	
<hr/>	
Hazard Assessment, Elimination, and Control	6-9
Alberta OH&S Code, Part 2 – Sections 7 & 8	6, 7
Before a Worker Begins a Job	7
Hierarchy of Controls	7, 8
FLHA Scenario.....	8
Let’s Review (1, 2)	9
CHOOSING THE RIGHT MACHINE	
<hr/>	
Push Around Units.....	9
Scissor Lifts	9, 10
Straight Booms	10
Articulating Booms	11
Case Study	12
Questions	13
Rescue Plans.....	13
Exercise	14
Let’s Review (3, 4)	14
SAFETY CONSIDERATIONS	
<hr/>	
Weather Considerations	14, 15
Wind Speed Chart	14
Temperature Chart	15
Minimum Safe Approach Distance (MSAD)	16
Alberta OH&S Part 17 – Overhead Power Lines	16
Communication	17
Importance of PPE.....	17

Travel Restraint / Fall Arrest Devices	18
Alberta OH&S Code Part 9 – Section 156	18
Entanglement	19
Entrapment	19
Working at Heights	19
Let’s Review (5, 6)	20

INSPECTIONS

Pre-Use Visual Inspection	20-22
Alberta OH&S Part 19 – Section 257	20
Inspecting Path of Travel	22
Check Slopes and Grade	23
Example	23

EWP LIMITATIONS

Unrestricted vs. Restricted Capacity	23, 24
Rated Capacity Chart	24
Questions	25
Side Force Allowance	25
Operator’s Manual	25
Stability	26
Centre of Gravity	26
Tipping Axis and Area of Stability	26
Why it Tips	26
Factors Affecting Stability	26
Counterweight	27
Forward and Backward Stability	27
Stability in the Footprint Area	28
Effect of Ground on Stability	28
Sail Effect	28
Let’s Review (7, 8)	28

SYSTEM COMPONENTS

Anchor	29
--------------	----

Connecting Components	29
Controllers	30
Axles	30
Oscillating Axles.....	31
Wheels / Tires.....	31
Cylinders	32
Fuel Systems	32
Engines	33
Boom / Scissor	33
Jib / Riser	34
Basket / Platform.....	34
Let's Review (9, 10)	34
SAFETY DEVICES	
<hr/>	
Tilt Alarm	35
Limit Switches.....	35
Emergency / Auxiliary Controls	35
Positive Air Shut Off	36
Envelope Management System.....	36
Stabilizers / Outriggers	37
Extendable Axles	37
Optional Equipment	38
Cold Weather	38
Operation	39
Let's Review (11, 12)	39
Safe-Use Guidelines and Reminders.....	40
Record Retention	40
Appendix A – Work at Height Rescue Plan Form.....	41
Appendix B – EWP Identification Exercise Chart	42
Appendix C – Example Inspection Checklist	43
Appendix D – General Inspection Checklist.....	44
Harness Donning.....	45-46

LEARNING OBJECTIVES

The participants will be able to understand the following:

1. Elevated Work Platform Basics (EWP)
2. EWP Types and Limitations
3. Hazard Assessment, Elimination, and Controls
4. Legislation and Standards
5. The Proper Procedure for a Pre-Use Inspection on an EWP
6. How to Safely Operate an EWP

ABBREVIATIONS USED IN THIS COURSE

- EWP – Elevated Work Platform
- OSSA – Oil Sands Safety Association
- OH&S – Occupational Health And Safety
- ANSI – American National Standards Institute
- CSA – Canadian Standards Association
- CEN – European Committee For Standardization
- OSSA EWP2010STS – Oil Sands Safety Association Elevated Work Platform 2010 Safety Training Standard

LEGISLATION

Related Elevated Work Platform OH&S 2009 Legislation:

- Section 2(1) Act: Obligations of employers, workers, etc.

CODE

- Part 2: Hazard Assessment, Elimination and Control
- Part 3: Specifications and Certifications
- Part 7: Emergency Preparedness and Response
- Part 9: Fall Protection
- Part 17: Overhead Power Lines
- Part 18: Personal Protective Equipment
- Part 19: Powered Mobile Equipment
- Part 23: Scaffolds and Temporary Work Platforms
- Part 28: Working Alone

STANDARDS

- CSA B354.1-04 Portable Elevating Work Platform
- CSA 354.2-01 Self Propelled Elevating Work Platform
- CSA 354.4-02 Self Propelled Boom Supported Elevating Work Platform
- ANSI A92.6-2006 Self Propelled Elevating Work Platform
- ANSI A92.5-2006 Boom Supported Elevating Work Platform
- OSSA EWP2010 STS

OH&S OBLIGATIONS OF EMPLOYERS, WORKERS, ETC.

Act - Section 2(1) – Obligations of employers, workers, etc.

2(1) Every employer shall ensure, as far as it is reasonably practicable for the employer to do so,

- a) The health and safety of
 - i. Workers engaged in the work of that employer, and
 - ii. Those workers not engaged in the work of that employer but present at the work site at which that work is being carried out and,
- b) That the workers engaged in the work of that employer are aware of their responsibilities and duties under this Act, the regulations and the adopted code.

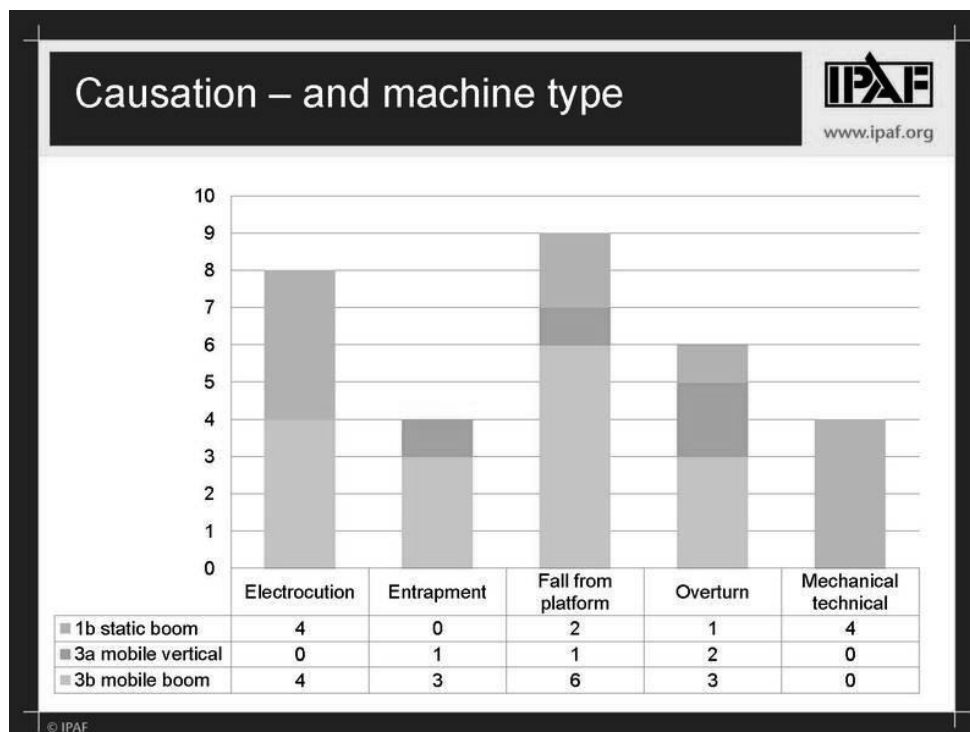
2(2) Every worker shall, while engaged in an occupation,

- a) Take reasonable care to protect the health and safety of the worker and of other workers present while the worker is working, and
- b) Co-operate with the worker's employer for the purpose of protecting the health and safety of:
 - i. The worker
 - ii. Other workers engaged in the work of the employer, and
 - iii. Other workers not engaged in the work of that employer but present at the work site at which that work is being carried out.

WORKPLACE FATALITIES

The following chart represents global deaths in 2012, with the majority (20) taking place in the United States. Only 1 was in Canada. IPAF stands for International Powered Access Federation, and is a Non-Profit-Organization that promotes the safe and effective use of Powered Mobile Equipment.

Falls from platforms accounted for the highest number of deaths at nine, closely followed by electrocution recording eight deaths and overturns causing six deaths.



Four workers were killed in entrapment incidents and another four from mechanical/technical related faults.

Almost half of the number of reported fatalities involved boom machines, 11 deaths involved vehicle mounts and four scissor lifts.

Jan 27, 2011- 23-year old male worker employed as an iron worker constructing a new school was in the basket of an elevated work platform securing a joist when the joist released and struck the worker. – AB WCB

Oct 18, 2011- 28-year old male is dead after being hit by a piece of structural steel at a construction site in NW Edmonton. Workers were placing steel beams on a skeleton structure, at the site when one beam fell and hit a worker who was operating the EWP. The worker fell approx 50 feet where he suffered fatal injuries. – ED Sun

May 3, 2012- An employee was servicing an engine on a plane at an airport. To access the right hand side of the engine the worker had to use an EWP. When he maneuvered in front of the engine he wasn't holding onto the handrail around the edge of the platform and was pulled into the engine (He was not wearing Fall Protection)-Ministry of Business

INTRODUCTION TO EWP

Discussions will cover the following EWP basics:

- Hazard Assessments
- Choosing the Right Machine
- Considerations
- Inspections
- Limitations
- System Components

According to the CSA Standards, EWPs can be classified as either:

- Portable
- Self-Propelled (Scissor Lifts), or
- Self-Propelled Boom Supported

HAZARD ASSESSMENT, ELIMINATION, AND CONTROL

- Prior to starting any work, a hazard assessment must be conducted and documented. All workers must be involved and it must be repeated when conditions change.
- A hazard assessment is an evaluation of a work place, or work situation, as to the potential for hazards that an employee may encounter while performing the job.

Alberta OH&S Code, Part 2

7(1) *An employer must assess a work site and identify existing and potential hazards before work begins at the work site or prior to the construction of a new work site.*

7(2) *An employer must prepare a report of the results of a hazard assessment and the methods used to control or eliminate the hazards identified.*

7(3) *An employer must ensure that the date on which the hazard assessment is prepared or revised is recorded on it*

7(4) *An employer must ensure a hazard assessment is repeated:*

- a) *At reasonably practicable intervals to prevent the development of unsafe and unhealthy working conditions,*
- b) *When a new work process is introduced,*
- c) *When a work process or operation changes, or*
- d) *Before the construction of significant additions or alterations to a work site.*

8(1) *An employer must involve affected workers in the hazard assessment and in the control or elimination of the hazards identified.*

8(2) *An employer must ensure that workers affected by the hazards identified in a hazard assessment report are informed of the hazards and of the methods used to control or eliminate the hazards.*

BEFORE A WORKER BEGINS A JOB:

- 1) Identify existing or potential hazards to which the worker is likely to be exposed to.
- 2) Specify the type and frequency of inspections and/or tests necessary to determine the likelihood of worker exposure to any of the identified hazards.
 - I.e. Must be at intervals to ensure the Health and Safety of workers.
- 3) Perform the inspections and tests identified.
 - By a Competent Worker that has received adequate training in the procedures.
- 4) Specify the safety and personal protective equipment required to perform the work.
- 5) Identify the personal protective equipment and emergency equipment to be used by a worker who undertakes rescue operations in the event of an incident or other emergency.
 - I.e. Plan for the worst case scenario and be able to perform a rescue should that situation arise and ensure all equipment has been inspected, documented and is readily available.
- 6) Identify emergency evacuation and/or communication requirements.
 - I.e. What type of communication will work the best (radio, phone etc.) and is it working?

WHEN ASSESSING HAZARDS USE THE HIERARCHY OF CONTROLS:

This arrangement is applicable when identifying the sequence of action in Hazard Controls.



Eliminate/Substitute the hazard by looking at changing how, when or where the work is being performed, use an alternative method, or modify work plans. This is removal of the hazard, NOT through the use of an engineering control (like ventilation) but instead by changing or moving the work so that the hazard no longer exists.

Ex. Instead of doing work at a height, do the work on the ground and then place the completed product after (removing the threat of falling while doing the work).

Engineering controls minimize exposure by removing or altering the hazard-install a guardrail, use a permanent existing platform that is fit for the job, use a stable temporary platform such as a scaffold, use an EWP

Administrative controls are things such as Safe Work Permits, Practices, Training, ETC.

PPE Is used as the last line of defense

A combination of controls can be used to bring the hazard to the lowest level possible.

SCENARIO:

A worker needs to hang a lighting system in a busy garage entranceway, using a scissor lift.

Fill out an FLHA in groups

FIELD LEVEL HAZARD ASSESSMENT		Company Name: _____	
Work to be done: _____		Date: _____	
Task location: _____		Emergency meeting location: _____	
		Permit Job # _____	
Identify and Prioritize the tasks and hazards below, then identify the plans to eliminate/control the hazards.			
TASKS	HAZARDS	PLANS TO ELIMINATE/CONTROL	
Require Gloves to be Removed Yes <input type="checkbox"/> No <input type="checkbox"/>		Warning ribbon needed? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Is the worker working alone? Yes <input type="checkbox"/> No <input type="checkbox"/>	If Yes, explain _____		
Job Completion			
Are all Permit(s) closed out? Yes <input type="checkbox"/> No <input type="checkbox"/>		Are there Hazards remaining? Yes <input type="checkbox"/> No <input type="checkbox"/> (If Yes, explain)	
Was the area cleaned up at end of job / shift? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Were there any incident / injuries? Yes <input type="checkbox"/> No <input type="checkbox"/>	If Yes, explain _____		
Please print and sign below (All members of the crew) prior to commencing work and initial when task is completed or at the end of the shift			
Worker Name and Signature (below) _____		Foreperson's Name & Signature: _____ (sign upon reviewing completed card)	
_____		_____	
_____		_____	
All Names and Signatures should be legible		Reviewed by Name & Signature: _____	

LET'S REVIEW

1. The first control we should look at when faced with potential hazards is:
 - a) PPE
 - b) Engineering
 - c) Elimination
 - d) Administrative
2. Before beginning any job, a worker should:
 - a) Specify the safety and PPE equipment required to perform the work
 - b) Identify existing or potential hazards
 - c) Identify emergency evacuation and/or communications requirements
 - d) All of the above

CHOOSING THE RIGHT MACHINE

Where will it be used?

- Indoors
- Outdoors

What type of surface?

- Smooth
- Rough
- Flat
- Hills

How high do you need to be?

What load capacity do you need?

PUSH AROUND UNITS:

- Compact enough to fit through a standard door
- Easy to transport and set up
- Have Forklift and Crane attachments to make units easy to move around
- Ease of transport and portability
- Quick set up and tear down
- Light weight for weight sensitive work surfaces.
- One person design for overhead light duty work.
- Limited wall access designed for overhead work only. Example servicing lights.
- Most units cannot be moved at height.



SCISSOR LIFTS:

- Available in On Slab (Indoor) and Off Slab (Rough Terrain) Configuration
- Available in a large range of heights and widths
- Accommodates greater platform capacities
- Extension decks
- Available in On-slab (Indoor) and Off-Slab (Rough Terrain) Configuration:

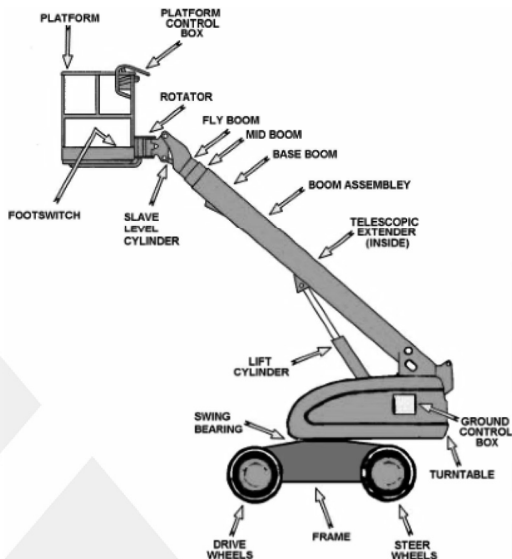
- Industrial or “Slab” Scissor Lifts are intended for indoor use on flat concrete slab surfaces. The lifts come with non-marking hard –rubber tires and have very high steering angles that provide excellent maneuverability. Rough terrain lifts have been developed for outside construction applications. These models are powered by gasoline/LPG or diesel engines and often include options such as four-wheel drive, oscillating axles and four-wheel steering. An outrigger option that allows the lift to accommodate uneven surfaces is also available on these units.
- Available in a large range of heights and widths
- Each model also has an associated width. Machine width is important because it not only communicates overall size, but it also implies platform size and lift capacity.
- Accommodates greater platform capacities:
- Greater lift capacities allow the operator to carry larger and heavier combinations of tools and materials.
 - Straight overhead work. Electrical or Mechanical.
 - Where higher lifting capacities are needed.
 - Larger work platform required.
 - Narrow access required
- Slab units are heavier than they look, be aware of whether the floor you are operating on can support the weight or not. Do not drive unit into a freight elevator until you know the lifting capacity of the elevator.



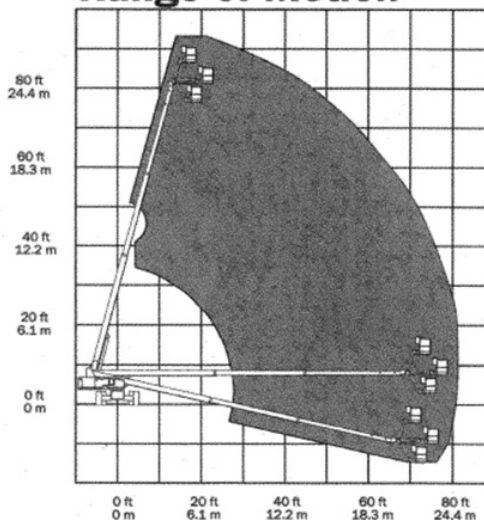
STRAIGHT BOOMS:

- Maximum combination of height and outreach
- Variety of heights
- Dual fuel (Gas/LPG) or diesel engine
- Greatest horizontal outreach

Boom heights and horizontal reaches can be quite large, but not necessarily equal. For example, a Genie SX-180 (Working height of 180', but horizontal reach of only 80')

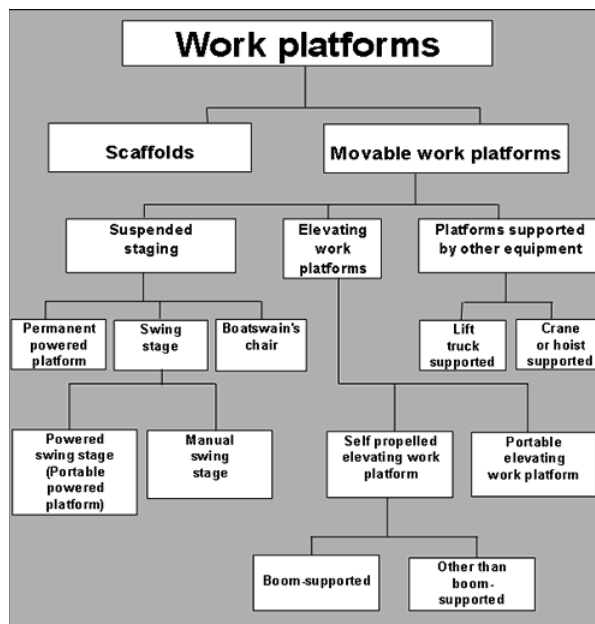
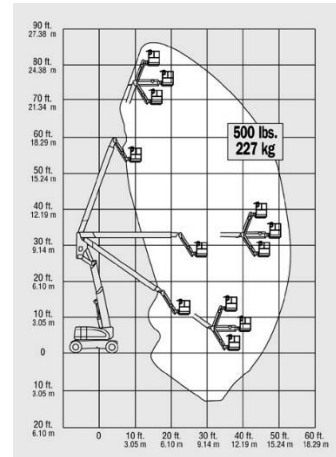
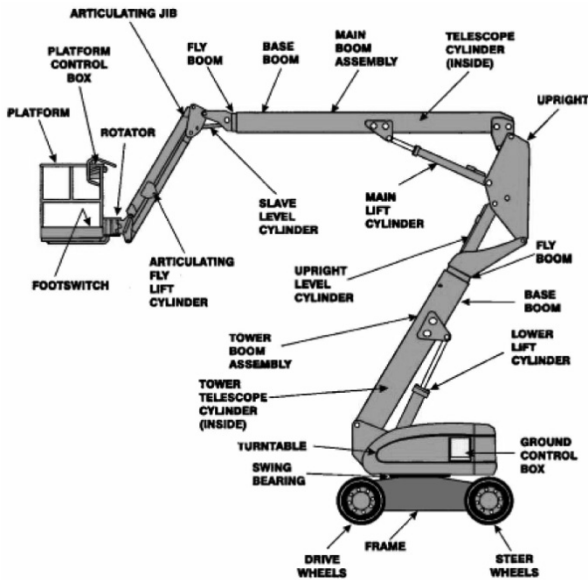


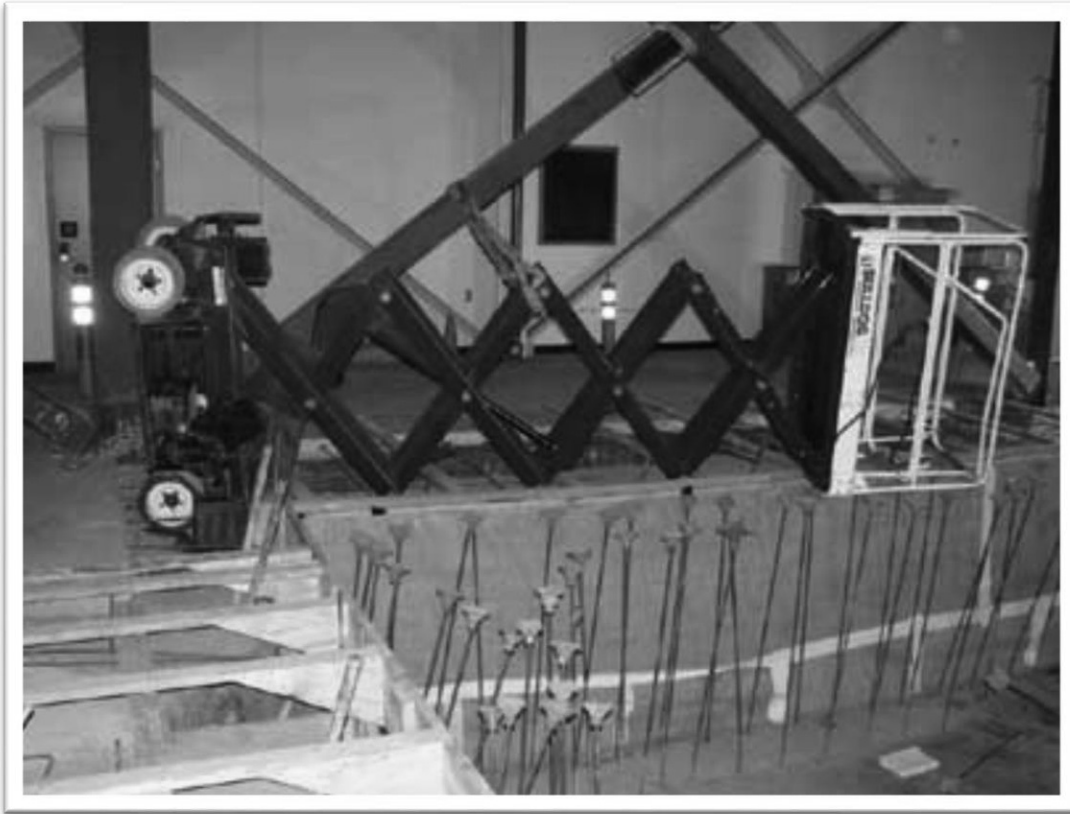
Range of Motion



ARTICULATING BOOMS:

- Can fit into narrow areas
- Can reach over and out above obstacles
- Variety of heights





CASE STUDY

On Monday, September 21, 2009, at approximately 4:15 p.m., a 48-year-old welder died when he was catapulted out of a scissor lift that tipped over. The victim moved the scissor lift while he was in an elevated position, and it tipped over into a pit approximately three feet from the lift. On November 3, 2009, a representative of the scissor lift rental agency was interviewed and the scissor lift involved in the incident was inspected and photographed.

The employer of the victim was a company that specialized in structural steel, fabrication, erection, and miscellaneous steel products for the construction industry. The company had been in business for 13 years and had approximately 100 employees at the time of the incident. There were four employees working at the site when the incident occurred. The victim had been employed with the company for 10 years and was an experienced and certified welder. He had been working at this job site for one month when the incident occurred.

The employer had a written Injury and Illness Prevention Program, with safety meetings that were held weekly and documented. The employer had an employee safety committee in which both management and employees participated. The employer had a training program that addressed machine operation and safety. Documented training was conducted in classroom settings and on-the-job training (OJT) at job sites. Employees were tested on their knowledge and operational skills of aerial lift equipment before being allowed to operate them. The victim in this case was tested, certified by the employer, and experienced in operating both articulating boom lifts and scissor lift equipment.

Question 1: What were the contributing factors that led to this incident?

Question 2: What pre-job planning steps were missed?

RESCUE PLANS

OH&S Part 7- Emergency Preparedness and Response

Emergency Response Plan:

115(1) *An employer must establish an emergency response plan for responding to an emergency that may require rescue or evacuation.*

115(2) *An employer must involve affected workers in establishing the emergency response plan.*

115(3) *An employer must ensure that an emergency response plan is current.*

Contents of Plan:

116 *An emergency response plan must include the following:*

- a) the identification of potential emergencies;*
- b) procedures for dealing with the identified emergencies ;*
- c) the identification of, location of, and operational procedures for emergency equipment;*
- d) the emergency response training requirements;*
- e) the location and use of emergency facilities;*
- f) the fire protection requirements*
- g) the alarm and emergency communications requirements*
- h) the first aid services required;*
- i) procedures for rescue and evacuation*
- j) the designated rescue and evacuation workers*

Rescue and Evacuation Workers:

117(1) *An employer must designate the workers who will provide rescue services and supervise evacuation procedures in an emergency*

117(2) *An employer must ensure that designated rescue and emergency workers are trained in emergency response appropriate to the work site and the potential emergencies identified in the emergency response plan.*

117(3) *The training under subsection (2) must include exercises appropriate to the work site that simulate the potential emergencies identified in the emergency response plan.*

117(4) *The training exercises referred to in subsection (3) must be repeated at the intervals required to ensure that the designated rescue and evacuation workers are competent to carry out their duties.*

EXERCISE

A worker has fallen 12 feet (4 meters) from a scaffold, and is suspended unconscious. You are working in the main plant area.

What should be involved in the Rescue Plan? Fill out form also Appendix A

LET'S REVIEW

3. An on-slab electric scissor lift would be a good choice to do work on a gravel road.
 - a) True
 - b) False
4. Things found in a rescue plan include:
 - a) Fire protection requirements
 - b) Procedures for rescue and evacuation
 - c) Identification of potential hazards
 - d) All of the above

SAFETY CONSIDERATIONS

WEATHER CONSIDERATIONS

NOTICE: DO NOT OPERATE THE MACHINE WHEN WIND CONDITIONS EXCEED 28 MPH (12.5M/S)

BEAUFORT NUMBER	Wind Speed		Description	Land Conditions
	mph(km/h)	m/s		
0	0 (0)	0-0.2	Calm	Calm. Smoke rises vertically
1	1-3 (1.6-4.8)	0.3-1.5	Light Air	Wind motion visible in smoke
2	4-7 (6.4-11.2)	1.6-3.3	Light Breeze	Wind felt on exposed skin. Leaves rustle
3	8-12 (12.9-19.3)	3.4-5.4	Gentle Breeze	Leaves and smaller twigs in constant motion
4	13-18 (20.96-29)	5.5-7.9	Moderate Breeze	Dust and loose paper raised. Small branches begin to move
5	19-24 (30.6-38.6)	8.0-10.7	Fresh Breeze	Smaller trees sway
6	25-31 (40.2-49.9)	10.8-13.8	Strong Breeze	Large branches in motion. Whistling heard in overhead wires. Umbrella use becomes difficult.
7	32-38 (51.5-61.2)	13.9-17.1	Near Gale/ Moderate Gale	Whole trees in motion. Effort needed to walk against the wind
8	39-46 (62.8-74)	17.2-20.7	Fresh Gale	Twigs broken from trees. Cars veer on road
9	47-54 (75.6-86.9)	20.7-24.4	Strong Gale	Light structure damage

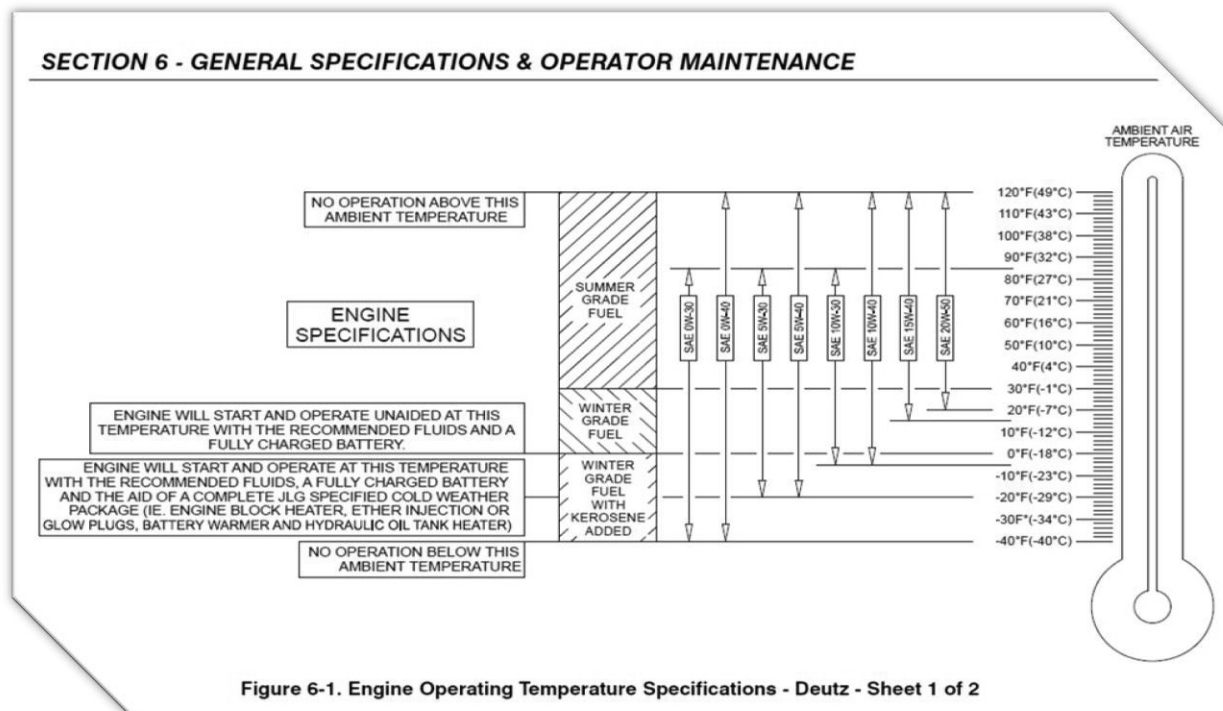
Weather conditions can have an impact on our equipment:

Lightning: Be aware of electrical storms in the area, do not operate an EWP during an electrical storm.

Winds: Do not operate an EWP in winds exceeding the manufacturer's specifications.

NOTE: Winds can be 50% greater at 20m (65') above ground.

Temperatures: Do not operate an EWP beyond the manufacturer's recommendations.



MINIMUM SAFE APPROACH DISTANCE (MSAD)

Schedule 4 Safe Approach Distance (Alberta OH&S)

Table 1 Safe limit of approach distances from overhead power lines for persons and equipment

OPERATING VOLTAGE BETWEEN CONDUCTORS OF OVERHEAD POWER LINE	SAFE LIMIT OF APPROACH DISTANCE FOR PERSONS AND EQUIPMENT
---	---

0-750 volts Insulated or polyethylene covered Conductors (1)	300 millimeters
0-750 volts Bare, uninsulated	1.0 meter
Above 750 volts Insulated conductors (1) (2)	1.0 meter
750 volts-40 kilovolts	3.0 meters
69 kilovolts, 72 kilovolts	3.5 meters
138 kilovolts, 144 kilovolts	4.0 meters
230 kilovolts, 280 kilovolts	5.0 meters
500 kilovolts <u>or</u> unknown	7.0 meters

Alberta OH&S Code Part 17 - Overhead Power Lines

Subsection 225(1) An employer must contact the power line operator before work is done or equipment is operated within 7.0 meters of an energized overhead power line

a) to determine the voltage of the power line, and

b) to establish the appropriate safe limit of approach distance listed in schedule 4

225(1.1) Except as provided for in subsection (2), an employer must ensure that the safe limit of approach distance, as established in subsection (1), is maintained and that no work is done and no equipment is operated at distances less than the established safe limit of approach distance.

225(2) An employer must notify the operator of an energized overhead power line before work is done or equipment is operated in the vicinity of the power line at distances less than the safe limit of approach distances listed in Schedule 4, and obtain the operator's assistance in protecting workers involved.

225(3) An employer must ensure that the earth or other materials are not placed under or beside an overhead power line if doing so reduces the safe clearance to less than the safe limit of approach distances listed in schedule 4.

225(4) A worker must follow the direction of the employer in maintaining the appropriate safe clearance when working in the vicinity of an overhead power line.

COMMUNICATION

- Always ensure that communication is clear between the operator and you/other workers; your life could depend on it.
- Understand your roles and responsibilities as well as you co-worker's
- Ensure pre-job planning has been conducted
- Know emergency response plan and emergency contact
- Ensure deficiencies and concerns are addressed
- If working alone (or in remote locations), ensure there is a communication process in place i.e. scheduled check-ins
- Be aware of battery limitations. Hot or cold temperatures can drastically affect both the output and life expectancy of batteries. Most batteries stop functioning at -20 C, but Lithium Ion may work down to -40. Temperatures above room temperature (20C) will also reduce the life expectancy.
- As there are many areas you may be required to work, communication methods are an important piece of information to know, as they can be all that saves you in an event that you need help.
- When working at a plant site, you may use radios, landlines, etc. In remote locations you may need other means of summoning assistance if required such as, Satellite Phone, Cellular Phone, Radio, Buddy Check In, etc.
- If you are working alone at height, you will need to ensure you have a communication method with you at all times in case of a fall.
- Check your site specific Policies and Practices in regards to your working situation.



IMPORTANCE OF PPE

It is essential that you inspect (before each use) and wear the appropriate job specific PPE while operating an EWP, including but not limited to:

- Hard hat
- Hearing protection
- Safety boots
- Safety glasses
- Safety gloves
- CSA, ANSI, CEN approved personal fall restraint or fall arresting devices
- Keep in mind that while some PPE may be quite standard (steel-toe boots, hardhat, eye protection), some may be very specific (respirators, supplied air, fall protection gear, etc).
- Also, dress for the weather, and pay attention to how that can change the effectiveness of your PPE.



TRAVEL RESTRAINT/FALL ARREST DEVICES

- Travel restraint systems are designed to stop the worker from falling out of the EWP.
- Fall Arrest systems are designed to stop a worker's fall before the worker hits a surface below.
- Fall protection systems include a harness worn by the worker, lanyard attached between the harness and an engineered anchorage on the EWP.
- All fall protection systems including harnesses and lanyards must be inspected daily during the pre-use/pre-operation of the EWP.
- Always check your site specific requirements for Fall Protection on EWP's as it may exceed the manufacturer's recommendations.

Alberta OH&S Code Part 9

Section 156 Boom-supported work platforms and aerial devices

156(1) *An employer must ensure that a worker on a boom-supported elevating work platform, boom-supported aerial device, or forklift truck work platform uses a personal fall arrest system*

- a) *connected to*
 - i. *an anchor specified by the manufacturer of the work platform, aerial device or forklift truck, or*
 - ii. *if no anchor is specified by the manufacturer, an anchor point certified by a professional engineer that meets the requirements of CSA Standard Z259.16-04, Design of Active Fall-Protection Systems, and*
- b) *when connected to the anchor, the lanyard, if reasonably practicable, is short enough to prevent the worker from being ejected from the work platform or aerial device but is long enough to allow the worker to perform his or her work.*

156(2) *An employer must ensure that a worker on a scissor lift or on an elevating work platform with similar characteristics uses a travel restraint system consisting of a full body harness and lanyard*

- a) *connected to an anchor specified by the manufacturer of the scissor lift or elevating work platform, and*
- b) *when connected to the anchor, the lanyard, if reasonably practicable, is short enough to prevent the worker from falling out of the scissor lift or elevating work platform but is long enough to allow the worker to perform his or her work.*

156(3) *Subsection (2) does not apply if*

- a) *the manufacturer's specifications allow a worker to work from the scissor lift or elevating work platform with similar characteristics using only its guardrails for fall protection, and*
- b) *the scissor lift or elevating work platform is operating on a firm, substantially level surface.*

156(4) *Despite subsection (2), if a worker's movement cannot be adequately restricted in all directions by the travel restraint system, the employer must ensure that the worker uses a personal fall arrest system.*

ENTANGLEMENT

Entanglement occurs when foreign objects such as ropes, cords, hoses, etc. become entangled in the EWP.

To prevent entanglement:

- Never attach wire, cable or similar items to the EWP that could cause the machine to become entangled.
- It is critical to inspect the path of travel
- Have constant communication with your ground personnel
- Be aware of hazards around you in confined spaces and structures.

In case of entanglement:

- Call for assistance from trained, qualified personnel to free the machine
- If entanglement cannot be corrected the worker(s) must be evacuated before attempting to free the EWP using ground controls.

ENTRAPMENT

Entrapment is the risk of being crushed against fixtures or other obstacles while accessing the work area, or while working at height.

Causes:

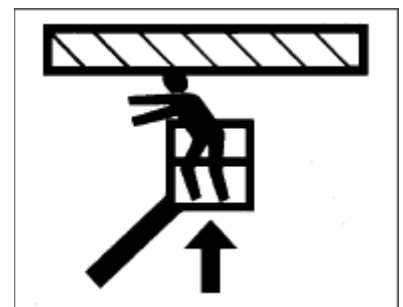
- Poor route planning
- Poor equipment selection
- Uneven ground
- Poor visibility
- Distractions
- High drive speeds
- Objects on control panel
- Overriding controls
- Using faulty equipment

To prevent entrapment:

- Do not do the things listed under 'Causes'
 - Eg. Plan your route, ensure good visibility and ground contact, etc.

In case of entrapment:

- Ensure ground key is available, and appoint a ground rescue person
- Have a rescue plan in place in case the operator is unable to remove themselves from the situation (by operating in a reverse order to what got them into the situation)



WORKING AT HEIGHTS

- Ground conditions can change the center of gravity of a machine. As height increases, the stability of the machine decreases dramatically.
- Additional height can also affect the operator's judgment; you could experience the feeling of **vertigo** (dizziness). This could cause you to accidentally misuse the equipment and cause an incident.
- If you have a fear of heights (Acrophobia) do NOT operate an EWP.

LET'S REVIEW

5. Winds will be:
 - a) Greater at low elevations
 - b) Greater at higher elevations
 - c) Equal at all elevations
 - d) None of the above
6. A 'fear of heights' is known as:
 - a) Acrophobia
 - b) Agoraphobia
 - c) Arachnophobia
 - d) Arithmophobia

INSPECTIONS

PRE-USE VISUAL INSPECTION

OH&S Part 19

257(1) *Before operating powered mobile equipment, the operator must complete a visual inspection of the equipment and surrounding area to ensure that the powered mobile equipment is in safe operating condition and that no worker, including the operator, is endangered when the equipment is started up.*

257(2) *While powered mobile equipment is in operation, the operator must complete a visual inspection of the equipment and surrounding area at the intervals required by the manufacturer's specifications or, in the absence of manufacturer's specifications, the employer's operating procedures.*

257(3) *Despite subsections (1) and (2), if the powered mobile equipment is continuously operated as part of an ongoing work operation, the operator may visually inspect the equipment during the work shift or work period as required by the employer's operating procedures.*

257(4) *A person must not start powered mobile equipment if the visual inspection under subsection (1) is not completed.*

At the beginning of each shift, the Elevated Work Platform shall be given a visual inspection and functional test including but not limited to:

- Operator's Manual
- Structural Damage
- Operating and emergency controls
- Safety devices
- Personal protective devices
- Boom and Scissor Components
- Air, hydraulic and fuel system leaks
- Cables and wiring harness
- Loose or missing parts
- Tires and wheels
- Placards, warning, control markings and operating manual(s)
- Outriggers and stabilizers

- Guardrail system
- Items specified by the manufacturer (obtain from manual)

The operator is responsible for visually inspecting the elevated platform at the beginning of each shift and for performing the function tests in accordance with manufacturer's recommendations. (ANSI 92.5)

SECTION 2 - USER RESPONSIBILITIES, MACHINE PREPARATION, AND INSPECTION

General

Begin the "Walk-Around Inspection" at Item 1, as noted on the diagram. Continue checking each item in sequence for the conditions listed in the following checklist.

⚠ WARNING

TO AVOID POSSIBLE INJURY, BE SURE MACHINE POWER IS OFF. DO NOT OPERATE MACHINE UNTIL ALL MALFUNCTIONS HAVE BEEN CORRECTED.

***INSPECTION NOTE:** On all components, make sure there are no loose or missing parts, that they are securely fastened, and no visible damage, leaks or excessive wear exists in addition to any other criteria mentioned.*

<ol style="list-style-type: none"> 1. Platform Assembly and Gate - Footswitch works properly, not modified, disabled or blocked. Latch and hinges in working condition. 2. Platform & Ground Control Consoles - Switches and levers return to neutral, decals/placards secure and legible, control markings legible. 3. Boom Sections/Turntable - See Inspection Note. 	<ol style="list-style-type: none"> 4. Swing Drive - No evidence of damage. 5. Wheel/Tire Assemblies - Properly secured, no missing lug nuts. Inspect for worn tread, cuts, tears or other discrepancies. Inspect wheels for damage and corrosion. 6. Drive Motor, Brake, and Hub - No evidence of leakage. 7. Hood Assemblies - See Inspection Note. 8. Auxiliary Hydraulic Pump - See Inspection Note. 9. All Hydraulic Cylinders - No visible damage; pivot pins and hydraulic hoses undamaged, not leaking. 10. Turntable Bearing - Evidence of proper lubrication. No evidence of loose bolts or looseness between bearing and machine. 11. Steering Spindles and Sensors - See Inspection Note. 12. Main Hydraulic Pump - See Inspection Note. 13. Platform Rotator - See Inspection Note. 14. Jib Rotator - See Inspection Note.
--	--

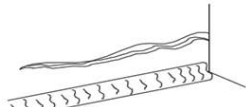

Figure 2-3. Daily Walk-Around Inspection - Sheet 2 of 2

3121170 - JLG Lift - 2-9

SECTION 2 - USER RESPONSIBILITIES, MACHINE PREPARATION, AND INSPECTION

Pre-Start Inspection

The Pre-Start Inspection should include each of the following:

<ol style="list-style-type: none"> 1. Cleanliness - Check all surfaces for leakage (oil, fuel, or battery fluid) or foreign objects. Report any leakage to the proper maintenance personnel. 2. Structure - Inspect the machine structure for dents, damage, weld or parent metal cracks or other discrepancies. <div style="display: flex; justify-content: space-around; align-items: center; margin: 10px 0;"> <div style="text-align: center;">  <p>Parent Metal Crack</p> </div> <div style="text-align: center;">  <p>Weld Crack</p> </div> </div> <ol style="list-style-type: none"> 3. Decals and Placards - Check all for cleanliness and legibility. Make sure none of the decals and placards are missing. Make sure all illegible decals and placards are cleaned or replaced. 	<ol style="list-style-type: none"> 4. Operation and Safety Manuals - Make sure a copy of the Operator and Safety Manual, AEM Safety Manual (ANSI markets only), and ANSI Manual of Responsibilities (ANSI markets only) is enclosed in the weather resistant storage container. 5. "Walk-Around" Inspection - Refer to Figure 2-2. 6. Battery - Charge as required. 7. Fuel (Combustion Engine Powered Machines) - Add the proper fuel as necessary. 8. Engine Oil Supply - Ensure the engine oil level is at the Full mark on the dipstick and the filler cap is secure. 9. Hydraulic Oil - Check the hydraulic oil level. Ensure hydraulic oil is added as required. 10. Accessories/Attachments - Reference the Operator and Safety Manual of each attachment or accessory installed upon the machine for specific inspection, operation, and maintenance instructions.
--	--

2-4 - JLG Lift - 3121170

SECTION 2 - USER RESPONSIBILITIES, MACHINE PREPARATION, AND INSPECTION

11. **Function Check** – Once the “Walk-Around” Inspection is complete, perform a functional check of all systems in an area free of overhead and ground level obstructions. Refer to Section 4 for more specific operating instructions.

⚠ WARNING

IF THE MACHINE DOES NOT OPERATE PROPERLY, TURN OFF THE MACHINE IMMEDIATELY! REPORT THE PROBLEM TO THE PROPER MAINTENANCE PERSONNEL. DO NOT OPERATE THE MACHINE UNTIL IT IS DECLARED SAFE FOR OPERATION.

Function Check

Perform the Function Check as follows:

1. From the ground control console with no load in the platform:
 - a. Check that all guards protecting the switches or locks are in place;
 - b. Operate all functions and make sure the Boom Control System warning light does not come on;
 - c. Check auxiliary power;
 - d. Ensure that all machine functions are disabled when the Emergency Stop Button is pushed in.
 - e. Ensure all boom functions stop when the function enable switch is released.

SECTION 2 - USER RESPONSIBILITIES, MACHINE PREPARATION, AND INSPECTION

2. From the platform control console:
 - a. Ensure that the control console is firmly secured in the proper location;
 - b. Check that all guards protecting the switches or locks are in place;
 - c. Operate all functions and make sure the Boom Control System warning light does not come on;
 - d. Ensure that all machine functions are disabled when the Emergency Stop Button is pushed in.
3. With the platform in the stowed position:
 - a. Drive the machine on a grade, not to exceed the rated gradeability, and stop to ensure the brakes hold;
 - b. Check the tilt sensor alarm to ensure proper operation.

- c. Check that all boom functions are disabled with the axles retracted and the boom out of transport mode.

NOTE: *The machine is in transport mode until one of the following three factors are exceeded:*

*Main boom extended more than 4 ft. (1.2 m) OR
Main boom 6° above horizontal (w/tower stowed) OR
Tower above horizontal.*

4. Swing the boom over either of the rear tires and ensure that the Drive Orientation indicator illuminates and that the Drive Orientation Override switch must be used for the drive function to operate.

INSPECTING PATH OF TRAVEL

Walk the path of travel prior to operation and look for:

- Potholes
- Soft spots
- Spills (such as oil)
- Wet slippery surfaces
- Ditches

**Dependent on season and weather conditions, special care may need to be taken. Pools of water, snow, or thin ice may hide deep potholes or ditches.*

Look up down and around for:

- Power lines

- Other equipment/vehicles/people that you may come in contact with

CHECK SLOPES AND GRADE

The maximum travel grade and slopes are:

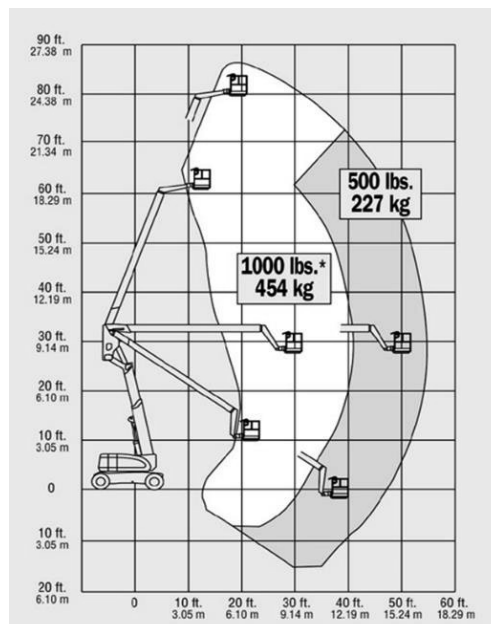
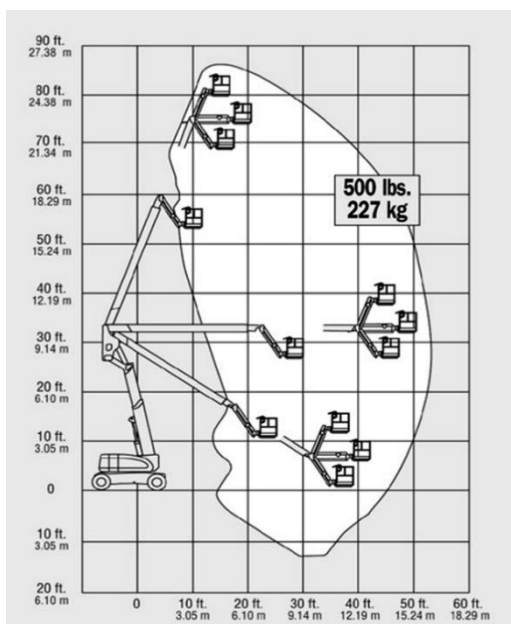
- Maximum travel grade is 45 degrees
- Maximum travel side slope is 5 degrees



The ground (as seen in the right image) seems to have a slight slope to it, and is believed to be a major contributing factor to the accident, along with high winds that would have hit the lift as it extended above the protection of the building. 3 died when the scissor lift tipped.

EWP LIMITATIONS

UNRESTRICTED VS. RESTRICTED CAPACITY



Platform capacity is rated for 1000lbs/454kg (2nd photo-Restricted) and 500lbs/225kg (1st photo-Unrestricted) Automatic capacity control systems adjusts the Safe Operating Envelope to match selected load.

The Safe Operating Envelope is the reach and height limitations within which the EWP can operate without risk of tipping over. For example, most machines won't be able to achieve their full reach at complete horizontal or vertical angles.

Restricted and Unrestricted refer to the range of motion of the machine with a given weight within the Safe Operating Envelope(s) (SOE), not the overall weight limitations.

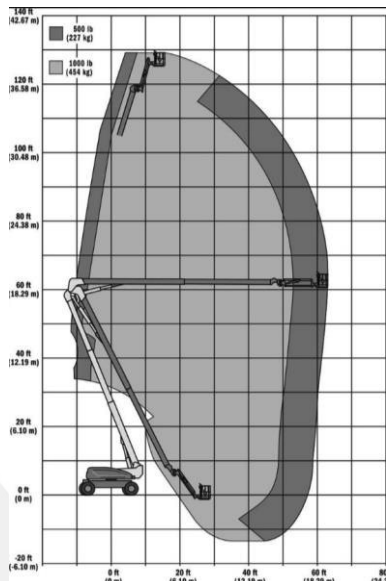
ie: Unrestricted does not mean that the machine has an unlimited weight capacity. It means that the machine can lift up to its maximum safe load in all SOE positions.

RATED CAPACITY

At your tables, please review the following chart and discuss and answer the questions that follow.

Indicate the appropriate sized machine as identified in the displayed chart:

	Common Name	Make/ Model	Terrain	Reach (Safe Operating Envelope, SOE)	Maximum Capacity (SOE)	Fuel
a)	Push Around Unit	JLG 25AM	On Slab	Height - 25 ft (7.62 m)	350 lb (160 kg)	Electric
b)	Slab Type Scissor Lift (self-propelled)	JLG 3246E2	On Slab	Height - 32 ft (9.75 m)	700 lb (315 kg)	Electric
c)	Rough Terrain or off Slab Scissor Lift (self-propelled)	JLG 3394RT	On Slab, or Off Slab	Height - 33 ft (10 m)	2,250 lb (1020 kg)	Diesel
d)	Straight Telescopic Boom Lift (self-propelled)	JLG 1200SJP	On Slab, or Off Slab	Height - 120 ft (36.6 m), 70 ft (21.3 m) horizontal (500 lb, 230 kg); Height -115 ft (35.1 m), 65 ft (19.8 m) horizontal 1000 lb, (450 kg)	500 lb – 1,000 lb (230 kg – 450 kg)	Diesel
e)	Articulating Boom Lift (self-propelled)	JLG 1250AJP	On Slab, or Off Slab	Use the Reach Chart in Section 5.7.2 of your workbook.	500 lb – 1,000 lb (230 kg – 450 kg)	Diesel



1. Weight of worker – 200lbs (90kg), Weight of tools-50lbs (23kg), Paved parking lot, working at 20ft (8m) high _____
2. Weight of worker-200lbs (90kg), Weight of second worker-250lbs (113kg), In an enclosed building, working at 26ft (8m) _____
3. Weight of worker- 195lbs (88kg), Weight of second worker 110lbs (50kg), Weight of third worker 102lbs (46kg), Weight of tools 95lbs (43kg) Unpaved parking lot, working at 20ft (8m) high _____
4. Weight of worker 200 lbs (90kg), Weight of second worker 200lbs (90kg), Weight of tools 50lbs (23kg), Unpaved parking lot, Working at 50ft (15m) high and 50 ft (15m) reach _____
5. Indicate which EWP is approved to be used as a crane _____

EWP LIMITATIONS

- An EWP is not to be used as a crane
- Do not suspend a load off the basket, nor attach any load to the platform
- Do not push or pull objects with an EWP
- Refer to the owner's manual and know the rated work load of your machine and never exceed it.



SIDE FORCE ALLOWANCE

Side Force Allowance is the sideways force exerted on the Elevated Work Platform, which can be caused by wind, weight tension or other factors.

- Do not exceed the rated platform capacity or side force rating intended by the manufacturer.
- Maximum platform capacity can be found on platform decals, in the operation manual, and on the machine's serial number plate
- The elevated platform is intended to be elevated only on a firm level surface, unless it's equipped with outriggers that are designed for use on sloped surfaces
- Do not alter or disable machine components that affect the elevated platform's stability
- Do not operate the machine in strong or gusty winds. Do not increase the surface area of the platform or load. Increasing the area exposed to the wind will decrease machine stability. Maximum wind speed is 28 MPH or 45 KPH (may vary by machine)
- Do not place or attach overhanging loads to any part of the elevated platform
- Do not increase the platform size with unauthorized deck extensions or attachments

OPERATOR'S MANUAL

- A copy of the owner's manual must always be stored on the machine in a weather resistant storage compartment
- It is your responsibility to operate the equipment as outlined in the operator's manual,
- The manual contains information such as:
 - Pre-Operation inspection
 - Function tests
 - Machine Rated Loads
 - Weight and stability
 - Reach
 - Anchor Points



IMPORTANT: If the manual is missing you must tag the machine out until the manual can be replaced!!

STABILITY

It is important that users understand what makes a platform stable and what causes it to overturn. To understand stability, one must understand the concepts of 'centre of gravity', 'tipping axis' (or tipping point), and forces that shift the centre of gravity.

Stability is resistance against tipping over. Stability depends on the location of the centre of gravity in relation to the tipping axis.

Centre of Gravity

- Every object has a centre of gravity. It is the point where the object's weight would be evenly distributed or balanced. If a support is placed under that point, the object would be perfectly balanced.
- The centre of gravity is usually located where the mass is mostly concentrated. However, the location doesn't always remain the same.
- Actions that change the configuration of the machine (eg. Raising/lowering the basket, extending the boom, traveling on a slope) can change the center of gravity

Tipping Axis and Area of Stability

- When an EWP turns over, it tips around an axis or point. This is called the tipping axis or tipping point.
- EWPs typically have four tipping axes – front, back, left, and right.
- Each EWP has its own area of stability.
 - This varies from platform to platform and from model to model.
- In most cases, the area of stability is bound by the four tipping axes (or the four tires or outriggers).
- The platform is stable as long as the centre of gravity remains inside the area of stability.
- This is the key to safe operation.

Why it tips

- When the centre of gravity shifts beyond the area of stability, the machine will tip over.
- Some factors that can cause a shift beyond the stability area are:
 - Overloading
 - Moving on excessively sloped ground
 - A sudden drop of one wheel
 - Shock loading
- Raising the platform also raises the EWP's centre of gravity.
 - Eg. When a scissor lift is situated on a slope, and the platform is raised, the platform's centre of gravity will move toward the tipping axis. If the centre of gravity moves beyond the tipping axis, the platform will overturn.

Factors Affecting Stability

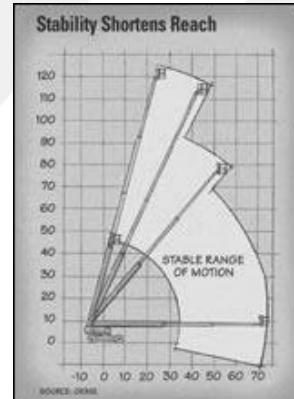
- Dynamic Forces
 - Dynamic forces are forces generated by movement or change of movement. For example, applying the brakes suddenly or travelling too fast around corners can cause instability – as in a car or van. Sudden stops while raising or lowering the platform can also cause instability.
- Travelling
 - Travelling the platform over rough or uneven ground can also cause instability. On a 14-metre (40') boom, a tire dropping 100 mm can cause the boom to sway 600 mm. It is important to lower the platform fully or to retract telescoping sections while travelling, particularly on uneven surfaces.
 - Changes at the base of the EWP can be exaggerated several times at an elevated or extended basket

COUNTERWEIGHT:

EWP's are stabilized by counterweight, this system includes the full weight of the machine base

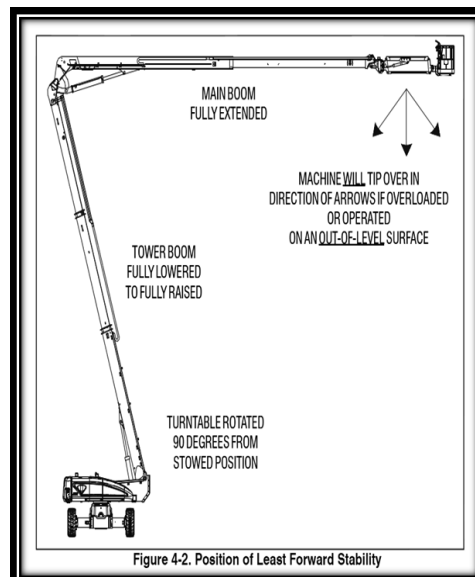
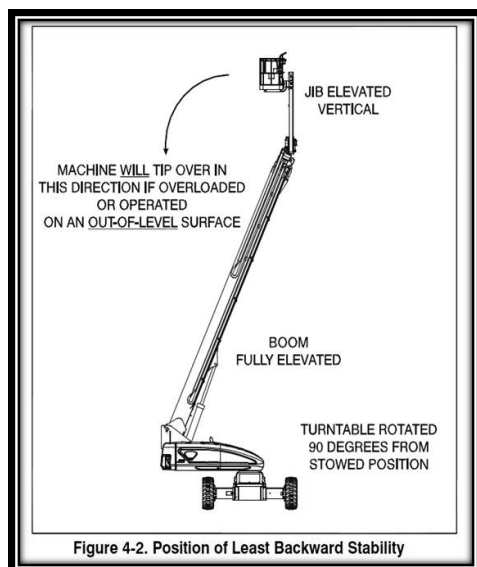
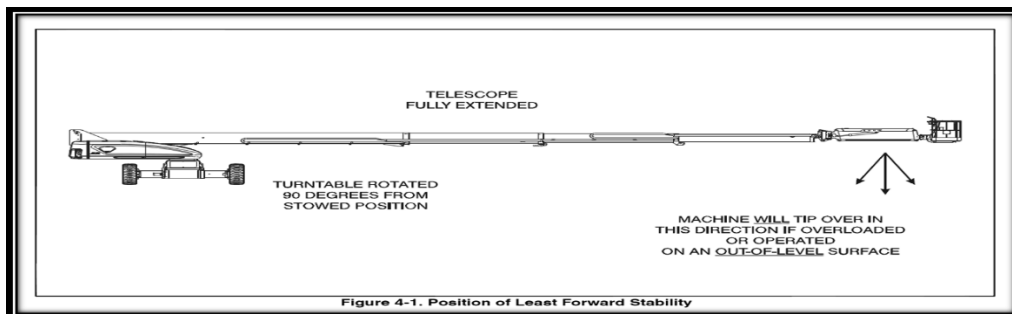
Changing the counterweight can cause tipping; do not overload the basket.

- Tail Swing is the area that the base covers as it turns the turntable assembly, a zero tail swing feature enables the EWP to fit into smaller spaces and is desirable for indoor usage.
- Damage to the counterweight can be hazardous and must be reported immediately.
- Be aware that when turning the machine, the tail may push against a nearby structure or piece of equipment and upset the stability of your machine: Always allow for a safe turn radius



FACTORS THAT AFFECT FORWARD AND BACKWARD STABILITY:

- Main boom elevation
- Tower elevation
- Jib elevation and;
- The degree of turntable rotation from the stowed position.



FACTORS THAT AFFECT STABILITY IN THE FOOTPRINT AREA:

- Elevated work platforms can become unstable and tip over when they are overloaded or loaded unevenly
- Boom-type machines are especially sensitive to overloading
- A small amount of weight placed on the platform can place enough force on the base of the equipment to tip it over



EFFECT OF GROUND ON STABILITY:

- Operating on poor ground conditions or uneven surfaces become worse as the height of the EWP is increased
- Travelling or operating on a slope or uneven terrain, can cause the machine to lose the center of gravity and tip
- Holes or drop-offs on the ground surface can cause one wheel to drop suddenly and tip the machine



SAIL EFFECT:

Use of tarps or other materials as windbreak devices are not recommended, as they increase the “sail effect” caused by wind resistance on the boom, creating a tip over hazard.



LET'S REVIEW

7. The Safe Operating Envelope of a Restricted Capacity machine will be:
 - a) Equal at all distances
 - b) Will have a greater capacity at greater distances from the base of the machine
 - c) Will have a greater capacity closer to the base of the machine
 - d) Unrelated to the actual capacity of the machine
8. Factors that can affect machine stability include:
 - a) Load weight
 - b) Ground strength
 - c) The 'sail effect'
 - d) All of the above

SYSTEM COMPONENTS

ANCHOR:

An engineered secured point of attachment

- A lanyard must be attached to the engineered anchor point provided within the basket or platform, all anchors are rated for 16kn (3600lbs) without reaching ultimate strength
- All boom style machines are equipped with anchors. Scissor lifts may or may not have anchors
- During pre-use inspection check for the location of the anchor and look for cracks, twists, bends, dents, rust, or any other disfigurements
- A damaged anchor may result in the worker being ejected from the basket resulting in serious injury or death
- Only one person can attach to an anchor (they are not designed to have two operators attached to the same anchor).



CONNECTING COMPONENTS:

The connecting components are used to connect the components of the EWP together, such things as pins, bushings or any bolted system

- These press fitted connecting components are non-lubricated pins, bushings or bolted systems that fasten scissor components or boom components together.
- During the pre-use/pre-operation inspection look for any rust, damage or excessive wear. Also look at banjo pins to ensure they are positioned correctly.
- Follow visual inspection process as outlined in the pre-use section of the operators' manual
- If any connecting component becomes loose or worn the boom or scissor may have excessive movement and sway. This can cause a crushing or collision hazard to the operator. If a connecting component works free, collapse of the boom or scissor component could occur



CONTROLLERS:

Are the functional joysticks or activation switches that control the EWP

- The functional joysticks are proportional, therefore they can be “feathered” for smoother operation
- Activation switches are either on or off and cannot be “feathered”
- The purpose of the controllers is to operate all functions on the machine. They are located in the platform as well at ground level
- During the pre-use inspection, confirm that all switches work and return to the neutral position. Joysticks that have lock gates must operate properly. Also ensure that all decals are in place and legible.
- If any controllers are not functioning properly, the unit must be tagged out of service and repaired. A malfunctioning controller increases the chance of injury from collision or entrapment, and may leave the operator stuck in an elevated position. Also a malfunctioning controller can have unpredictable or erratic movement.



GROUND CONTROLS

- Must be accessible from ground level
- Be provided for all powered functions except driving and steering
- Steering and driving may be provided on some machines, please see operator’s manual
- Will automatically return to the ‘off’ or ‘neutral’ position when released

AXLES:

A supporting shaft connected to the chassis on which the wheels are mounted. “a spindle on which a wheel revolves”

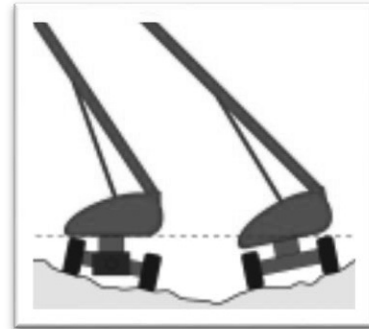
- EWP’s with 4 wheels have 2 axles
- Some machines have 2 stationary axles and others have 1 stationary and 1 oscillating axle
- During the pre-use/pre-operation inspection inspect that all four wheels are connected to the axle properly. Also check for any visible damage such as corrosion, wear, broken welds, etc.
- Although all fixed axles are connected directly to the chassis visually, look for any structural damage. If damage is found, tag out the unit. Structural damage may cause the machine to collapse under extreme conditions.



OSCILLATING AXLES:

A free moving axle with a center pivot point that the wheels are attached to. Most of these systems may be locked into certain positions.

- An oscillating axle will eliminate the possibility of a three point contact when traveling across rough terrain when the unit is in the stowed position
- The main purpose for an oscillating axle is to keep all four wheels in contact with the ground when traveling in a stowed position for better terrain ability
- Offers additional operator protection by automatically locking the axle when the turntable is rotated
- During the pre-use/pre-operational inspection, look for leaks, damage or any obstruction with the system. Refer to the operator's manual for the proper function test
- Be cautious when utilizing this system, as it 'could' cause one tire to lift into the air and out of contact with the ground, resulting in a 3-point stance, and reduced stability.
- Non-functioning interlocks or limit switches allow the machine to operate outside safe parameters.



WHEELS/TIRES:

Wheels are a disk or rigid circular ring connected to a hub, designed to turn around an axle. A tire is the covering for a wheel, usually made of rubber.

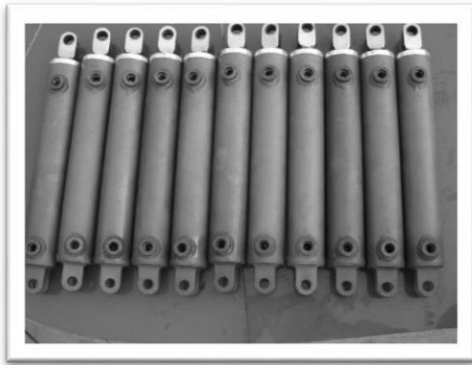
- Tires for EWP's are usually either pneumatic or solid rubber
- Wheels are used to reduce friction and allow the machine to steer and be in motion
- Tires provide traction and stability as well as reduce shock
- Inspect wheels and tires for proper air pressure, cuts, missing lug nuts, dents
- The wheels or tires are the main contact point with the ground. The wheels play a key role in the stability of all EWP units. If the wheels or tires give way, this can cause the unit to collapse.
- Over-inflation can cause explosion resulting in injury, under inflation can cause machine instability



CYLINDERS:

A cylinder is a uniform solid or hollow body with straight sides and circular sections. When hydraulics, pressurized fluid or gas flows within the cylinder through pipes or channels it creates movement.

- Cylinders are used to operate all the boom and scissor components to lift the operator to various positions, and provide the power for the lift components
- Cylinders must be inspected for leaks, damage or cracks during the pre-use/pre-operation inspection. Also visually inspect all hose fittings for leakage or damage which may lead to failure
- Cylinder inspection must be a visual inspection only. Due to pressures associated with hydraulics, using any body parts to reach around and feel for leaks is strictly forbidden.



- Hydraulic fluid under pressure can penetrate the skin and cause serious injury.

FUEL SYSTEMS:

Fuel systems are a set of connected parts that provide material for burning for a source of power to the engine.

- The purpose of the fuel source is to supply the right amount of fuel to the engine depending on the supply needed
- All engines require a fuel source for them to run. This can be gasoline, diesel, propane, electric or a combination.
- During the pre-use/pre-operation inspection check to make sure there is enough fuel for the day. Look for any leaks and spills and clean up immediately. Confirm that you are filling with the proper fuel required for that machine.
- All fuels are extremely explosive. Alberta OH&S requires no source of ignition within 7.5 meters or 24.6 feet while refueling. Fuels are extremely flammable therefore any leaks or spills can introduce a fire or explosion. Fuel systems can produce exhaust gas that can cause asphyxiation; proper ventilation is required.

ENGINES:

A mechanical source of power with parts working together, engines may be internal combustion (gasoline, diesel or propane) or electric.

- The purpose of an engine is to energize the hydraulic pump to power the controls and functions on the EWP.
- During the pre-use/pre-inspection look at all belts and hoses for leaks, breaks and damage. Check oil, grease and coolant levels and look for leaks. On electric units visually check all electrical connections for damage and ensure proper connection.
- If the engine is not working properly this may leave the worker stranded at an elevated height. Have engines serviced and inspected by a qualified person according to the service intervals in the operator's manual.
- Engines can produce high heat, high noise levels, and can use flammable fluids. Belts and rotating parts can cause harm to an operator.



BOOM/SCISSOR:

Boom and scissor components are the mechanical devices that are attached between the basket and the chassis or turntable that lift and lower the platform.

- The purpose of boom and scissor components is to position the worker up to an elevated work area
- Scissor lift components are linked together, lift height will determine the number of links
- Straight stick booms components consist of the main boom with up to three additional booms that telescope and retract within each other
- Articulating booms can have two booms which consist of the main boom and secondary/riser boom and either can telescope or retract
- Inspect the boom/scissor components for leaks, damage, missing parts or wear during the pre-use inspection (refer to Operator's manual for inspection guidelines)
- Each unit will have their own range of motion that the operator must be aware of. Riser booms have a specific sequence of operation and if not operating properly may make the unit unstable. Refer to the operator's manual for proper operation. Structural damage may weaken boom or scissor components, which may cause a collapse or failure of the component.



JIBS/RISERS:

The jib is an extension from the primary/main boom that can be adjusted hydraulically.

- The jib/riser gives the operator a greater range of motion for easier access to their work location
- The purpose of the jib boom is to help the worker maneuver into position easier. Some systems have up to 144 degrees of motion horizontally and some may have 180 degrees of side to side motion. The jib boom can be approximately 6 feet or 2 meters in length (but this may vary by machine).
- For the pre-use/pre-operational inspection look for hydraulic leaks, structural damage, and check all connecting components
- The hazard with a jib boom is: Due to the maneuverability of the jib, the operator can become entangled more easily. It also makes it more susceptible to tipping. Always look in the direction that you are moving the platform and watch for any crushing hazards.



BASKET/PLATFORM:

A basket/platform is defined as a top rail, mid rail, and toe kick enclosure designed to keep the operator within it, and to protect the operator from injury during operation.

- The purpose of the basket/platform is to provide a safe lifting point for the operator of the EWP and is designed to protect the operator under normal operation
- On all elevated Work Platforms, the only safe place to operate the equipment from is the platform or basket. All operation of the controls must only be performed while the operator is within the confines of the platform or basket
- The basket/platform must be inspected daily for cracks, damage, alterations or any signs of weakness. Ensure all gates or chains for entry are in place and in working order, as well as decals are in place and legible.
- Crushing injuries are the most common hazard while operating an EWP. Many baskets have pinch rails to protect the operator. Damage or modifications to the basket or railing could compromise the anchor points for fall protection, or affect proper attachment of gate or chain at entrance.



LET'S REVIEW

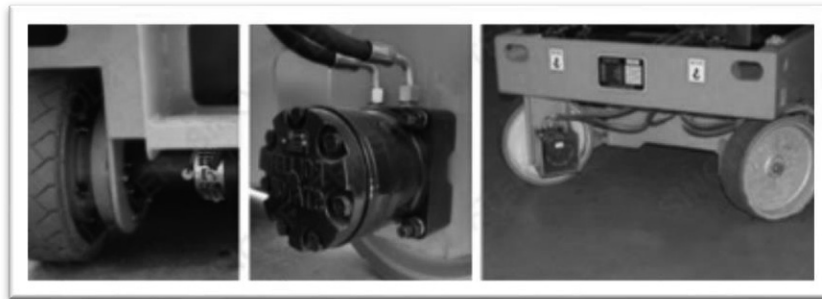
9. Cushion tires are:
 - a) Generally intended for indoor usage
 - b) Generally intended for heavy duty environments
 - c) Expensive
 - d) All of the above
10. Hydraulic pre-use inspections:
 - a) Should never be done
 - b) Should be done visually, only
 - c) Should be 'hands on' to check difficult to see parts
 - d) Only need to be done once a month or so

SAFETY DEVICES

Are designed into the EWP for the worker's protection and must be included in the pre-use visual inspection where possible and tested during the function test.

TILT ALARM:

- Tilt alarms are the primary warning system that tells the worker the site is not safe to work on. All these systems have a pre-determined setting from the factory.
- The purpose of the tilt alarm is to warn the worker that the unit is on a severe slope. Therefore you must not elevate until repositioned to a level surface
- You must manually test the tilt alarm during the pre-use/pre-operation inspection. Refer to the operators manual for the specific unit to be operated
- If the tilt alarm is not working or has been disconnected, this will allow the worker to elevate on an uneven surface. This can cause a tip over. Some units have interlocks that stop the unit from lifting when the tilt alarm operates.



LIMIT SWITCHES:

- A limit switch is “a device for breaking connection in the electrical circuit so the boom/scissor cannot extend or pass what is permitted”. It ensures that the unit operates in the correct sequence.
- They are installed to limit boom position, elevated drive speed, axle position or steering position to keep the unit operating within safe parameters
- Always confirm they are operating properly during the pre-use inspection/function test. Most limit switches are inaccessible so always consult the operator's manual for proper testing procedures
- If a malfunctioning limit switch is detected, shut down the unit, tag it out of service and have it repaired by a qualified technician
- A limit switch that is not operating properly may allow the EWP to operate out of sequence. This is extremely dangerous to the operation of the unit.

EMERGENCY/AUXILIARY CONTROLS:

- Emergency/Auxiliary controls are a backup system that run in the event of a primary system failure. Once activated, the system is designed to lower the platform to the ground for safe exit from the platform. On some units this may also activate the steer function, which helps when the unit needs to be removed for service.

- Emergency controls must be tested during the pre-use/pre-operation inspection. Each unit will have its own unique way to operate the emergency controls. Therefore, always consult the operator's manual.
- If the emergency controls are not functioning properly then the system may not work properly when needed. If any problems are detected then the unit must be tagged out and repaired. Always have ground personnel nearby that are trained on the emergency controls. If not, a worker could be stranded and have to wait for rescue personnel.

POSITIVE AIR SHUT OFF:

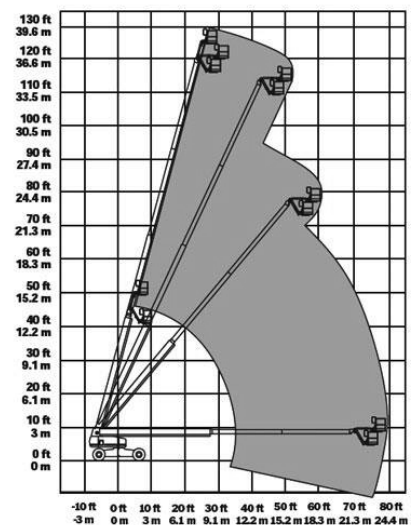
- Positive air shutoffs are mechanically or electrically activated devices to block the air intake into the engine in the event of an 'over-speed' due to inhaled combustible gas or fumes from the surrounding area
- Only diesel operated machines are required to have a positive air shutoff installed on them.
- Diesel engines do not regulate the air entering the engine, if the air becomes contaminated with a flammable gas it will run on the contaminated air instead of diesel fuel. The only way to shut them down is by blocking the air intake.
- During the pre-use inspection, just inspect for any visible damage or loose connections
- The main hazard with positive air shutoffs is that they must only be used in an emergency. Normal operation or usage can cause engine and air intake damage.



ENVELOPE MANAGEMENT SYSTEM:

The envelope management system is an automated system designed to limit the movement of the Elevated Work Platform components.

- This system is typically found on all Elevated Lifts that elevate higher than 85 feet/27 meters. This complex system monitors boom height, length, and angle to keep the operator within a safe range of motion.
- Due to the length and size of the larger units the boom cannot extend full length horizontally. Due this restriction the EMS limits the length extended to the height lifted.
- The EMS shall be tested during the pre-operation/pre-use inspection every day.
- Due to the complex testing system for these units, if the operator is unsure of the proper functioning of the EMS the unit may not operate properly.



STABILIZERS/OUTRIGGERS:

Outriggers are defined as “devices used to extend out and down and may be used to lift the unit off the ground for leveling purposes”. Stabilizers are “a device which when activated will stabilize the unit by extending down to contact the ground”.

- The purpose of these systems is to level the unit when operating on uneven surfaces
- These systems are mainly equipped on rough-terrain scissor lifts. Stabilizers/outriggers are hydraulically-operated and are self-leveling or leveled manually
- During the pre-use/pre-operational inspection, check for proper operation, hydraulic leaks or any visible damage. Check the outrigger/stabilizer pads for proper attachment and confirm the bottoms of the pads are free from any obstruction.
- If the outriggers are not positioned on a firm surface this can cause instability with the unit. If malfunctioning, this may allow an operator to lift to heights beyond manufacture’s ratings, and could tip over or collapse.



EXTENDABLE AXLES:

Extendable axles are a box in a box design that can stretch to full width using a hydraulic system.

- This system will primarily be found on all of the larger units that can extend beyond 80’/24.38 meters. The axle will extend outwards by hydraulics to the determined length.
- The axle must be extended outward to the fully extended position before the unit will allow the boom to be raised or extended. By extending the axle, this increases the stability area for the unit. They are designed to retract into the transport position so they can be placed onto transport trucks. Once extended out on the worksite, they can stay extended for the entire project if necessary.
- They must be inspected during the pre-use/pre-operation for damage or hydraulic leaks. Also ensure all wear pads are in place and in working condition
- Beware of a crushing or collision hazard when extending or retracting axles. Be aware of clearances when entering or exiting through narrow spaces as the foot print of the unit has been increased.

OPTIONAL EQUIPMENT:

Optional equipment is supplied to increase the efficiency of the operator and to make their tasks easier and safer.

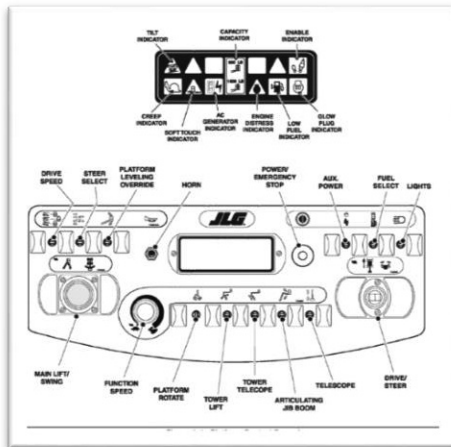
- Many manufacturers have optional equipment that can be supplied with the unit. Such items are welders, tools trays, pipe cradles, welding cables or generators.
- All the pre-use/pre-operational inspections along with the hazards associated with their use will be supplied in the operator's manual
- All optional equipment becomes an integral part of the EWP and becomes the responsibility of the operator to use correctly according to the operator's manual. Operators may have to reduce the amount of weight in the platform or reduce wind speed ratings depending on the optional equipment being used. Some optional equipment kits may have to be mounted specific to the manufacture's specifications in order to displace the weight properly on the platform or basket.

COLD WEATHER:

- Extreme temperatures can affect both the operator and the machine.
- Many machines, and their components, have temperature limitations
- This can include machine components, as well as the fluids used during operation (fuels, hydraulic oils, etc.)
- Check manufacturer's specifications with regard to these limitations
- Site-specific rules must also be consulted before performing work in extreme temperatures

OPERATION

- As an operator you must understand each of the controls for the machine to be operated.
- Note: When the drive enable system is in use, the machine may drive in the opposite direction that the drive and steer control handle is moved.
- Use the color-coded direction arrows on the platform controls and the drive chassis to identify the direction of travel.



LET'S REVIEW

- The tilt alarm:
 - Should be disabled for the duration of the work during the pre-use inspection
 - Activates to tell the worker that the boom is being raised or lowered
 - Warns the employee that the machine is on a severe slope
 - All of the above
- Outriggers:
 - Can be used on soft or firm surfaces equally safely
 - Are never found on scissor lifts
 - Are made up of a free moving axle with a center pivot point that the wheels are attached to
 - Are devices used to extend out and down and may be used to lift the unit off the ground for leveling purposes

SAFE-USE GUIDELINES AND REMINDERS

- Always check for overhead power lines before moving the machine or operating the platform.
 - Allow for movement or sway of the lines as well as the platform. Be aware of overhanging tools or equipment.
- Wear a full-body harness and tie off to a designated tie-off point while the machine is moving.
- Do not leave the machine unattended without locking it or otherwise preventing unauthorized use.
- Don't load the platform above its rated working load (RWL).
- Make sure that all controls are clearly labeled with action and direction.
- Keep guardrails in good condition and ensure that the gate is securely closed before moving the platform.
- Shut off power and insert the required blocking before maintenance or servicing.
- Deploy stabilizers or outriggers according to the manufacturer's instructions.
- Don't remove guardrails while the platform is raised.
- Position the boom in the direction of travel unless the manufacturer specifies differently.
- Keep ground personnel away from the machine and out from under the platform.
- Don't access the platform by walking on the boom.
- Don't try to push or move the machine by telescoping the boom.
- Do not use the machine as a ground for welding.
- Don't use a boom-supported platform as a crane.
- Don't operate the equipment in windy conditions. For safe wind speeds refer to the operator's manual for the specific make and model you are using.
- Do not place the boom or platform against any structure to steady either the platform or the structure.
- Secure loads and tools on the platform so that machine movement won't dislodge them.
- Make sure that extension cords are long enough for the full platform height and won't get pinched or severed by the scissor mechanism.
- Use three-point contact and proper climbing techniques when mounting or dismounting from the machine
- Communicate with other nearby workers prior to re-positioning the EWP in any way to ensure they are clear of any potential hazards

Always remember to review and understand your site-specific rules and regulations!

RECORD RETENTION

An employer must ensure that all records with respect to Elevated Work Platforms are retained for not less than:

- **1 year** if **no incident** or unplanned event occurred, or
- **2 years** if **an incident** or unplanned event occurred.

APPENDIX A

Company Logo	Company Name	Document: ???
	Work at Height Rescue Plan	Issue: 1 (Apr 07) V: 1 (Apr 07)

Site Address:..... Rescue Plan Ref No:.....

.....
.....

Location/area:.....

JOB TASK:

Reference No.:.....

Work at Height Dates: From:..... To:.....

What is task to be done:.....

.....
.....
.....

Operators:

Names of operators who are involved in the work at height:

- 1)..... 2).....
- 3)..... 4).....
- 5)..... 6).....

The Rescuer is to check all individual suspension trauma straps are in good working condition prior to proceeding with the work at height task and sign below.

7) Signature WAH Rescuer:..... Date:.....
(WAH Rescuer to remain with operators at all times for safety and communications)

RESCUE:

Communication:

What communication systems will be used between the suspended worker and supervisor / rescue team?

(✓ as appropriate)

- 1) Direct voice communication
- 2) Whistle
- 2) Mobile Phone
- 3) Two-way Radios / Headsets

APPENDIX B

SPECIFIC MAKE AND MODEL OF EWP	
ANCHOR (s)	
PPE REQUIRED	
SIDE SLOPE AND GRADE IN THE STOWED POSITION	
WIND SPEED MAXIMUM	
SIDE FORCE ALLOWANCE/HORIZONTAL LOAD	
MAXIMUM PLATFORM CAPACITY	
MAXIMUM OCCUPANTS	

APPENDIX C



JLG Industries, Inc.
1 JLG Drive
McConnellsburg, PA 17233-9533

BOOM LIFT - SCISSOR LIFT - TRAILER MOUNTED BOOM LIFT New Machine Inspection and End of Warranty Report

Serial Number: _____ Customer No. : _____ Owner User

Machine Model: _____

Hourmeter Reading: _____

INSPECTION TYPE: New Machine End of Warranty

Check each item below. (Refer to Operators & Safety, Service & Maintenance Manuals for specific information regarding inspection procedures and criteria.) Indicate in the appropriate space as each item has been performed. If the item is found to be not acceptable, describe each discrepancy in the comments space at the bottom of the form. Use additional paper if necessary. Immediate action must be taken to correct all discrepancies. The Owner shall not place the machine in service until all discrepancies have been corrected.

Y=Yes (Passed) N=No (Failed) C=Corrected NA=Not Applicable	Y	N	C	NA
PLATFORM				
1. All controls operate properly.				
2. Load capacity indicator operates properly.				
3. Capacity decals in place, secure and legible.				
4. Footswitch or enable switch operates properly.				
5. Emergency stop shuts off controls and engine.				
6. Platform installed and secure.				
7. Gate, chains or bar installed; latches properly.				
8. Platform and boom leveling systems operate properly.				
9. All function and speed cut-outs operate properly.				
10. Drive Brakes operate properly.				
11. Swing Brake operates properly.				
TURNTABLE/ARMS AND CHASSIS				
1. Wheel rim nuts torqued properly.				
2. Tires properly inflated.				
3. Hoses, fittings, and components tight and free of leaks.				
4. Fluid levels correct; hydraulic tank, hubs, coolant and batteries.				
5. Engine idle, throttle and RPMs set properly.				
6. Hydraulic and air filters clean.				
7. Fuel and hydraulic tank caps tight and vents open.				
8. Exhaust system free of leaks.				
9. Hood doors open and latch properly.				
10. Manual descent or auxiliary power operates properly.				

Y=Yes (Passed) N=No (Failed) C=Corrected NA=Not Applicable	Y	N	C	NA
TURNTABLE/ARMS AND CHASSIS (continued)				
11. Oscillating axle operates properly.				
12. Safety props operational.				
13. Axle extension and interlocks operate properly.				
14. Outriggers/Stabilizers operate properly.				
15. Pot Hole Protection operates properly.				
16. Tongue Jack operates properly.				
17. Stow Latch operates properly.				
GENERAL				
1. All instruction & safety placards installed, secure & legible.				
2. Check all nuts and bolts for tightness.				
3. All electrical connections tight.				
4. All pins installed and secured properly.				
5. All manuals received (per manual packing list), if no, reorder immediately.				
6. Paint & overall appearance.				
7. Machine received as ordered.				
8. If machine ownership has changed complete attached Owner Update form and return to JLG.				
Comments:				

The undersigned certifies that this machine has been inspected, per each area of inspection, and any and all discrepancies have been brought to the attention of the Owner/User, and that all discrepancies have been corrected prior to any further use of this machine.

JLG Account Holder: _____ / _____ / _____ Owner/User: _____ / _____ / _____
 Authorized Signature Printed Signature Date Authorized Signature Printed Signature Date

APPENDIX D

Hands-on Checklist for Elevated Work Platforms

Trainee Name: _____
 Employer: _____
 Date: _____
 EWP Used: _____

	Complete	N/A
Job Site Inspection		
Review site rules and communication		
Check ground conditions		
Check slope		
Look overhead for obstructions		
Observe environment conditions		
Check for hazardous areas		
Look for pedestrian/vehicle traffic		
Walks path of travel		
Pre- Use Inspection		
Check for operators manual		
Check for visible damage		
Check for hydraulic leaks		
Inspect belts and hoses		
Inspect all pins and connections		
Engine Compartment and positive air		
Check fuel level		
Check oil level		
Inspect tires		
Clear drive direction arrows		
Inspect limit switches		
Inspect platform and guard rails		
Inspect placards and reads		
Checks machine rated capacity/side force allowance		
Ground Control Test		
Tilt alarm		
Emergency Descent Controls		
Lift platform		
Lift jib		
Platform level		
Boom extend/retract		
Turntable rotate		
Primary boom		
Secondary boom		
Stop button		
Fall Protection/Fall Restraint		
Student Donned Fall Protection Properly		
Student Selects Proper Fall Protection Equipment Fall arrest or travel restraint		

	Complete	N/A
Platform Function Test		
Attach lanyard to lanyard attachment point only		
Horn		
Emergency Descent Controls Check		
Lift platform		
Primary boom test		
Riser boom test		
Jib boom		
Rotate platform		
Rotate turntable		
Right Steering Control Check		
Left Steering Control Check		
Drive forward and backwards		
Check braking		
Elevate and check drive reduction		
Operation		
Drive forward and backwards		
Rotate 90 degrees off to the side		
Drive using drive directional arrows		
Position machine on a firm and level surface		
Elevate the boom to full height		
Extend the boom to full length		
Lift jib up and down		
Rotate the platform to the side		
Retract boom		
Lower boom		
Lift platform up approximately 15' and lower using emergency power		
Shut down machine in a stowed position		
Ultra/Super Boom Functions		
Extend and set axles		
Test envelope system from ground		
Test envelope system from platform		
Raise and extend to full height		
Instructor has questioned student with respect to additional height and ground		
Students explain the effects of additional height.		

By signing below, you are accepting responsibility for the information and skills that have been passes on to you during this training program. All topics were reviewed in generic terms, and you have understood the material, and the proper operation of Elevated Work Platforms.

Trainee signature: _____

Instructor signature: _____

SUPPLEMENTARY INFORMATION

HARNESS DONNING

STEP 1

Must complete Pre-Use Inspection

STEP 2

Locate back D-ring held in position by the D-ring pad; lift up harness and hold by this D-ring. Shake harness to allow straps to fall into place. Ensure the straps are not twisted.



STEP 3

- Grasp shoulder straps and slip harness onto one arm. D-ring will be located on your back side.
- Slip free arm into harness and position the shoulder straps on top of shoulder. The chest strap with quick connect buckle will be positioned on front side when worn properly.
- D-Ring will be located in the back between shoulder blades.



STEP 4

- Reach between your legs and grasp the leg strap on your left side.
- Bring the strap up between your legs and connect it by inserting the tab of the buckle into receptor of quick connect buckle on the left side, you will hear a click when the tab engages properly.
- Repeat with right side.
- You should be able to slide two fingers between your leg and the straps, it should be a snug fit.

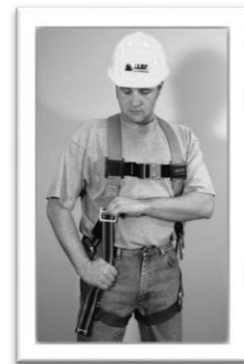


STEP 5

- Connect chest strap and position 15-20 cm (6-8 inches) down from shoulder.
- Tighten shoulder straps.
- Left and right sides of shoulder straps should be adjusted to the same length.

STEP 6

- After all straps have been buckled and tightened, pass excess through loop keepers.



STEP 7

- Use “Buddy System” to ensure correct fit, and positioning.



HANDS ON CHECKLIST FOR ELEVATED WORK PLATFORM

Trainee Name: _____

Date: _____

Employer: _____

EWP Used: _____

	Complete	N/A
Job Site Inspection		
Review site rules and communication		
Check ground conditions		
Check slope		
Look overhead for obstructions		
Observe environment conditions		
Check for hazardous areas		
Look for pedestrian/vehicle traffic		
Walks path of travel		
Pre- Use Inspection		
Check for operators manual		
Check for visible damage		
Check for hydraulic leaks		
Inspect belts and hoses		
Inspect all pins and connections		
Engine Compartment and positive air		
Check fuel level		
Check oil level		
Inspect tires		
Clear drive direction arrows		
Inspect limit switches		
Inspect platform and guard rails		
Inspect placards and reads		
Checks machine rated capacity/side force allowance		
Ground Control Test		
Tilt alarm		
Emergency Descent Controls		
Lift platform		
Lift jib		
Platform level		
Boom extend/retract		
Turntable rotate		
Primary boom		
Secondary boom		
Stop button		
Fall Protection/Fall Restraint		
Student Donned Fall Protection Properly		
Student Selects Proper Fall Protection Equipment Fall arrest or travel restraint		

	Complete	N/A
Platform Function Test		
Attach lanyard to lanyard attachment point only		
Horn		
Emergency Descent Controls Check		
Lift platform		
Primary boom test		
Riser boom test		
Jib boom		
Rotate platform		
Rotate turntable		
Right Steering Control Check		
Left Steering Control Check		
Drive forward and backwards		
Check braking		
Elevate and check drive reduction		
Operation		
Drive forward and backwards		
Rotate 90 degrees off to the side		
Drive using drive directional arrows		
Position machine on a firm and level surface		
Elevate the boom to full height		
Extend the boom to full length		
Lift jib up and down		
Rotate the platform to the side		
Retract boom		
Lower boom		
Lift platform up approximately 15' and lower using emergency power		
Shut down machine in a stowed position		
Ultra/Super Boom Functions		
Extend and set axles		
Test envelope system from ground		
Test envelope system from platform		
Raise and extend to full height		
Instructor has questioned student with respect to additional height and ground		
Students explain the effects of additional height.		

By signing below, you are accepting responsibility for the information and skills that have been passes on to you during this training program. All topics were reviewed in generic terms, and you have understood the material, and the proper operation of Elevated Work Platforms.

Trainee Signature: _____

Instructor Signature: _____

STUDENT PRACTICAL EVALUATION

1. Student to inspect path of travel. _____ (Check that this was done as a group)
2. Ensure the student is equipped with an approved full body harness worn properly and shown where to attach lanyard. _____
3. Student to show the location of the Operators Manual, reiterate it is the responsibility of the operator to read it. _____
4. Student performed a pre-use inspection. _____ (Attach pre-use form to this form)
5. Student to show location and explain purpose of limit switches. _____
6. Student to show operation of emergency lowering systems, ground and platform. _____
7. Student to demonstrate checking controls for proper directional operation. Telescope in/out, lift up/down, platform rotation/level, swing, drive forward/reverse, steer left/right, proper operation of towers and risers. _____
8. Student to perform all operational functions of machine, i.e. high and low speeds and at different elevations. _____
9. Instructor is present in the platform at all times and has allowed the student to operate all functions of the machine until the student is comfortable with all operational controls. _____

To be completed by student:

Student (Print Name) _____ has successfully demonstrated to the instructor the safe operational techniques of the EWP. The instructor has allowed the student to operate the machine until the student was comfortable and confident with operational controls.

Signature of Trainee: _____

Practical Start Time: _____ Practical End Time: _____

Instructor (Print Name): _____

Signature: _____ Date: _____

COURSE EVALUATION FORM

Instructor Name: _____ Class Date: _____

Your feedback is very important in order to improve the course and its content.

Please circle your choice.

	Poor	Fair	Neutral	Good	Excellent
1. Was the Learning Objectives made clear to you at the start of the session?	1	2	3	4	5
2. Was the Learning Objectives relevant to the knowledge/skill requirements of your job?	1	2	3	4	5
3. Were the course objectives met?	1	2	3	4	5
4. Instructor's knowledge and versatility with the subject	1	2	3	4	5
5. Enthusiasm of the Instructor	1	2	3	4	5
6. Presentation of information in an organized, logical fashion	1	2	3	4	5
7. Pace of the presentation/course (Please specify: too slow/too fast/good)	1	2	3	4	5
8. Was sufficient time spent on each objective	1	2	3	4	5
9. Opportunities for feedback and participation	1	2	3	4	5
10. Degree to which your questions were answered	1	2	3	4	5
11. Effectiveness of training aids (slides, overheads, PC / projector, training manuals, flip-charts, videos etc.)	1	2	3	4	5
12. Information presented using a variety of techniques (lecture, demonstration, exercise, discussion, video)	1	2	3	4	5
13. Adequacy/physical comfort of training facilities (Please specify: lighting, ventilation, noise level, chairs, other)	1	2	3	4	5
14. Probability of applying what you have learned to your job	1	2	3	4	5
15. Degree of your understanding of course concepts at the end of the training session	1	2	3	4	5
16. Overall course rating	1	2	3	4	5
17. How did you learn about this course:					

Comments: _____

OSSA Elevated Work Platform Exam

Course Date:	Student Name:	Exam Score:	/55
Company:	Instructor Name:	Percent:	%

- Read each question carefully and circle the best answer. • If you have a question for clarification, raise your hand for the instructor.
- Time limit is 30 minutes, passing grade is 80%. • If you make a mistake, mark an X on the incorrect answer and circle your choice.

- 1.) a b c d 16.) a b c d 31.) a b c d
- 2.) a b c d 17.) a b c d 32.) a b c d
- 3.) a b c d 18.) a b c d 33.) a b c d
- 4.) a b c d 19.) a b c d 34.) a b c d
- 5.) a b c d 20.) a b c d 35.) a b c d
- 6.) a b c d 21.) a b c d 36.) a b c d
- 7.) a b c d 22.) a b c d 37.) a b c d
- 8.) a b c d 23.) a b c d 38.) a b c d
- 9.) a b c d 24.) a b c d 39.) a b c d
- 10.) a b c d 25.) a b c d 40.) a b c d
- 11.) a b c d 26.) a b c d 41.) a b c d
- 12.) a b c d 27.) a b c d 42.) a b c d
- 13.) a b c d 28.) a b c d 43.) a b c d
- 14.) a b c d 29.) a b c d 44.) a b c d
- 15.) a b c d 30.) a b c d 45.) a b c d

46.) a b c d

47.) Write the number on the left to match each component with its definition. Note there will be leftover definitions. (6 pts - 1 pt each).

- a) Pothole protection _____
- b) Basket controls _____
- c) Outriggers _____
- d) Rated Capacity Plate _____
- e) Counterweight _____
- f) Anchor Point _____
1. The main system for travel restraint
 2. A backup control system used if the main fails or if the operator becomes incapable
 3. A metal plate lowered close to the ground
 4. Where to attach the lanyard for fall protection PPE
 5. The main control system for the unit
 6. An optional component to hold fluorescent lighting tubes
 7. Provide the power for the lift components
 8. Stabilize the unit by extending down to contact the ground
 9. Includes the full weight of the machine base
 10. Displays the maximum weight that can be lifted

48.) a b c d

49.) a b c d

50.) a b c d

STS#EWP2015REV2

REGISTRATION NO. TP EWP 17-1631



ELEVATED WORK PLATFORM

OSSA# 20130704-34 STS#EWP2015REV2

TP EWP 17-1631

Candidate Name (Print)
(Full First, Full Middle, Full Last)

- Initial
- Renewal

Course Date

Authorization (Print)

Expiry Date

Authorization (Signature)



iSAFETY

www.isafety.ca 780 756-9191 info@isafety.ca

iSAFETY

iSAFETY TRAINING AND STAFFING LTD.

#217, 10807 Castledowns Road,

Edmonton, Alberta T5X 3N7

Phone: (780) 756-9191 Fax: (855) 667-2339

