Genie
A TEREX BRAND

LIFT PRO™

MOBILE ELEVATING WORK PLATFORM OPERATOR TRAINING

TRAINER'S GUIDE

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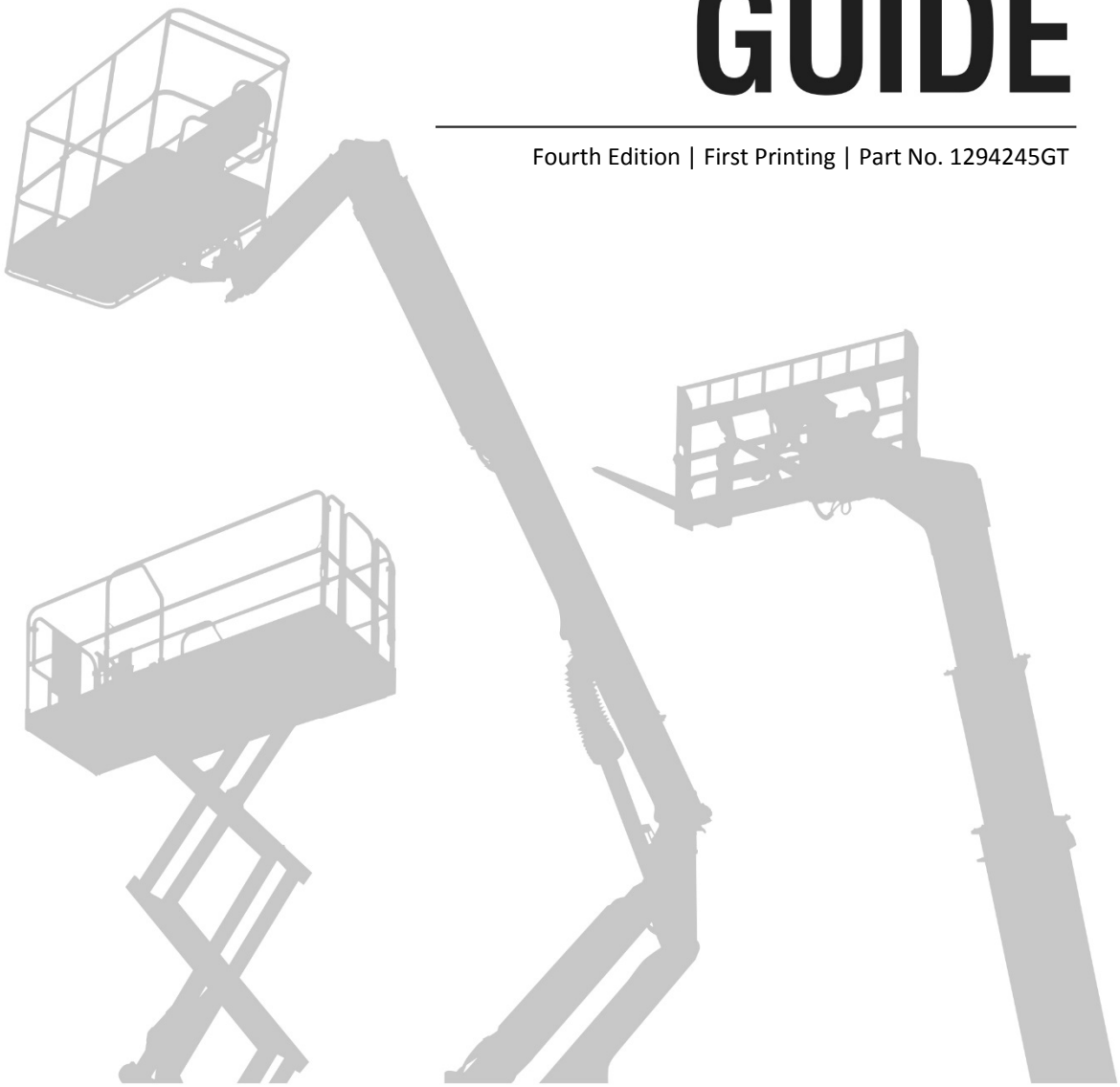


Application of Genie Training Materials:

Information contained in this manual is considered appropriate for the training of trainers and operators of Genie Mobile Elevating Work Platforms.

Trainer Qualifications

Trainers must be qualified to present the training information contained in this manual. OSHA and ANSI define a qualified person as:

> "...one who, by possession of a recognized degree, certificate, or professional standing, or by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project."

Trainers should have completed the Genie "trainer training" and/or be capable of demonstrating that they are qualified to present this training material based on the criteria established by the definition above. Trainers must comply with the responsibilities regarding training found in the ANSI Responsibilities Manuals including record keeping, and determination that trainees have successfully demonstrated that they are qualified to operate Mobile Elevating Work Platform(s).

If you do not meet the above criteria or need additional information to become a qualified trainer, contact Genie at 1-800-536-1800 or your local Genie dealer.

Overview and Responsibilities

Trainer's Responsibility and Expectations

This is a safety training class, and your role in properly setting the tone for the class and positioning the importance of "safe use" is critical!

It is the trainer's responsibility to provide the necessary training so that each trainee fully understands the responsibilities associated with the safe operation of Genie MEWPs. For participants to pass this course, they must show proficiency in a hands-on demonstration of safe operation and achieve a score of 100% on the written exam.

The trainer must know the customer's application and working environment. Whenever possible, promote discussions of situations based on actual experiences. Customize some of these experiences in advance. Making this course relevant will greatly improve the likelihood that the trainees will take what they have learned in your class back to their respective jobs.

Trainee's Responsibility and Expectations

It is the trainee's responsibility to fully understand all responsibilities associated with the safe operation of Genie MEWPs. Each trainee must achieve 100% proficiency in the product demonstration and the written examination. Anything less than 100% would imply that it's okay to compromise jobsite safety... which is never acceptable. Each trainee must actively participate in the training workshop, including classroom activities and hands-on operation.

Only trained personnel should be allowed to operate a MEWP. If a trainee does not meet the established standard for either the hands-on demonstration or the written exam, the trainer must inform the trainee's employer. Additional training and/or coaching may be necessary to pass the course. By successfully completing this course, the trainee will also be expected to identify and correct any unsafe operation or potential accident observed of other operators.

Seminar Record Log Sheet

As outlined in the ANSI Standards, Dealers, Owners, and Users must keep a four-year record of their assigned responsibilities. A seminar sign-in sheet is provided for your convenience. The log sheet will help you keep a record of:

1. Each training session conducted

2. Participant's name in each session

3. Company name in each session

4. Models covered in training session

At the beginning of each seminar, and as each trainee enters the room, have them sign in. Have them print legibly. Copies may be made from the sample sign-in sheet provided at the back of this book.

Trainer's Preparation

Seminar Format

We have designed several different techniques to capture the trainee's attention and to facilitate the learning process. We have integrated written material with a video presentation and hands-on experiences in order to create a learning environment that facilitates participation. You are encouraged to add your own experiences and those of the trainees. For a learning experience to be meaningful, the dialogue and interaction must work both ways. Avoid a one-way monologue. Instead, draw the trainees into the course content.

Using the Training Guides

The Trainer's Guide will help you to present this seminar by offering an easy step-by-step instruction in sequential order. A large portion of the class is meant to be conducted verbally, but it is not intended to be merely read to the trainees.
The Participant's Guide flows parallel to the Trainer's Guide, although a series of "fill-in-the-blank statements" are provided which the trainee is required to complete (answers are provided for the trainer in the Trainer's Guide). These statements should reinforce key points of instruction as the course unfolds. You may provide the answers to some of the statements or call on some of the trainees to fill in the blanks.

This technique should encourage attentiveness and trainee participation.

Even though the course goes into considerable depth, it is not intended to cover every possible unsafe situation an operator may encounter. Any individual intending to use a Genie MEWP must read and understand the appropriate operator's and safety manuals. This will serve to familiarize the participants with these manuals and help emphasize their importance.

During this course, the trainer will utilize a Genie Operator's Manual and the ANSI Responsibilities Manual in conjunction with the Training Guide.

It is the trainer's responsibility to provide each participant a copy of a Genie Operator's Manual to use during the training and for a follow-up reference. A sample copy of an operator's manual for each Genie product family is included in this training kit. The trainer can use the samples to easily reproduce a copy of an operator's manual for each participant. Select a manual that is most appropriate for the type of MEWP used in the training.

Responsibility

Training Location Considerations

The training seminar consists of both classroom and hands-on activities. It is important that you identify, in advance, where each training segment will take place.

A Genie MEWP Safety Video is also provided to make the presentation more effective. It is important to note that the video should never be used as a substitute for conducting the entire seminar. The classroom should be large enough for all participants, with writing surfaces and a TV and DVD player (or laptop and projector) positioned for easy viewing.

The hands-on area should have ample space for each trainee to operate the machine(s).

Required Materials

- Sign-in Sheet/Record Log Sheet

- Train The Trainer Program

- Participant's Guide (one per trainee)

- TV/DVD Player or Laptop and Projector

- Genie Aerial Platform Safety Video

- Certificates of Training and Aerial Access Wallet Cards

- Pens or Pencils

- Appropriate Genie Product(s)

Tips to the Trainer:
Training Agenda

• Determine in advance how long the training session will last. Duration may vary depending on class size and number of products to be presented.

• Classroom time may not vary as much as the hands-on time.

• If the class size is large, try "team teaching" with another trainer. Split the class into two groups. This may improve logistics, maximize participation, and reduce the idle time a trainee may experience while waiting for his/her turn with the machine(s).

• Refer to the Trainer's Guide and explain your expectations of each trainee.

• Encourage participation, involvement, questions, and be safe!

Introduction

Start the Video Now

This training is designed to be general in nature since it covers safe operating procedures for all types of Mobile Elevating Work Platforms. It is expected that operators will follow established familiarization procedures prior to operating models not specifically addressed during this training.

This course consists of five key areas of learning and proficiency demonstration. We are going to talk about Terminology and Applications, Responsibility, Safety, Operation and finish with Hands-on.

The most important thing we can teach you today is to rely on the appropriate operator's manual for the Mobile Elevating Work Platform (MEWP) you are learning to operate. It contains all of the safety rules and operating instructions you will need. We have provided you with an appropriate Operator's Manual for your use during the training and as a follow-up reference.

Tips to the Trainer:

Introductions and Purpose:

1. Greet the class. Begin to create the proper learning atmosphere.
2. Introduce yourself. Be sure everyone has signed in on the training log sheet.
3. Review the training agenda and course outline.
4. Identify specific products to be covered.

Terminology

Tips to the Trainer:

The information in this section is an introduction to the new terminology that has been adopted by ANSI and CSA.

Explain to the participants that the term Aerial Work Platform and the categories of Boom-supported Elevating Platform, Self-propelled Elevating Platform and Manually-propelled Elevating Platform have been replaced by the new terminology as outlined in this training course.

MEWP is an acronym for Mobile Elevating Work Platforms.

MEWP classifications are made up of a combination of two key distinguishing descriptions:

a) A MEWP **group**, which is determined by where the platform location is in reference to the tipping line (see Figure 1)

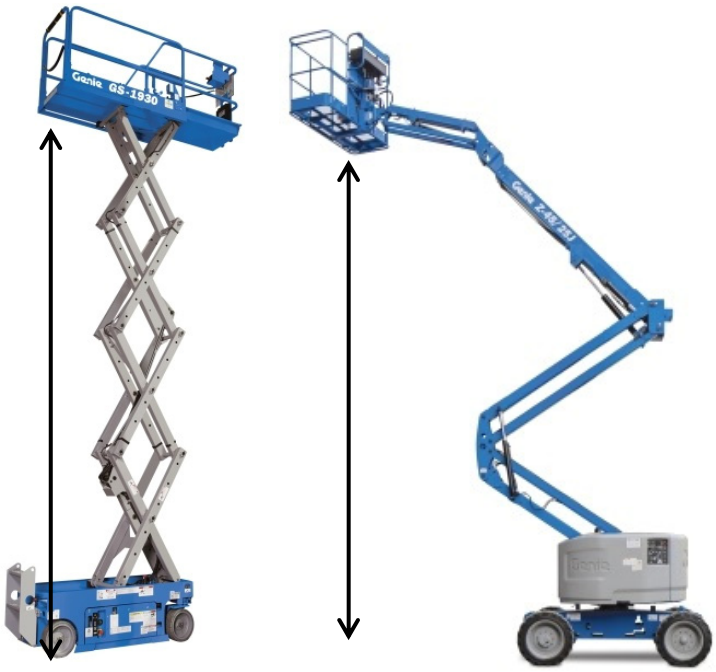
b) A MEWP **type**, which is in reference to traveling;

Type 1 -
Traveling is allowed only with the MEWP in its **stowed** position

Type 2 -
Traveling with the work platform in the elevated position is controlled from a point on the **chassis**

Type 3 -
Traveling with the work platform in the elevated travel position is controlled from a point on the work **platform**

Figure 1



Group A **Group B**

Terminology

There are six classifications of MEWPS and training is required for each classification.

Please note: since Type 2 machines are relatively uncommon, this training program will focus only on Type 1 and Type 3 machines.

Type 1, Group A (1A): Stationary Vertical MEWP

(Traveling is allowed only with the MEWP in its stowed position)

Example of a 1A MEWP:

A great example of a Type 1, Group A MEWP would be manually-propelled vertical lifts. The platform never extends beyond the tipping line and the machine is designed to only be moved with the platform in the stowed position.

Type 1, Group B (1B): Stationary Boom MEWP
(Traveling is allowed only with the MEWP in its stowed position)

Example of a 1B MEWP:

Trailer-mounted Booms are perfect examples of a Type 1, Group B MEWP. The platform is designed to extend beyond the tipping line and the machine is designed to only be moved with the platform in the stowed position.

Please note that, in the United States, trailer-mounted booms still fall under the ANSI A92.2 Standards which have slightly different requirements which will be addressed during this course.

Terminology

Type 3, Group A (3A): Platform-controlled Mobile Vertical MEWP

(Traveling with the work platform in the elevated position is controlled from a point on the work platform)

Example of a 3A MEWP:

A great example of a Type 3, Group A MEWP would be electric or rough terrain scissor lifts. The main platform never extends beyond the tipping line and machine travel is controlled from the platform controls.

Type 3, Group B (3B): Platform-controlled Mobile Boom MEWP

(Traveling with the work platform in the elevated position is controlled from a point on the work platform)

Example of a 3B MEWP:

Articulated and Telescopic Booms are perfect examples of a Type 3, Group B MEWP. The platform is designed to extend beyond the tipping line and machine travel is controlled from the platform controls.

MEWP Selection

Type 1, Group A (1A): Stationary Vertical MEWP

Stationary, or manually-propelled, Vertical Mobile Elevating Work Platforms are **economical** and easy to transport, and are often a good alternative to platform-controlled vertical lifts (3A).

They're **compact**. Most models can roll through single or double doorways. They can also go on some elevators, depending on elevator load capacity.

They're relatively **lightweight** so they are ideal for use on floors that can only support limited loads.

They're **simple** machines that are easy to operate and easy for one person to set up.

They're versatile. Multiple options such as narrow platforms and rough terrain tires, and accessories such as tool trays, fluorescent tube caddy and locating laser light are available to customize the lift for every application.

Common applications include indoor construction, contractors, HVAC installation, schools, universities, churches, hospitals and shopping malls. They are also often used for maintenance and cleaning, as well as work in light-floor-load areas such as gymnasiums, theaters and stages.

MEWP Selection

Type 1, Group B (1B): Stationary Boom MEWP

Stationary Boom Mobile Elevating Work Platforms combine the up-and-over access of an articulating **boom** with the convenience of a built-in **trailer**.

A contractor can easily tow one of these units behind a pickup truck or utility vehicle, saving on delivery charges from the rental store.

They provide an excellent working envelope with the ability to reach **up** and **over** obstacles, allowing workers to perform tasks faster and more efficiently than smaller manually-propelled products at a significantly **lower** **cost** than that of a self-propelled boom.

A variety of hitch coupler options allow these machines to be towed behind pickups or SUVs while hydraulic outriggers with automatic self-leveling allow an operator to quickly set up the machine for maximum productivity.

Common applications include schools, museums, casinos, parks, retail, home construction, tree trimming and lighting, window washing, signs and mechanical and electrical contractors.

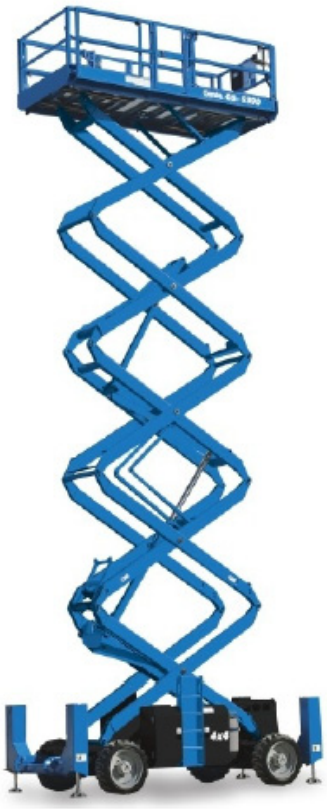
MEWP Selection

Type 3, Group A (3A): Platform-controlled Mobile Vertical MEWP

Platform-controlled Vertical Mobile Elevating Work Platforms offer outstanding maneuverability and productivity-enhancing features. They are **self**-**propelled** and most models have the ability to drive while fully **elevated**. Common Platform-controlled MEWPs include scissor lifts and single-personnel lifts.

They offer either zero degree or high angle **turning** radius for outstanding maneuverability in tight or congested jobsites, and some are lightweight enough to fit in an elevator, depending on the elevator load capacity.

Common applications include HVAC, indoor maintenance & construction, painting and drywall, exterior finishing, rugged worksites, tilt-up construction, warehouse, stock-picking, transporting, inventory management, general maintenance and light-duty construction



MEWP Selection

Type 3, Group B (3B): Platform-controlled Mobile Boom MEWP

Booms fall into two categories of design: **Articulating** and **Telescopic**.

Articulating Z-booms are MEWPs with multiple boom sections that hinge or articulate allowing the operator to gain access to work areas over **obstacles** and barriers. Also referred to as knuckle booms, or up and over booms, these versatile products are perfect for **tight** **access** and hard to reach areas, or when reaching over obstacles.

Common applications include outdoor construction and building maintenance.

Telescopic S-booms are MEWPs with boom sections that **extend** telescopically. They are also commonly known as **stick** booms because of their straight appearance. Telescopic booms offer greater horizontal **outreach** than any other type of MEWP.

Booms with four-wheel drive and active oscillating axles are designed for maximum terrainability and traction.

Common applications include large construction projects, steel erection, tilt panels, refineries, mechanical and electrical contractors, factories, food processing, manufacturing, maintenance, schools and hospitals.

Articulating Z-Boom

Telescopic S-Boom

Responsibility

Start the Video Now

Tips to the Trainer:

The information in this section is an introduction to ANSI, SAIA and CSA and provides a brief summary of the Responsibilities contained in the ANSI/SAIA Manual of Responsibilities.

Instruct the participants to refer to their ANSI/SAIA Manual of Responsibilities for the complete list of responsibilities. The ANSI/SAIA Manual of Responsibilities should be used in conjunction with the discussion in this section.

ANSI standards provide the requirements for design, maintenance and use of aerial lift equipment in the U.S.A.

ANSI refers to the American National Standards Institute.

ANSI standards that apply to Mobile Elevating Work Platforms are under the designation of ANSI/SAIA **A92.**

These standards are developed by a consensus body of industry experts and are published and distributed by the A92 secretariat, which is the Scaffold and Access Industry Association, or **SAIA**.

Contact information for SAIA is found in the ANSI Manual of Responsibilities supplied with all Mobile Elevating Work Platforms shipped within the United States or Canada.

In Canada, **CSA**, or the Canadian Standards Association, provides standards for MEWPs. The CSA standards that apply to MEWPs are under the designation of CSA **B354**.

Responsibility

The ANSI Manual of Responsibilities outlines the responsibilities of manufacturers, dealers, owners, users, operators, supervisors, occupants, lessors, lessees and brokers of MEWPs as they relate to the safe use of the equipment.

It also provides a detailed description of the **safety practices** you must follow as an operator of MEWPs.

We encourage you to thoroughly read and understand the Responsibilities Manual. It must be kept on the MEWP at all times.

You are required to **know** and **understand** your responsibilities as an operator before you operate any MEWP.

Responsibility

Manufacturer

The manufacturer has the responsibility of manufacturing the machine to dimensional, operational, structural, stability and quality standards.

As it pertains directly to the operation and maintenance of the MEWP, the manufacturer has the responsibility to provide **operational** and maintenance instructions, and to identify the hazards associated with operating or repairing the MEWP.

The manufacturer also has the responsibility to provide training materials for the operator training session we are participating in today.

Dealer

The dealer is responsible for delivering to the user or operator a machine that meets the manufacturer's standards for design, structural integrity, stability and quality.

The dealer is responsible for offering appropriate **training** and **familiarization** or have proof of training and familiarization for all of their employees whom they authorize to operate a MEWP.

When a dealer sells, leases, rents, or provides a MEWP, when requested by the user, the dealer must offer operator training or **advise** the user where training can be obtained.

The dealer is responsible for offering familiarization at delivery to the person receiving the MEWP, unless the user has made alternate arrangements with the owner or dealer.

The dealer is responsible for keeping all training records for at least the period of time that the training is **valid.**

Responsibility

Owner

The owner of the MEWP could be the dealer in a rental situation or may have the additional responsibilities of the user if he or she is directing operators to operate the machine.

It is the owner's responsibility to keep and maintain the manuals as supplied by the manufacturer and to insure that a copy of each is stored in the weather-resistant compartment **on the machine**.

The owner is responsible for insuring that all maintenance and **inspections** have been performed on the machine as required by the manufacturer.

These include **frequent** inspections (typically performed every three months or every 150 hours, whichever comes first), and **annual** inspections (a more detailed inspection performed by a qualified service technician no later than 13 months after the previous annual inspection).

In the case where a MEWP is being rented, arrangements must be made by the owner to identify the entity that will be responsible for the inspections and maintenance activities described in the standard.

It is the responsibility of the owner to provide **on the MEWP** a means to identify the date the last annual inspection was performed as well as the interval at which annual inspections are required.

The owner is responsible for offering appropriate training and familiarization or have **proof** of training and familiarization for all of their employees whom they authorize to operate a MEWP.

The owner is responsible for keeping all training records for at least the period of time that the training is **valid.**

Responsibility

User

By definition, the user is the person or persons who are in the position of directing operators to use the MEWP to perform work. Most commonly, this is the employer.

It is the user's responsibility to keep and maintain the **manuals** as supplied by the manufacturer and to insure that a copy of each is stored on the machine.

The user must either train and familiarize or ensure that personnel whom they authorize as **operators** and **supervisors** have been trained and have received unit-specific familiarization.

The user must develop a **safe use** program specific to MEWPS which must include, but not be limited to:

a) Performing a site **risk assessment** to identify all hazards, develop control measures and communicate the results with everyone affected,

b) **Selection**, provision and use of a suitable MEWP and associated equipment,

c) Access, preparation and maintenance of the site to include an assessment that the **support surface** is adequate to support the weight of the MEWP,

d) MEWP maintenance including inspections and repairs as required,

e) Inform the operator of local site requirements and warn and provide the means to protect against identified hazards in the areas where the MEWP will be operated

f) Have a **trained** and qualified supervisor to monitor the performance or the work of the operator to ensure compliance with provisions of the standards,

g) Prevention of unauthorized use of the MEWP,

h) Safety of persons **not** involved in the operation of the MEWP.

Responsibility

User cont.

Before a job starts and periodically throughout a long-term job, the risk assessment must be reviewed to determine if any part of the job or the work environment has changed and the effect that it could have on the safety of the operation.

If any modifications to the risk assessment are required, these must be **communicated** to everyone involved prior to resuming the job.

The User must develop a written **Rescue Plan** that will be carried out in the case of machine breakdown, platform entanglement or fall from platform.

The plan must be put in writing and become part of the company's training manual.

All occupants in the platform must receive training that explains the procedures to follow if they fall and await rescue or witness another worker's fall.

The plan must **limit** the time that a properly restrained worker hangs suspended in the air.

Rescue plans can include the following:

- **Self-** rescue by the person involved,
- **Assisted** rescue by others in the work area, or
- **Technical** rescue by emergency services.

Responsibility

User cont.

The user is responsible for designating a qualified person to **monitor**, supervise and **evaluate** operators on a regular basis to ensure that they have the skills necessary to do the job safely.

The evaluations should be documented and **retained** by the user.

Some examples of situations when retraining is required include, but are not limited to:

a) The operator's valid training period has **expired** (as determined by the user);
b) The operator's performance has **deteriorated**;
c) The operator has gone an extended period of **time** without operating a MEWP;
d) The operator has been assigned to operate a MEWP with new or significantly **different** technology;
e) The operator has been involved in an **accident** or near-miss incident with a MEWP.

The user must ensure that anyone who directly **supervises** MEWP operators is trained in the following:

a) How to properly **select** the correct MEWP for the work to be performed;

b) The rules, regulations and standards that apply to MEWPS, including the provisions for safe use, training and familiarization, and the work to be performed;

c) How to identify and avoid potential hazards associated with the operation of MEWPS;

d) Understanding that the manufacturer's operator's manual(s) are an integral part of the MEWP and must be stored in the weather-resistant compartment on the machine when not in use.

Responsibility

User cont.

And finally, the user must ensure that maintenance and repair personnel are trained by a qualified person to inspect and maintain the MEWP in accordance with the manufacturer's recommendations and ANSI and CSA standards.

Operator

The person who actually performs work using the MEWP is the operator.

The operator is responsible for operating the MEWP within the limits of intended use as defined by the manufacturer in the **operator's** manual and job site and governmental regulations.

The operator is responsible for insuring that he/she has received proper training and is **familiar** with the specific model of MEWP to be operated.

It is the operator's responsibility to check that the **manuals** are in the storage box on the platform and read them before operation.

Responsibility

Operator Cont.

The operator is responsible for visually **inspecting** the MEWP at the beginning of each shift and for performing the **function** tests in accordance with manufacturer's recommendations.

The operator is responsible for reporting any problems or malfunctions that occur before or during operation. Any such identified problems or malfunctions that affect the safety of operations shall be repaired **prior** to continued operation.

The operator is responsible for performing the workplace **risk assessment**, including rescue planning.

And finally, the operator must ensure that all **occupants** in the platform have a basic level of knowledge to work safely on the MEWP. This includes:

- the requirement to use **fall** protection and the location of fall protection anchors,
- factors including how their actions could affect **stability**,
- the safe use of any **accessories** that they are assigned to use;
- any site specific work **procedures** the occupants must follow related to the operation of the MEWP;
- **hazards** related to the task at hand and their avoidance;
- manufacturer’s warnings and instructions; and

At least one of the occupants must be provided with the knowledge to operate the platform controls in an emergency where the operator cannot.

Video Presentation

Tips to the Trainer:

Before the Video Presentation:

1. Ask if the participants have any questions about the ANSI or CSA Regulations.
2. Set up the video in advance.
3. Check in advance to confirm product, fall protection equipment, etc. are ready for the hands-on demonstration portion of the class.
4. Play the first section of the video until the blue screen appears instructing you to pause the video and review the Participant's Manual for the next section.

This video was designed to help you develop safe operating practices when using Mobile Elevating Work Platforms.

The presentation format illustrates the steps that lead to safe operation.

1. Safety first; understand all potential operational and use hazards.
2. Always perform a pre-operation inspection.
3. Always perform function tests: Genie operator's manuals include step-by-step function tests that both test the machine functions and teach the individual how to operate the machine.

Before any actual operation of the machine, it is important to read the appropriate operator's manual prior to its use. Failure to obey the instructions and safety rules in the manual and on the MEWP could result in death or serious injury.

START THE VIDEO NOW

Safety

Tips to the Trainer:

1. Review the Safety Rules And Potential Hazards section in the operator's manual. This section should reinforce the concepts identified in the video.

2. The operator's manual should be used in conjunction with the discussions in the section.

There are specific hazards associated with operating Mobile Elevating Work Platforms. These hazards have been identified by the manufacturer and are located in the **operator's** manual for each model.

These hazards are to be observed in conjunction with all other workplace safety rules and regulations. The hazards identified in the operator's manual are grouped in several categories which include, but are not limited to, **tip-over**, **fall**, **collision** and **electrocution** hazards.

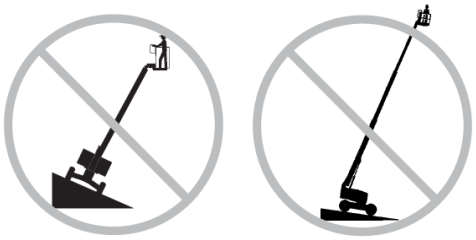
We would like to introduce you to an overview of these hazards. It is your responsibility to read and **understand** all of the hazards in the appropriate operator's manual.

Safety

Tip-over Hazards

Do not exceed the rated **platform** capacity intended by the manufacturer.

The MEWP is intended to be elevated only on a **firm** **level** surface, unless it is equipped with outriggers that are designed for use on sloped surfaces.



Do not alter or disable machine components that affect the MEWP's stability or replace them with items of different **weight**.

Do not operate the machine in strong or gusty winds. Do not increase the surface area of the platform or the load. Increasing the area exposed to the wind will **decrease** machine stability.

Do not place or attach **overhanging** loads to any part of the MEWP.

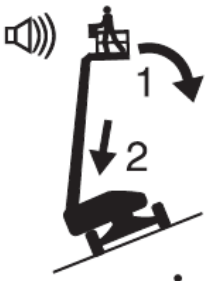
Do not place ladders or scaffolds in the platform or against any part of the machine.

And of course, never use a machine if any control or safety **device** is malfunctioning or has been tampered with.

Safety

All self-propelled MEWPs will tip over if elevated on a **slope** that exceeds the manufacturer's recommendations or driven on uneven terrain including drop-offs or holes.

If the tilt alarm sounds when the platform is raised, use extreme caution. If on a scissor lift, lower the platform and move the machine to a firm, level surface. If on a boom, identify the condition of the boom on the slope. Follow the steps to lower the boom before moving to a firm, level surface. **Do not rotate** the boom while lowering.



If the tilt alarm sounds with the platform uphill, first lower the boom, then retract the boom.

If the tilt alarm sounds with the platform downhill, first retract the boom, then lower the boom.

Driving on a Slope

Booms –

Determine the uphill, downhill and side slope ratings for the machine and determine the slope grade.

Maximum slope rating, platform downhill (gradeability)

Maximum slope rating, platform uphill

Maximum side slope rating

Be sure the boom is below horizontal and the platform is between the non-steer wheels.

Scissor Lifts –

Determine the slope and side slope ratings for the machine and determine the slope grade.

Maximum slope rating, stowed position

Maximum side slope rating, stowed position

Note: Slope rating is subject to ground conditions and adequate traction.

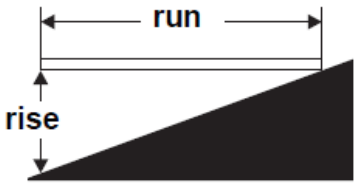
To determine the slope grade:

Measure the slope with a digital inclinometer OR use the following procedure:

You will need:

- a carpenter's level,
- a straight piece of wood at least 3 feet/1 meter long, and
- a tape measure.

Lay the piece of wood on the slope. At the downhill end, lay the level on the top edge of the piece of wood and lift the end until the piece of wood is level. While holding the piece of wood level, measure the vertical distance from the bottom of the piece of wood to the ground. Divide the tape measure distance (rise) by the length of the piece of wood (run) and multiply by 100.



Example:

Piece of wood = 144 inches (3.6 m)
Run = 144 inches (3.6 m)
Rise = 12 inches (0.3 m)
12 in ÷ 144 in = 0.083 x 100 = 8.3% grade
0.3 m ÷ 3.6 m = 0.083 x 100 = 8.3% grade

Fall Hazards

To avoid fall hazards, personal fall protection equipment, or **PFPE** is required when operating either a self-propelled or trailer mounted boom. All occupants must wear a full body harness and **appropriate** lanyard in accordance with governmental regulations.

Do not operate the machine unless the guard rails are properly installed and the **entry** is secured for operation.

Do not sit, stand or climb on the platform **guard rails.**

Do not **climb down** from the platform when it is raised.

Safety

Collision Hazards

These include hazards to the MEWP and surrounding areas as well as personnel collisions that result in injury.

Always look **in the direction** you are moving when you are traveling, elevating or lowering the MEWP.

Check the work area for **overhead** obstructions or other possible hazards. Genie recommends wearing personal protective equipment as required when operating MEWPs.

Be aware of crushing hazards when grasping the platform guardrail.

Do not **lower** the platform unless the areas below are clear of personnel and obstructions.

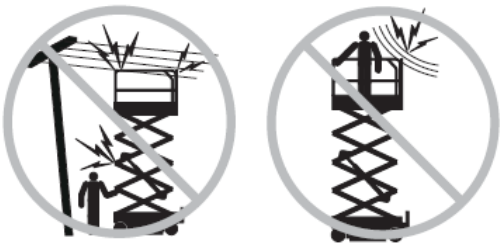
Limit **travel** speed according to condition of ground surface, congestion, slope, location of personnel, and any other factors which may cause collision.

Be aware of limited sight distances and blind spots when driving or operating a machine.

Be aware of boom position and **tailswing** when rotating the turntable.

Electrocution Hazards

MEWPs are not electrically insulated and provide **no** protection from electrocution.



Keep away from the MEWP if it contacts energized **power lines**.

Working near energized power sources requires common sense and planning. To help with the planning, there is information in the operator's manual and on **decals** attached to the MEWP that will identify, at a minimum, the required clearance you must maintain when working near electrical conductors. Do not operate a machine without this information.

It is mandatory that all operators fully understand the potential for electrocution when operating a MEWP. High voltage overhead power lines are most often not insulated. The operator or any part of the machine will not have to come in direct contact with a power line to be in extreme danger. High voltage electrical current can jump up to **45** feet to seek a ground.

Operators must know, or find out, the voltage of all power sources in their work area and maintain the **required clearance** in accordance with the information in the operator's manual and on decals attached to the MEWP.

Example:

Line Voltage	Required Clearance	
0 to 50KV	10 ft	3.0 m
50 to 200KV	15 ft	4.6 m
200 to 350KV	20 ft	6.1 m
350 to 500KV	25 ft	7.6 m
500 to 750KV	35 ft	10.6 m
750 to 1000KV	45 ft	13.7 m

Safety

Decal Legend

Genie product decals use symbols, color coding and signal words to identify the following:

Safety alert symbol—used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

Red—used to indicate a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Orange—used to indicate a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Yellow with safety alert symbol—used to indicate a hazardous situation which, if not avoided, may cause minor or moderate injury.

CAUTION

Yellow without safety alert symbol—used to indicate a hazardous situation which, if not avoided, may result in property damage.

NOTICE

Green/Blue—used to indicate information considered important, but not hazard related (such as messages related to property damage)

Again, this is an overview. Specific hazards are identified in the operator's manual for each Mobile Elevating Work Platform.

START THE VIDEO NOW

Operation

There are five principles of safe machine operation. They are:

1. Avoid **hazardous** situations.
2. Always perform a pre-operation **inspection**.
3. Always perform **function** tests prior to use.
4. Inspect the **work** place.
5. Only use the machine as it was **intended**.

Genie operator's manuals are organized around these principles. These principles, followed in sequence, will help you to operate the MEWP safely and efficiently.

Avoid hazardous situations.

The Safety section of this training guide has provided you with some familiarization of the hazards associated with operating Mobile Elevating Work Platforms.

The Safety Rules section in the operator's manual of the MEWP you will be operating lists serious hazards associated with operation. Always **read** and **understand** the appropriate operator’s manual for the MEWP you will be operating **before** using the machine.

You need to understand and avoid all hazards through every phase of machine inspection, testing and operation.

Operation

Tips to the Trainer:

Pre-operation Inspection

1. Instruct the participants to refer to the Pre-operation Inspection section of the Genie Operator's Manual. Review the complete checklist.

2. Be prepared to demonstrate to the class how to actually conduct the Pre-operation Inspection during the hands-on training. Have each trainee conduct a Pre-Operation Inspection on the machine(s) they will be operating during the training.

Always perform a pre-operation inspection.

It is the responsibility of the **operator** to perform a Pre-operation Inspection.

The Pre-operation Inspection is a visual inspection performed by the operator prior to **each** work shift. The inspection is designed to discover if anything is apparently wrong with a machine before the operator performs the function tests.

The operator's manual contains information about how to perform this inspection.

You will need to check for unauthorized modifications, damage or loose or missing parts.

If damage or any unauthorized variation from factory delivered condition is discovered, the MEWP must be **tagged** and removed from service.

Repairs to the MEWP may only be made by a **qualified** service technician, according to the manufacturer's specifications. After repairs are completed, the operator must perform a pre-operation inspection **again** before going on to the function tests.

Scheduled maintenance inspections shall be performed by qualified service technicians, according to the manufacturer's specifications and the requirements listed in the responsibilities manual.

Tips to the Trainer:

Function Tests:

1. Instruct the participants to refer to the Function Tests section of their Genie Operator's Manual. Review the complete function tests.

2. Explain to the class that you will demonstrate how to perform the function tests at each control panel during the hands-on portion of the training. After completing the tests at the ground controls, each trainee will perform the same procedures. Use the operator's manual for detailed steps of the function tests. Repeat the process at the platform controls. Don’t forget that everyone needs to use a body harness, with fall restraint lanyard, when they enter a Boom platform.

3. Perform each function test during the hands-on training. Be sure to acknowledge the desired aspects of performance as they occur. Explain why some tests are full or partial cycle.

4. Return to the classroom for the wrap-up activities, including examination and certificates.

Always perform function tests prior to use.

The Function Tests are designed to discover any **malfunctions** before the MEWP is put into service. The operator must follow the step-by-step instructions to test all machine functions.

A malfunctioning MEWP must **never** be used. If malfunctions are discovered, the MEWP must immediately be tagged and removed from service. Repairs to the MEWP may only be made by a qualified service technician, according to the manufacturer's specifications.

After repairs are completed, the operator must perform a pre-operation inspection and function tests again before putting the MEWP back into service.

Operation

Tips to the Trainer:

Be sure all trainees review and understand the potential hazards listed under “Workplace Inspection.”

Workplace Inspection

1. Instruct the participants to refer to the Workplace Inspection section of their Genie Operator's Manual. Review the complete workplace inspection. An actual inspection may not be appropriate during training. Continue workplace hazards discussions using the suggestions listed below:

- Visibility is essential for safe operation; check for blind spots.
- When the operator is elevated in the platform, drop-offs may not be visible. Check in advance. Ask the class if they can cite any specific areas that everyone should be aware of.
- Ask the class what types of surfaces would be inappropriate for using Genie MEWPs. Some appropriate responses are: soft soil conditions, vehicle beds, limited floor rating on multi-storied buildings, mezzanines, etc.
- Ask the class what work environments could be potentially hazardous? Some appropriate responses are: certain paint areas; grain elevators; poorly ventilated areas (internal combustion engines); areas with the potential for sudden air gusts such as around aircraft or operating outdoors.

Inspect the workplace.

The Workplace Inspection helps the operator determine if the workplace is suitable to operate the MEWP safely. It should be performed by the operator **prior** to moving the MEWP to the work place.

It is the **operator's** responsibility to read and remember the work place hazards, then watch for and avoid them while moving, setting up and operating the MEWP.

Only use the machine as it was intended.

The Operating Instructions section in the operator's manual provides instructions for each aspect of MEWP operation. It is the operator's responsibility to follow all the safety rules and instructions in the operator's, safety and responsibilities manuals.

Unless specifically permitted in the operator's manual, MEWPs should **not** be used for lifting anything other than personnel and light tools.

Only **trained** and authorized personnel should be permitted to operate a machine. If more than one operator is expected to use a machine at different times in the same work shift, they must all be qualified operators and are expected to follow all safety rules and instructions in the operator's, safety and responsibilities manuals. That means **every new operator** should perform a pre-operation inspection, function tests, and a workplace inspection **before** using the MEWP.

Don't forget to rely on the appropriate operator's manual for the MEWP(s) you are learning to operate. It contains all of the **safety rules** and operating instructions you will need.

Demonstrate Proficiency

During the hands-on section of training, the qualified operator assessing your proficiency will be expecting you to demonstrate your knowledge of the **five principles** of safe machine operation. You will need to operate the MEWP for sufficient time to demonstrate proficiency in the actual operation of the machine.

Familiarization

Once you have completed this program and have demonstrated proficiency on a MEWP, you may need to learn how to operate other types of MEWPs.

The user (often times the employer), as described in the Responsibility section, must ensure that before use, the operator is **familiar** with the model of the MEWP to be operated, and specifically:

1. Knows the location of the weather resistant compartment for manual storage.
2. Knows the operating and responsibilities manuals supplied by the manufacturer are stored in the weather resistant compartment and is familiar with the information in operating and safety manuals.
3. Understands all control functions, devices, decals and warnings.
4. Is aware of and understands all features and operating characteristics specific to the model of MEWP being used.

Final Exam

1. Ultimately who is responsible for the safe operation of the MEWP?

   A. Operator
   B. Equipment Owner

2. All the necessary safety rules and operating instructions for safely operating a MEWP are found in the **operator's** manual.

3. All training records must be kept for:

   A. At least three years
   B. At least four years
   C. At least the period of time that the training is valid

4. What are three of the nine hazards described in the operator's manual?

   1. Electrocution Hazard
   2. Tip Over Hazard
   3. Fall Hazard
   4. Collision Hazard
   5. Component Damage Hazard
   6. Explosion and Fire Hazard
   7. Damaged Machine Hazard
   8. Crushing Hazard
   9. Bodily Injury Hazard

5. The five principles of safe machine operation are:

   1. Avoid **hazardous** situations.

   2. Always perform a pre-operation **inspection** before each work shift.

   3. Always perform **function** tests prior to use.

   4. Inspect the **work** place.

   5. Only use the machine as it was **intended**.

6. It is the user's responsibility to keep and maintain the manuals as supplied by the manufacturer and to insure that a copy of each is stored on the **machine.**

7. The operator is responsible for insuring that he or she has received proper **training** and is familiar with the specific model of MEWP to be operated.

8. It is the operator's responsibility to check that the **manuals** are in the storage box on the platform and read them before operation.

9. MEWPs are intended to be elevated only on **firm** **level** surfaces.

10. Increasing the surface (or sail) area of the platform exposed to the wind will decrease the machine stability.

    True or False

11. Do not place or attach **overhanging** loads to any part of the MEWP.

12. Limit travel speed according to:

    A. Ground surface conditions
    B. Slope
    C. Location of personnel
    D. All of the above

13. Who is responsible to see that only properly trained and authorized personnel operate the machine?

    A. The dealer

    B. The owner

    C. The user (most commonly the employer)

    D. The operator

Final Exam

14. High voltage electrical current can jump up to 45 feet to seek a ground.

    A. True
    B. False

15. Testing the Tilt Sensor on a scissor lift is part of which principle of safe machine operation?

    A. Workplace Inspection
    B. Pre-operation Inspection
    C. Function Tests

16. Who is ultimately responsible for reading the Operator's Manual prior to using the machine?

    A. The User
    B. The Operator
    C. The Owner

17. Which of the following should be included in the Function Tests?

    A. Tilt Sensor
    B. Horn
    D. Drive and Braking
    E. Steering
    F. Emergency Stop
    G. Auxiliary Controls
    H. Lift Raise and Lower
    I. All of the above

18. Only one Pre-operation Inspection needs to be performed during a shift no matter how many operators use the machine.

    A. True
    B. False

19. The person or persons who are in the position of directing operators to use the MEWP to perform work is:

    A. The Owner
    B. The User
    C. The Dealer
    D. The Operator

20. The standards writing bodies for the United States and Canada respectively are:

    ANSI and **CSA**

21. Which principle is designed to discover if anything is apparently wrong with a machine before the operator performs the function tests?

    A. Workplace Inspection
    B. Pre-operation Inspection
    C. Function Tests

22. A damaged or malfunctioning MEWP must **never** be used.

23. If the tilt alarm sounds while operating a boom on a slope with the platform uphill, the operator should:

    A. First retract the boom, then lower the boom.
    B. Lower the platform immediately
    C. First lower the boom, then retract the boom
    D. Drive to a more level spot

24. The User must ensure that personnel that they authorize to use a MEWP has been properly trained.

    A. True
    B. False

25. Rescue Plans can include:

    A. Self-Rescue
    B. Assisted Rescue
    C. Technical Rescue
    D. All of the above

26. Safe Use Programs must include:

    A. Performing a site risk assessment
    B. Selection of a suitable MEWP
    C. Prevention of unauthorized use
    D. All of the above

Final Exam

27. Any person other than the operator can occupy a MEWP platform without any instruction.

    A. True
    B. False

28. A MEWP Group is in reference to:

    A. Traveling
    B. Platform location in reference to the tipping line
    C. Location of controls

29. A Type 3 MEWP is one that:

    A. Can only be moved in the stowed position
    B. Is controlled from the ground controls
    C. Is controlled from the platform controls

30. Which MEWP is relatively lightweight and is ideal for use on floors that only support limited loads?

    A. 1A
    B. 2B
    C. 3B

31. Which MEWP can be towed behind a work truck or SUV?

    A. 2A
    B. 1B
    C. 3A

32. Who is responsible for ensuring that all maintenance and inspections have been performed on the machine as required by the manufacturer?

    A. Manufacturer
    B. Owner
    C. Operator
    D. User

33. Match the decal color with the appropriate signal word.

A. Red	**B** Warning
B. Orange	**D** Notice
C. Yellow	**A** Danger
D. Green/Blue	**C** Caution

34. All occupants of a self-propelled boom must wear personal **fall** protection.

35. List at least three things that the operator must check on the machine as a part of the “Pre-Operation Inspection.”

    Refer to the Operator's Manual

36. List at least three things that the operator must look for as part of the “Workplace Inspection.”

    Refer to the Operator's Manual

37. Information about the Required Clearance from electrically charged devices can be found:

    A. In the Operator’s Manual
    B. On decals on the machine
    C. All of the above

38. If the operator has any questions regarding the operation or application of the machine he/she should:

    A. Do the best he/she can under the circumstances.
    B. Experiment.
    C. Modify or make alterations as required.
    D. Stop operation and seek assistance from the employer, owner/dealer or manufacturer before further operation.

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Genie Operator Training – Training Record

The American National Standards Institute (ANSI) and the Canadian Standards Association (CSA) define training as "Instruction to enable the trainee to become a qualified person regarding the task to be performed, including knowledge regarding potential hazards."

Only personnel who have received general instructions regarding the inspection, application and operation of Mobile Elevating Work Platforms (MEWP), including recognition and avoidance of hazards associated with their operation, shall operate a MEWP. The ANSI A92 and CSA B354 standards outline the items to be covered.

This form is provided as an example for use in fulfilling the ANSI and CSA record keeping requirements. Use this form to record completion of Train the Trainer and/or Operator Training on Mobile Elevating Work Platforms.

Use the Familiarization Log for follow-up training on specific machine models.

Name - Print	Company	Email

Person Training:	Training Organization:	Date:
Type of Training	☐ Train the Trainer	☐ Operator Training Only
Scope of Training Check boxes for type(s) of MEWP(s) Included during demonstration of proficiency phase of training.	☐ Group 1, Type A ☐ Group 1, Type B	☐ Group 3, Type A ☐ Group 3, Type B

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Genie Operator Training - Familiarization Log

Operator (person being familiarized): _____

Organization: _____ Date of General Training: _____

This form is provided as an example for use in fulfilling ANSI and CSA recordkeeping requirements

Person Providing Familiarization	Company	Product Model	Date	Operator's Previous Training Verified
				☐
				☐
				☐
				☐
				☐
				☐
				☐
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Genie Operator Training - Hands-on for 1A and 1B MEWPs

Operator's Name: _____ **Location:** _____ **Date:** _____

Trainer's Name: _____ **Organization:** _____

Classification: ☐ **Group 1, Type A** ☐ **Group 1, Type B** **Model:** _____

	Pass	Fail	N/A
Perform a pre-operation inspection	☐	☐	
Perform function tests using the Operator's Manual	☐	☐	
Perform a workplace inspection	☐	☐	

Group 1, Type A

	Pass	Fail	N/A
Install outriggers (if so equipped) and adjust To level the machine	☐	☐	☐
Be sure all four interlock display lights at the ground controls are on and all four outriggers are in firm contact with the ground. Use the bubble level to make sure the machine is level	☐	☐	☐
Raise the platform to full height, then lower the platform to the stowed position	☐	☐	
Turn the machine off with the emergency stop button	☐	☐	

Group 1, Type B

	Pass	Fail	N/A
With the parking brake set, deploy and level the outriggers	☐	☐	
Raise the platform to full height, then lower to the stowed position	☐	☐	
Attach appropriate lanyard to platform anchor point	☐	☐	
Rotate the turntable 180 degrees and operate drive utilizing "drive enable."	☐	☐	☐
In the stowed position, operate the manual platform leveling	☐	☐	
In the stowed position, operate the platform rotate	☐	☐	
From the ground and with the parking brake set, retract the outriggers to the stowed position	☐	☐	
Turn the machine off with the emergency stop button	☐	☐	

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MOBILE ELEVATING WORK PLATFORM OPERATOR TRAINING

Genie Operator Training - Hands-on for 3A and 3B MEWPs

Operator's Name: _____ **Location:** _____ **Date:** _____

Trainer's Name: _____ **Organization:** _____

Classification: ☐ **Group 3, Type A** ☐ **Group 3, Type B** **Model:** _____

	Pass	Fail	N/A
Perform a pre-operation inspection _____	☐	☐	
Perform function tests using the Operator's Manual _____	☐	☐	
Perform a workplace inspection _____	☐	☐	
Drive forward and reverse from creep to full speed in both high and low drive range (operate steer left and right during drive sequence) _____	☐	☐	
Perform gradual stop by slowly returning drive joystick controller to center position _____	☐	☐	
Perform quick stop by releasing drive joystick controller to center position _____	☐	☐	
Perform an emergency stop by driving, then releasing the function enable switch - footswitch (booms) or joystick switch (scissors) _____	☐	☐	
Raise the platform off the speed limit switch and operate drive forward and reverse _____	☐	☐	
Operate the platform up function(s) and boom extend functions (when applicable) until the platform is at full height _____	☐	☐	
Return all functions to the fully stowed position _____	☐	☐	
Turn the machine off with the emergency stop button _____	☐	☐	

Additional for Group 3, Type B MEWPs

	Pass	Fail	N/A
Attach appropriate lanyard to anchor point _____	☐	☐	
Rotate the turntable 180 degrees and operate drive utilizing "drive enable." _____	☐	☐	☐
In the stowed position, operate the manual platform leveling _____	☐	☐	
In the stowed position, operate the platform rotate _____	☐	☐	

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Genie Operator Training - Familiarization

Operator's Name: _____ **Location:** _____ **Date:** _____

Trainer's Name: _____ **Organization:** _____

Classification: ☐ **1A** ☐ **1B** ☐ **3A** ☐ **3B** **Model** _____

ANSI defines a qualified person as:

"One who, by possession of a recognized degree, certificate, or professional standing, or by extensive knowledge, training, and experience, has successfully demonstrated his or her ability to solve or resolve problems related to the subject matter, the work, or the project".

To perform a proper machine familiarization, the qualified person (as defined by ANSI) must ensure that the operator:

Knows the location of the weather resistant compartment for manual storage _____ Pass ☐ Fail ☐

Knows the operating, safety and responsibilities manuals supplied by the manufacturer are required to be stored in the weather resistant compartment and is familiar with the information found in the operating and safety manuals _____ Pass ☐ Fail ☐

Understands all control functions, devices, decals and warnings _____ Pass ☐ Fail ☐

Is aware of and understands all features and operating characteristics specific to the model of Mobile Elevating Work Platform being used ____ Pass ☐ Fail ☐

Demonstrate knowledge of the five principles of safe machine operation: _____ Pass ☐ Fail ☐

1. Avoid hazardous situations
2. Perform a pre-operation inspection on the machine
3. Perform function tests prior to use
4. Inspect the workplace
5. Only use the machine as it was intended

Operate the Mobile Elevating Work Platform for sufficient time to demonstrate proficiency in the actual operation of the machine * _____ Pass ☐ Fail ☐

* Please use the appropriate Hands-On Operation Check Sheet

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Distributed By:

Genie North America
Phone 425.881.1800
Toll Free USA and Canada
800.536.1800
Fax 425.883.3475