INTERNATIONAL STANDARD

ISO 18878

Second edition
2013-08-01

Mobile elevating work platforms — Operator (driver) training

Plates-formes élévatrices mobiles de personnel — Formation des opérateurs (conducteurs)

Reference number
ISO 18878:2013(E)

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Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

The committee responsible for this document is ISO/TC 214, *Elevating work platforms*.

This second edition cancels and replaces the first edition (18878:2004), which has been technically revised.

Introduction

This International Standard is one of a series produced by ISO/TC 214 regarding standardization of terminology and general principles for training operators (drivers) of elevating work platforms used to raise (elevate) and position personnel (and related work tools and materials) to a work position where a work task is to be performed. It is intended that each local jurisdiction use this International Standard to develop detailed training requirements particular to the local conditions.

Mobile elevating work platforms — Operator (driver) training

1 Scope

This International Standard provides methods for preparing training materials and administering standardized training to operators (drivers) of mobile elevating work platforms (MEWPs).

It is applicable to MEWPs, as defined in ISO 16368, intended to move persons, tools and materials to positions where they can carry out work from the work platform.

NOTE National or other regulations, which could be more stringent, can apply.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 16368, *Mobile elevating work platforms — Design, calculations, safety requirements and test methods*

ISO 18893, *Mobile elevating work platforms — Safety principles, inspection, maintenance and operation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 16368, ISO 18893 and the following apply.

3.1
trainer
qualified person who conducts the training of the MEWP operator

3.2
examiner
qualified person who tests the competency of the trainee

3.3
familiarization
showing of the location of the operator's manual, and demonstration of the control functions, safety features and specific operating characteristics, of a particular model of MEWP to a trained operator

3.4
examination [re-examination]
testing of the operator's proficiency in, and retention of, the subject matter covered in both the theory and operational portions of the training [retraining] of the MEWP operator

3.5
qualified person
person 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, work, or the project

4 Safe use of the MEWP

This International Standard shall be used in conjunction with ISO 18893, which is focused on safe use of MEWPs in all its aspects.

5 Requirements for training, familiarization and authorizing operators

Only personnel properly trained, familiarized and authorized in accordance with this International Standard, shall operate a MEWP.

6 Contents of training

6.1 Primary training

The operator shall be trained in the following:

a) assessment of the risks related to the task to be performed and the worksite where these tasks will be performed (see ISO 18893:—, Clause 6 and Annex A)[1)], including daily worksite inspections;

b) selection of an appropriate MEWP;

c) purpose, use and content of the manufacturer's operator's manuals, warnings and instructions and applicable safety rules;

d) location and storage of the manufacturer's operator's manuals and the importance of keeping them maintained in the weather-resistant storage compartment on the MEWP when not in use;

e) pre-start inspection (see ISO 18893);

f) factors affecting stability (see ISO 18893);

g) hazards and their avoidance (see ISO 18893);

h) general knowledge of the intended purpose and function of all MEWP controls, including emergency controls

i) how to address problems or malfunctions affecting the operation of the MEWP;

j) use of personal protective equipment (PPE) appropriate to the task, worksite and environment;

k) safe travelling;

l) transport (if appropriate);

m) securing the MEWP from unauthorized use;

n) how to obtain assistance from a person on the ground;

o) the importance of obtaining specific make and model familiarization prior to operation of a MEWP;

p) operation of a MEWP.

NOTE Local conditions or manufacturer's instructions may require that other subjects be added.

1) To be published. Revision of ISO 18893:2004.

6.2 Familiarization

Before being authorized to operate a particular MEWP make or model, the operator shall receive familiarization by a qualified person in

a) the location of the manufacturer's manuals on the MEWP,

b) the manufacturer's specific warnings and instructions,

c) the control functions specific to the particular MEWP,

d) the function of each safety feature specific to the particular MEWP, and

e) the operating characteristics specific to the particular MEWP.

6.3 Practical evaluation

Under the direction, observation and evaluation of a qualified person, the trainee shall operate the MEWP for a period of time sufficient to demonstrate proficiency in the operation of all control functions of the MEWP and in safe-use operations, at a minimum of 75 % of the operating height and reach, as well as in both the lowered and elevated travel positions, as applicable.

After the operator has received familiarization, and under the direction of a qualified person, the trainee shall be required to operate the MEWP for a period of time sufficient to demonstrate proficiency in its operation.

7 Administration of training

7.1 Qualified trainer

The MEWP trainer shall be a qualified person who has extensive knowledge in the training process, the delivery of training and the evaluation of the operator's proficiency in the operation of the MEWP on which the operator is being trained.

The trainer shall also be knowledgeable regarding the application and operation of MEWPs in the location and environment where the training is being delivered.

7.2 Proficiency

The trainee shall show proficiency in both theory and operation of the MEWP to the examiner.

7.3 Record keeping

Records of the person(s) trained in the operation of the MEWP shall be retained by the training entity, and the successful trainee shall be furnished proof of training (for examples, see Annexes A to E).

The records shall

— reflect the specific period of time that the training is valid.

— include the name of the entity providing training or retraining, the name of trainer(s) and examiner(s), clear identification (i.e. make, model, serial number) of the MEWPs covered by training, and the date of training, and

— be retained for at least the specific period of time the training is valid.

7.4 Training/retraining

The operator shall be trained or retrained as necessary to keep the level of proficiency at an acceptable level (see Annexes A to D).

Examples of situations when retraining is necessary include, but are not limited to

— expiration of valid training period which shall not exceed 5-years,

— deterioration of proficiency,

— following an accident or near-miss while operating or using a MEWP;

— a condition in the workplace changes in a manner that could affect the safe operation of the MEWP;

— new MEWP technologies and working methods.

7.5 Examination/re-examination

The operator shall be examined or re-examined to evaluate the level of proficiency (see Annexes A to D).

Examples of situations when examination/re-examination is necessary include, but are not limited to

— following training or retraining,

— expiration of valid training period.

7.6 Auditing

Training processes and content shall be audited at least every 12 months, or within 13 months of the last audit.

Audits shall be performed to ensure compliance with this International Standard.

Auditors shall be familiar with this and associated International Standards and shall possess a detailed knowledge of training processes and their supporting administrative procedures.

7.7 Verification of training

The employer of the operator shall be responsible for the verification of training and, in some cases, for showing documentation stating that the employee has the necessary training and skill for the work he/she is being asked to perform.

Annex A
(informative)

Example of knowledge evaluation sheet

TYPE 1, TYPE 2 & TYPE 3 MEWPs		
Training Date: _____		
Name of training entity _____ Name of examiner: _____ Name of candidate: _____ MEWP(s) covered: _____		
Mark if acceptable		
PUBLIC SAFETY	Know the manufacturer's obligations	
REGULATIONS, STANDARDS AND TEXTS	Know the employer's obligations (training, issuing of the authorization to drive) and the operator's responsibility	
CLASSIFICATION	Know MEWP classifications by category	
TECHNOLOGY	Know the technology of the different elements of the MEWP	
CHARACTERISTICS	As a function of the different categories of MEWP, able to identify the characteristics of each category, the common uses, the advantages and disadvantages	
SAFETY	Know how to choose a MEWP depending on the nominal load, working height, nature of work	
	Know the rules for minimizing the risks of electrocution	
	Know how to determine load restrictions	
	Know the rules for driving, travelling and parking and protection against unauthorized use	
	Know the main hazards: overturning (wind, nature of the ground, work-platform load) falling, impact, etc.	
	Know the rules for stability and use	
	Know the safety devices and common checks and maintenance to be carried out	
	Know how to perform function tests prior to use	
	Know the orders and movements linked to use of emergency controls	
	Know the function and use of manuals, decals and placards	
	Know how to carry out a pre-start inspection	
	Know how to carry out a work-site inspection	

Annex B
(informative)

Practical knowledge evaluation test for type 1 MEWPs — Example

TYPE 1 MEWPs

Training date: _____

OBSERVATIONS

Name of training entity: _____ Name of examiner: _____

Name of candidate: _____

MEWP(s) covered: _____

Mark if acceptable

		Vertical axis[a]	**Work platform movement**[b]	
SUITABILITY	Determine suitability of MEWP for the application	X	X	
VERIFICATION	Visually check the condition of the MEWP	X	X	
	Verify that the safety features operate correctly	X	X	
POSITIONING	Properly interpret and execute commands	X	X	
	Position the unit at a location	X	X	
	Bring the MEWP into service	X	X	
	Set up the markers and signs	X	X	
	Adjust the stabilizers (if equipped)	X	X	
	Set-up and position the MEWP per operator's manual	X	X	
	Move the work platform parallel to a flat vertical surface	X	X	
	Position the work platform above a flat surface	X	X	
	Position the work platform below a flat surface	X	X	
	Move the work platform across this surface		X	
	Position the work platform in a limited space		X	
	Put the MEWP into the transport position	X	X	
	Smoothness of the manoeuvres	X	X	
	Accuracy of the manoeuvres	X	X	
EMERGENCY	Perform recovery manoeuvres	X	X	
	Perform rescue manoeuvres (from the ground position)	X	X	

[a] Vertical movements of the work platform due to movements of the lifting structure. It includes awareness of the position of the platform and lifting structure when raising and lowering the platform and when slewing the lifting structure.

[b] Any movement of the work platform excluding movements resulting from operation of the lifting structure. This includes horizontal platform movements when the MEWP base is moved, vertical and horizontal platform movements caused by travelling over uneven ground, bounce and sway resulting from lifting structure flexing.

Annex C
(informative)

Practical knowledge evaluation test for type 2 MEWPs — Example

TYPE 2 MEWPs — SECTION 1

Training date: _____

OBSERVATIONS

Name of training entity: _____ Name of examiner: _____

Name of candidate: _____

MEWP(s) covered: _____

Mark if acceptable

		Vertical axis[a]	**Work platform movement**[b]	
SUITABILITY	Determine suitability of MEWP for the application	X	X	
VERIFICATION	Visually check the condition of the MEWP	X	X	
	Verify that the safety features operate correctly	X	X	
POSITIONING	Properly interpret and execute commands	X	X	
	Properly give commands to position the vehicle	X	X	
	Position the platform along a flat vertical surface	X	X	
	Move the work platform parallel to a flat vertical surface	X	X	
	Position the platform above a flat surface		X	
	Position the platform below a flat surface	X	X	
	Move the platform across this surface		X	
	Position the platform in a limited space	X	X	
	Behaviour in the event of an inclination warning	X	X	
	Put the MEWP into the transport position	X	X	
	Smoothness of the manoeuvres	X	X	
	Accuracy of the manoeuvres	X	X	
EMERGENCY	Perform recovery manoeuvres	X	X	
	Perform rescue manoeuvres (from the ground position)	X	X	

[a] Vertical movements of the work platform due to movements of the lifting structure. It includes awareness of the position of the platform and lifting structure when raising and lowering the platform and when slewing the lifting structure.

[b] Any movement of the work platform excluding movements resulting from operation of the lifting structure. This includes horizontal platform movements when the MEWP base is moved, vertical and horizontal platform movements caused by travelling over uneven ground, bounce and sway resulting from lifting structure flexing.

TYPE 2 MEWPs — SECTION 2

Training date: ________________

OBSERVATIONS

Name of training entity: ______________________ Name of examiner: _________________________________

Name of candidate: _________________________________

MEWP(s) covered: _________________________________

Mark if acceptable

			Vertical axis[a]	Work platform movement[b]	
POSITIONING		Position the unit at a location	X	X	
SUITABILITY		Determine suitability of MEWP for the application	X	X	
TRAVELLING		Visually check the condition of the MEWP	X	X	
Platform raised	Platform on vehicle axis (forwards or backwards)	Travel in a straight line forwards	X	X	
		Travel in a straight line backwards	X	X	
		Travel in a curve (slalom, bend) forwards	X	X	
		Travel in a curve (slalom, bend) backwards	X	X	
	Platform at right angles to vehicle to left or right	Travel in a straight line forwards		X	
		Travel in a straight line backwards		X	
		Travel in a curve (slalom, bend) forwards		X	
		Travel in a curve (slalom, bend) backwards		X	
		Travel with simultaneous platform movements	X	X	
VERIFICATION		Properly interpret and execute the commands	X	X	
		Travel with mastery of different types of ground	X	X	
		Use the audible warning correctly	X	X	
		Glance backwards before moving backwards	X	X	
		Respect for travelling rules and notice boards	X	X	
		Adapt driving to suit the traffic conditions (congestion, bend, etc.)	X	X	
		Smoothness of manoeuvres	X	X	
		Accuracy of manoeuvres	X	X	
		Behaviour in the event of an inclination warning	X	X	
		Performance of shutdown procedure for MEWP	X	X	

[a] Vertical movements of the work platform due to movements of the lifting structure. It includes awareness of the position of the platform and lifting structure when raising and lowering the platform and when slewing the lifting structure.

[b] Any movement of the work platform excluding movements resulting from operation of the lifting structure. This includes horizontal platform movements when the MEWP base is moved, vertical and horizontal platform movements caused by travelling over uneven ground, bounce and sway resulting from lifting structure flexing.

Annex D
(informative)

Practical knowledge evaluation test for type 3 MEWPs — Example

TYPE 3 MEWPs

Training date: _____

OBSERVATIONS

Name of examiner: _____

Name of candidate: _____

The trainee is capable of: _____

Mark if acceptable

			Vertical axis[a]	**Work platform movement**[b]	
SUITABILITY		Determine suitability of MEWP for the application	X	X	
VERIFICATION		Visually check the condition of the MEWP	X	X	
		Verify that the safety features operate correctly	X	X	
Platform raised	Platform in direction of travel	Travel in a straight line forwards	X	X	
		Travel in a straight line backwards	X	X	
		Travel in a curve (slalom, bend) forwards	X	X	
		Travel in a curve (slalom, bend) backwards	X	X	
	Platform in opposite direction to travel	Travel in a straight line forwards		X	
		Travel in a straight line backwards		X	
		Travel in a curve (slalom, bend) forwards		X	
		Travel in a curve (slalom, bend) backwards		X	
	Platform at right angles to direction of travel	Travel in a straight line forwards		X	
		Travel in a straight line backwards		X	
		Travel in a curve (slalom, bend) forwards		X	
		Travel in a curve (slalom, bend) backwards		X	

TYPE 3 MEWPs

Training date: _____

OBSERVATIONS

Name of examiner: _____

Name of candidate: _____

The trainee is capable of: _____

Mark if acceptable

		Vertical axis[a]	**Work platform movement**[b]	
TRAVELLING	Travel with mastery of different types of ground	X	X	
	Use the audible warning correctly	X	X	
	Glance backwards before moving backwards	X	X	
	Respect for travelling rules and notice boards	X	X	
	Adapt driving to suit the traffic conditions (congestion, bend, etc.)	X	X	
	Smoothness of manoeuvres	X	X	
	Accuracy of manoeuvres	X	X	
POSITIONING	Properly interpret and execute the commands	X	X	
	Position the unit at a location	X	X	
	Position the work platform along a flat vertical surface	X	X	
	Move the work platform along a flat vertical surface	X	X	
	Position the work platform above a flat surface		X	
	Move the work platform across this surface		X	
	Position the work platform below a flat surface	X	X	
	Move the work platform across this surface	X	X	
	Position the work platform in a restricted space		X	
	Behaviour in the event of an inclination warning	X	X	
	Move and position the platform with combined movements	X	X	
	Performance of shutdown procedure for the MEWP	X	X	
EMERGENCY	Perform recovery manoeuvres	X	X	
	Perform rescue manoeuvres (from the ground position) including the involvement of an unskilled person on ground.	X	X	

[a] Vertical movements of the work platform due to movements of the lifting structure. It includes awareness of the position of the platform and lifting structure when raising and lowering the platform and when slewing the lifting structure.

[b] Any movement of the work platform excluding movements resulting from operation of the lifting structure. This includes horizontal platform movements when the MEWP base is moved, vertical and horizontal platform movements caused by travelling over uneven ground, bounce and sway resulting from lifting structure flexing.

Annex E
(informative)

MEWP operator training certificate of completion — Examples

I the undersigned [examiner's name and forename], acting in the capacity of examiner for

— the company [corporate name of the company]

— the body referred to [corporate name of the body]

after having verified the theoretical and practical knowledge of [operator's name and forename], issue operator with the

Safe-Operating Proficiency Certificate

For the operating of mobile elevating work platforms (MEWPs) of the following types:

____

____

____

Date: _____________________________

[Signature, stamp]

This certificate of completion is valid until: _____________________________

Authorization to Operate MEWPs

I the undersigned [name and forename of employer or representative, and company corporate name]:

_____

_____

certify that [name and forename, function of operator] _____
has presented to me the

Safe-Operating Proficiency Certificate

which was issued to operator on _____

In addition, meets minimum physical requirements to operate MEWPs.

Verified by [name and forename] _____.

On the strength of which, after having informed the operator of the hazards specific to the company and/or the work to be performed, I authorize [operator's name] _____
to operate category MEWPs in my company.

Date _____

[Signature, stamp]

MEWP *Authorization to Operate* card

The authorization to operate can also be presented in the form of an "identification card" which will carry the minimum information such as given in the example below.

[Company logo]	**Authorization to drive**
Ref: _____ Issued by: _____ Name: _____ Position: _____ Date: _____ Signature: _____	

[Photograph]	**Title holder:** [Name of title holder]
[Qualification] _____ is authorized to operate MEWPs:	
Type	Valid until:
_____ _____ _____	_____ _____ _____

The reference shown on the front may correspond to the title holder's personal training file, in which are given the results of the evaluation tests, together with the name of the examiner.

The limit of validity can be given by affixing a stamp or the signature of the examiner who issued the card.

ICS 53.020.99;03.100.30

Price based on 13 pages