

# DRAFT AMENDMENT

## ISO 11850.2:2011/DAM 2

ISO/TC 23/SC 15

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### Machinery for forestry — General safety requirements

#### AMENDMENT 2: Access to operator's station and maintenance locations

*Matériel forestier — Exigences de sécurité générales*

*AMENDEMENT 2: Accès au poste d'opérateur et emplacements de maintenance*

ICS: 65.060.80

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This document was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 15, *Machinery for forestry*.

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## Machinery for forestry — General safety requirements

### AMENDMENT 2: Access to operator's station and maintenance locations

#### Clause 2

Replace the reference to EN 779:2002 with the following:

ISO 16890-1:2016, Air filters for general ventilation — Part 1: Technical specifications, requirements and classification system based upon particulate matter efficiency

#### 4.3.2.6, second paragraph

Replace the paragraph with the following:

The cab shall also be equipped with a filtration system with inlet air filter(s) of at least class  $ePM_{10} \geq 50$  in accordance with ISO 16890-1:2016 or equivalent. The inlet air filter(s) shall be serviceable from inside the cab or from a service platform. If the intake air filter(s) are located before the fan, the system between the filter and fan shall be free from leakage.

[ISO 11850:2011/DAmD 2.2](https://standards.iteh.ai/catalog/standards/sist/2243f743-686a-425e-87a9-f800a9e6ece2/iso-11850-2011-damd-2-2)

#### 4.3.2.6, last paragraph

Replace the paragraph with the following:

Verification of conformity shall be by checking for conformance with ISO 14269-2 or ISO 10263-4 and with ISO 16890-1:2016, as appropriate and by inspection.

#### 4.4 a), first paragraph

Amend the requirement concerning the maximum height of the first step by replacing the paragraph with the following:

- a) The access shall permit a person to achieve three points of support if the platform or work surface is elevated by more than 550 mm above the ground and shall be in accordance with ISO 2860 and ISO 2867 with the following exception:
  1. A maximum first step height of 700 mm from the ground shall be allowed for wheeled skidders and wheeled feller-bunchers as defined in ISO 6814.

Foot placement surfaces shall be slip-resistant and the design of the steps shall be such that accumulation of debris, mud, snow, etc. is minimized.

## Annex ZA (informative)

### Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered

This European Standard has been prepared under a Commission's standardization request "M/396 Mandate to CEN and CENELEC for Standardisation in the field of machinery" to provide one voluntary means of conforming to essential requirements of Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast).

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in [Table ZA.1](#) confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Directive, and associated EFTA regulations.

**Table ZA.1 — Correspondence between this European Standard and Annex I of Directive 2006/42/EC**

The relevant Essential Requirements of Directive 2006/42/EC	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
	<p style="text-align: center;">(standards.iteh.ai)</p> <p style="text-align: center;">ISO 11850.2:2011/DAM 2.2</p> <p style="text-align: center;">https://standards.iteh.ai/catalog/standards/sist/2243f743-686a-423c-87d9-f800a9e6ece2/iso-11850-2011-dam-2.2</p>	To cover all the relevant safety requirements for the products(s) in its scope, this standard (providing general/common requirements for a whole machine family) has to be applied together with one of those standards as specified in the scope (providing specific requirements for a particular category of machinery within this family).
<b>1. ESSENTIAL HEALTH AND SAFETY REQUIREMENTS</b>		
1.1.2. Principles of safety integration	1, 4.1, 4.2, 4.3, 4.3.2, 4.3.3, 4.3.4, 4.4, 4.4.(a), 4.5.1, 4.5.2, 4.5.3, 4.5.4, 4.5.5, 4.5.6, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11, 4.12, 4.14, 4.17, 4.18, 4.19, 4.20.	
1.1.3. Materials and products	4.3.2	
1.1.4. Lighting	4.7	
1.1.5. Design of machinery to facilitate its handling	4.2, 4.3	
1.1.6. Ergonomics	4.3.2.6, 4.4 a)	
1.1.7. Operating positions	4.3.1, 4.4	
1.1.8. Seating	4.3.3, 4.3.4	
<b>1.2. CONTROL SYSTEMS</b>		
1.2.1. Safety and reliability of control systems	4.5	
1.2.2. Control devices	4.5.1, 4.12	
1.2.3. Starting	4.5.1	
1.2.4. Stopping	4.5.2	
1.2.4.1. Normal stop	4.5.2	

Table ZA.1 (continued)

The relevant Essential Requirements of Directive 2006/42/EC	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
1.2.4.2. Operational stop	4.5.3, 4.5.4, 4.5.5, 4.5.6, 4.8	
1.2.4.3. Emergency stop		Not covered
1.2.4.4. Assembly of machinery	4.1.	
1.2.5. Selection of control or operating modes	4.5.	
1.2.6. Failure of the power supply		Not covered
1.3. PROTECTION AGAINST MECHANICAL HAZARDS		
1.3.1. Risk of loss of stability	4.3.2, 4.11.	
1.3.2. Risk of break-up during operation		Not covered
1.3.3. Risks due to falling or ejected objects	4.3.2	
1.3.4. Risks due to surfaces, edges or angles		Not covered
1.3.5. Risks related to combined machinery		Not covered
1.3.6. Risks related to variations in operating conditions		Not covered
1.3.7. Risks related to moving parts	4.1	
1.3.8. Choice of protection against risks arising from moving parts	4.10	
1.3.8.1. Moving transmission parts		Not covered
1.3.8.2. Moving parts involved in the process	4.10	
1.3.9. Risks of uncontrolled movements	4.9	
1.4. REQUIRED CHARACTERISTICS OF GUARDS AND PROTECTIVE DEVICES		
1.4.1. General requirements	4.1, 4.2, 4.3	
1.4.2.1. Fixed guards	4.1	
1.4.2.2. Interlocking movable guards		Not covered
1.4.2.3. Adjustable guards restricting access		Not covered
1.4.3. Special requirements for protective devices		Not covered
1.5. RISKS DUE TO OTHER HAZARDS		
1.5.1. Electricity supply		Not covered
1.5.2. Static electricity		Not covered
1.5.3. Energy supply other than electricity		Not covered
1.5.4. Errors of fitting		Not covered
1.5.5. Extreme temperatures		Not covered
1.5.6. Fire	4.14	
1.5.7. Explosion		Not covered
1.5.8. Noise	4.15	

Table ZA.1 (continued)

The relevant Essential Requirements of Directive 2006/42/EC	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
1.5.9. Vibrations	4.16	
1.5.10. Radiation		Not covered
1.5.11. External radiation		Not covered
1.5.12. Laser radiation		Not covered
1.5.13. Emissions of hazardous materials and substances		Not covered
1.5.14. Risk of being trapped in a machine	4.1	
1.5.15. Risk of slipping, tripping or falling	4.1	
1.5.16. Lightning		Not covered
1.6. MAINTENANCE		
1.6.1. Machinery maintenance	4.18	
1.6.2. Access to operating positions and servicing points	4.4 (a), 4.17	
1.6.3. Isolation of energy sources		Not covered
1.6.4. Operator intervention		Not covered
1.6.5. Cleaning of internal parts		Not covered
1.7. INFORMATION		
1.7.1. Information and warnings on the machinery	5.1, 5.2, 5.3	
1.7.1.1. Information and information devices	5.1, 5.2, 5.3	
1.7.1.2. Warning devices	5.1, 5.2, 5.3	
1.7.2. Warning of residual risks	5.1, 5.2, 5.3	
1.7.3. Marking of machinery	5.1, 5.2, 5.3	
1.7.4. Instructions	5.1, 5.2, 5.3	
1.7.4.1. General principles for the drafting of instructions	5.1, 5.2, 5.3	
1.7.4.2. Contents of the instructions	5.1, 5.2, 5.3	
1.7.4.3. Sales literature		Not covered
2. SUPPLEMENTARY ESSENTIAL HEALTH AND SAFETY REQUIREMENTS FOR CERTAIN CATEGORIES OF MACHINERY	4.3.2.6	
2.1. FOODSTUFFS MACHINERY AND MACHINERY FOR COSMETICS OR PHARMACEUTICAL PRODUCTS		Not covered
2.2. PORTABLE HAND-HELD AND/OR HAND-GUIDED MACHINERY		Not covered
2.2.1. General		Not covered
2.2.1.1. Instructions		Not covered
2.2.2. Portable fixing and other impact machinery		Not covered
2.2.2.1. General		Not covered
2.2.2.2. Instructions		Not covered



Table ZA.1 (continued)

The relevant Essential Requirements of Directive 2006/42/EC	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
2.3. MACHINERY FOR WORKING WOOD AND MATERIAL WITH SIMILAR PHYSICAL CHARACTERISTICS		Not covered
2.4. MACHINERY FOR PESTICIDE APPLICATION		Not covered
2.4.2. General		Not covered
2.4.3. Controls and monitoring		Not covered
2.4.4. Filling and emptying		Not covered
2.4.4. Applications of pesticides		Not covered
2.4.5.1. Application rate		Not covered
2.4.5.2. Distribution, deposition and drift of pesticide		Not covered
2.4.5.3. Tests		Not covered
2.4.5.4. Losses during stoppage		Not covered
2.4.6. Maintenance		Not covered
2.4.6.1. Cleaning		Not covered
2.4.6.2. Servicing		Not covered
2.4.7. Inspections		Not covered
2.4.8. Marking of nozzles, strainers and filters		Not covered
2.4.9. Indication of pesticide in use		Not covered
2.4.10. Instructions	ISO 11850:2011/DAM 2.2	Not covered
3. SUPPLEMENTARY ESSENTIAL HEALTH AND SAFETY REQUIREMENTS TO OFFSET HAZARDS DUE TO THE MOBILITY OF MACHINERY	<a href="https://standards.iteh.ai/catalog/standards/sist/22431743-686a-425e-87a9-f800a9e6ece2/iso-11850-2011-dam-2-2">https://standards.iteh.ai/catalog/standards/sist/22431743-686a-425e-87a9-f800a9e6ece2/iso-11850-2011-dam-2-2</a>	Not covered
3.1. GENERAL		Not covered
3.2. WORK POSITIONS		Not covered
3.2.1. Driving positions		Not covered
3.2.2. Seating		Not covered
3.2.3. Positions for other persons		Not covered
3.3. CONTROL SYSTEMS		Not covered
3.3.1. Control devices		Not covered
3.3.2. Starting/moving		Not covered
3.3.3. Travelling function		Not covered
3.3.4. Movement of pedestrian-controlled machinery		Not covered
3.3.5. Control circuit failure		Not covered
3.4. PROTECTION AGAINST MECHANICAL HAZARDS		
3.4.1. Uncontrolled movements		Not covered
3.4.2. Moving transmission parts		Not covered
3.4.3. Roll-over and tip-over	4.3.2.2, 4.3.2.3.	
3.4.4. Falling objects	4.3.2.1.	Not covered
3.4.5. Means of access		Not covered
3.4.6. Towing devices		Not covered