
**Machinery for forestry — Falling-object
protective structures (FOPS) —
Laboratory tests and performance
requirements**

*Matériel forestier — Structures de protection contre les chutes d'objets
(FOPS) — Essais de laboratoire et exigences de performance*



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Contents

Page

Foreword.....	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Laboratory tests	2
4.1 Apparatus	2
4.2 Test conditions	2
4.3 Test procedure	4
5 Performance requirements	6
5.1 Protective properties	6
5.2 Additional ROPS requirements	6
5.3 Temperature and material requirements	6
6 Reporting results	7
Annex A (normative) Test report for ISO 8083	8

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.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 8083 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 15, *Machinery for forestry*.

This second edition cancels and replaces the first edition (ISO 8083:1989), which has been technically revised.

A new bolt and nut class as well as the – 20 °C temperature class for Charpy V-notch impact strength have been added. The normative references have been updated and the model test report modified to be more complete from the point of test laboratory accreditation. In addition, the text has been editorially rearranged for clarity.

Introduction

Special forestry machinery needs a falling-object protective structure (FOPS) standard of its own. It is recognized that there are various classes and sizes of forestry machinery that operate in a variety of environmental conditions as well as variations in log size the machines are capable of handling. Therefore, two alternative levels of acceptance criteria are given.

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Machinery for forestry — Falling-object protective structures (FOPS) — Laboratory tests and performance requirements

1 Scope

This International Standard establishes a consistent, reproducible means of evaluating characteristics of falling-object protective structures (FOPS) under loading, and prescribes performance requirements for a representative specimen under such loading. It is applicable to mobile or self-propelled, specially designed forestry machines as defined in ISO 6814.

NOTE Research work is being done to develop a test method and criteria for certain polycarbonate materials and constructions where the present requirement levels may not be adequate.

2 Normative references

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

ISO 148-1, *Metallic materials — Charpy pendulum impact test — Part 1: Test method*

ISO 898-1:1999, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs*

ISO 898-2:1992, *Mechanical properties of fasteners — Part 2: Nuts with specified proof load values — Coarse thread*

ISO 3164, *Earth-moving machinery — Laboratory evaluations of protective structures — Specifications for deflection-limiting volume*

ISO 3411, *Earth-moving machinery — Human physical dimensions of operators and minimum operator space envelope*

ISO 6814, *Machinery for forestry — Mobile and self-propelled machinery — Terms, definitions and classification*

ISO 8082, *Self-propelled machinery for forestry — Roll-over protective structures — Laboratory tests and performance requirements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

falling-object protective structure

FOPS

system of structural members arranged in such a way as to provide operators with reasonable protection from falling objects (e.g. trees, rocks)