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**Self-propelled machinery for forestry – Laboratory tests and
performance requirements for roll-over protective structures –
Part 2: Machines having a rotating platform with a cab and boom
on the platform (ISO 8082-2:2011, IDT)**

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The International Standard ISO 8082-2:2011 has the status of a Swedish Standard. This document contains the official version of ISO 8082-2:2011.

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Denna standard är framtagen av kommittén för Skogsmaskiner, SIS/TK 231.

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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Symbols	5
5 Test method and facilities	8
5.1 General	8
5.2 Instrumentation	8
5.3 Test facilities.....	8
5.4 ROPS/rotating platform assembly and attachment to bedplate	9
6 Test loading procedure	9
6.1 General	9
6.2 Lateral loading	11
6.3 Vertical loading.....	11
6.4 Longitudinal loading	12
7 Temperature and material requirements	13
8 Performance requirements	15
9 Labelling of ROPS	17
9.1 General	17
9.2 Label specifications	17
9.3 Label content	17
10 Reporting results	17
Annex A (normative) Test report for ISO 8082-2	18
Bibliography	20

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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 8082-2 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 15, *Machinery for forestry*.

ISO 8082 consists of the following parts, under the general title *Self-propelled machinery for forestry — Laboratory tests and performance requirements for roll-over protective structures*:

- *Part 1: General machines*
- *Part 2: Machines having a rotating platform with a cab and boom on the platform*

Introduction

Earth-moving excavators used in cross-over applications involving sites with trees, but excluding forestry applications, are covered by ISO 12117-2. Because of the similarity between excavators and forestry machines having a rotating platform with a cab, a fixed cab riser and a boom on a platform, this part of ISO 8082 specifies test methods and procedures similar to those of ISO 12117-2 and ISO 3471.

Self-propelled machinery for forestry — Laboratory tests and performance requirements for roll-over protective structures —

Part 2: Machines having a rotating platform with a cab and boom on the platform

1 Scope

This part of ISO 8082 establishes a consistent and reproducible means of evaluating the load-carrying characteristics of roll-over protective structures (ROPS) on self-propelled forestry machines under static loading, and gives performance requirements for a representative specimen under such loading. It is applicable to machines configured as forestry machines or defined as such in ISO 6814, having a rotating platform with a cab — with or without a fixed cab riser — and boom on the same or a separate platform, intended to be operated by an operator wearing a seat-belt.

It is not applicable to forestry machines with elevating cabs.¹⁾

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 898-1, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs with specified property classes — Coarse thread and fine pitch thread*

ISO 898-2, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 2: Nuts with specified property classes — Coarse thread and fine pitch thread*

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

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

ISO 5353, *Earth-moving machinery, and tractors and machinery for agriculture and forestry — Seat index point*

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

1) The roll-over behaviour of such machines needs more study.

3 Terms and definitions

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

3.1
bedplate
substantially rigid part of the test fixtures to which the machine frame is attached for the purpose of the test

[ISO 12117-2]

3.2
boundary plane
BP
plane defined as the vertical projected planes of the back, side and knee area of the DLV

NOTE The boundary plane is used to determine the load application zone.

[ISO 12117-2]

3.3
deflection-limiting volume
DLV
orthogonal approximation of a large, seated, male operator as defined in ISO 3411 wearing normal clothing and a protective helmet

[ISO 8082-1]

3.4
deflection of ROPS
movement of the ROPS, mounting system and frame section as measured at the load application point, excluding the effect of any movement of the test fixture(s)

[ISO 12117-2]

3.5
elevating cab
additional means for raising and lowering the cab relative to the rotating platform

3.6
fixed cab riser
additional structure that changes the height position of the cab relative to the rotating platform and which is considered a ROPS structural member

3.7
lateral simulated ground plane
LSGP
for a machine coming to rest on its side, the plane 15° away from the DLV about the horizontal axis within the plane established in the vertical plane passing through the outermost point of the ROPS

See Figure 1.

NOTE 1 The LSGP is established on an unloaded ROPS and moves with the member to which the load is applied while maintaining its 15° angle with respect to the vertical.

NOTE 2 Adapted from ISO 8082-1:2009, definition 3.5.1.

3.8

locating axis

LA

horizontal axis for positioning the DLV with respect to the seat index point (SIP)

[ISO 3164]

3.9

load application point

LAP

point on the ROPS structure where the test load force (F) is applied

[ISO 12117-2]

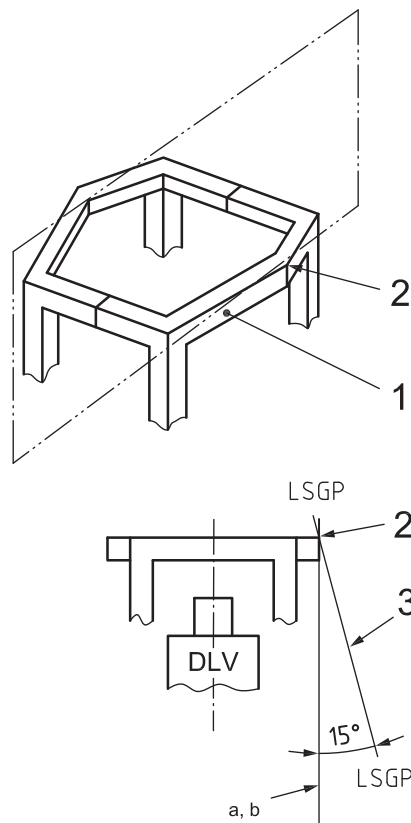
3.10

load distribution device

LDD

device used to prevent localized penetration of the ROPS members at the load application point

[ISO 12117-2]



Key

- 1 upper ROPS member to which the lateral load is applied
- 2 outermost point from the end view of ROPS member (1)
- 3 lateral simulated ground plane (LSGP)
- a vertical line passing through the point (2)
- b vertical plane parallel to the machine longitudinal centreline through line a

Figure 1 — Determination of lateral simulated ground plane (LSGP)