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Agricultural and forestry machinery — Inspection of sprayers in use —

Part 4: Fixed and semi-mobile sprayers

Matériel agricole et forestier — Contrôle des pulvérisateurs en service —

Partie 4: Pulvérisateurs fixes et semi-mobiles

Reference number
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Contents

Page

Foreword ..... **v**
Introduction ..... **vii**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
4 Requirements and method of verification **1**
4.1 General 1
4.2 Leaks and dripping 2
4.2.1 Static leaks 2
4.2.2 Dynamic leaks 2
4.2.3 Spraying and dripping on parts 2
4.3 Pump(s) 2
4.3.1 Capacity 2
4.3.2 Pulsations 3
4.3.3 Air chamber 3
4.4 Spray mix agitation 3
4.4.1 Hydraulic 3
4.4.2 Mechanical 3
4.5 Spray tank(s) 4
4.5.1 Lid 4
4.5.2 Tank filling strainer(s) 4
4.5.3 Pressure compensation 4
4.5.4 Tank content indicator(s) 4
4.5.5 Tank emptying 4
4.5.6 Tank filling 4
4.5.7 Induction hopper 4
4.5.8 Cleaning device for plant protection product containers 5
4.5.9 Cleaning equipment 5
4.6 Measuring systems, controls and regulation systems 5
4.6.1 General 5
4.6.2 Pressure indicator for spray liquid 5
4.6.3 Other measuring devices 6
4.6.4 Pressure adjusting devices 6
4.6.5 Direct injection systems 6
4.7 Lines (pipes and hoses) 7
4.7.1 Lines 7
4.8 Filters 7
4.8.1 Filter presence 7
4.8.2 Isolating device 7
4.8.3 Filter insert changeability 7
4.9 Application unit 7
4.9.1 Dripping 7
4.9.2 Horizontal spray booms 7
4.9.3 Vertical spray boom 9
4.9.4 Spray guns and lances 10
4.10 Blower 10
4.10.1 Condition 10
4.10.2 Adjustability 10
4.11 Distribution 10
4.11.1 Uniformity of spray jet 10
4.11.2 Nozzle output 11
4.11.3 Spray distribution measurement on a patternator (optional) 11
4.11.4 Optional vertical distribution information 11
4.12 Autonomous application units 11

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4.12.1 Drive system ... 11
4.12.2 Travel speed spray robots ... 12
4.13 Cleaning equipment ... 12

5 Test methods ... 12
5.1 Test facilities and equipment ... 12
5.1.1 General ... 12
5.1.2 Test facilities ... 12
5.2 Spray agitation pumps ... 12
5.2.1 Pump capacity test ... 12
5.2.2 Pump pulsations ... 14
5.3 Sprayer´s pressure indicators ... 14
5.3.1 Specification of pressure indicators used for verification ... 14
5.3.2 Verification method of the sprayer pressure indicator ... 14
5.4 Flow meters for controlling the volume/area rate ... 15
5.4.1 General ... 15
5.4.2 Operating procedure No. 1: Verification by nozzle flow rate measurement ... 15
5.4.3 Operating Procedure No. 2: Verification by installing a calibrated flow meter in the circuit of the sprayer ... 15
5.5 System for controlling forward speed ... 15
5.6 Uniformity of the transverse volume distribution with a horizontal patternator ... 15
5.6.1 Specification of the horizontal patternators used for verification ... 15
5.6.2 Calculation of coefficient of variation (C_V) ... 16
5.6.3 Verification method of the uniformity of the transverse distribution ... 16
5.6.4 Verification method of spray gun/lance flow rate ... 16
5.7 Flow rate of the spray nozzles ... 16
5.7.1 General ... 16
5.7.2 Measurement with nozzles fitted on the sprayer ... 17
5.7.3 Measurement with nozzles removed from the sprayer ... 17
5.8 Pressure drop ... 17
5.9 Pressure variation when the sections are closed ... 17
5.10 Pressure variation when the spray is switched off ... 17
5.11 Accuracy of direct injection systems ... 17
5.12 Pressure distribution ... 18

Bibliography ... 19

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Foreword

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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 document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 6, *Equipment for crop protection*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 144, *Tractors and machinery for agriculture and forestry*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 16122-4:2015), which has been technically revised.

The main changes are as follows:

— removed errors and resolve contradictions to the ISO 16119 series which specifies environmental requirements for new sprayers;

— updated the normative references;

— modified the terms and definitions;

— modified requirements on filling high capacity spray-tanks during leak test;

— modified tank filling strainer/filling hole;

— modified tank emptying;

— modified pressure indicators;

— modified diameter analogue pressure indicators;

— modified maximum error flow-meters for controlling the volume/hectare rate;

— modified Figure 1;

— modified dripping;

— modified spray guns and lances;

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— modified pump capacity test.

A list of all parts in the ISO 16122 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

There are two main reasons for the inspection of sprayers:

— reducing the potential risk of environmental contamination by plant protection products;

— good control of the pest with the minimum possible input of plant protection product.

In order to use plant protection products in agricultural production safely, it is necessary to define the requirements and test methods for sprayers in use. This is a relevant step after having standardized minimum requirements for new sprayers, in respect of safety hazards (see ISO 4254-6) and potential risks of environmental contamination (see ISO 16119 series).

Standardising the requirements and methods for inspection of sprayers in use takes into consideration not only the original performance of the sprayer but also its use, care and maintenance. This is a logical link to ensure the continued benefit arising from the supply of new sprayers of good quality.

The inspection of sprayers in use can be a mandatory requirement or adopted on a voluntary basis. In both cases further requirements, outside the scope of this document, are necessary for the management of inspections. These include, for example, requirements for the competence of persons carrying out inspections and the frequency of inspections.

The terms and definitions for specific sprayers are given in the relevant specific parts.

NOTE National or local regulations concerning the qualifications and competence of inspectors can apply.

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Agricultural and forestry machinery — Inspection of sprayers in use —

Part 4: Fixed and semi-mobile sprayers

1 Scope

This document, when used together with ISO 16122-1:2024, specifies the requirements and test methods for the inspection of fixed and semi-mobile sprayers, when in use.

The requirements relate mainly to the condition of the sprayer with respect to its potential risk for the environment and its performance to achieve good application.

NOTE Requirements for the protection of inspectors during an inspection are given in ISO 16122-1:2024.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 5681:2020, *Equipment for crop protection — Vocabulary*

ISO 5682-2:2017, *Equipment for crop protection — Spraying equipment — Part 2: Test methods to assess the horizontal transverse distribution for hydraulic sprayers*

ISO 12809:2020, *Crop protection equipment — Reciprocating positive displacement pumps and centrifugal pumps — Test method*

ISO 16122-1:2024, *Agricultural and forestry machinery — Inspection of sprayers in use — Part 1: General*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5681:2020 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Requirements and method of verification

4.1 General

Before starting the inspection, the pre-inspection requirements of ISO 16122-1:2024, Clause 5, shall be met.

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