International Standard

ISO 16122-1

Second edition
2024-12

Agricultural and forestry machinery — Inspection of sprayers in use —

Part 1: General

Matériel agricole et forestier — Contrôle des pulvérisateurs en service —

Partie 1: Généralités

Reference number
ISO 16122-1:2024(en)

© ISO 2024



COPYRIGHT PROTECTED DOCUMENT

© ISO 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword ... **iv**
Introduction ... **v**
1 Scope ... **1**
2 Normative references ... **1**
3 Terms and definitions ... **1**
4 Criteria for classification of sprayers ... **1**
5 Pre-inspection requirements ... **2**
5.1 General ... 2
5.2 Place for inspection ... 2
5.3 Pre-inspection ... 2
5.3.1 General ... 2
5.3.2 Cleaning ... 2
5.3.3 Power transmission parts ... 2
5.3.4 Moving parts ... 3
5.3.5 Hydraulic system ... 3
5.3.6 Structural parts and framework ... 3
5.3.7 Lockable foldable parts ... 3
5.3.8 Blower ... 3
5.3.9 Electrical safety (for electrical systems on sprayers > 50 V) ... 4
6 Inspection ... **4**
7 Test report ... **4**
Annex A (informative) **Parts of the ISO 16122 series dealing with specific sprayer types** ... **6**
Bibliography ... **8**

© ISO 2024 – All rights reserved

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 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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

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 16122-1:2015), which has been technically revised.

The main changes are as follows:

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

— updated the normative references;

— modified pre-inspection in 5.3;

— modified inspection clause;

— modified the test report.

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.

© ISO 2024 – All rights reserved

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.

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

© ISO 2024 – All rights reserved

Agricultural and forestry machinery — Inspection of sprayers in use —

Part 1: General

1 Scope

This document defines the general requirements to be fulfilled for the inspection of all types of sprayers for plant protection products used in agriculture, horticulture, forestry and other areas, except knapsack sprayers.

NOTE For knapsack sprayers, see ISO/FDIS 19932–3:—.

The specific requirements for the different types of sprayers are defined in the relevant specific parts of the ISO 16122 series. When used in conjunction with the relevant sprayer specific part (see Annex A), this document specifies the requirements and test methods for the inspection of sprayers in use.

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

This document also includes minimum requirements for the preparation of the sprayer for the inspection and the minimum safety requirements with respect to the safety of the inspector (test operator) during the inspection.

2 Normative references

The following document is 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*

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 Criteria for classification of sprayers

In order to define the application of each part of the ISO 16122 series, a classification of sprayers has been established. See Annex A.

© ISO 2024 – All rights reserved