

SLOVENSKI STANDARD
oSIST prEN ISO 16122-5:2018
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Kmetijski in gozdarski stroji - Kontrola škropilnikov v uporabi - 5. del: Zračni sistemi - Varstvo okolja (ISO/DIS 16122-5:2018)

Agricultural and forestry machines - Inspection of sprayers in use - Part 5: Aerial spray systems - Environmental protection (ISO/DIS 16122-5:2018)

Land- und Forstmaschinen - Pflanzenschutzgeräte - Gerätekontrolle - Teil 5: Luftfahrzeuge (ISO/DIS 16122-5:2018)

Matériel agricole et forestier - Contrôle des pulvérisateurs en service - Partie 5: Systèmes aériens de pulvérisation - Protection de l'environnement (ISO/DIS 16122-5:2018)

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ICS:

13.020.99	Drugi standardi v zvezi z varstvom okolja	Other standards related to environmental protection
65.060.40	Oprema za nego rastlin	Plant care equipment

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Agricultural and forestry machines — Inspection of sprayers in use —

Part 5: Aerial spray systems — Environmental protection

*Matériel agricole et forestier — Contrôle des pulvérisateurs en service —**Partie 5: Titre manque*

ICS: 13.020.99; 65.060.40

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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 documents 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 on 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 the following URL: 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*.

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

Introduction

Significant areas are sprayed globally by fixed wing and rotary aircraft in order to overcome serious pest threats to agriculture and forestry. Aerial application is used where difficult terrain or crop (forests) dictate as well as for timely application to large areas in order to maximize efficient use of crop protection products and minimize environmental impact. This standard specifies requirements and methods for their inspection in use of such spray systems.

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Agricultural and forestry machines — Inspection of sprayers in use —

Part 5: Aerial spray systems — Environmental protection

1 Scope

This International Standard specifies the requirements and test methods for their verification for inspection in use for aerial fixed wing and rotary aircraft spray systems for agriculture, forestry, turf, and vegetation control in transport access ways (such as gas and electric lines) with regard to minimizing the potential risk of environmental contamination during use.

This document applies only to manned aerial aircraft. It does not cover aircraft safety and design criteria for air worthiness and aircraft registration nor pilot or operator requirements all of which will be specified separately by countries or regions.

This part of ISO 16122 relates mainly to the condition of the equipment with respect to its potential risk for the environment and its performance to achieve good applications.

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

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, *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 16122-1:2015, *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 and the following apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

fixed wing aircraft

fixed wing aircraft approved by local or national authority equipped for the application of plant protection products including fertilizers on crops, including forestry and grasslands

3.2

rotary aircraft

helicopter (rotary) aircraft approved by local or national authority, equipped for the application of plant protection products and fertilizers on crops, including forestry and grasslands

ISO/DIS 16122-5:2018(E)**3.3****global navigation satellite system (GNSS)**

generic term for satellite navigation systems that provide autonomous geospatial positioning with global coverage

[SOURCE: ISO/TS 11356:2011, 3.4]

4 Requirements**4.1 General requirements**

The sprayer should be free from any damage that could cause spray liquid to leak from the tank, its' lid (which should be in good condition), its fittings, the pump, pipework and nozzles. A test for static leaks shall be performed with the tank filled to its nominal capacity with the aircraft parked on a level horizontal surface and the pump not running.

Compliance shall be checked by: visual check.

4.2 Sprayer tanks

The tank surface shall be at free from cuts or abrasion externally and internal that may compromise wall integrity. There should be no loose apparatus or blockage in the spray tank.

Compliance shall be checked by measurement, visual inspection.

4.2.1 Lid – Filling hole

For any tank opening greater than 400 mm in diameter it shall be provided with a secured grating which can only be removed by the use of tools. The openings in the grating shall not exceed the above-mentioned dimensions. Any opening lid shall be tightly sealed to avoid spillage.

Compliance shall be checked by: measurement test and visual inspection.

4.2.2 Strainers

Minimum 20 mesh strainers are recommended prior to transfer into the tank and mesh strainers should be per recommendations of spray system manufactures and observed to be free from cuts or blockage.

Compliance shall be checked by: visual check.

4.2.3 Emptying

No puddling of liquid visible in bottom of spray tank after draining or cleaning procedure.

Compliance shall be checked by: visual check.

4.2.4 Tank emptying device

It shall be possible to use an emptying device while aircraft is parked such that emptying of the residual is achieved.

It shall be possible to collect the liquid at the outlet without contaminating the environment. Compliance shall be checked by: visual check.

4.2.5 Tank contents indicator(s)

The indication of contents shall be easily readable from the pilot or operators position and from where the tank is filled. Turning of the head and the upper body is acceptable.