ISO 16122-2:2024-12 (E)

Agricultural and forestry machinery - Inspection of sprayers in use - Part 2: Horizontal boom sprayers

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) 3
4.5.1 Lid 3
4.5.2 Tank filling strainer 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 4
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 Pressure drop 6
4.6.6 Spray boom section pressure equalizer 6
4.7 Lines (pipes and hoses) 6
4.7.1 Lines 6
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 Spray boom 7
4.9.1 Stability/Alignment 7
4.9.2 Damping, slope compensation and stabilization 7
4.9.3 Automatic resetting 7
4.9.4 Nozzle spacing/ Orientation 7
4.9.5 Boom deformation 8
4.9.6 Prevention of nozzle damage 8
4.9.7 Height adjustment 8

4.10 Nozzles 9
4.10.1 Similarity 9
4.10.2 Dripping 9
4.10.3 Transverse distribution 9
4.11 Blower (if present) 10
4.11.1 Condition 10
4.11.2 Adjustability 10
4.12 Spray guns and lances (if present) 10
4.12.1 Trigger 10
4.12.2 Adjustment of flow rate and angle 10
5 Test methods 10
5.1 Test facilities and equipment 10
5.1.1 General 10
5.1.2 Test facilities 10
5.2 Pumps 11
5.2.1 Pump capacity test 11
5.2.2 Pump pulsations 11
5.3 Sprayer´s pressure indicators 11
5.3.1 Specification of pressure indicators used for verification 11
5.3.2 Verification method of the sprayer pressure indicator 12
5.4 Flow meters for controlling the volume/area rate 12
5.4.1 General 12
5.4.2 Operating procedure No. 1: Verification by nozzle flow rate measurement 12
5.4.3 Operating Procedure No. 2: Verification by installing a calibrated flow meter in the circuit of the sprayer 13
5.5 System for controlling forward speed 14
5.6 Uniformity of the transverse volume distribution with a horizontal patternator 14
5.6.1 Specification of the horizontal patternators used for verification 14
5.6.2 Verification method of the uniformity of the transverse distribution 15
5.6.3 Calculation of coefficient of variation (CV) 15
5.7 Flow rate of the spray nozzles 15
5.7.1 General 15
5.7.2 Measurement with nozzles fitted on the boom 15
5.7.3 Measurement with nozzles removed from the boom 16
5.7.4 Measurement on a spray gun/lance 16
5.8 Pressure drop 16
5.9 Pressure variation when the sections are closed 16
5.10 Pressure variation when the spray is switched off 16
5.11 Pressure distribution 16
Bibliography 18