ASABE/ISO 14269-2:1997 (SEP2006) (R2020)
Tractors and self-propelled machines for agriculture and forestry — Operator enclosure environment — Part 2: Heating, ventilation and air-conditioning test method and performance

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This standard was reviewed for adoption by the ASABE Power and Machinery Agricultural Machinery-Common Tests Technical subcommittee, and has been formally approved by the Technical Committee. The adoption of this standard was made possible by the signing of 2004 SAE-ASABE copyright agreements, which gave ASABE a royalty-free license to publish in whole or in part SAE standard document J1503. Adopted and approved as an American National Standard October 2006; reaffirmed January 2012, January 2017, September 2020.

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0 Foreword

0.1 ASABE/ISO 14269-2:1997, Tractors and self-propelled machines for agriculture and forestry — Operator enclosure environment — Part 2: Heating, ventilation and air-conditioning test method and performance, is an adoption without modification of the identically titled ISO standard ISO 14269-2:1997, Tractors and self-propelled machines for agriculture and forestry — Operator enclosure environment — Part 2: Heating, ventilation and air-conditioning test method and performance.

This ISO standard is a derivative of SAE J1503, Performance Test for Air-Conditioned, Heated, and Ventilated Off-Road Self-Propelled Work Machines.

0.2 ASABE/ISO 14269-2 specifies a uniform test method for measuring the contribution to operator environmental temperature and humidity provided by an air-conditioning, heating and ventilation system operating in a specific ambient environment for tractors and self-propelled machines for agriculture and forestry. This method may not determine the complete climatic environment of the operator since this is also affected by heat load from sources other than those on the machine, for example solar heating. It is recommended that part 3 of ISO 14269 be used in conjunction with this part to determine more accurately the complete heat loading on the operator enclosure. Minimum performance levels for the machine's operator enclosure air conditioning, heating and ventilation systems are established in this part.

0.3 Six normative references are listed in ISO 14269-2:1997. These references have been reviewed and accepted as part of the adoption of ASABE/ISO 14269-2:1997.

0.4 This standard has been approved as an American National Standard by ANSI (American National Standard Institute).

Text of ISO 14269-2:1997, Tractors and self-propelled machines for agriculture and forestry — Operator enclosure environment — Part 2: Heating, ventilation and air-conditioning test method and performance, follows.

1 Scope

This part of ISO 14269 specifies a uniform test method for measuring the contribution to operator environmental temperature and humidity provided by an air-conditioning, heating and ventilation system operating in a specific ambient environment for tractors and self-propelled machines for agriculture and forestry. The method may not determine the complete climatic environment of the operator since this is also affected by heat load from sources other than those on the machine, for example solar heating. It is recommended that part 3 of ISO 14269 be used in conjunction with this part to determine more accurately the complete heat loading on the operator enclosure. Minimum performance levels for the machine's operator enclosure air conditioning, heating and ventilation systems are established in this part.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 14269. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 14269 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2288:1997, Agricultural tractors and machines — Engine test code — Net power.

ISO 5353:1995, Earth-moving machinery, and tractors and machinery for agriculture and forestry — Seat index point.

ISO 5721:1989, Tractors for agriculture — Operator's field of vision.

ISO 14269-1:1997, Tractors and self-propelled machines for agriculture and forestry — Operator enclosure environment — Part 1: Vocabulary.

ISO 14269-4:1997, Tractors and self-propelled machines for agriculture and forestry — Operator enclosure environment — Part 4: Air filter element test method.

ISO 14269-5:1997, Tractors and self-propelled machines for agriculture and forestry — Operator enclosure environment — Part 5: Pressurization system test method.

3 Definitions

For the purposes of this part of ISO 14269, the definitions given in ISO 14269-1 apply, of which the following are particularly relevant.

3.1 effective temperature: Combination of relative humidity and temperature which can indicate the level of comfort perceived by the human body. [ISO 14269-1:1997, definition 2.1]

3.2 operator enclosure temperature chart: Diagram of the range of effective temperatures in which the operator environment within the operator enclosure is perceived as desirable. [ISO 14269-1:1997, definition 2.2]

NOTE: See figure 1.

3.3 operator environment: Space surrounding the operator as defined by temperature and velocity measurement points. [ISO 14269-1:1997, definition 2.3]

NOTE: See figure 2.