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ASABE, 2950 Niles Road, St. Joseph, MI 49085-9659, USA, phone 269-429-0300, fax 269-429-3852, hq@asabe.org

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Safety for Agricultural Field Equipment

Supersedes ASAE R275, Improving Safety on Farm Implements, adopted June 1964; R280, Improving Safety on Farm Tractors, adopted December 1964; and S297T, Enclosure-Type Shielding of Forward Universal Joint and Coupling Means of Agricultural Implement Power Drive Lines, adopted June 1966. Proposed by the Engineering Policy Committee of the Farm and Industrial Equipment Institute; adopted by ASAE as Recommendation December 1968; revised December 1969; revised and reclassified as an American National Standard February 1972; revised editorially June 1972 (revision 3); revised December 1973, March 1977, March 1978; reaffirmed December 1982; revised March 1984, March 1985, March 1987, April 1988; revision approved by ANSI June 1989; revised editorially April 1991; reaffirmed by ASAE December 1992; reaffirmed by ANSI July 1993; revised March 1995, March 1997, February 1998; revision approved by ANSI November 1998, reaffirmed by ASAE December 1998; revised May 1999; revision approved by ANSI September 1999; revised December 2002; revised editorially November 2005; revised June 2006, June 2009, June 2017.

Keywords: Braking, Controls, Definitions, Guard, Manuals, Power take-off, ROPS, Safety, Safety signs, Transport.

1 Scope

1.1 This Standard is a guide to provide a reasonable degree of personal safety for operators and other persons during the normal operation and servicing of agricultural field equipment.

1.2 This Standard does not apply to skid steer loaders, permanently installed grain dryers, and agricultural equipment covered by other safety standards, such as but not limited to permanently installed farmstead equipment, portable grain augers, and storage structures, except where specifically referenced by other standards.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies unless noted. For undated references, the latest approved edition of the referenced document (including any amendments) applies.

2.1 General standards used in the application of this document.

ANSI/ASAE S272 Lighting and Marking of Agricultural Equipment on Highways

ANSI/ASAE S338, Field Equipment for Agriculture — Safety Chain for Towed Equipment

ANSI/ASAE S335, Braking System Test Procedures and Braking Performance Criteria for Agricultural Field Equipment

ANSI/ASAE S390, Definitions and Classifications of Agricultural Field Equipment

ANSI/ASAE S478 Roll-Over Protective Structures (ROPS) for Compact Utility Tractors

ANSI/ASABE S604 Safety for Power Take-off (PTO), PTO Drive Shafts, and Power Input Connection (PIC) for Agricultural Field Equipment

ANSI/ASABE S619 Safety for Tractor-Mounted, Boom-Type Post Hole Diggers

ANSI/ASABE S625 Drawbar Pin Dimensions and Requirements for Towed Equipment

ANSI/ASABE S639 Safety Standard for Large Row-Crop Flail Mowers

ANSI/ASABE AD500-1 Agricultural tractors — Rear-mounted power take-off types 1, 2, 3 and 4 — Part 1: General specifications, safety requirements, dimensions for master shield and clearance zone. Users are directed to the most recent ASABE adopted version of this ISO document.

ANSI/ASABE AD11684 Tractors, machinery for agricultural and forestry, powered lawn and garden equipment — Safety signs and hazard pictorials — General principles. Users are directed to the most recent ASABE adopted version of this ISO document.

ANSI/ASABE AD26322-1 Tractors for agriculture and forestry — Safety — Part 1: Standard tractors. Users are directed to the most recent ASABE adopted version of this ISO document.

ANSI/ASABE AD26322-2 Tractors for agriculture and forestry — Safety — Part 2: Narrow track and small tractors. Users are directed to the most recent ASABE adopted version of this ISO document.

ASABE/ISO 12140 Agricultural machinery — Agricultural trailers and trailed equipment — Drawbar jacks. Users are directed to the most recent ASABE adopted version of this ISO document.

ASABE/ISO 23205 Agricultural tractors — Instructional seat. Users are directed to the most recent ASABE adopted version of this ISO document.

ASABE/ISO TS 28924 Agricultural Machinery — Guards for Moving Parts of Power Transmission — Guard Opening Without Tool. Users are directed to the most recent ASABE adopted version of this ISO document.

ECE Regulation No. 43 Uniform provisions concerning the approval of safety glazing materials and their installation on vehicles

SAE J1194, Rollover Protective Structures (ROPS) for Wheeled Agricultural Tractors

SAE J2194, Roll-Over Protective Structures (ROPS) for Wheeled Agricultural Tractors.

SAE Z26.1-1996 Safety Glazing Materials for Glazing Motor Vehicles and Motor Vehicle Equipment Operating on Land Highways

ISO 10975 Tractors and machinery for agriculture — Auto-guidance systems for operator-controlled tractors and self-propelled machines — Safety requirements

ISO 13857:2008 Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs

ISO TS 28923 Agricultural machinery - Guards for moving parts of power transmission - Guard opening with tool

2.2 Applicable parts of ISO 4254 Agricultural machinery — Safety or the national adoption used in the application of this document.

ISO 4254-1:2013 Agricultural machinery — Safety — Part 1: General Requirements

ISO 4254-5 Agricultural machinery — Safety — Part 5: Power driven soil working equipment

ANSI/ASABE AD4254-6, Agricultural machinery — Safety — Part 6: Sprayers and liquid fertilizer distributors. Users are directed to the most recent ASABE adopted version of this ISO document.

ISO 4254-7:2008 Agricultural machinery — Safety — Part 7: Combine harvesters, forage harvesters and cotton harvesters