

ANSI/ASABE AD11684:1995 APR2011 (R2021)

Tractors, machinery for agricultural and forestry, powered lawn and garden equipment —
Safety signs and hazard pictorials — General principles



American Society of
Agricultural and Biological Engineers

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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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Tractors, machinery for agricultural and forestry, powered lawn and garden equipment — Safety signs and hazard pictorials — General principles

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History of ASAE S441, Safety Signs: Proposed by the Farm and Industrial Equipment Institute; approved by the ASAE Power and Machinery Division Standards Committee; adopted by ASAE December 1983; reaffirmed December 1988; revised editorially July 1989; revised June 1993, March 1995, February 1999; revised editorially January 2004; reaffirmed February 2004, February 2005, January 2010.

ASAE S441 was used as the basis document for ISO 11684, Tractors, machinery for agricultural and forestry, powered lawn and garden equipment — Safety signs and hazard pictorials — General principles. ASAE S441.3 was replaced by an adoption with deviations of ISO 11684:1995 April 2011; adoption approved as an American National Standard May 2011; reaffirmed and revised editorially January 2016, corrigendum approved October 2017; reaffirmed March 2021.

Keywords: Decals, Label, Safety, Signs

0 Foreword

0.1 ANSI/ASABE AD11684:1995, Tractors, machinery for agricultural and forestry, powered lawn and garden equipment — Safety signs and hazard pictorials — General principles, is an adoption with deviations of the identically titled ISO standard ISO 11684:1995, Tractors, machinery for agricultural and forestry, powered lawn and garden equipment — Safety signs and hazard pictorials — General principles. Deviations noted in the following Foreword sections pertain to those provisions where harmonization could not be achieved between ASABE and the International Standard.

Deviations from the subsequently printed international standard are noted with underscore (addition) or strikethrough (deletions) text. Deviations from the international standard figures and equations are clearly marked.

0.2 ANSI/ASABE AD11684:1995 establishes general principles for the design and application of safety signs and hazard pictorials permanently affixed to tractors, machinery for agriculture, and powered lawn and garden equipment. This standard outlines safety sign objectives, describes the basic sign formats and colours and provides guidance on developing the various panels that together constitute a safety sign.

The scope is identical to the ISO standards scope except as follows:

0.2.1 Deletion of "and forestry" and "as defined in ISO 3339-0 and ISO 5395" from section 1 Scope.

0.3 Two Normative references are listed in ISO 11684:1995. The responsible ASABE committee has reviewed these references and approved the following deviation:

0.3.1 Remove ISO 3339-0:1986, Tractors and machinery for agriculture and forestry — Part 0: Classification system and classification

0.4 This standard has been approved as an American National Standard by ANSI (American National Standards Institute). Substantial original content of the original ISO 11684 was based on ASAE S441.

0.5 ASABE technical deviations from ISO 11684:1995:

0.5.1 Add section 4.3:

4.3 Expected life and maintenance

4.3.1 A safety sign is considered permanent if, when viewed at distances described in section 5.9, the sign has good color and legibility after exposure tests for weatherability at a latitude of 25° to 35° North on a surface inclined at 45° facing south for a period of at least two years.

4.3.2 Instructions shall be provided in the operator's manual regarding the maintenance and replacement of safety signs.

0.5.2 Add section 5.9:

5.9 Letter style and size

5.9.1 Letter Style

5.9.1.1 Signal words shall be upper case sans serif letters.

5.9.1.2 Message panel lettering shall be sans serif. Letters may be in upper case only or in combinations of upper case and lower case as deemed appropriate.

5.9.1.3 The font may be one of the following or a font with similar legibility: Arial, Arial Bold, Helvetica, Helvetica Bold, Folio Medium, Franklin Gothic, Futura, News Gothic Bold, Meta Bold, or Univers.

5.9.2 Letter size

5.9.2.1 Lettering shall be of a size that enables a person with normal vision, including corrected vision, to read the safety sign at a safe viewing distance from the hazard.

5.9.2.2 Safe viewing distance for the signal word shall take into consideration a reasonable hazard avoidance reaction time.

5.9.2.3 Safe viewing distance for the message panel wording may be different from the safe viewing distance for the signal word.

5.9.2.4 Signal word letter height should be at least 50% greater than the selected height of the message panel wording.

5.9.2.5 Minimum word letter height shall be not less than 6 mm for a signal panel word nor less than 3 mm for a message panel word (upper case letters).

0.5.3 Add section 10.6:

10.6 Colors

Specified colors for use on safety signs are to be approximately as follows:

Color Reference Munsell Number

Black N2.0/ or lower

Orange 5.0YR6.0/15

Red 7.5R4.0/14

White N9.0/ or higher

Yellow 5.0Y8.0/12

Text of ISO 11684:1995, Tractors, machinery for agricultural and forestry, powered lawn and garden equipment — Safety signs and hazard pictorials — General principles, with deviations noted, follows.

1 Scope

This International Standard establishes general principles for the design and application of safety signs and hazard pictorials permanently affixed to tractors, machinery for agriculture ~~and forestry~~, and powered lawn and garden equipment ~~as defined in ISO 3339-0 and ISO 5395~~. This International Standard outlines safety sign objectives, describes the basic safety sign formats and colours, and provides guidance on developing the various panels that together constitute a safety sign.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard 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 3339-0:1986, Tractors and machinery for agriculture and forestry — Part 1 — Classification system and classification~~

ISO 5395:1990, *Power lawn-mowers, lawn tractors, lawn and garden tractors, professional mowers, and lawn and garden tractors with mowing attachments — Definitions, safety requirements, and test procedures*

3 Risk reduction through design

3.1 Safety should be integrated into machine design, manufacture, operation, instruction, and supervision. Risks should be reduced or eliminated so far as possible without unreasonable impairment of product function by

- eliminating or reducing hazards by suitable choice of design features and construction materials;
- limiting exposure of persons to hazards by reducing the need for operator intervention in hazardous areas;
- providing guards or other safety devices to protect persons from the hazards which cannot reasonably be eliminated or sufficiently limited by design.

3.2 Even when appropriate design features and safety devices are incorporated into machinery, some residual risks may remain. Safety signs warn operators or other exposed persons about such residual risks.

4 Objectives of safety signs

4.1 The objectives of a safety sign are to

- Alert persons to an existing or potential hazard
- Identify the hazard
- Describe the nature of the hazard
- Explain the consequences of potential injury from the hazard