

ANSI/ASABE AD8759-1:1998 JAN2013

Agricultural wheeled tractors — Front-mounted equipment — Part 1: Power take-off and three-point linkage



American Society of
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This standard was reviewed for adoption with deviations by the ASABE Power and Machinery Tractors and Tractor Implement Interface/PTO Technical subcommittees, and has been formally approved. This adoption, along with the adoption with deviations of ISO 500-1:2004/Cor. 1:2005 and ISO 8759-2:1998 and the identical adoptions of ISO 500-2:2004 and ISO 500-3:2004 replaced ASAE S203.14 FEB04 and ASAE S513 FEB03. Rear mounted PTOs are addressed in the ISO 500 adoptions, front mounted in the ISO 8759 adoptions. Adopted by ASABE December 2010; approved as an American National Standard January 2011; revised June 2012; revision approved by ANSI June 2012; revised January 2013; revision approved by ANSI February 2013.

Keywords: Clearance zone, Front hitch, Master shield, Power take-off, Safety, Speed, Three-point linkage, Tractor

0 Foreword

0.1 ANSI/ASABE AD8759-1:1998, Agricultural wheeled tractors — Front-mounted equipment — Part 1: Power take-off and three-point linkage, is an adoption with deviations of the identically titled ISO document ISO 8759-1:1998, Agricultural wheeled tractors — Front-mounted equipment — Part 1: Power take-off and three-point linkage. Deviations noted in the following Foreword sections pertain to those provisions where harmonization could not be achieved between ASABE and the International Standard.

0.2 ANSI/ASABE AD8759-1:1998 specifies dimensions and requirements for power take-off and for front three-point linkages in association with a power lift for the attachment of implements or equipment to the front of agricultural wheeled tractors. It is not applicable to tractors which are designed to run in two directions, where either end can be considered to be the front or rear; in this case ANSI/ASABE AD500-1:2004 W/Cor.1, ASABE/ISO 500-2:2004, ASABE/ISO 500-3:2004 and ISO 730 apply.

0.3 Two normative references are listed in ISO 8759-1:1998. These references have been reviewed and accepted as part of the adoption with deviations of ANSI/ASABE AD8759-1:1998.

0.4 This standard has been approved as an American National standard by ANSI (American National Standards Institute). The original content of ISO 8759 was based on ASAE S203 and ASAE S217.

0.5 This standard deviates from ISO 8759-1:1998 as follows:

0.5.1 In Scope replace ISO 500 reference with ANSI/ASABE AD500-1:2004 W/Cor.1, ASABE/ISO 500-2:2004, and ASABE/ISO 500-3:2004. Any reference to ISO 500 in the printed portion of the ISO text shall be replaced by ANSI/ASABE AD500-1:2004 W/Cor.1, ASABE/ISO 500-2:2004, and ASABE/ISO 500-3:2004.

0.5.2 In Scope replace ISO-730-1 reference with ISO-730.

0.5.3 Clause 4.4 refers to the PTO protective device (Master Shield) and states that “if the protective device is not designed to be used as a step, it may be flexible”. If the Master Shield can be used as a step, then it shall be designed according to ISO 500-1 and shall be capable of withstanding a vertical static load of 1200N without permanent deformation. (Ref ISO 26322-1).

0.5.4 ASABE S203.14 previously did not specify a Type 1 (35 mm, 540 rpm) or Type 3 (45 mm, 1000 rpm) PTO. ISO 8759-1:1998 specifies Type 1, 2 and 3 with rotation in the clockwise direction as viewed from the front of the tractor. ISO 8759-1:1998 further specifies that the Type 1 shaft, have rated rotational frequency of 540 rpm or 1000 rpm with rotation in the anti-clockwise direction as viewed from the front of the tractor. A Type 1 shaft with rated rotational frequency of 1000 rpm shall not be used. Only Type 1 (35mm, 540 rpm), Type 2 (35 mm, 1000 rpm) or Type 3 (45 mm, 1000 rpm) shafts shall be used and shall have rotation in the anti-clockwise direction as viewed from the front of the tractor.

0.5.5 Over speed requirements

0.5.5.1 Tractors capable of driving the 540 r/min shaft in excess of 630 r/min and the 1000 r/min shaft in excess of 1170 r/min shall also include a suitable warning of operation in excess of those speeds

0.5.5.2 If a shiftable PTO is provided, a means shall be employed on the tractor to prevent over speeding of a Type 1 tractor PTO shaft in excess of 630 r/min, or a Type 2 tractor PTO shaft in excess of 1170 r/min.

Text of ISO 8759-1:1998; Agricultural wheel tractors — Front-mounted equipment — Part 1: Power take-off and three-point linkage, follows.

1 Scope

This part of ISO 8759 specifies dimensions and requirements for power take-off and for three-point linkages in association with a power lift for the attachment of implements or equipment to the front of agricultural wheeled tractors.

It is not applicable to tractors which are designed to run in two directions, where either end can be considered to be the front or the rear; in this case ISO 500 and ISO 730-1 apply.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 8759. 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 8759 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 500:1991, Agricultural tractors — Rear-mounted power take-off — Types 1, 2 and 3.

ISO 730-1:1994, Agricultural wheeled tractors — Rear-mounted three-point linkage — Part 1: Categories 1, 2, 3 and 4.

3 Definitions

For the purposes of this part of ISO 8759, the following definition and those given in ISO 730-1:1994 apply, except for definitions 3.2.25¹⁾ and 3.2.26¹⁾ which concern convergence and are not applicable to front-mounted linkages. Additionally, pitch (3.2.21¹⁾) is considered positive when clockwise as viewed from the left-hand side of the tractor.

3.1 front of the tractor

leading end of the machine when moving in the normally accepted direction of travel on the road, as characterised by the relative positions of the seat, steering wheel, controls and road lighting equipment

¹⁾ These references concern ISO 730-1:1994