

Specification for

Brakes and braking systems for towed agricultural vehicles

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Agricultural Machinery and Implements Standards Committee (AGE/-) to Technical Committee AGE/17 upon which the following bodies were represented:

- Agricultural Engineers' Association
- British Agricultural and Garden Machinery Association Ltd.
- Department of Transport
- Flour Milling and Baking Research Association
- Health and Safety Executive
- Institute of Brewing
- Ministry of Agriculture, Fisheries and Food
- National Farmers' Union
- National Institute of Agricultural Engineering
- National Union of Agricultural and Allied Workers
- United Kingdom Agricultural Supply Trade Association Ltd.

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Foreword

This revision of this British Standard, which has been prepared under the direction of the Agricultural Machinery and implements Standards Committee, supersedes BS 4639:1970 which is withdrawn. It maintains the same primary objective of the earlier edition, which is to improve the safety of operation of agricultural vehicles both on and off the road. At the same time it is recognized that, bearing in mind the small proportion of their time spent on public roads and their low speed, they do not require the same braking performance as normal road vehicles. The overall aim of achieving a deceleration of 2.5 m/s^2 with all vehicles and combinations of vehicles is, therefore, maintained.

Since 1970 the most significant development nationally in this field has been the publication by the Department of Transport of a code on agricultural trailer braking systems. This code complements the Motor Vehicles (Construction and Use) Regulations, 1978, as amended by Statutory Instrument 1984, number 1809. It recommends the use of a single line hydraulic system for actuation on the majority of vehicles so as to achieve maximum interchangeability and safety. Other methods of brake actuation are, however, not excluded.

Internationally work on harmonization of legislation within the United Nations Economic and Social Council Economic Commission for Europe (ECE) has continued, and on development of test procedures within the International Organization for Standardization (ISO).

Test methods in this standard are technically equivalent to ISO 5697:1982 "*Agricultural and forestry vehicles — Determination of braking performance*" published by ISO.

As far as possible every effort has been made to make this British Standard compatible with existing and proposed regulations and recommendations, both national and international.

The definitions in this standard are based on the Motor Vehicles (Construction and Use) Regulations, 1978, as amended by Statutory Instrument 1984, number 1809.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This British Standard specifies requirements for the brakes and braking systems of towed agricultural vehicles in combination with agricultural towing vehicles (normally agricultural tractors).

It contains braking requirements for the towed vehicle and for the towing vehicle to ensure their compatibility and requirements for the characteristics and performance of the complete braking system.

Conditions of test are given in Appendix A and tests for service brakes and parking brakes are given in Appendix B and Appendix C respectively. A specimen test report is given in Appendix D.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definitions

For the purposes of this British Standard the following definitions apply.

2.1

towed agricultural vehicle

an agricultural trailer, the main purpose of which is to carry agricultural produce, or any towed agricultural vehicle having a maximum weight exceeding twice its unladen weight but not being an agricultural trailed appliance conveyor

2.2

agricultural trailed appliance conveyor

a trailer having an unladen mass not exceeding 510 kg which is designed and constructed for the conveyance of not more than one agricultural trailed appliance and which has each of its wheels fitted with a pneumatic tyre

2.3

agricultural trailed appliance

a trailed implement or machine constructed or adapted for use off roads for agricultural, horticultural, or forestry purposes and having a maximum weight not exceeding twice its unladen weight

2.4

balanced vehicle

a towed agricultural vehicle generally having two or more axles so that the weight of the vehicle is supported by its road wheels when the vehicle is detached from the towing vehicle

2.5

unbalanced vehicle

a towed agricultural vehicle, so constructed that part of the weight of the vehicle is not supported by the road wheels when the vehicle is detached from the towing vehicle, e.g. having one axle, or two axles if closely spaced

2.6

brake control

that part of the braking system which is directly actuated by the driver

2.7

inertia (over-run) brake

a service brake actuated by a compressive force in the hitch between towed and towing vehicles

2.8

service brake

that brake normally applied by the driver to decelerate a moving vehicle

2.9

unladen weight

the weight of the unladen vehicle

2.10

maximum weight

those maximum axle and gross weights stated by the manufacturer to be technically permissible

NOTE These weights may be greater than the "maximum weights" authorized by the national administration.

2.11

maximum mass

the mass corresponding to the maximum weight

2.12

unladen vehicle

a vehicle in running order with, where appropriate, its tanks and radiators full and carrying only a driver of mass 75 kg, but no optional accessories or load, where these are applicable

2.13

independent braking

the braking of the towing and towed vehicles by separate independent controls operated by the driver in the driving position of the towing vehicle

2.14

simultaneous braking

the braking of the towing vehicle and the towed vehicle by a single control operated by the driver in the driving position of the towing vehicle and where the muscular energy of the driver is not the energy used for braking the towed vehicle