



*United Kingdom of Great  
Britain and Northern Ireland*

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 **EDICT OF GOVERNMENT** 

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BS 4139 (1967) (English): Specification for safety requirements for perambulators (baby carriages)

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*Nulli vendemus, nulli negabimus aut differemus Rectum aut Justiciam.*  
*We will sell to no man, we will not deny or defer to any man either Justice or Right.*  
MAGNA CARTA (1297)

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Specification for

**Safety requirements for  
perambulators (baby  
carriages)**

## Co-operating organizations

The Perambulators and Carrycots Committee, under whose supervision this British Standard was prepared consists of representatives from the following Government departments and professional and industrial organizations:

British Baby Carriage Manufacturers' Association

British Nursery Goods Association

Ministry of Health

National Association of Pram Retailers, Ltd.

Royal College of Nursing

Royal Society for the Prevention of Accidents

Women's Advisory Committee of the BSI

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## Foreword

This standard makes reference to the following British Standards:

BS 871, *Abrasive papers and cloths for general purposes.*

BS 3785, *Webbing safety harness for baby carriages and chairs and walking reins.*

BS 3805, *Leather safety harness for baby carriages with and without leading rein.*

The need for this British Standard arose from the desire of many organizations interested in personal safety for generally accepted methods of ascertaining the safety of perambulators. It cannot be too strongly emphasized that the ultimate safety of the child depends upon the exercise of suitable responsibility by the person in charge of it. Also it should be borne in mind that the normal single carriage is intended for occupation by one child only.

As there are so many designs and sizes available it was decided that the need was for methods of test and requirements of safety performance of perambulators rather than for a specification of design details, so that purchasers might make a final choice from a range of designs which were all known to have satisfactory safety characteristics.

The technical committee responsible for producing the standard is composed of representatives from organizations having a mutual interest in the subject. The committee wish to emphasize that the perambulator is too often regarded as a vehicle for transporting more than the child and whilst, within reason, shopping packages and similar parcels can be carried in it, there is a limit to this, and also to the manner in which the articles are disposed about the perambulator; beyond these limits the perambulator may become out of balance and thus unsafe. It is also considered essential that adequate maintenance be given to the vehicle and desirable that manufacturers should make this and other information concerning the use and manipulation of the perambulator available to the purchaser in some form of instructions supplied with it.

The following British Standards have also been published in this series:

BS 3881, *"Safety requirements for carry cots".*

BS 3785, *"Webbing safety harness for baby carriages and chairs and walking reins".*

BS 3805, *"Leather safety harness for baby carriages with and without leading rein".*

NOTE 1 Where metric equivalents are stated, the figures in British units are to be regarded as the standard. The metric conversions are approximate. More accurate conversions should be based on the tables in BS 350, *"Conversion factors and tables"*.

NOTE 2 The units in Appendix D, Appendix E and Appendix F are metric in order to align the tests of this standard with those it has in common with BS 4792 *"Safety requirements for pushchairs"*. A fully metric revision of this standard will be published following completion of current work within the International Organization for Standardization (ISO).

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 4 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 gives methods of test and requirements to ensure the stability and safe performance characteristics of perambulators for babies and infants. It covers perambulators, also known as baby carriages, divided into two classes:

- 1) those with hard bodies
- 2) those with soft bodies.

The standard does not deal with bedfolders, folding chairs or similar shaped conveyances intended for older children.

## 2 Definitions

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

### 2.1

#### **perambulator (or baby carriage)**

a means of transport for babies and infants, consisting of a body of boat or box like shape, mounted on a chassis which has four tyred wheels, and with an extended handle for pushing and steering. Some types have the body permanently mounted on the chassis; other types have detachable bodies

### 2.2

#### **hard bodies**

bodies of perambulators which are and remain rigid at all times even when removed from the chassis

### 2.3

#### **soft bodies**

bodies which may be folded up if required, sometimes removable from and sometimes folding with the chassis. The sides are frequently of soft fabric stretched on a folding frame

## 3 Hard body perambulators

**3.1 Materials.** The materials used shall not include any material or finish that is by its chemical composition or its physical characteristics (e.g. sharp edges) known to be injurious to a child in the circumstances in which a perambulator may be used. Any coating of paint used shall not contain lead, or any compound of lead in excess of that permitted on toys by the Toys (Safety) Regulations. See Appendix C.

In addition, materials used shall not show that they would contribute appreciably to the intensity of a fire; that is they shall not smoulder or ignite when subjected to a temperature of 300 °F (150 °C) for 10 minutes.

**3.2 Dimensions.** It is not considered that dimensions require specification herein except that:

- 1) dimensions shall be such, and shall be so disposed, that the perambulator passes the tests for stability;
- 2) the average depth of the body from the top edge of the upholstery to the level of the next major horizontal plane (the seat if there is one), shall be not less than 7<sup>1</sup>/<sub>2</sub> in (190 mm), and this shall also be the minimum depth at, or at any position within 12 in from, the safety harness anchorage points.

**3.3 Parking devices.** Perambulators shall have a parking device that ensures that the perambulator shall not move when tested in accordance with Appendix D.

If the parking device acts on the tyres, it shall be self-adjusting or be capable of simple adjustment to compensate for wear of tyres. If the parking device acts on the tyres or wheels, it shall act on at least two tyres or wheels on the same axle.

The operating point of the brake lever shall always be visible to the person pushing the perambulator, but shall not be within reach of a child secured in the perambulator by means of a properly adjusted British Standard safety harness complying with the requirements of either BS 3785<sup>1)</sup> or BS 3805<sup>2)</sup>.

**3.4 Stability.** The perambulator shall stand firm and shall not tip over when tested in accordance with Appendix E.

In addition, in the case of perambulators with detachable bodies, the means for securing the body to the chassis shall not become detached during the test.

**3.5 Wheel attachment.** After completion of all the tests, the wheels shall be inspected to verify that they are still securely and correctly fitted.

**3.6 Perambulator harness.** Provision shall be made for the attachment of a child's safety harness that complies with the requirements of appropriate British Standards. In the case of perambulators designed for two children, provision shall be made for the independent attachment of two harnesses.

The attachment points may be in the form of loops or similar devices. The attachment points shall show no damage when tested in accordance with the requirements of Appendix A.

<sup>1)</sup> BS 3785, "Webbing safety harness for baby carriages and chairs and walking reins".

<sup>2)</sup> BS 3805, "Leather safety harness for baby carriages with and without leading rein".

**3.7 Chassis.** Perambulators incorporating a folding chassis shall have in addition to the normal locking method an additional separate safety device. The actions of the locking method and safety device shall be such that if either is operated independently when the perambulator contains the 30 lb dummy, the degree of folding of the perambulator which occurs, does not cause or permit movement of the handle to such an extent that its uppermost part passes over the seat of the perambulator.

**3.8 Padding.** Padding shall be sufficiently firm to make it incapable of conforming to a child's face and causing suffocation.

**3.9 Mudguards.** When mudguards are provided they shall be so positioned that they do not prevent the tilting of the perambulator to an angle of 30° to the horizontal either forwards or backwards.

**3.10 Hoods.** Any hood or apron shall be fitted in such a manner that it deflects rain from entering the body of the perambulator.

**3.11 Rigidity.** The perambulator shall show no visible damage when tested with a static load in accordance with Appendix B.

## 4 Soft body perambulators

**4.1 General.** The requirements given in Clause 3 shall be met.

**4.2 Body attachments.** Detachable soft body or folding soft body type perambulators shall be checked by visual examination for the security of the body fittings and against these becoming detached from the chassis, or allowing the body to fold up during use.

## 5 Marking and labelling

The manufacturer shall indicate the following:

- 1) His name or other means of identification.
- 2) Compliance with this British Standard.
- 3) Every perambulator shall have permanently fixed inside the body by the manufacturer, in a visible position, a permanent label giving essential instructions for correct use of the vehicle and the child's belt, also emphasizing the responsibility of the person in charge and the danger of attaching extraneous items such as shopping baskets. The label should be placed where it can readily be seen when putting the baby in the perambulator, and adjusting the coverings, i.e. at the foot inside the perambulator body. A suitable wording is as follows:

The correct use and maintenance of this perambulator are important to ensure the child's safety.

For full benefit from the safety requirements it is essential that the child wears a B.S. Safety Belt, properly fitted. Do not make the perambulator unstable with additional children or goods.

NOTE The word "vehicle" may be used in place of "perambulator".

NOTE This British Standard provides for a product which concerns personal safety (see Foreword). Manufacturers and purchasers are urged to make use of the scheme operated by the British Standards Institution (see below) whereby the product may bear the registered mark of the BSI.

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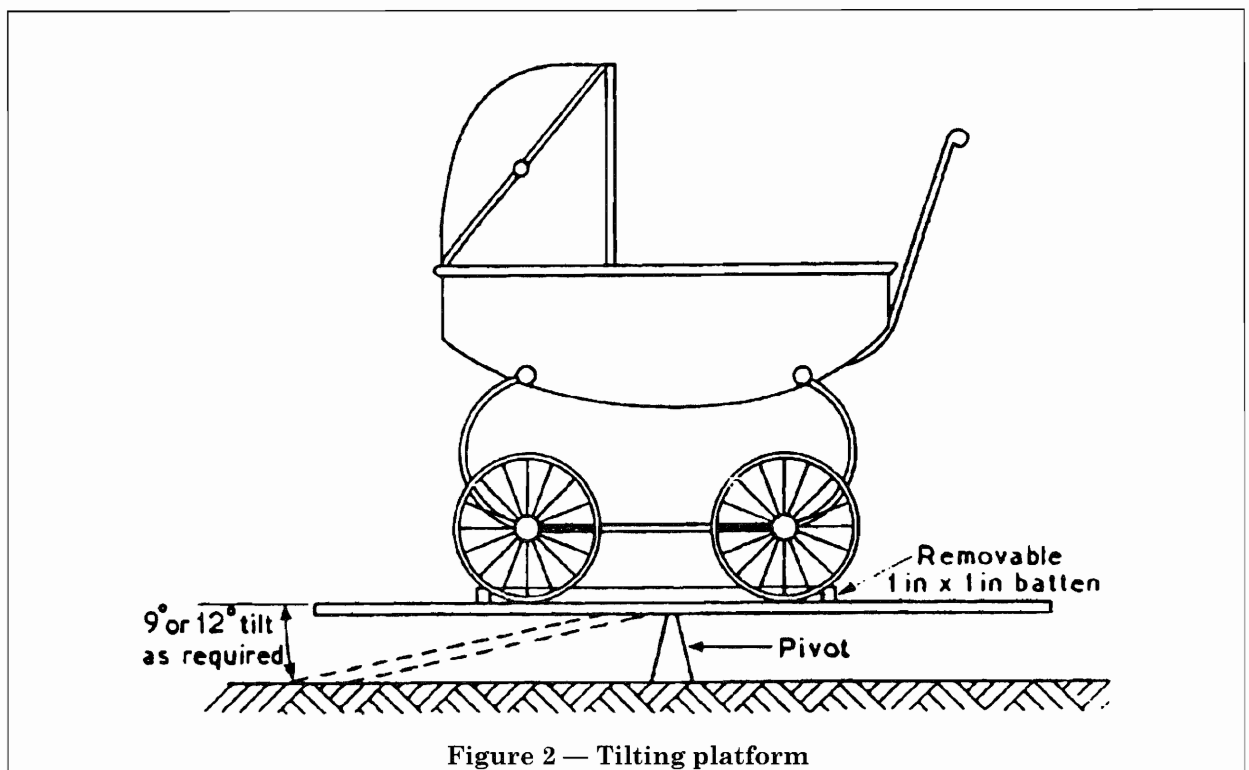


## Appendix A Harness attachments

A.1 A weight of 30 lb (13.6 kg) is attached by a cord and hook onto the harness attachment and allowed to hang freely for a period of 1 minute down the outside of the body adjacent to the attachment and then for a further period of 1 minute down the outside of the body opposite the attachment. In the case of attachment points designed to hold two ends, the weight is increased to 60 lb (27.2 kg).

## Appendix B Rigidity

The perambulator assembled as for use shall have a bag of sand weighing 90 lb (40 kg) placed on the seat for a period of twelve hours.



## Appendix C Extract from the toys (safety) regulations 1967, No. 1157

A toy shall not have any coating of paint which contains lead, or any compound of lead, so that the proportion (by weight) of lead calculated as the element (Pb) exceeds 5 000 parts in 1 000 000 parts of the dry paint film.

In this Regulation, "paint" includes lacquer, varnish and other similar substances.

## Appendix D Test for parking devices

A dummy (see Appendix F) is placed in the perambulator at the position the child would occupy normally (taking into account the positions of the anchorage points for the safety harness). A safety harness complying with the requirements of BS 3785 is applied so as to limit the movement of the dummy to 50 mm in any direction from the previously mentioned position. In the case of perambulators designed for two children, the test is made with one or two dummies, whichever gives the more onerous conditions under the test.

The perambulator with the parking device applied is placed forwards and then backwards on a slope of 9° to the horizontal. The slope is covered with No. 3 sandpaper complying with the requirements of BS 871. A note is made of any movement of the perambulator on the slope.

### **Appendix E Test for stability**

A dummy (see Appendix F) is placed in the perambulator at the position the child would occupy normally (taking into account the positions of the anchorage points for the safety harness). A safety harness complying with the requirements of BS 3785 is applied so as to limit the movement of the dummy to 50 mm in any direction from the previously mentioned position. In the case of perambulators designed for two children, the test is made with one or two dummies, whichever gives the more onerous conditions under the test.

The perambulator is placed in turn forwards, backwards and sideways in each direction on a slope of 12° to the horizontal, with appropriate wheels resting against a suitable stop (e.g. 25 mm × 25 mm batten) that does not influence the test result. The slope is covered with No 3 sandpaper complying with the requirements of BS 871. The parking device is not applied.

The test is repeated with the parking device applied.

### **Appendix F Details of test dummy**

The dummy is a solid cylinder, 200 mm in diameter and 300 mm in height. The dummy has a mass of 15 kg and its centre of gravity is 150 mm above its base.

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