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Specification for

Light domestic duty jumper lead sets for automotive starting

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Automobile Standards Policy Committee (AUE/-) to Technical Committee AUE/9, upon which the following bodies were represented:

- Automobile Association
- Consumer Policy Committee of BSI
- Department of Trade and Industry (Consumer Safety Unit, CA Division)
- Department of Transport
- Garage Equipment Association
- Institute of Trading Standards Administration
- Motor Cycle Industry’s Association of Great Britain Ltd.
- Petrol Pump Manufacturers’ Association
- Royal Automobile Club
- Society of Motor Manufacturers and Traders Ltd.

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Foreword

This British Standard has been prepared under the direction of the Automobile Standards Policy Committee to establish a standard of performance for jumper lead sets for automotive jump starting.

BS AU 237a deals with requirements for jumper lead sets for use when starting an internal combustion engine from a supplementary battery. Examples are motor vehicles, boats and other installations.

The standard is applicable to 12 V vehicle systems.

This second edition of BS AU 237 supersedes BS AU 237-1:1990 which is withdrawn. It constitutes a technical revision undertaken to improve and clarify testing procedures arising from the application of the first edition for conformity testing purposes. At the same time the title of the standard has been amended to reflect the fact that Part 2 for heavy domestic duty and Part 3 for commercial vehicles have not been developed and the need for such Parts are no longer considered necessary.

Product certification. Users of this British Standard are advised to consider the desirability of third party certification of product conformity with this British Standard based on testing and continuing product surveillance which may be coupled with assessment of a supplier's quality systems against the appropriate Part of BS 5750.

Enquiries as to the availability of third party certification schemes are forwarded by BSI to the Association of Certification Bodies. If a third party certification scheme does not already exist, users should consider approaching an appropriate body from the list of Association members.

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 10, 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 jumper lead sets for light domestic use when starting an internal combustion engine from a supplementary battery in environmental temperatures down to $-10\text{ }^{\circ}\text{C}$. It is restricted to maximum engine capacity, 3.5 l petrol and 2.5 l diesel.

Requirements for the safe use of jumper lead sets for jump starting are given as safety and operating instructions in Annex C.

2 References

2.1 Normative references

This British Standard incorporates, by reference, provisions from specific editions of other publications. These normative references are cited at the appropriate points in the text and the publications are listed on the inside back cover. Subsequent amendments to, or revisions of, any of these publications apply to this British Standard only when incorporated in it by updating or revision.

2.2 Informative references

This British Standard refers to other publications that provide information or guidance. Editions of the publications current at the time of issue of this standard are listed on the inside back cover, but reference should be made to the latest editions.

3 Definitions

For the purposes of this British Standard, the definitions given in BS 6604:1985 apply, together with the following.

3.1

conductor

that portion of a cable which has the specific function of conveying current

3.2

clip

a device which makes a mechanical and electrical connection from the conductor to the battery or earth terminal of a vehicle

3.3

jumper lead set

a set of two insulated flexible low-voltage conductors and four insulated clips securely attached to the ends of the conductors

3.4

starter battery

a battery principally used for starting, lighting and ignition on vehicles or plant employing internal combustion engines

3.5

jump starting

a technique used for assisting the starting of an internal combustion engine where a healthy and reasonably well-charged battery is connected temporarily in parallel with an ailing or discharged battery of the same nominal voltage to provide additional cranking power

4 Cable and construction

4.1 Jumper lead length

When measured between the ends of the jaws of each clip, the overall length of the jumper leads as shown in Figure 1 shall be not less than 3 m.

4.2 Cable construction

Any material used for cable construction shall be of a size capable of carrying 100 A continuously.

4.3 Cable insulation

The cable insulation shall be homogeneous and shall meet the requirements of type TI 1 of BS 6746:1990 and of A.4 of this standard.

The mean thickness of insulation shall be not less than 1.3 mm, but it is permissible for the thickness at any one place to be less than 1.3 mm provided that the difference does not exceed $0.1\text{ mm} + 10\%$ of the value specified.

Compliance shall be checked using the method described in 8.1 of BS 6469-1.1:1992.

4.4 Colour coding

A clear distinction shall be made between the two cables in a jumper lead set by colour coding of the cables and clips. The cable and clip insulation used for a positive connection shall be red, and that used for the negative shall be black.

4.5 Temperature range

All cables and conductors shall be designed to operate within a temperature range of $-25\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$.

When tested in accordance with 8.1 of BS 6469-1.4:1992 at $-25\text{ }^{\circ}\text{C}$, the cable insulation shall show no cracking or rupture visible to the naked eye, if necessary corrected to give normal vision, of a trained observer.

5 Clips

5.1 Design

Clips consisting of a pair of jaws, held together by and pivoted about a hinged point, shall be fitted with a spring clamping device to provide force on the jaw holding the clip in a closed position.

NOTE Designs of clip are optional provided that they meet the requirements of this standard.