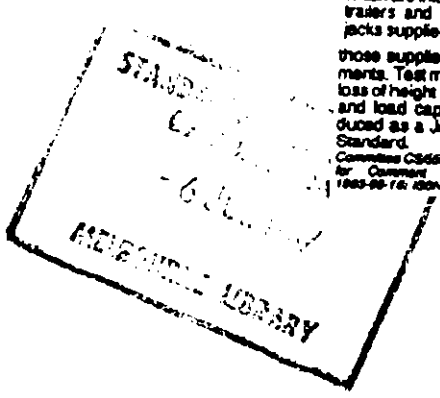

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Standards Association of Australia

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VEHICLE JACKS

This Australian Standard was prepared by Committee CS/55, Car Jacks and Trolley Jacks. It was approved on behalf of the Council of the Standards Association of Australia on 4 May 1987 and published on 1 June 1987.

The following interests are represented on Committee CS/55:

Australian Automotive Aftermarket Association

Australian Automobile Association

Australian Automobile Chamber of Commerce

Australian Federation of Consumer Organizations

Confederation of Australian Industry

Department of the Attorney-General

Department of Consumer Affairs, N.S.W.

Department of Defence

Department of Employment and Training, Vic.

Department of Motor Transport, N.S.W.

Federal Chamber of Automotive Industries

Metal Trades Industry Association of Australia

Ministry of Consumer Affairs, Vic.

Society of Automotive Engineers, Australasia

Trade Practices Commission

AUSTRALIAN STANDARD

VEHICLE JACKS

AS 2693—1987

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PREFACE

This Standard was originally prepared by the Association's Committee on Car Jacks and Trolley Jacks in response to a request by the Department of Defence which was supported by the Australian Federation of Consumer Organizations.

The Department of Defence had found a number of deficiencies in the design of jacks purchased for use with army vehicles, and felt that the design principles established by this Standard could apply equally to smaller jacks used for passenger cars.

This edition of the Standard includes a revision of Appendix B to allow for the use of test rigs which do not employ a dead weight, as well as a number of minor changes to requirements made at the request of the Department of the Attorney-General.

Suppliers of vehicle jacks should take cognizance of the regulations under the Trade Practices Act relating to the supply of these products.

CONTENTS

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
VEHICLE JACKS

1 SCOPE. This Standard specifies requirements for the design, construction, performance and labelling of jacks designed to raise vehicles. The performance requirements include those relating to ease of use.

A summary of requirements according to vehicle jack type is given in Appendix F.

2 APPLICATION. This Standard is applicable to screw jacks, hydraulic jacks, lever jacks and pantograph jacks. It is not applicable to trolley jacks, which are specified in AS 2615 or to air bag jacks. This Standard may also be applicable to other types of jacks, in which case they shall comply with Clauses 6.7, 7 and 8 together with any other parts of the Standard which the Regulatory Authority deems to be applicable.

3 REFERENCED DOCUMENTS. The following Standards are referred to in this Standard:

AS 1192 Electroplated Coatings—Nickel and Chromium.

AS 1789 Electroplated Coatings of Zinc on Iron and Steel.

AS 1790 Electroplated Coatings of Cadmium on Iron and Steel.

AS 1830 Iron Castings—Grey Cast Iron.

AS 1831 Iron Castings—Spheroidal or Nodular Graphite Cast Iron.

AS 1832 Iron Castings—Malleable Cast Iron.

AS 2105 Inorganic Zinc Silicate Paint.

AS 2581 Pressure Sensitive Adhesive Plastics Labels for Permanent Use (General Purpose).

AS 2615 Trolley Jacks.

AS K108 Metal Priming Paint, Anti-corrosive.

4 DEFINITIONS. For the purpose of this Standard, the following definitions apply.

4.1 Bearing surface—the area contained within the periphery of the base of a vehicle jack.

NOTES:

1. The bearing surface area of the base should be measured when the head cap is fully raised.
2. When determining the periphery of the base of the jack, any protrusions or embossing of the bearing surface of the base which are less than 5 mm in height should be ignored.

4.2 Designated range of vehicles—the make and model or models of vehicles for which a particular specific vehicle jack is marked as being suitable.

4.3 General purpose jack—a vehicle jack, other than a specific vehicle jack.

4.4 Head cap—the point of contact of the jack with the vehicle.

4.5 Hydraulic jack—a jack in which the lifting force is obtained by means of the operator's force being applied through a liquid (see Figure 1(d)).

4.6 Lever jack—a jack in which the force exerted by the operator is transformed into a lifting force by means of a first or second order lever, used in conjunction with a ratchet (see Figure 1(c)).

4.7 Lifting cycle—the operation of raising the head cap of the jack with the handle provided from its fully lowered position to its fully raised position and then returning it to its fully lowered position.

4.8 Maximum loaded mass—the mass of the unladen vehicle, with a full capacity of lubricating oil, coolant and fuel, together with the heaviest factory-installed options if such options weigh 2 kg or more individually, plus additional loading equivalent to 68 kg for each seating position other than the driving position, plus the greater of the following:

(a) 13.6 times the number of seating positions, in kilograms, for luggage.

(b) The manufacturer's nominated load-carrying capacity evenly distributed over the available load area.

4.9 Nominated capacity—the capacity nominated by the manufacturer as the maximum load that is to be lifted by the jack.

NOTE: The nominated capacity needs to be marked on the jack (see Clause 7.1(c)).

4.10 Pantograph jack (scissor jack)—a screw jack in which the screw forms part of a hinged frame. The rotation of the screw alters the geometry of the frame, thus lifting or lowering the load (see Figure 1(b)).

4.11 Projected plan area of the base—the maximum area described by joining the outermost peripheral points on the base of a vehicle jack.

NOTES:

1. The projected plan area of the base should be measured when the head cap is fully raised.
2. When determining the periphery of the base of the jack, any protrusions or embossing of the bearing surface of the base which is less than 5 mm in height should be ignored.

4.12 Screw jack—a jack in which the force exerted by the operator is transformed into a lifting force by means of the rotation of a screw thread (see Figure 1(a)).

4.13 Specific vehicle jack—a jack which is limited in its application to a specific vehicle or range of vehicles and is not intended to be used to lift a vehicle at other than the specific engagement points.

NOTE: The designated range of vehicles needs to be marked on the specific vehicle jack (see Clause 7.1(b)).

4.14 Unladen mass—the mass of a vehicle with a full capacity of lubricating oil, coolant and fuel, but without goods, occupants or options other than those options which are essential to normal use of the vehicle.

4.15 Vehicle—any wheeled vehicle used on a road, not including any vehicle used on a railway or tramway, but including any towed unit such as a caravan or trailer.