

Australian Standard 2615—1983

TROLLEY JACKS



STANDARDS ASSOCIATION OF AUSTRALIA
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The following interests are represented on Committee CS/55:

Attorney General's Department
Australian Automobile Association
Australian Automobile Chamber of Commerce
Australian Automotive Aftermarket Association
Australian Federation of Consumer Organizations
Confederation of Australian Industry
Department of Consumer Affairs, N.S.W.
Department of Defence
Department of Labour and Industry, 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
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AUSTRALIAN STANDARD

TROLLEY JACKS

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PREFACE

This standard was prepared by the Association's Committee on Car Jacks and Trolley Jacks in response to requests from the Victorian Automobile Chamber of Commerce and the Consumers Association of Victoria, which were concerned about the safety and quality of manufacture of industrial trolley jacks and the smaller household trolley jacks, respectively.

The availability of small trolley jacks at relatively low cost has led to an increase in their popularity for home maintenance of vehicles. However, in the absence of established design criteria, there have been doubts about their fitness for purpose. This standard specifies criteria for safety and durability of trolley jacks of all sizes.

In the preparation of this standard the committee took note of the regulations published in the New South Wales Government Gazette No 196. The requirements of this standard are not less stringent than the regulations.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
TROLLEY JACKS

1 SCOPE. This standard specifies requirements for the design, construction and performance of trolley jacks. It is applicable both to industrial types and to types intended for household use in vehicle maintenance.

2 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	Grey Iron Castings
AS 1831	Spheroidal or Nodular Graphite Iron Castings
AS 1832	Malleable Iron Castings
AS 1833	Austenitic Iron Castings
AS 2105	Inorganic Zinc Silicate Paint
AS K108	Metal Priming Paint, Anti-corrosive

3 DEFINITIONS. For the purposes of this standard, the following definitions apply:

3.1 Trolley jack—a jack mounted on a chassis which may be provided with wheels or skids (which may or may not be used to transmit the load) for manoeuvring the jack, and having a handle to position the jack under the vehicle.

3.2 Vehicle—any self-propelled 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.

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

NOTE: The nominated capacity must be marked on the trolley jack (see Clause 6.1(b)).

3.4 Base plane—a substantially level concrete surface or its equivalent (see Fig. 1).

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

3.6 Operating force—the force which must be applied to the handle in order to perform a lifting cycle of the trolley jack. The force is measured at the centre of the handgrip or, if there is no handgrip, at a point 50 mm from the operator's end of the handle.

3.7 Head cap—as shown in Fig. 1.

4 DESIGN AND CONSTRUCTION.

4.1 General. The trolley jack shall be designed and constructed so as to comply with all the relevant requirements specified herein. It shall be free from defects that would affect its durability or serviceability, and all screws, pins, bolts and similar parts shall have effective means for preventing loss of proper tightness and adjustment. All bearings and moving parts requiring periodic lubrication shall be provided with readily accessible means of lubrication.

If the jack supplied is not fully lubricated, adequate instructions for initial lubrication shall be supplied.

The jack shall be supplied with hydraulic cylinders filled to the correct level with the recommended hydraulic fluid (see Clause 6.1(d)).

4.2 Materials. All materials used in the design of the trolley jack shall be such that they have adequate strength to withstand the forces and pressures for the full range of duties.

NOTE: Some examples of suitable castings are specified in AS 1830, AS 1831, AS 1832 and AS 1833.

4.3 Protective Coating. A suitable corrosion protection coating shall be applied to the trolley jack, except for mating surfaces or sliding parts.

NOTES:

1. The purpose of this requirement is to inhibit corrosion.
2. Although any suitable protective coating may be used, the protective coating is to be applied using good commercial practice.
3. Some examples of suitable protective coatings are specified in AS 1192, AS 1789, AS 1790, AS 2105 and AS K108.

4.4 Head Cap. The head cap of the trolley jack shall—

- (a) be free to rotate about a vertical axis;
- (b) remain parallel to the base plane within ± 5 degrees as the head cap is raised or lowered under load;
- (c) be capable of retaining a cylindrical bar of 100 mm nominal diameter when the head cap is inclined at 5 degrees to the horizontal; and

NOTE: This is intended to provide a test of the shape of the head cap and its ability to retain a 100 mm diameter axle housing.

- (d) remain, throughout the lifting cycle, vertically above the figure described by joining of the points of contact of the jack with the base plane.

4.5 Overload Protection. The trolley jack shall be provided with a means of protection against raising the head cap under a load in excess of its nominated capacity, + 10, - 0 percent.

4.6 Prevention of Overtravel. The trolley jack shall be provided with a positive stop to prevent overtravel or the design of the jack shall be such that overtravel is effectively prevented.