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Report No SC12-2249 / 2

30 November 2012

ASSESSMENT OF A 2000kg TROLLEY JACK (Stock No 2801)

Client: Trade Quip Pty Ltd
27 Capital Link Drive
Campbellfield Vic 3061

Att: Mr Frank He

Reference: Letter dated 25/10/12

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INTRODUCTION

A 2000kg capacity heavy duty low profile trolley jack was submitted for assessment to AS/NZS 2615-2004. The handle length was 1496mm (3 piece) and had a minimum height of 116mm and a maximum height of 522mm.

RESULTS

General

The jack was free of apparent defects and was fitted with split pins, spring washers and circlips to prevent loosening, complying with Clause 5.1.

Protective Coating

The jack was painted to prevent corrosion, complying with Clause 5.3

Head Cap

The head cap was free to rotate about the vertical axis, remained parallel to ± 5° during the lift cycle, was capable of retaining a 100mm bar when offset 5° and remained within the plane of the contact points, complying with the requirements of Clause 5.4. The head cap was 79.2mm diameter and the side plate spacing 161mm, ie 49% of the side plate spacing.

Overload Protection

The overload protection was tested and activated at a force of 22.45kN (2289kg) which complied with the requirement of activating within 15% of the 2000kg capacity.

Prevention of Overtravel

The jack relieved at the end of its stroke preventing overtravel and complying with Clause 5.6.

Minimum Capacity

The capacity of the jack was greater than 750kg, complying with Clause 5.7.

Deflection Under Load

The jack was tested as a 2000kg jack in accordance with Appendix B. The deflection under load was 4.7% of the head cap height and at conclusion of 30 minutes, there was no loss of height, complying with Clause 6.4.

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Eccentric Load Test

The jack was loaded to 2500kg (1.25 x 2000kg) at the front of the head cap (Y) and at the side of the head cap (X) in accordance with Appendix E. The percentage deflection was 0.79% at position Y and 0.31% at position X. It was possible to perform a lift cycle at an operating force of less than 450N and no wheels lifted from the surface during eccentric loading, complying with the deflection requirement of Clause 6.7 as a 2000kg jack.

Overload Capacity

A jack was loaded to 4000kg (2 x 2000kg) in accordance with Appendix D. The jack supported the load without collapse and it was possible to perform a lift cycle after overload with an operating force of less than 450N. The loss of height after overload test was 0.63%, complying with the requirement of Clause 6.6 for a 2000kg jack.

Ease of Operation

Ease of operation was determined over the range of travel and the jack was capable of lifting 2000kg at an operating force of less than 450N (371N), complying with the requirement of Clause 6.3 for a 2000kg jack.

Lowering

The jack was capable of controlled lowering and could be stopped within 2mm or <1% of the range of travel, complying with the requirement of Clause 6.5.

Durability Test

An unused jack was tested in accordance with Appendix A. The jack was capable of lifting the 2000kg load through the range travel and at completion of 202 cycles, the jack relieved at the end of the stroke and the operating force did not exceed 450N, complying with the requirement of Clause6.2. (Some loosening of the main lift arm pivot nut on one side and distortion of the spring washer on the opposite side had occurred but this did not effect performance of the 200 cycles).

Marking and Instructions

Markings and instructions were not assessed.

DISCUSSION OF RESULTS

Based on the tests performed, the jack complies with AS/NZS 2615-2004 Clause Nos 5.1, 5.2, 5.3, 5.5, 5.6, 5.7, 6.2, 6.3, 6.4, 6.5, 6.6 and 6.7 as a 2000kg trolley jack.

The jack complies with Clause 5.4 of mandatory standard AS/NZS 2615-2004.

(Any reference to AS/NZS 2615-2004 on packaging, marking or instructions should reference the mandatory standard)