

ICS 53.020.99

CCS J80



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 27695-2011

Safety rules for automobile lift

汽车举升机安全规程

Issued on: December 30, 2011

Implemented on: December 1, 2012

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

Table of Contents

1	Scope
2	Normative references
3	Metal structure
3.1	Design Requirements
4.1	Rope
4.2	Chain
4.3	Pulley
5	Hydraulic System
6	Electrical
7	Control and operating system
8	Electrical Protection
8.5	Grounding
9	Security guard
11	Car Lift job management Safe system of work
12.3	The operator

Foreword

This standard 3.1,3.3,3.4,4,5.1,5.4,5.8,5.9,5.10,6.1,6.2,6.4,7.4,7.5,7.6,8.2,8.3,8.4,8.5, 8.6,8.7,9,10,13.2,13.3,15.2,16.2,17,18 mandatory provisions, other provisions are recommended. This standard was drafted in accordance with GB/T 1.1-2009 given rules. The standard proposed by China Machinery Industry Federation. This standard by the National Standardization Technical Committee crane (SAC/TC227) centralized. This standard is drafted by: Chongqing special equipment quality and safety testing center, lifting the transport machinery national quality inspection center. Participated in the drafting of this standard. Jiang Hangfei Machine Equipment Co., Ltd. Hefei, Qingdao Jinhua Industrial Group Co., Ltd., Guangzhou City Transit Cars Equipment Co., Ltd., Fenghua City, South Machinery Manufacturing Co., Gaochang hydraulic Guangzhou Electrical and Mechanical Technology Co., Ltd., Yantai Pentium automotive testing dimension Repair Equipment Manufacturing Co., Ltd. Yingkou vigorously Qibaoshebei. The main drafters of this standard. Deng Mingxu, Bicheng Lin, Bianshu Jun, Zou Dingdong, Pangxiao Li, Hung Yi, Hao Yonggang, Zhao Shichang, Jin Lei, Li, Zhu Asian power, high Changping, Chen Kuo-fu, cases of this legislation, Long Rongzhi, Zhang Li Yong. Car Lift Safety Regulations

1 Scope

GB 27695-2011 is the Chinese national standard on safety rules for automobile lift, in the field of materials handling equipment. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 30 December 2011 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 December 2012. Classification: ICS 53.020.99, CCS J80. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the vehicle lift design, manufacture, installation, use, maintenance, and inspection of the basic safety requirements and other aspects of retirement. This standard applies to car repair with a power source for the hydraulic drive, mechanical drive car lift.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document. GB 2893 Safety colors

GB/T 3323 metal fusion welded joints radiography

GB/T 3811-2008 crane design specifications

GB 4208 housing protection (IP Code) GB/T 4842 Ar

GB/T 5117 carbon steel electrode

GB/T 5118 Low Alloy Steel Electrode

GB 5226.2-2002 Safety of machinery - Electrical equipment - Part 32. Requirements for hoisting machines

GB/T 5293 carbon steel submerged arc welding wire and flux

GB/T 5972 crane wire rope maintenance, maintenance, installation, examination and discard

GB/T 6074 plate chain, connecting ring and groove wheel size, measuring forces and tensile strengths

GB/T 8110 gas shielded arc welding of carbon and low alloy steels

GB/T 12470 low alloy steel submerged arc welding wire and flux

GB 15052 Safety signs and hazard pictorials - General symbols

GB/T 19418 steel welding joint quality levels for imperfections

3.1 Design Requirements

3.1.1 Car lift metal structure design, selection of materials should be reasonable, structure type and structural measures to meet the structural members in the transport, security Installation and use of the intensity (including fatigue strength), stability, rigidity and safety-related requirements.

3.1.2 In the metal structure design documents, should be specified steel grades, model connecting material, the main component of the force should also be noted for steel The required mechanical properties, chemical composition and other additional assurance project. In addition, the form should indicate the required weld, weld quality grade.

3.2 Material Car lift force mainly by the steel members should be selected in line with the provisions of GB/T 3811-2008 in the 5.3.1.1.

3.3 structural welding requirements

3.3.1 structural welding materials shall meet the following requirements.

- a) Electrode type corresponding to the main mechanical properties of the metal used in manual welding to adapt, and should be consistent with GB/T 5117 or GB/T 5118 Provisions; wire shall comply with GB/T 8110 or GB/T 5293's;
- b) automatic or semi-automatic welding using welding wire and flux corresponding with the body should adapt the mechanical properties of the metal, should be consistent GB/T 5293 and the relevant provisions of GB/T 12470; and
- c) argon gas welding should comply with the provisions of GB/T 4842; the carbon dioxide gas used should be consistent HG/T 2537 Provisions.

3.3.2 Car Lift the main force member and full penetration of fusion welded joints connected thereto weld rating shall comply with JB/T 10559 The weld grades 1,2,3 for grading.

3.3.3 Inspection of Weld Internal Defects shall meet the following requirements.

a) weld will be 100% inspection. Which the qualified when using ultrasonic test level should reach JB/T 10559 in Class

1 Weld acceptance criteria requirements. The ray examination should reach the required GB/T 3323, which is not less than the qualified level II grade.

b) Level 2 sampling weld can be depending on the circumstances, when the qualified

ultrasonic test their level should reach JB/T 10559 in Level 2 weld acceptance criteria requirements. The ray examination should reach the required GB/T 3323, which should not be the qualified rating Lower than III grade.

3 Weld sampling in accordance with specific circumstances, when using ultrasonic inspection qualified its assessment level should reach JB/T 10559 in Level 3 weld acceptance criteria requirements.

4.1 Rope

4.1.1 Car Lift lifting and balancing rope should not be lower than the performance of wire rope GB/T 20118 regulations, lifting wire rope A safety factor of not less than 7, balance wire rope safety factor of not less than 5.

4.1.2 fixed and the connection strength of wire rope ends should reach a minimum wire rope breaking force.

4.1.3 Rope maintenance, maintenance, installation, inspection, scrap shall comply with the relevant provisions of GB/T 5972's.

4.2 Chain

4.2.1 The use of car lift chain, the chain should not be lower than the performance of GB/T 6074 regulations, the safety factor of not less than 5.

4.2.2 one of the following occurs when the chain, should be scrapped.

- b) chain elongation amounted to 1.5% of the original length;
- c) chain and hole diameter wear volume of 5% of the original diameter;
- d) chain plate thickness and width of the wear volume of 10% of the original thickness and width.

4.3 Pulley

4.3.1 shall be provided to prevent the rope pulley rope grooves prolapse device or structure. In the side and circular top plate, etc. with the pulley sheave cover body The gap should not exceed

0.5 times the diameter of the wire rope.

4.3.2 manpower accessible pulleys, pulley should be set casing.

4.3.3 Lifting with pulley diameter wire rope diameter ratio should be greater than 18.

4.3.4 pulleys of the following cases occurs, should be scrapped.

- a) affect the performance of surface defects (eg. cracks, etc.);