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

GB 7956.12-2015

Fire fighting vehicles - Part 12: Aerial fire fighting vehicle

消防车 第12部分：举高消防车

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1 Scope

GB 7956.12-2015 is the Chinese national standard on fire fighting vehicles - part 12: aerial fire fighting vehicle, in the field of environment and health protection, safety. 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 9 October 2015 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 January 2016. Classification: ICS 13.220.10, CCS C84. 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 part of GB 7956 specifies the terms and definitions, technical requirements, test methods, inspection rules as well as marking, packaging, transport and storage of aerial fire fighting vehicles. This part is applicable to various aerial fire fighting vehicles.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated reference, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 3181 Colour Standard for Paint Film

GB 4351.1-2005 Portable Fire Extinguishers - Part

3 Terms and Definitions

For the purposes of this document, the terms and definitions given in GB 7956.1-2014 and the following apply. For the convenience of application, some terms and definitions specified in GB 7956.1-2014 are listed as follows:

3.1 aerial fire fighting vehicle The fire fighting vehicle that is mainly equipped with elevating boom, slewing mechanism, etc. and used for high-altitude fire fighting and rescue as well as goods, materials and fire fighter transmission. Generally, it is classified into platform fire fighting vehicle, aerial ladder fire fighting vehicle and water tower fire fighting vehicle.

3.2 platform fire fighting vehicle The fire fighting vehicle that is mainly equipped with crank arm, straight-crank arm and rescue cage, and able to transmit fire fighter and fire extinguishing goods and materials to high altitude, rescue trapped person or spray fire extinguishing agent. [definition

3.2.1 in GB 7956.1-2014]

3.4 water tower fire fighting vehicle The fire fighting vehicle that is mainly equipped with straight arm, crank arm, straight-crank arm and liquid feed pipe, with fire monitor or forcible entry device installed at top, able to spray fire extinguishing agent at high altitude or carry out forcible entry. [definition

3.2.3 in GB 7956.1-2014]

4 Technical Requirements

4.1 Basic Requirements Aerial fire fighting vehicle (hereafter abbreviated as aerial fire fighting vehicle) shall comply with the requirements of this part, except the general technical requirements in GB 7956.1-2014.

4.2.2 Operating instructions and mark

4.2.2.1 Detailed illustration or literal operating instructions and warning specifications shall be arranged at operating platform of stabilizer, rescue cage and turntable of aerial fire fighting vehicle visible for the operation personnel.

4.2.3 Hydraulic system

4.2.3.1 Hydraulic oil tank volume of aerial fire fighting vehicle shall ensure the aerial fire fighting vehicle is able to continuously complete 50 operation cycles, and the temperature of hydraulic oil in the oil tank shall not be greater than 90°C. There shall be no boom (ladder) quiver, creeping or blocking due to overhigh oil temperature, and the hydraulic elements and components shall be free from oil leakage, oil penetration or damage.

4.2.4 Safety requirements

4.2.4.1 Aerial fire fighting vehicle shall possess the function of interlocking of lower- and upper-vehicles; the boom (ladder) cannot move before the stabilizer is extended and leveled and supported reliably; before boom (ladder) retracts to the support bracket, the stabilizer of lower-vehicle cannot retract. Interlock function of lower- and upper-vehicles shall be realized automatically.

4.2.4.7 The safety coefficient for pulling the rigging like steel cable, chain, etc. of boom (ladder) shall not be less than 5, and that for other rigging shall not be less than 2.

4.2.4.8 Operating platform of aerial fire fighting vehicle shall not be equipped with device that directly adjust the parameters of hydraulic or electrical system. The places for parameter adjustment can only be opened with special tools and shall be with warning specifications whose color meets the requirements of Clause 9 in GB 15052-2010 and content contains the text "adjustment ought to be implemented by experienced personnel" with font size enabling operation personnel to read easily.

4.2.5 Special requirements

4.2.5.1 Platform fire fighting vehicle 4.2.5.1.1 For platform fire fighting vehicles with the maximum operating height not greater than 35 m, the duration for its boom lifting from driving position to the maximum operating height and rotating by 90° shall be less than 150s. For platform fire fighting vehicles with the maximum operating height greater than 35 m but not greater than 70 m, such duration shall increase by 40 s for each 10 m of the part exceeding 35 m. 4.2.5.1.2 The duration for stabilizer extending, supporting and being leveled shall not be greater than 50 s. 4.2.5.1.3 The area of rescue cage of platform fire fighting vehicle shall be greater than 1.5m². 4.2.5.1.4 As for platform fire fighting vehicle with the rescue cage monitor not spraying water, the rated load of its rescue cage shall not be less than 270kg. 4.2.5.1.5 If lateral cat ladder is arranged for platform fire fighting vehicle, auxiliary ladder able of ensuring the personnel arrive at ground surface safely shall be arranged; there shall be transitive ladder section connecting rescue cage on the top of crawling ladder.

4.2.5.2 Aerial ladder fire fighting vehicle 4.2.5.2.1 For aerial ladder fire fighting vehicles with a maximum operating height not greater than 40 m, the duration for ladder lifting from driving position to the maximum operating height and rotating by 90° shall be less than 120s. 4.2.5.2.2 The duration for stabilizer extending, supporting and being leveled shall not be greater than 40 s. 4.2.5.2.3 As for aerial ladder fire fighting vehicle, the area of its rescue cage shall be greater than 1.0m² and that of its lift shall be greater than 0.8m². 4.2.5.2.4 As for aerial ladder fire fighting vehicle with the rescue cage monitor not spraying water, the rated load of its rescue cage shall not be less than 180kg. 4.2.5.2.5 As for aerial ladder fire fighting vehicle, auxiliary ladder, which may directly arrive the ground surface when