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

GB 7956.6-2015

**Fire fighting vehicles - Part 6: Compressed air foam system fire
fighting vehicle**

消防车 第6部分：压缩空气泡沫消防车

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Technical requirements
 - 4.2 Requirements for vehicle
 - 4.3 Requirements for chassis restructuring
 - 4.4 Requirements for special devices
 - 4.4.1 Compressed air foam system
 - 4.4.1.1 General requirements
 - 4.4.1.2 Performance requirements
 - 4.4.2 Compressed air system
 - 4.4.3 Foam proportioning system
 - 4.4.4 Fire pump
 - 4.4.5 Fire monitor
 - 4.4.6 Pipelines
 - 4.4.7 Foam tank
- 5 Test methods
 - 5.2 Vehicle requirements test
 - 5.3 Chassis restructuring requirements test
 - 5.3.1 TEST the CAFS vehicle according to the methods specified in Section
 - 5.4 Special device requirements test
 - 5.4.1 Test for the compressed air foam system
 - 5.4.1.2 System performance test
 - 5.4.3 Performance test of the foam proportioning system
 - 5.4.4.5 Overload operation test REGULATE the outlet pressure of the fire pump to
 - 5.4.5 Test for the fire monitor
 - 5.8 Inspection of the files, tools and wearing parts accompanied with the vehicle
- 6 Inspection rules
 - 6.1 Inspection classification
 - 6.1.2 Type test
- 7 Symbols, packaging, transport and storage
 - 7.2 Packaging

7.3 Transport

1 Scope

Part 6 of China's mandatory series on fire fighting vehicles, covering the compressed air foam system appliance - the pumper that mixes foam concentrate, water and compressed air before the line rather than at the nozzle, so that the foam leaves the truck already made. It sets the terms and definitions, the technical requirements, the test methods, the inspection rules and the provisions for symbols, packaging, transport and storage, and it applies to compressed air foam system fire fighting vehicles. The requirements build on Part 1 of the series, GB 7956.1, for everything common to fire appliances, and add what is specific to this type: the foam proportioning and air injection system, the class A foam it is designed around, the pump to GB 6245, the suction hose to GB 6969, the portable extinguishers carried to GB 4351.1 and the paint film colour to GB/T 3181. Clause 4 runs to fourteen pages of technical requirements and clause 5 to seventeen of test methods, which is where the value of the document lies for a manufacturer or a certification body. Issued on 9 October 2015 and in force since 1 January 2016, it is a first edition within the GB 7956 series.

This Part of GB 7956 specifies the terms and definitions, technical requirements, test methods, inspection rules as well as symbols, packaging, transportation and storage of the compressed air foam system fire fighting vehicle. This Part is applicable to the compressed air foam system fire fighting vehicle.

2 Normative references

The following documents are essential to the application of this document. For dated references, only the editions with the dates indicated are applicable to this document. For undated references, only the latest editions (including all the amendments) are applicable to this document.

GB/T 3181 Color standard for paint film

GB 4351.1-2005 Portable fire extinguishers - Part

3 Terms and definitions

The following terms and definitions and those defined in GB 7956.1-2014 are applicable to this document. For ease of use, some of the terms and definitions in GB 7956.1-2014 are repeated below.

3.1 Compressed air foam system fire fighting vehicle It refers to the fire fighting vehicle mainly equipped with a water tank and a foam tank, and injecting foam for fire protection

through the compressed air foam system.

3.4 Class A foam It refers to the foam mainly used for fighting Class A fires.

3.5 Dry foam It refers to the Class A foam with a foam expansion ratio of not less than 10 times and a mixing ratio of not more than 1%, which is able to be stably attached to a vertical wall within a specified period of time.

3.6 Wet foam It refers to the Class A foam with a foam expansion ratio of less than 10 times, a mixing ratio of not less than 0.2% and better flowability.

4 Technical requirements

4.1 Basic requirements Compressed air foam system fire fighting vehicle (hereinafter referred to as "CAFS vehicle") shall conform to not only the requirements of GB 7956.1-2014, but also the requirements of this Part.

4.2 Requirements for vehicle

4.2.1 The fuel tank capacity shall meet the requirement that CAFS vehicle is under continuous operation for 2h at the rated flow and outlet pressure of the fire pump after driving 100km.

4.2.2 The control panel of the CAFS vehicle shall conform to the following requirements.

4.2.5 When the CAFS vehicle is equipped with a compressed air outlet, this outlet shall be in plug-in connection. When the compressed air foam system is in operation, this outlet shall be able to stop the output of compressed air.

4.3 Requirements for chassis restructuring

4.3.1 Chassis restructuring shall conform to the requirements given in Section

5.4 of GB 7956.1-2014.

4.3.2 When the tank is mounted directly on the chassis, ENSURE that the tank is resiliently connected to the chassis and not in direct contact with the chassis.

4.4.2 Compressed air system

4.4.2.1 At the rated outlet pressure, the rated flow rate of the compressed air system shall not be less than 12 times the sum of the flow rates of the mixture at the outlets during the injection of dry foam, and shall not be less than 6 times the sum of the flow rates of the mixture at the outlets during the injection of wet foam.

4.4.3 Foam proportioning system

4.4.3.1 Parts that are in direct contact with the foam concentrate shall be made of copper

alloy or of materials with the same corrosion resistance.

4.4.3.5 When the remaining volume of foam concentrate in the foam tank is less than 5% of the nominal capacity, the foam pump shall be able to shut down automatically.

4.4.3.6 The foam proportioning system shall be equipped with exterior foam suction port and suction hose. The assembly and disassembly shall be convenient.

4.4.4 Fire pump

4.4.4.1 General requirements 4.4.4.1.1 The fire pumps equipped for the CAFS vehicle shall conform to the requirements of GB 6245-2006.

4.4.5 Fire monitor

4.4.5.1 The fire monitors equipped for the CAFS vehicle shall conform to the requirements of GB 19156.

4.4.5.2 The angle of depression after the fire monitor is loaded shall not be less than 7°.

4.4.6 Pipelines

4.4.6.1 Water inlet pipelines 4.4.6.1.1 When the fire pump's water inlet is set on the side, both sides of the fire fighting vehicle shall be provided with the water inlets. Unilateral water inlet shall meet the requirements for the rated pressure and flow rate of the CAFS vehicle.

4.4.6.2 Water outlet pipelines 4.4.6.2.1 The diameter and quantity of the water outlet pipelines shall ensure the output flow rate of the CAFS vehicle at the rated operating conditions. 4.4.6.2.2 The lowest point of the water outlet pipelines shall be provided with a device that is able to guarantee to empty the residual water in the water outlet pipelines within 45s. The operation shall be simple. 4.4.6.2.3 When the height of the water outlet center from the ground is greater than 1.2m, the water outlet shall be tilted downward, and the height from the plane on the operating pedal shall not be greater than 1.2m. 4.4.6.2.4 A check valve shall be provided between the water outlet pipeline and the fire pump.

4.4.7 Foam tank

4.4.7.1 Tank requirements 4.4.7.1.1 Water tanks, Class B foam tanks and valves shall be made of corrosion-resistant materials or go through the anti-corrosion treatment. Class A foam tanks shall be made of stainless steel or other corrosion-resistant materials. 4.4.7.1.2 Each foam tank shall be equipped with a respirator. The respirator shall ensure the normal transmission of foam concentrate during the operation of CAFS vehicle. 4.4.7.1.3 When the tank volume of the CAFS vehicle is greater than or equal to 12m³, the volume error shall not be greater than ± 2%. When the volume is less than 12m³ and not less than 1m³, the absolute value of error increases by 0.1% for each decrease of 1m