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

GB/T 23417-2024

Aircraft de-icing and anti-icing vehicles

飞机除冰防冰车

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting is required. This document replaces GB/T 23417-2009 "Functional requirements for self-propelled aircraft deicing and anti-icing vehicles". Compared with GB/T 23417-2009, In addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) The scope of application has been changed (see Chapter 1, Chapter 1 of the.2009 edition);
- b) Added "Terms and Definitions" (see Chapter 3);
- c) added "Classification" (see Chapter 4);
- d) The "General Requirements" and their test methods have been changed (see 5.1, 6.2, and Chapter 3 of the.2009 edition);
- e) Added "safety requirements" and their test methods (see
- f) Added the requirements for "structural safety factor" and its test method (see
- g) Added "stability" requirements and test methods (see
- h) Added "maneuverability" requirements and test methods (see
- i) Added "operational performance" requirements and test methods (see
- j) Added the requirements for "external lighting and optical signal devices" and their test methods (see
- k) Added "reliability" requirements and test methods (see
- l) Added "rain exposure" requirements and test methods (see 5.9.1, 6.10.1);

1 Scope

GB/T 23417-2024 is the Chinese standard for aircraft de-icing and anti-icing vehicles, the boom-mounted units that spray heated glycol fluid over an airframe before departure in freezing conditions. The task is safety-critical and time-critical at once: contaminated wings have caused fatal accidents, and the holdover time after treatment is short, so the vehicle

has to heat, proportion and deliver fluid accurately at high flow while an operator works a boom close to an aircraft skin in poor visibility. The standard sets the categories, then the technical requirements: the general and safety requirements, the structural safety factor, the stability, the manoeuvrability, the operational performance, the fluid heating and mixing system and its temperature and proportioning accuracy, the spray system and the boom with its reach, control and anti-collision provisions, the basket and operator protection, the tanks, the electrical and hydraulic systems and the environmental adaptability. It then covers the test methods, the inspection rules and the marking, packaging, transport and storage. It took effect on 23 August 2024.

This document specifies the classification, technical requirements, test methods, inspection rules, signs, Labeling, instructions for use, packaging, transportation and storage. This document applies to bicycles equipped with de-icing and anti-icing fluid spraying systems and with heating or snow blowing functions used in civil airport areas. Design, manufacture and inspection of de-icing and anti-icing vehicles for high-altitude aircraft with booms.

2 Test methods Test Cab. Steady state damp heat test GB 2893 Safety Colors

GB/T 3766 General rules and safety requirements for hydraulic transmission systems and their components

GB 3847 Diesel vehicle pollutant emission limits and measurement methods (free acceleration method and loaded deceleration method)

GB/T 4094.2 Marking of electric vehicle controls, indicators and signal devices

GB/T 4208 Enclosure protection degree (IP code)

GB 7258-2017 Technical conditions for motor vehicle operation safety

GB/T 7593 Symbols for driver controls and other display devices on powered industrial vehicles

GB/T 7935 General technical requirements for hydraulic components

GB/T 9969 General principles for instructions for use of industrial products

GB/T 12536 Motor vehicle coasting test method

GB/T 12543 Automobile acceleration performance test method

GB/T 12544 Test method for maximum speed of motor vehicles

GB/T 12547 Test method for minimum stable speed of motor vehicles

GB/T 12673 Measurement methods for main dimensions of automobiles

GB/T 12674 Methods for determination of automobile mass (weight) parameters