

ICS 43.060.20

CCS T 18



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

GB/T 35358.1-2017

**Inlet air cleaning equipment for vehicle engines and
compressors -- Part 1: Fractional efficiency testing with fine
particles (0.3 μm to 5 μm optical diameter)**

(English Translation)

Issued on: December 29, 2017

Implemented on: July 1, 2018

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

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Foreword

GB/T 35358 "car engine and compressor intake air filtration device" is divided into two parts.

--- Part 1. Fine particle classification efficiency test (0.3 μ m to 5 μ m);

--- Part 2. Coarse grading efficiency test (5 μ m to 40 μ m).

This section GB/T 35358 Part 1.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This section uses the translation method identical with ISO/T S19713-1.2010 "Road vehicles, internal combustion engines and compressors intake air filter Installation Part 1. Fine particle classification efficiency test (0.3 μ m to 5 μ m) "(in English).

This section made the following editorial changes.

--- According to this section of the main areas of application and terminology habits, the original standard name changed to "car engine and compressor Intake air filtration unit Part 1. Fine particle classification efficiency test (0.3 μ m to 5 μ m) ".

Please note that some of this document may be patentable. The issuing agencies of this document do not bear the responsibility of identifying these patents.

This part is proposed by the Ministry of Industry and Information Technology of the People's Republic of China.

This part of the National Automotive Standardization Technical Committee (SAC/TC114) centralized.

This part of the drafting unit. Aviation Industry Products Quality Supervision, Inspection and Testing Center (Xinxiang), Zibo Yonghua Filters Ltd., Switzerland Ankai Okai Jia Automotive Technology Co., Ltd.

Introduction

This section provides engine rating classification method of air filtration device for the traditional and new forms of air filtration device grading Efficiency measurement, the role of these air filtration device is to filter out dust in the air pollutants to protect the engine.

Fractionation efficiency is a major performance metric for air filtration units. This section is used to guide the measurement of this parameter test method. system the purpose of this test method is to classify the air filtration unit in a prescribed laboratory test bench in accordance with a uniform test method Test evaluation.

The data obtained in accordance with this section can be used to determine the classification efficiency characteristics of the air filtration unit tested in accordance with this method. actual the working environment (pollutants, humidity, temperature, mechanical vibration, flow fluctuations, etc.) is difficult to be simulated, but by using this test method, you can compare the high confidence level compares the classification efficiency of the air filtration unit.

Car engine and compressor intake air filter Part 1. Fine particle classification efficiency test (0.3 μ m to 5 μ m)

1 Scope

GB/T 35358 provisions of this part of the test method is through the use of optical diameter 0.3 μ m to 5 μ m dust to test the engine Air filter performance.

This part of the performance test including but not limited to the air flow resistance or pressure loss, the original classification efficiency and dust holding capacity during the test

increment Grading efficiency.

The purpose of this section is to establish and provide a unified test procedures, test conditions, test equipment and performance reports, in order to be able to intake system the air filters used in the system are compared with those of air filters. In the use of laboratory bench to air filter and air filter this part of the conformance assessment, the test equipment, test procedures and test report format described in detail.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all revisions) applies to this document.

GB/T 28949-2012 Performance Tests for Intake Air Filters for Internal Combustion Engines and Air Compressors (ISO 5011:2000, IDT) ISO 12103-1 Road vehicles - Test dust for filter assessment Part 1. Arizona test dust
(Roadvehic-les-Testcontaminantsforfiltererevaluation-Part 1: Arizonatestdust)

3 Terms and definitions

The following terms and definitions apply to this document.

Air cleaner assembly Assembly of air cleaner housing and air filter.

3.1.1

Single stage air cleaner Air filter without prefilter.

3.1.2

Multi-stage air cleaner an air cleaner consisting of two or more stages, the first stage is usually a prefilter, and the subsequent stages consist of one or more air filters.

Note: If two filters are used, the first one is called the main filter and the second one is the safety filter.

3.1.3

Pre-cleaner Before the test dust to reach the air filter, the use of inertial force or centrifugal force to remove part of the test dust device.