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

GB/T 5923-2010

Replacing GB/T 5923-1986

**Test methods of fuel filters for automotive compression ignition
engines**

(English Translation)

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Foreword

This revised standard adopts ISO 4020:2001 "Road vehicles - diesel fuel filter test method" (in English).

This standard is based on ISO 4020. redrafted "With fuel filter test method for diesel road vehicles" (in English) 2001.

This standard and ISO 4020:2001 The main difference is as follows.

- The standard test oil are used to produce domestic oil or oil available domestically produced oil modulation instead of ISO 4020 Oil standards, to meet the test requirements of the oil viscosity, easy to purchase, lowering the cost of test;
- Delete this standard ISO 4020 in ISO 3016:1994 Petroleum products determine the freezing point, ISO 3104:1994 Petroleum products Turbid liquid and transparent standards for the oil to determine the five test kinematic viscosity and calculation of dynamic viscosity, etc., with domestic production Oil and test methods in place;
- The standard delete nanoscale carbon black as an instantaneous filtration efficiency and life testing impurities removed nanoscale carbon black were the contents of each chapter

test, also remove the "organic impurities (nanoscale carbon black)" and "inorganic impurities" terms, in line with a diesel engine Actual use of the fuel filter, operability is good;

--- The standard delete the ISO 4020 standard preface;

--- The revised standard using two or more parallel main oil pump when the water system so that accurate water metering;

--- The revised standard hydraulic pulse fatigue test waveforms, more reasonable, good operability;

--- With a decimal point "." Instead of a comma as the decimal point "." this standard replaces GB/T 5923-1986 "Test Method for automotive diesel fuel filter." this standard and GB/T 5923-1986 the main differences are as follows.

--- This standard removes the carbon black and added one ISO 12103-M1 test impurities as an instantaneous filtration efficiency and life testing;

--- The revised standard using two or more parallel main oil pump when the water system;

--- The revised standard filter integrity test production methods;

--- The revised standard hydraulic pulse fatigue test waveform diagram;

--- This standard specifies the parameters of vibration fatigue test.

The Standard Appendix A, Appendix B, Appendix C, Appendix D and Appendix E are normative appendix.

Appendix F of this standard is an informative annex.

This standard was proposed by the National Development and Reform Commission, People's Republic of China.

This standard by the National Automotive Standardization Technical Committee (SAC/TC114) centralized.

This standard was drafted. China Automotive Engineering Research Institute (emission and energy-saving test Chongqing Municipal Key Laboratory of vehicle), Bengbu Jinwei filter Qing Co., Ltd, Chengdu Zeren Industrial Co., Ltd., Guangzhou Jia-Bin Industrial Co., Ltd., Zibo Yonghua Filters Manufacturing Co.

the company.

1 Scope

This standard specifies the automotive diesel fuel filter (referred to as filter) performance test method, the test chamber so that the filter performance the test results are comparable.

This standard applies to the nominal volume flow (or nominal volume flow) at 200L/h or less

automotive diesel fuel filter. Rated Volume flow is greater than 200L/h cleaner can refer to use.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Study whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB 253 Kerosene

GB 10327 standard for detecting light diesel engine technical conditions GB 11122 diesel oil GB/T 14041.1-2007 determine the hydraulic filter and verify the structural integrity of the initial bubble point (ISO 2942:2004, IDT) SH/T 0111 synthetic spindle oil ISO 565 test material wire cloth, perforated metal plate or EDM nominal pore size ISO 760 Moisture Karl Fischer method ISO 8213. 1986 Chemical products for industrial use sampling techniques from powders to coarse lumps of various solid particles of chemical products ISO 11841-1:2000 Road vehicles and internal combustion engines cleaner Vocabulary - Part 1. definitions of filters and filter components ISO 11841-2:2000 Road vehicles and internal combustion engines cleaner Vocabulary - Part 2. Performance of filters and their components definition ISO 12103-2:1997 Road vehicles - Evaluation of filter testing Part 2 gray aluminum dust test Standard Test Method ASTM-D971-1999a ring measured oil interfacial tension of water

3 Terms and Definitions

The standard terms and definitions of terms and definitions from ISO 11841-1 and ISO 11841-2 as well as the new column.

Precipitator sedimentor According to the density difference between oil and impurities, utilizing the principle of gravity settling separator to remove impurities.

Instantaneous filtration efficiency According to the test method specified in, the ability to filter out a particular test dust test piece was measured at certain time during the test. Test pieces filter in addition to the quality of test dust and dirt added mass percentage (%) was evaluated.

Laboratory filter life filterlifeinlaboratory According to test methods specified by the provisions of the test oil contains impurities, a predetermined volume flow through the filter, with the pressure reaches 30kPa when as the time required for the test chamber filter life.

Note: Units min.