JB

MACHINERY INDUSTRY STANDARD

OF THE PEOPLE'S REPUBLIC OF CHINA

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JB/T 51023-1999

Replacing JB/T 51023-92

Fuel filter assembly - Product quality grading

(for internal use)

汽油滤清器总成 产品质量分等

（内部使用）

Issued on: December 30, 1999 **Implemented on: June 1, 2000**

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Foreword

This Standard is a modification to JB/T 51023-92 "Fuel filter assembly - Product quality grading". It is an editorial modification to the previous edition. The main technical contents are remained unchanged.

Since the implementation of this Standard, it replaces JB/T 51023-92.

This Standard was proposed by and shall be under the jurisdiction of National Technical Committee on Internal Combustion Engine of Standardization Administration of China.

The drafting organization of this Standard: Shanghai Engine Research Institute.

Main drafter of this Standard: Yuan Dexian.

This Standard was issued in 1992 for the first time.

Fuel filter assembly - Product quality grading

(for internal use)

1 Scope

This Standard specifies the quality indicators, test methods, and inspection rules for qualified-grade, first-grade of fuel filter assembly products.

This Standard is applicable to the product quality grading of the paper-filter fuel filter assembly of which the rated volume flow is less than 1.0 L/min (hereinafter referred to as the fuel filter). It is also applicable to the quality grading of powder-metallurgy-filer, plastic-filter, ceramic-filter fuel filter products.

2 Normative references

The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. At the time of publication, the editions indicated are valid. All standards are subject to revision. The parties who are using this Standard shall explore the possibility of using the latest version of the following standards.

GB/T 2828-1987, *Sampling procedures and tables for lot-by-lot inspection by attributes (Apply to inspection of successive lots or batches)*

JB/T 8122-1999, *Diesel engines - Fuel filters - Test method*

3 Quality indicator

3.1 Technical requirements

3.1.1 The fuel filter shall be manufactured in accordance with the approved product drawings and technical documents. The technical requirements shall comply with the provisions of this Standard.

3.1.2 The filter paper of the filter element shall adopt the filter paper specified on the product pattern, and be through thermal curing according to the performance requirements of the filter paper.

3.1.3 The quality of the non-paper filter media shall comply with the provisions of the product pattern.

3.1.4 Metal parts used in the fuel filter shall be rust-proof.

4.3.3 Fuel concentration of test solution impurity is 0.4 g/L.

4.3.4 Test device complies with the provisions of 6.6.1 in JB/T 8122-1999.

4.3.5 The test solution passes through the fuel filter at a rated volume flow rate. Stop the test when the differential pressure reaches 13.33 kPa. Record the cumulative time of passing through the test solution and the total amount of test solution.

4.3.6 According to the provisions of JB/T 8122, determine and calculate the filtration efficiency.

4.3.7 Determination method of total impurities in test solution passing through the fuel filter: in accordance with the provisions of 6.5.7.8 ~ 6.5.7.10 in JB/T 8122-1999.

4.3.8 The ash capacity is calculated according to equation (1):

$$G=W_1-W_2 \quad \cdots\cdots (1)$$

Where,

G - ash capacity;

W_1 - total impurities added into test solution;

W_2 - total impurities in test solution after filtration.

4.4 Vibration test method of the fuel filter: the vibration specifications are according to 3.1.12.

4.5 Test method of high-temperature resistance of the fuel filter: according to 3.1.13.

4.6 Test method of low-temperature resistance of the fuel filter: according to 3.1.14.

4.7 Test method of fuel resistance of the fuel filter: according to 3.1.15.

4.8 The requirements specified in 3.1.6 and 3.1.7 shall use visual inspection.

4.9 The requirements specified in 3.1.7 shall use general measuring tool to test.

4.10 The bubble test is according to the provisions of 6.2 in JB/T 8122-1999.

4.11 The joints of the fuel filter tube do not break in the bending and torsion tests. Test method: fix the filter housing firmly; agreed by the supplier and the

commerce department. At this time, it is not limited by the lower value of batch range. If the above location is not available, with the consent of the relevant department, it can be extracted from the production line of the manufacturer or from the products that has been put into storage in the near future (in half a year). In this case, the batch range specified in 5.3.4 must be strictly implemented. The sampling shall ensure the randomness of the sample extraction.

5.5 Product quality grading

5.5.1 Sample inspection

The sample shall be inspected according to the classifications for the unqualified specified in Table 5, Table 6 and the sampling plans specified in Table 7, table 8, and the provisions of Clause 3 and Clause 4.

5.5.2 Determination of batch

After the sample has been checked in its entirety, if the sample has a certain number of unqualified less than or equal to the Ac value, this type shall be qualified; if the number of the unqualified of some type is greater than or equal to Re value, this type shall be unqualified; when each type is determined as qualified, this batch of products shall be qualified.

5.5.3 Quality grading

5.5.3.1 After the sample has been checked in its entirety, when the number of unqualified items of each type in the sample is less than or equal to the Ac value of the first-grade, the product to be inspected shall be the first-grade. When the number of unqualified items of each type in the sample is less than or equal to the Ac value of the qualified-grade, the product to be inspected shall be the qualified. When the number of one type of unqualified items in the sample is greater than or equal to the Re value of the qualified-grade, the product to be inspected shall be the unqualified.

5.5.3.2 When the product is graded as unqualified, it is allowed to make a review once in half a year. If qualified in review, it can still be graded as qualified product, but it must not be graded as the first-grade product.

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