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

GB/T 18410-2024

Replacing GB/T 18410-2001

Vehicle identification number bar-code label

车辆识别代号条码标签

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2 Normative references

Four documents are cited: GB/T 12908, Information technology - Automatic identification and data capture techniques - Bar code symbology specification - Code 39; GB 16735, Road vehicles - Vehicle identification number (VIN); GB/T 18411, Motor vehicle products nameplate; and GB/T 25978, Road vehicles - Plates and labels.

Dated references apply in the cited edition only; undated references apply in their latest edition, including all amendments.

3 Terms and definitions

The terms defined in GB 16735 and GB/T 25978 apply, together with the three terms below.

3.1 bar-code reader: equipment used to read bar codes, generally made up of a non-contact scanner, a decoder and a data converter.

3.2 check: comparison, by machine or by hand, of the dimensions and the optical characteristics of a bar code with the specified requirements.

3.3 measurement and analysis: obtaining the actual dimensions of a bar code and checking whether they meet the requirements.

4 Type of the label

The type of the label is shown in Figure 1.

On the vehicle, the VIN bar-code label is to be fixed in a position that is easy to scan, so that a bar-code reader can be used conveniently.

5.1 General requirements for the label

The VIN bar code is made up of the identification mark I at the beginning followed by the seventeen characters of the VIN; the bar code is also to include a start character and a stop character.

A title reading VIN is to precede the human readable characters of the label, unless the bar code is part of the content of the product nameplate specified in GB/T 18411, or part of the VIN label or plate placed near the windscreen pillar as required by GB 16735.

The start character, the stop character and the identification mark are not to be printed on the label.

The minimum height of the human readable characters is 2.38 mm.

The symbol may be printed horizontally or vertically, as shown in Figure 2. When printed horizontally, the human readable characters are printed directly above or below the bar code and centred on it; when printed vertically, the human readable characters are printed vertically at the middle of the left or the right side of the bar code. A note states that Figure 2 shows only examples of symbols for which, under 5.1.2, the title need not be marked.

5.2 Requirements for the bar code symbol

The VIN bar code is to comply with GB/T 12908. The density and the dimensions of the symbol are to satisfy the following limits, in which X is the width of the narrow element.

The narrow element width X lies between 0.190 mm and 0.317 mm.

The wide to narrow ratio N is 3, with a permitted range of 2.8 to 3.4.

The width of the intercharacter gap has a minimum value of X ; its maximum value is 5.3 times X where X is less than 0.287 mm, and 1.52 mm where X is 0.287 mm or more.

The minimum width of the quiet zone is 10 times X .

The minimum height of the bar code is 9.5 mm, or 15 per cent of the total length of the symbol excluding the quiet zones.

5.3 Readability and label performance

To avoid damaging the label or the vehicle surface, a non-contact bar code scanner is to be used. The text of the requirement on the light source of the reader is printed as a 633 nm band or the visible infrared band, the numeral being preceded in the source by a stray letter B.

The label is to meet the general performance requirements for labels of GB/T 25978; where the label is a special purpose label as defined in GB/T 25978, it is also to meet the anti-counterfeiting and anti-tampering requirements of that document.

6 Bar code verification procedure

The verification compares the dimensions and the optical characteristics of the bar code with the specified requirements, by machine or by hand, in the laboratory; it does not apply to outdoor inspection. Labels are verified individually and at random, not tested at the same time. The instruments used are a microscope and a reticle eyepiece micrometer.

The verification instrument is to be calibrated by the prescribed procedure. After correct calibration, the test specimen of the instrument manufacturer is checked; if the result does not fall within the error range specified by the manufacturer, the instrument is calibrated again and the check repeated.

The label is verified according to GB/T 25978. When the bars and spaces are measured and analysed, the first measurement is made perpendicular to the bars at the centre of the bar code; if the code is out of tolerance, the second measurement is taken below or to the left of the first; if it is still out of tolerance, the third measurement is taken above or to the right of the first; if it remains out of tolerance the label is judged not to conform and the check ends.

For decoding, the transcription of the human readable characters is compared with the encoded bar code to establish that it is correct. A note states that the transcription of the human readable characters does not include the start character, the stop character or the identification mark.

The label is judged to conform when the bar code meets the specified tolerances and indexes.

R Relationship to previous standards

The cover page and the foreword state that the document replaces GB/T 18410-2001, Vehicle identification number bar-code label. Besides structural and editorial changes, the technical changes recorded are: the normative references to GB 16735 and GB/T 25978 were added (Clause 3); the dimensional requirements for the bar code symbol were

changed (5.2, against 5.2.2 of the 2001 edition); the performance requirements for the label were changed and now refer directly to GB/T 25978 (5.4, against 5.4 of the 2001 edition); and the definitions of vehicle identification code, label and permanent label were deleted (Clause 3 of the 2001 edition).

The publication history states that the document was first issued in 2001 as GB/T 18410-2001, the present edition being the first revision.

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