



# SURFACE VEHICLE RECOMMENDED PRACTICE

J1877™

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(R) Recommended Practice for Bar-Coded Vehicle Identification Number Label

## RATIONALE

Revisions include: For 2.1.4, 3.1, 4.2, and 4.4, references to FMVSS 115 have been replaced with 49 CFR Part 565 and references to FMVSR 567 have been replaced with 49 CFR Part 567. Companies referenced in 8.1 have been removed completely so that an approved list of suppliers does not need to be maintained.

## 1. SCOPE

This SAE Recommended Practice describes the basic content requirements, barcode specifications, and functional test specifications of the vehicle identification number (VIN) label. On the vehicle, the VIN label is to be mounted in a readily accessible location for use of a barcode scanning device.

### 1.1 Purpose

This document specifies a permanent label for the standard VIN that can be automatically identified through a bar-coded format.

## 2. REFERENCES

### 2.1 Applicable Documents

The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

#### 2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

SAE J272 Vehicle Identification Number Systems

SAE J273 Passenger Car Vehicle Identification Number System

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### 2.1.2 AIAG Publications

Available from Automotive Industry Action Group, 4400 Town Center, Southfield, MI 48075-1104, 248-358-3570, [www.aiag.org](http://www.aiag.org).

AIAG B-1 Bar Code Symbology

AIAG B-2 Vehicle Identification Number (VIN) Label Application Standard

### 2.1.3 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, [www.astm.org](http://www.astm.org).

ASTM G53-77 Practice for Operating Light- and Water-Exposure Apparatus

### 2.1.4 Code of Federal Regulations (CFR) Publications

Available from United States Government Printing Office, 732 North Capitol Street, NW, Washington, DC 20401, Tel: 202-512-1800, [www.gpo.gov](http://www.gpo.gov).

49 CFR Part 565 Vehicle Identification Number (VIN) Requirements

49 CFR Part 567 Certification

## 3. DEFINITIONS (REFER TO AIAG B-2, APPENDIX A)

### 3.1 BARCODE READER

A device for machine reading of barcodes, which typically consists of a noncontact scanner, a decoder, and a data communication device.

### 3.2 LABEL

The surface containing the information in bar-coded and human-readable formats.

### 3.3 MEASUREMENT OR ANALYSIS

The process to arrive at actual dimensions, which are used for comparison to specifications.

### 3.4 PERMANENT LABEL

A permanent label shall be intended to provide a scannable life that approximates the life of the vehicle as simulated by the test specification in Section 7.

### 3.5 VEHICLE IDENTIFICATION NUMBER (VIN)

The VIN is a standardized series of letters and single-digit numbers that is assigned to a motor vehicle for identification purposes as required by 49 CFR Part 565 and 49 CFR Part 567 and recommended under SAE J272 and SAE J273.

### 3.6 VERIFICATION

A procedure to compare dimensional and optical characteristics of a barcode to specified tolerances using mechanical or manual processes.

#### 4. LABEL SPECIFICATIONS (REFER TO AIAG B-2, APPENDIX A)

##### 4.1 Vehicle Identification Number (VIN)

The VIN barcode shall consist of the 17-character vehicle identification number preceded by the data identifier "I." The barcode also contains a start and stop character.

##### 4.2 Label Title

The barcode will contain a title and VIN, unless it is part of the federal certification label as required pursuant to 49 CFR Part 567 or if it is part of the VIN label located on the upper left side of the dash panel as allowed pursuant to 49 CFR Part 565.

##### 4.3 Human-Readable Character Suppression

The human-readable characters for start, stop, and the data identifier shall be suppressed from printing.

##### 4.4 Human-Readable Character Height

The minimum height of the human-readable characters is 2.38 mm (0.094 inch). This requirement is not intended to supersede government requirements. For example, 49 CFR Part 567 dictates the minimum height of the characters when the VIN is placed on the certification label.

##### 4.5 Horizontal or Vertical Printing

The symbols may be printed horizontally or vertically. When the barcodes are printed horizontally, the human-readable data should be printed directly above or below the barcodes and centered. When barcodes are printed vertically, the human-readable data should be printed vertically and centered to the left or right of the barcode.

#### 5. GENERAL SYMBOLOGY SPECIFICATIONS

##### 5.1 Code 39 Symbolology

The VIN barcode shall conform to AIAG B-1, which is effective as of this date. This specification is shown in AIAG B-1, Appendix B. All aspects of the barcode symbology codes shall follow this specification except as described in the following sections.

##### 5.2 Code Density and Dimensions (Refer to AIAG B-2, Appendix A)

The average width of the narrow element shall be within the range of 0.19 to 0.317 mm (0.0075 to 0.0125 inch).

The ratio shall be 3:1 with an allowable range of 2.8 to 3.2.

The minimum bar height shall be 9.5 mm (0.375 inch) or 15% or the barcode length.

#### 6. SCANNING DEVICES (REFER TO AIAG B-2, APPENDIX A)

To avoid damage to the label or vehicle surfaces, only noncontact barcode scanners shall be used to scan the barcodes. Scanning devices shall use a light source in B633 nanometer range or in the visible red light spectral band range.