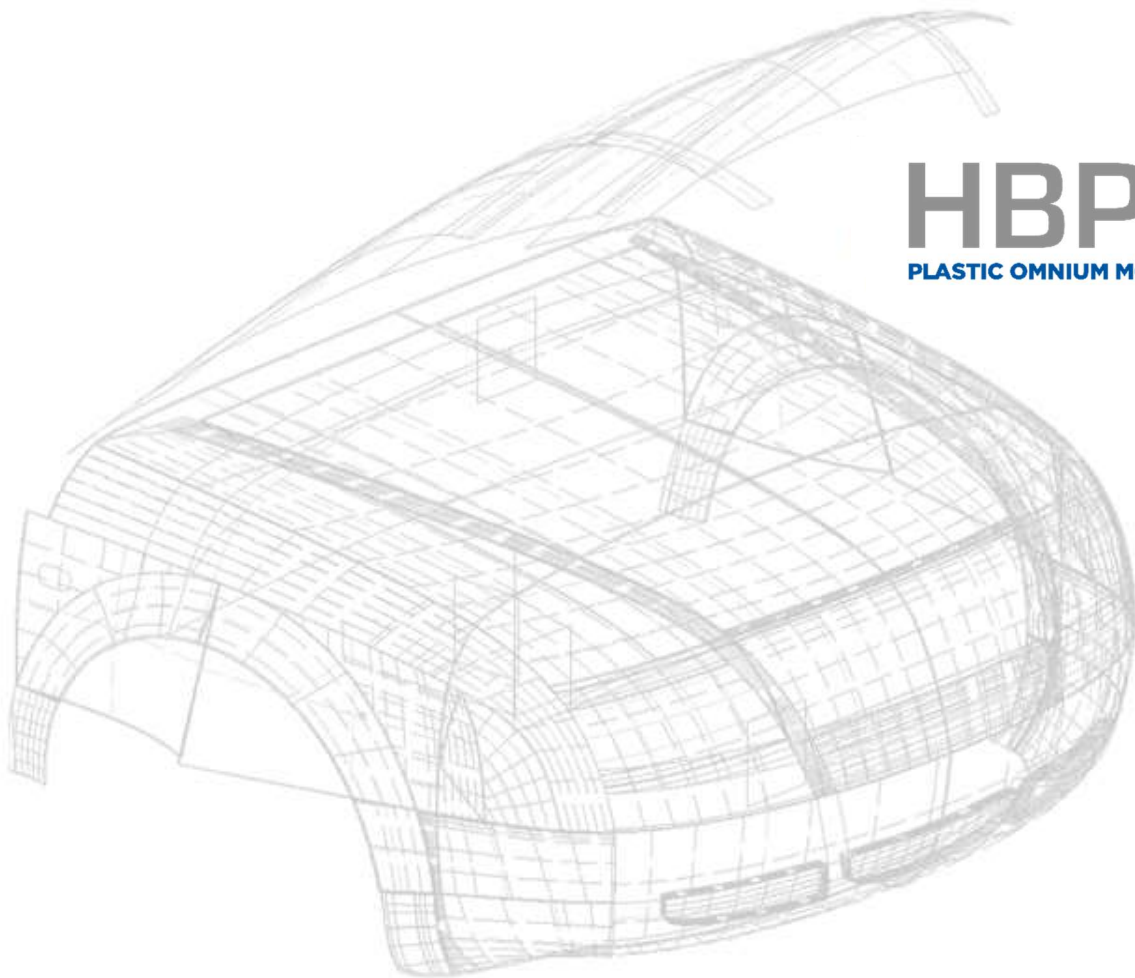


Standard logistic label Requirement specification

Valid for all NAFTA companies of the HBPO group



HBPO
PLASTIC OMNIUM MODULES

Version 003

Title:	Standard Logistic Label Requirement Specification	Owner:	LO
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Version	Date	Author	Remark
001	10.02.2006	M. Baron	creation of version 001
002	11.10.2006	B. Harold	Update to AAIG standards
002A	12.15.2006	M. Baron	Update part number and added Date request; added I -722
002B	1.23.2007	M. Baron	Updated sample master label id sample picture to show 4S (not 3S) to match section 3.8 wording
002C	6.12.2007	B. Berger	Updated formatting to comply with HBPO-I-005 (Added Intention, Scope, Responsibility, and Detail)
002D	6.13.2007	M. Baron	Added note about carton label not required for bulk containers.
002E	5.13.2010	M. Baron	Added HBPO deviation section 8.6; clarified pictures of sample label
002F	3.1.2011	M. Baron	Section 7.3 edited the words to help on clarity
003	10.2.2019	R. Coleman	Include VDA label info and misc updates for 2019

Standard Logistic Label Requirement Specification

1 Introduction and general information

This specification provides guidelines for shipping/parts identification labels and master labels. These labels are designed to improve the productivity and controls at suppliers and HBPO North America by allowing effective and efficient capture of data for production counts, warehouse input/output, shipper generation, forwarding, freight transfer control, receiving, and other inventory controls. Strict adherence to these specifications will benefit both suppliers and HBPO North America manufacturing plants. This specification is to be used in conjunction with the Standard Logistic Requirement Specification (INT-F-232).

In this document, the word “**SHALL**” indicates a requirement and the word “**SHOULD**” indicates a recommendation.

The supplier will be held liable for costs arising from disregard to regulation of this standard logistic requirement specification by HBPO North America.

2 Scope

This specification applies to HBPO NAFTA production facilities, its suppliers and subcontractors.

3 Responsibility

The HBPO Logistics department has responsibility for creating and approving this instruction, as well as approving subsequent revisions of this document.

4 Detail

4.1 Hardware and Software

HBPO North America recommends the use of bar-coding software and hardware, which allows flexibility in label generation. Printers **SHALL** produce labels that meet AIAG and/or VDA specifications and tolerances. Thermal printers and laser printers are strongly recommended. Dot matrix printers **SHALL NOT** be used as bar-coded data can become skewed.

4.2 Sample Label Approval

Suppliers **SHALL** submit sample labels to their Logistics representative prior to changing their label format. Written approval will be sent from HBPO North America to the supplier once the label format is tested and passes. Using EDI will make your data collection process much smoother as most of the data required is sent to you via this method.

4.3 Normative References

AIAG Trading Partner Labels (B-10)

VDA Label Standard 4902 version 4

ANSI Data Application Identifier Standard

HBPO North America Standard Logistic Requirement Specification (INT-F-232)

5 Materials and Placement

5.1 Label medium

The label medium **SHALL** be white in color with black printing. Requests for alternative medium may be made for pre-production builds or revision level changes.

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5.2 Label format

The HBPO North America preferred label is an AIAG B-10.

For suppliers outside NAFTA, the VDA 4902 label is acceptable when necessary.

5.3 Adhesives for Returnable Containers

SHALL be removable pressure sensitive adhesive based on synthetic elastomers featuring moderately high initial tack, good resistance to static shear, a high level of ultimate adhesive, and clean removability.

5.4 Adhesives for Expendable Containers

SHALL be wrinkle free and shall adhere to the pack; adhesive types can be pressure sensitive or dry gummed.

5.5 Types of Labels and Packaging

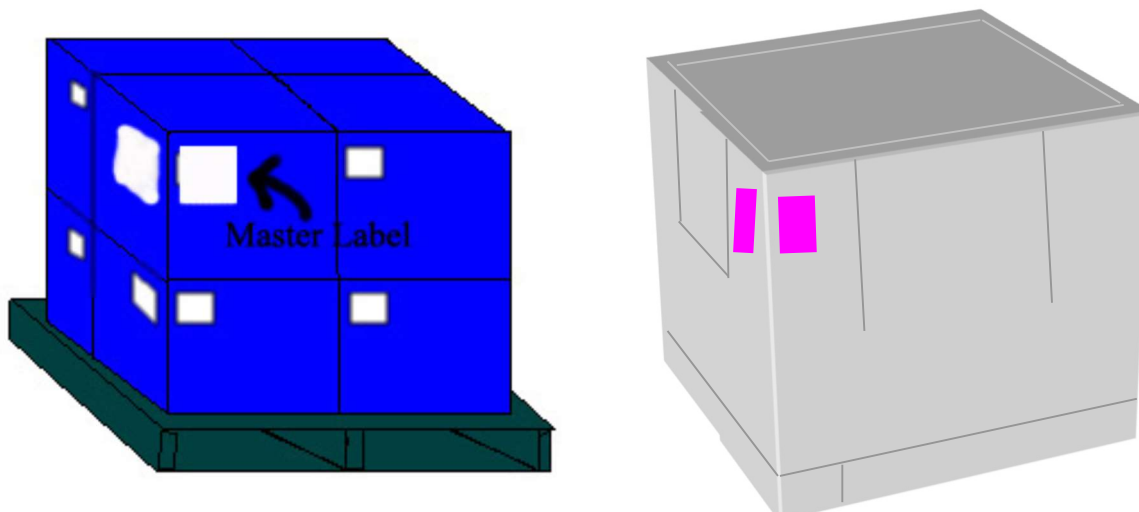
The two types of labels are required by HBPO North America shipments described below:

1. The Carton Label **SHALL** be used to identify a single pack of multiple packs containing the same part number on a pallet. For bulk bins, only a Carton Label is required.
2. A Master Label **SHALL** be used for the unit load. Each individual package **SHALL** contain a Carton Label within the outer package.

Illustrations of the most common shipping packs and recommended label locations are shown. In most cases two labels are specified. The bottom edge of the label **SHOULD** be parallel to the base of the package/container. To facilitate reading of the bar code symbols, the top edges of the label, whenever possible, **SHOULD NOT** be more than 20 inches from the bottom of the container. Wraparound labels are acceptable for expendable containers if quiet zones are within specifications.

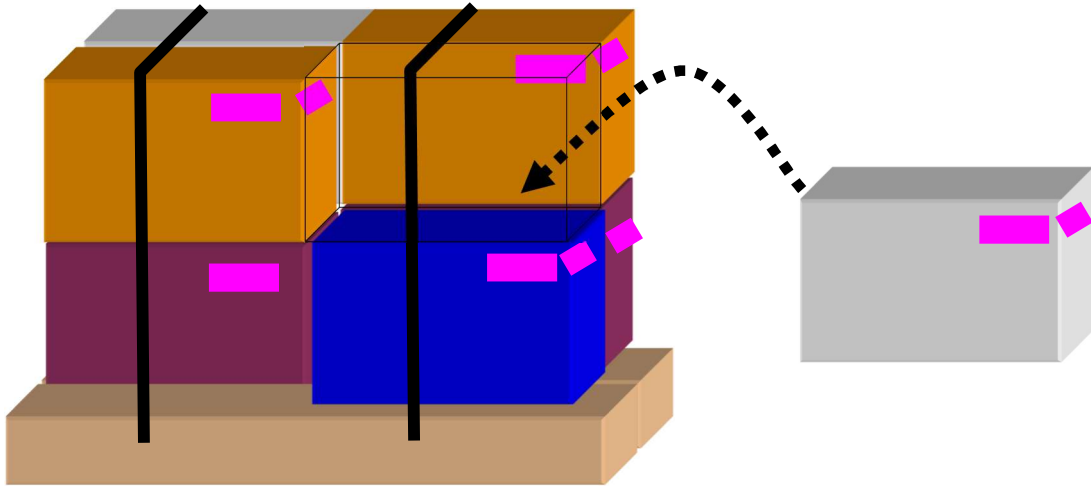
5.5.1 Example: Unit Loads/containers vs bulk containers.

Two (2) Master Labels **SHALL** be attached to unit load/container on adjacent or opposite sides depending on packaging. **Please note that on Bulk packs or racks, Master Labels are not required.**



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- 5.5.2 **Example:** Single tote/box unit load packs are to be banded to pallet. Single box(es) **SHALL** have Carton Label on two (2) adjacent sides



6 Bar Code Symbology (see AIAG B-16 Linear Bar Code, page 16)

6.1 Linear Bar Code

Bar codes **SHOULD** be Code 128, but **MAY** be Code 39. The print quality for information encoded in the Code 128 symbol shall comply with ISO/IEC Standard for Bar Code Print Quality 15416. In addition, the symbol **SHALL** be left justified, allowing for a quiet zone at each end of the symbol, of at least 0.25 inches (6.4mm).

6.2 Code Configuration

The five characters '%', '/', '\$', '+' and '.' **SHALL NOT** be used on the container, master or quick receive labels.

6.3 Code Density and Dimensions

The minimum height of the symbol **SHALL** be 0.5 inch, (13mm) except as noted. Non-significant zeros and spaces **SHALL** be omitted except as noted. The dimension of the narrowest element (X dimension) range **SHALL** be from 0.0010 to 0.017 inch (0.254 to 0.432mm) as determined by the printing capability of the supplier/printer of the label. Symbols with narrow elements at the lower end of this range may require special care to meet the print quality requirements. Conformance to the print quality requirements **SHALL** be determined in accordance with ISO/IEC 15416.

6.4 Check Digits

Check digits **SHALL** be used in the code 128 bar codes. The **ONLY** check digit type NOT TO BE USED is the EAN/UCC type.

6.5 Reflectivity and Contrast

The printed bar code symbols **SHALL** meet the reflectivity and contrast requirements, specified in Section 4.1 of AIAG's B1 document, at all electromagnetic wavelength from B633 to B900 nanometers.

6.6 Quality Assurance Requirements

It is the responsibility of the supplier to provide bar code labels that meet these specifications. Equipment is available to verify the bar code symbols to meet these requirements. Use of statistical process control techniques to minimize printing variability is recommended

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The minimum symbol grade at point of customer scan **SHALL** be "C", 1.5/10/660, where:

- 1.5 is the minimum print quality at point of production
- 10 (=0.254mm) is the measurement of aperture, and
- 660 (=660 nanometers [nm] +/-10nm) is the inspection wavelength

For more detailed specifications related to the automotive industry, reference the AIAG B8 document.

6.7 Code 39

If code 39 must be used, check digits **SHALL NOT** be used in the bar codes. The narrow element width **SHALL** be within the range of 0.013 to 0.017 inches (0.33 to 0.43 mm). The average width of the wide elements to the average width of the narrow elements **SHALL** be 3:1, with an allowable range of 2.8:1 to 3.2:1.

6.8 Data Identifier Codes

A data identifier code in the first position following the start code of the bar code symbol **SHALL** be used to identify the information below. This character is not to be included in the human readable line but is shown in human readable characters under the title for the appropriate data area.

Example: a container has a quantity of 12345. When scanned, the barcode will return Q12345. The 'Q' is embedded in the barcode and not visible to the human eye. The human readable quantity will be 12345 not Q12345.

Using additional bar code symbols on shipping packages is not encouraged but may be appropriate in some circumstances. To prevent reading wrong data into a system, and to differentiate among all bar code symbols, any added bar code symbols placed on the Carton/Parts Identification label **SHALL** use data identifiers. Any bar code symbol placed elsewhere on a shipping package **SHOULD** contain a data identifier.

The following data identifier codes are assigned for the different types of data:

P – Part Number, Prefix and Base
Q – Quantity
V – Supplier Number
3S - Unique Serial Number – Carton/Parts Identification Label (AIAG format)
4S – Unique Serial Number – Master Label (AIAG format)
2S – Shipment ID

Note: 3S is the package identification assigned by the supplier to the lowest level (carton or container) of packaging. 4S is the package identification assigned by the supplier to packaging containing multiple containers of like items on a single customer order (master load).

IE: Container (4S) > Cartons (3S) > Material (P)
Container (3S) > Material (P)

7 Label Data Positions and Specifications

7.1 Label Block Dimensions

Block heights are nominally 1.1 +/- .1 inch and 0.9 +/- .1 inch (27 mm and 22.9 mm +/- 2.54mm).

7.2 Block Titles

Block titles are to be left justified in each block except where noted and 8 LPB. Titles for bar coded items **SHALL** include the data identifier that corresponds to the field as defined in Appendix A of AIAG B-10 document.

7.3 Part Number

The human readable part number characters **SHOULD** be 2 LPB. The maximum length of the part number will be 26 characters including spaces.

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The bar code symbol of the part number **SHALL** be located directly below the human readable characters, at least 0.25 inch (7mm) from the left label edge, and **SHOULD** be 0.5 inches (13 mm) high. The maximum length of any bar symbol **SHOULD NOT** exceed 5.5 inches (140 mm).

The part number **SHALL** be the designated number assigned by HBPO North America (in special cases and/or OEM end customer requirements). This part number is the number that HBPO sends via EDI and/or email releases to the supplier. The prefix, base and suffix of the part number **SHALL** be located in the Block A1 area, designated by the identifier "(P)" with each section of the part number separated by a blank space. In the case there are blank spaces between the prefix, base or suffix, all **SHALL** be included in the bar code symbol (it is important to note that some part numbers will NOT have a prefix and/or a suffix).

In summary, the supplier shall ensure that the part number on the label matches exactly the part number listed on the HBPO release for formatting and spacing.

7.4 Quantity

The Quantity field **SHALL** be a maximum of six characters, both human readable and bar coded, the human readable **SHALL NOT** show lead zeros (although the bar code **SHOULD** contain leading zeros) The human readable characters **SHOULD** be 2 LPB.

The bar code symbol for the quantity **SHALL** be directly below the human readable characters and **SHOULD** be 0.5 inches (13 mm) high.

The nominal length anticipated for the quantity is six (6) numeric characters plus the data identifier (Q). The length of this area (and the position of the line separating the Quantity Area from the area to the right) may be adjusted to handle specific needs of the supplying location and/or HBPO North America for information required on the right side of the label. The nominal starting position of the bar code **SHOULD** be 0.25 in. (73.2mm) from the left edge of the label.

7.5 Supplier Code

The human readable supplier code **SHOULD** be 2 LPB. The bar code symbol for the supplier code **SHALL** be directly below the human readable characters and **SHOULD** be 0.5 inches (13 mm) high. The nominal starting position of the bar code **SHOULD** be 0.25 in. (73.2mm) from the left edge of the label.

7.6 Label Serial Number (used for all HBPO traceability)

The human readable serial number **SHOULD** be 2 LPB. The bar code symbol for the serial number **SHALL** be directly below the human readable characters and **SHOULD** be 0.5 inches (13 mm) high. The nominal starting position of the bar code **SHOULD** be 0.25 in. (73.2mm) from the left edge of the label.

The serial number **SHALL** consist of a unique 10-digit number. The maximum length of the serial number **MAY** be ten (10) characters plus the data identifiers.

The serial number **SHALL** be a unique number (not necessarily in sequential order) assigned by the supplier within life of program not just the calendar year. Each Shipping container or pack having a Shipping/ Parts Identification label **SHALL** have a unique serial number.

The supplier **SHALL** historically record and cross-reference the lot code numbers to the label serial number.

7.7 Part Description

The part description **SHALL** be placed in block B2. The description **SHOULD** be allowed to extend to two lines.

7.8 Customer Plant Name

The HBPO Plant Name **SHALL** be up to 30 characters long on each of two lines, if necessary. The first line **SHALL** begin with the name HBPO, located below the "To" header.

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7.9 Ship From

The ship from plant name and address **SHALL** be placed in block C2.

7.10 Master Label

When using this design for a Master Label, the words "MASTER LABEL" **SHALL** appear in block D2.

7.11 Optional Fields

When space is available, the supplier may include additional fields for their own needs. If the supplier part number is placed on the label, it **SHALL NOT** be bar coded.

HBPO North America strongly requests that a date be placed in the optional field area, to ensure FIFO at both ends of the supply chain are noted.

8 Special Labels

8.1 Multiple, Common Item Packs

A Master Label **SHALL** be used when the supplier and HBPO North America agree that the total contents of a multiple, common item packs **SHOULD** be identified. Each sub-pack/container of the multiple packs **SHALL** be identified with a Carton Label. The total multiple pack **SHALL** be identified with a Master Label in a location specified by HBPO North America. The Master Label **SHALL** be placed on the pack in such a manner that when the pack is broken apart the label is discarded (i.e., hang Master Label from banding). The balance of the Master Label format **SHALL** conform to the specification for the Carton Label except that the data identifier for the serial number **SHOULD** be "4S" instead of "3S". The serial number, preceded by "4S" in the bar code form only **SHALL** be a unique number, not to be repeated over the course of a program life for any other Master Label or any Carton Label.

NOTE: Plastic wrap requires special approval by HBPO Logistics, and generally is not allowed.

8.2 HBPO AIAG Format Carton Label (not to scale)

Y234567-901234567-90123456	
PART (P)	
QUANTITY (Q)	DESCRIPTION
12345	Bolt, 3/4" Hardened Steel
	Round Head
	TO
	HBPO Site
	Missouri
SUPPLIER (V)	SHIP FROM
123456789	Generic Tool Shop
	Div. of Alpha Corp.
	342 Maple Highway
	Nature Springs, MI 48888
SERIAL (3S)	
GEN1234567	
	MM/DD/YYYY

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8.3 HBPO AIAG Format Master Label (not to scale)

Y234567-901234567-90123456	
PART (P)	
QUANTITY (Q)	12345
DESCRIPTION Bolt, 3/4" Hardened Steel Round Head TO HBPO SITE Missouri	
SUPPLIER (V)	123456789
SHIP FROM Generic Tool Shop Div. of Alpha Corp. 342 Maple Highway Nature Springs, MI 48888	
SERIAL (4S)	GEN1234567
MASTER LABEL MM/DD/YYYY	

8.4 Other HBPO Label Options

At HBPO, while working to ensure our incoming processes are common and streamlined, our goal is to work with our suppliers to ensure all shipping process are optimized. To do this, HBPO has and will approve changes in the standards listed above to support supplier requirements.

These special approvals are reviewed on a case-by-case basis. The only firm rule is that supplier bar codes SHALL be 90 degree rotated from the 4 HBPO required barcodes. Suppliers located outside NAFTA region may use VDA 4902 Version 4. Refer to INT-F-232 for detailed guidelines on VDA 4902 formatting.

8.4.1 VDA 4902

8.4.1.1 Data elements

The following data elements are identical for large load carrier labels and small load carrier labels.

Field contents:

- Left-aligned, also the barcodes
- No leading blanks or zeros
- No following blanks within the barcode