GLOBAL TRANSPORT PARTNER LABEL

LABELING & REQUIREMENTS STANDARD

VERSION 2016-01
RELEASE 1.00

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This AAM - GTPL Requirements Standard contains specifications on bar code labeling specifications for Direct, Outside Processors (OSP), Prototype, and Primary metals material.

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A. Purpose

The purpose of this document is to specify and provide written requirements for the printing and application of AAM‟s packaging label formats and bar code symbology to our suppliers. These specifications provide AAM suppliers the necessary information to become compliant with our latest label formats and placement requirements. Suppliers, both internal and external SHALL use the AAM label formats outlined in this document when shipping to all AAM facilities as specified in Appendix III.

B. General Information

This document was developed in conjunction with, and is an extraction of the Automotive Industry Action Group (AIAG) and the American National Standards Institute (ANSI) as referenced in the appendix. This document will be revised as our requirements change. Please visit the website http://www.aam.com/Suppliers/Suppliers-Home-129.html for the most current release of this document. Instructions for label compliancy certification are provided later in this document.

In this document the word **'SHALL'** indicates a requirement and the word „SHOULD" indicates a recommendation. The words followed by **'NOT'** will help emphasize the opposite of the statement. In order to facilitate efficient and lean practices throughout AAM operations, the labeling requirements „**SHALL'** be followed exactly. If there is any concern about meeting these requirements, please contact your AAM materials, or packaging representative.

Please note that the AAM Global Transport Partner Label, Standard Version. **2012-01, Rev. 1.0** supercedes all previous divisional and corporate container label requirements standards, including 2002-03 Release 6.1, 2004-01, Release 1.0 and 1.3.

The changes to 2012-01 Release 1.0 specifications are relative to the mandatory inclusion of Lot Number data on AAM-GTPL-A (container) labels.

The changes to 2016-01 Release specifications are relative to Lot number is moved to "Supplier free area" and Heat number is introduced to capture heat code in the labels.

AAM would prefer no additional data be added to the labels other than outlined in this document. However, if state, federal or country laws are passed which require a supplier to include information such as health, safety or environmental data to be added to the label, the supplier should use the supplier free area at the bottom block of the label for this data. Target Audience for this document:

1. AAM direct material suppliers, raw material suppliers, sub-assemblies, or pre-manufactured goods used in the manufacturing process at American Axle plants and subsidiaries.
2. Prototype Material suppliers.

NOTE: Shipments to AAM plants must be labeled in compliance with this new standard by June 30, 2016.

C. Label Specifications

AAM highly recommends the use of bar coding software and hardware, which allows flexibility in label generation. Suppliers SHALL label Container, Master, and Mixed Loads with labels that meet AAM standards, quality and tolerances as noted in Section C.

C.1 Size and Material

The label SHALL be white with black print. The minimum size SHALL be 4.0 inches (101.6mm) by 6.0 inches (152.4mm). 4 X 6.5 inch labels are optionally acceptable. Adhesive / pressure sensitive labels SHALL be applied to the packaging material in WRINKLE FREE fashion for scanner readability.

C.2 Bar Code Symbology

- **PDF 417: See detail in Section D.**
- **Linear Bar Code**: The Linear Symbology used in this standard SHALL be Code 128, allowing for a quiet zone at each end of the symbol, of at least 6.4mm (0.25 inches).
  - The minimum height of the symbols shall be 10.2MM or (0.4inch).
  - Non – Significant zeros and spaces SHALL be omitted.
  - The four characters %, /, $, and + SHALL NOT be used.
- **LPN Block - Narrow Elements ('X' Dimension):** The bars and spaces in a symbol are called elements. For each bar code 128 symbol the dimension of the narrowest element (x dimension) range shall be from **0.33 to 0.43 mm** (0.013 to 0.017) as determined by the printing device. Symbols with narrow elements at the lower end of this range may require special care to meet the print quality requirements.
- **ORDER ID # Block - Narrow Elements ('X' Dimension):** The bars and spaces in a symbol are called elements. For each bar code 128 symbol the dimension of the narrowest element (X dimension) range shall be from **0.83 to 0.93 mm** (0.033 to 0.037 inch) as determined by the printing device. Symbols with narrow elements at the lower end of this range may require special care to meet the print quality requirements.
- **Quiet Zone:** For optimal scanning and readability of bar codes, the symbol will be justified with leading and trailing clear areas from edges or lines SHALL be at least 0.25 inches (6.4mm). Quiet Zone for the Order ID # is 10X or 0.25" whichever is greater. (Assumes minimum bar code printer of 200 dots per inch (DPI)).
- **Fonts:** Fonts SHALL be upper case **Bold Arial Narrow, Helvetica condensed** or its equivalent Font sizes are specified for readability, as determined by the print devices capability. Data that will not fit at the

specified font size should be truncated. The Font size shall be as large as practical for information being printed. Data Titles are all upper case and the same size (6-9 point). Font should be Sans-serif (without tails, e.g. Helvetica).

- **Exceptions:** There are no exceptions to this label standard.
- **Date Formats:** Dates SHALL be in the International date format as shown DD MMM YYYY, e.g. 03MAR2004.

C.3 Text Lines Per Block

The height of text characters is defined by using a unit of measure called Lines-Per –Block (LPB), rather than inches, millimeters, or points. This enables the printer of the label to determine the actual height and font of text for a given LPB. Eight sizes may be specified for text, ranging from 1 LPB to 8 LPB. The label designer SHALL choose the exact height of the text sizes. Labelers SHALL choose a single height for each of the eight sizes. The table below shows suggested sizes per AIAG specs.

Lines per Block	Max. Characters per Line	Point	Inches	MM
1 LPB	8	64	0.90	22.0
2 LPB	18	32	0.40	11.0
3 LPB	28	20	0.25	7.0
4 LPB	34	16	0.20	5.0
5 LPB	42	12	0.15	4.0
6 LPB	48	10	0.12	3.0
7 LPB	59	8	0.10	2.0
8 LPB	68	6	0.08	1.5

All Bar code label exhibits are for illustrative purposes only, and may not be to scale or bar code print quality standards.

C.4 Quality Requirements

AAM suppliers have a responsibility to provide bar coded labels that meet AAM standards.

- Verification: The supplier per AIAG, ISO and QS9000 standards shall verify labels as legible and easily scannable. AIAG and AAM standards recommend a minimum Scan Grade of (C), 1.5/10/660 at the receiving point. A recommended Print Quality Grade ≥ 2.5 (B) at the time of printing. AAM materials will perform random audits and non-compliance may result in a non compliance warning or PRR. Minimum print quality grade = 3.0 **(B), based on:**
  - Measurement aperture = 0.010 inch (0.254)
  - Inspection wavelength = 660 nanometers +/- 10 nanometers
- Most Frequent Quality Problems
  - Incorrect Label on Individual Containers
  - Unable to Read Bar Code
    - Less than ANSI readability code of „C"
    - Supplier should ensure code of „B" upon label printing to ensure a minimum code of „C" at receipt time.
  - Missing Container Labels
  - Missing Master Label on palletized or shrink wrap parts
  - Missing Data Identifiers on 1D Bar code
  - Incorrect Symbology on bar code, i.e. not code 128
  - Incorrect data in PDF417 2D

D. Label Information

Three types of Labels are required by AAM depending on how material is packaged for shipment:

1. The **Container Label** (AAM-GTPL-A) SHALL be used to identify a single pack containing the same part number. It is the most commonly used shipping parts label.
2. A **Master Label** (AAM-GTPL-B) SHALL be used for containers, pallets, skids, etc. holding more than one container or carton of the same part number. Each individual container or carton SHALL be labeled with the AAM-GTPL-A label. The Master Label per AIAG specifications SHALL be applied to the exterior of any shrink-wrapped pallet or skid and SHALL be on adjacent corners, not on the top of the pack.
3. A **Mixed Load** (AAM-GTPL-C) label SHALL be used for transport units containing multiple containers with different part numbers. Each individual container SHALL be labeled with the AAM-GTPL-A label.

D.1 Required Data Areas and Titles

These are the required data fields for container labels where fields are present:

From Block: Suppliers Name, Supplier Address, Email, and Phone Contact
To Block: American Axle Plant Location, Address, and Plant /Dock
Description
Order ID #
Part Number
Supplier Material OK/ Rev#
Pull Signal
License Plate (LPN)
Quantity
Lot #
Heat#
Date
Market Location
 # Packs
Total Qty

Note: Order ID numbers are required on all labels. The Order ID # and Pull Signal will be provided to suppliers through EDI DELJIT transactions and/or the AAM Supplier Portal, and where applicable, will also appear on the label as human readable data. See Section D.7 for additional detail.

Note: Lot numbers will be contained in the 2D block of the AAM-GTPL-A label. **Lot numbers are required by all AAM locations.**

D.2 Lot Number Requirement

The Lot number is defined by the Supplier and must be traceable to the date and shift of manufacture. Refer to Appendix II for additional Lot number definition.

D.3 Conditional Data Areas

Heat #: Used for primary metals, linked to Lot number
Rev # : Part Revision Level – 2D & Human readable
Gross Weight: 2D block only as specified by AAM materials
Tare Weight: 2D block only as specified by AAM materials

Note: Heat numbers will be required on labels only if parts are under heat lot control mandates by AAM. The Heat numbers will be contained in the 2D block of the AAM-GTPL-A and Mixed load labels. The following plants presently require this: AAM de Mexico, S.A. de C.V. – Guanajuato Manufacturing Campus, Guanajuato Forge, MSP, Oxford Forge, Colfor Malvern, Colfor Minerva, AccuGear-Silao, and AccuGear-Fort Wayne.

D.4 Prototype Division Labels

Prototype Material Suppliers **MAY** use the AAM-GTPL-A, AAM-GTPL-B, or AAM-GTPL-C as defined in these specifications. **Differences are**:

- Mandatory usage of the **Revision number** in the Human readable block on line 3 of the label
- Population of the same **Revision number data** to be contained in the **2D PDF417 block**
- **NO Pull signal** or **Order Numbers** are required
- **NO Plant /Dock** Required
- **Market Location** Block populated as dictated by AAM Prototype Plants
- **Gross & Tare Weight** data (2D) populated as dictated by AAM Prototype Plants

D.5 Data Identifiers

A data identifier is one or more character that defines a general category type of specific use of bar coded data. The bar-coded field SHALL start with the data identifier and will identify the type of information encoded in that symbol. Care must be taken to use the proper data identifier. The data identifier SHALL be printed in human readable characters in parentheses adjacent to the title for the appropriate data block. All data identifiers SHALL be included in the applicable Bar code Symbology and SHALL NOT appear in the human readable text. DO NOT include the parentheses in the bar coded data. The data identifiers shown below SHALL be used in 1D and/or in the PDF417 2D bar codes:

Data Identifier	Data Block
9K	Order ID #
P	Part Number
15K	AAM Pull Signal Number
2P	Engineering Change / Revision Level
1T	Lot / Serial Number
2T	Heat Number
20L	Plant Dock
21L	Market Location #
Q	Quantity
4Q	Gross Weight
11Q	Tare Weight

Data Identifier	Data Block
2Q	Total Quantity
7Q	Number of Packs
1J	License Plate – Container
5J	License Plate – Mixed Load
6J	License Plate – Master Load
9D	Date

D.6 Format and Font Specification Matrix

The following applies to AAM-GTPL-A, AAM-GTPL-B, and AAM-GTPL-C labels.

Data Title	Data ID	Description	Bar Code	Source Data	Bar Code Mil Spec	Bar Code Height	# of Char. W/O Data Identifier	Type	Font Size	Bold
FROM		Ship from: Max 5 lines of data; Company Name, Address, Contacted, Phone/email, Country of Origin, i.e. Made in / Assembled in	N				5 lines	A/N	10	Y
TO		Ship to: Max 4 lines of Data, Company Name, Address (3 Lines), Plant Dock (with Data Title)	N	DELJIT			4 Lines	A/N	10	Y
PLANT / DOCK	20L	Plant / Dock	PDF417				8	A/N	20	Y
2D SYMBOL PDF417 See Detail Spec Also read detailed AIAG B16 Global Transport Label specs on this block		Machine Readable combination of LPN, Order ID Number, Pull Signal#, Quantity, Lot, Heat & Rev	Y PDF 417			1.0 in. +/- 0.2 in. (25.40 mm + 5.08 mm)	142 char. GTPL – A label For Mixed – GTPL – C Refer to AIAG B16 guidelines			N
DESCRIPTION		Description of Part (3 lines)	N				15 char	A/N	12	N
ORDER ID#	9k	Order # Assigned by the customer	Y	DELJIT	0.33 to 0.037 inch	0.83 to 0.93mm	8	N	12	Y

Data Title	Data ID	Description	Bar Code	Source Data	Bar Code Mil Spec	Bar Code Height	# of Char. W/O Data Identifier	Type	Font Size	Bold
PART NUMBER	P	Part Identification Code	N	DELJIT			13	A/N	44	Y
SUPPLIER MATERIAL OK		Supplier Material OK (quality requirement)	N				3 lines	A	9	Y
LICENSE PLATE	1J	License Plate (Serial Number) assigned by the supplier, used for uniquely identifying an individual transport unit not to be repeated for 365 days. Note: LPN"s must be unique between the Container label and the Master label	Y Code 128		13	12mm	20 char including UN#	A/N	24	Y
LICENSE PLATE	5J	License Plate (unique Serial Number) assigned by the supplier, used for uniquely identifying a mixed load (multiple part numbers) not to be repeated for 365 days	Y Code 128		13	12mm	20 char. Including UN number	A/N	24	Y
LICENSE PLATE	6J	License Plate (unique Serial Number) assigned by the supplier, used for uniquely identifying a Master (same part number) not to be repeated for 365 days Note: LPN"s must be unique between the Container label and the Master Label, or mixed labels	Y Code 128		13	12mm	20 char. Including UN number	A/N	24	Y
QUANTITY	Q	Quantity, unit of measure assumed to be each unless mutually defined by AAM and supplier.	N	DELJIT			7 char	N	22	Y

Data Title	Data ID	Description	Bar Code	Source Data	Bar Code Mil Spec	Bar Code Height	# of Char. W/O Data Identifier	Type	Font Size	Bold
TOTAL QUANTITY	2Q	For Master & Mixed labels – Total Qty of all individual containers from DELJIT segment	N PDF417	DELJIT			7 char.	N		
# OF PACKS	7Q	For Master & Mixed Label only Qualifier – PK	N PDF417	Supplier Computed			7 char.	N	18	Y
PULL SIGNAL	15K	AAM Plant Pull Signal, or replenishment signal as defined or transmitted by AAM to supplier	N	DELJIT			8 char	A/N	24	Y
SUPPLIER AREA		Open Area for Supplier Use: Suppliers Shall adhere to all bar code guidelines set forth in AIAG B16 – Global Transport Shipping label standards. E.G. (1P) supplier part number.	N							
DATE	9D	Date printed or shipped by supplier. Use international date format (day, month, year), no slashes	N				9 char	A/N	10	Y

Data Title	Data ID	Description	Bar Code	Source Data	Bar Code Mil Spec	Bar Code Height	# of Char. W/O Data Identifier	Type	Font Size	Bold
Note 1		The Font size shall be as large as practical for information being printed. Data titles are all upper case and the same size. (6-9 point). Font should be sans serif (without tails, e.g. Helvetica). Symbology Code 128 should have and "X" dimension of 0.33 to 0.43mm (0.013 to 0.017 inch) as determined by the printing device. Symbology PDF417 should have an "X" dimension of min 0.010" (10 MILS) (0.254mm)								
Note 2		Note: PDF417 or correction (security) level shall be 5, 4, or 3. Use the Max ECC that will print and scan in 2D location								
LOT #	1T	Traceability number assigned by AAM supplier to identify a unique group or entities (lots, batches, etc.)	N				16 char	A/N	10	Y
HEAT NUMBER	2T	Traceability Number for Heat Number	N				16 Char	A/N	10	Y
REV #	2P	Part Revision # assigned by AAM	OPT PDF417	AAM Engineering			3	A/N	10	Y
MARKET LOCATION	21L	AAM Plant consuming location (internal to AAM) as defined or transmitted by AAM to Supplier. Maybe NULL	N	DELJIT			7 char	A/N	36	Y

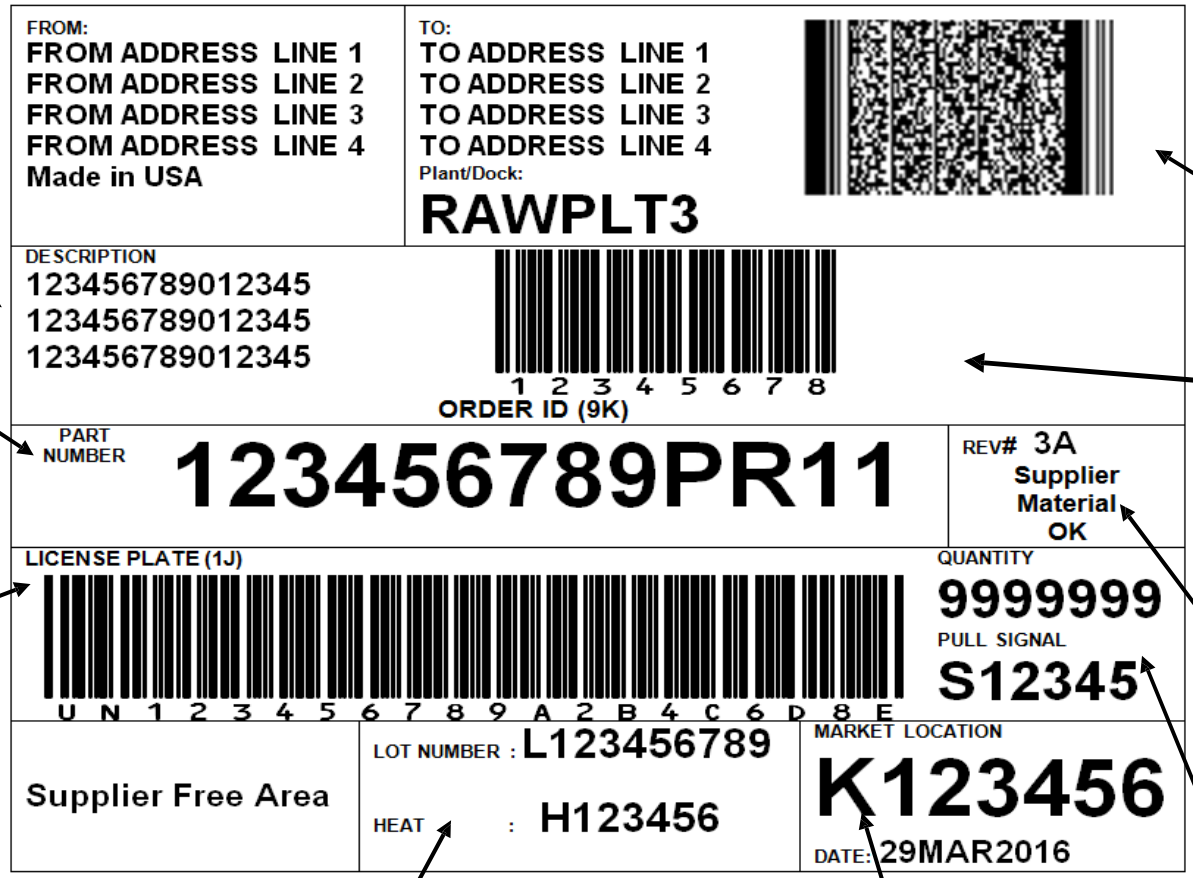
Data Title	Data ID	Description	Bar Code	Source Data	Bar Code Mil Spec	Bar Code Height	# of Char. W/O Data Identifier	Type	Font Size	Bold
Gross Weight	4Q	Optional Use of Gross Weight of Skid or Container as required by AAM materials or transportation	OPT PDF417			PDF417	7 char	N	NA 2D	NA 2D
Tare Weight	11Q	Optional Use of Tare Weight of Skid or Container as required by AAM materials or transportation	OPT PDF417			PDF417	7 char	N	NA 2D	NA 2D

D.7 Detail Label Specifications

Detailed specifications for AAM-GTPL-A (container label), AAM-GTPL-B (master label), and AAM-GTPL-C (mixed load label) are found in this section. It includes information pertinent to label layout, format, PDF417 data specifications, and data sources.

AAM GTPL – A Container Label - FORMAT & FONT SPECS

ALL FONTS SHALL BE UPPER CASE BOLD ARIAL NARROW, HELVETICA CONDENSED OR EQUIVALENT



Title: **FROM**
6 Point 1.5mm, 0.06" max
Address 4 Lines Max 24
Char. Per line max 10
Point 2.5 mm 0.1"
Made in XXX or ASY in XXX
Truncate data if exceeds max length
10 Point, 2.5 mm, 0.1"

Title: **DESCRIPTION**
6 Point 1.5mm, 0.06" max
3 Lines max
12 Point
15 Character s per line

Title: **PART NUMBER**
6 Point 1.5mm, 0.06" max
Part Number Text
44 Point, 11.2mm, 0.44" 13 characters Part # max.

Title: **LICENSE PLATE**
6 Point 1.5mm, 0.06" max
Bar Code
Code 128
(13 mil) nominal
Height 12mm (.05) in min Data Identifier 1J
Assigning Authority UN=DUNS 9 Digits DUNS number
9 Characters **Unique** Container Serial # max (see Section D.6)
Human Readable Text
24 Point, 6.1mm, 0.24"

Note: Spaces are optional in human readable text only. Spaces shall not be included in Bar Code Data

Title: **LOT # #**
6 Point 1.5mm, 0.06" max
10 Point Text 16 characters max
Title: **HEAT # #**
6 Point 1.5mm, 0.06" max
10 Point Text 16 characters max

Title: **Reference Sub Block**
Title: **MARKET LOCATION (GROUP LOCATOR)**
OPTIONAL BASED ON Data received in DELJIT segments (see EDI) 36 Point Font – Bold, Height 9MM (min), 7 Characters - alpha numeric
Title: **DATE**:
9 Point 1.5mm, 0.06" max
Date Text 9 characters, 9 Point BOLD - International Date Format

Title: **TO:**
6 Point 1.5mm, 0.06" max
Address 4 Lines max 24 characters line max 10 Point BOLD
Title**: Plant / Dock**
6 Point 1.5mm, 0.06" max
8 character max
20 Point

Title: **None**
PDF 417 2D Bar Code

Replenishment Sub Block
Title; **ORDER ID** (9K)
6 Point 15mm, 0.06" max
Bar Code: Code 128
34 mil nominal (min.) Height 15mm (min).
Data Identifier Order ID (9K)
8 characters alpha numeric
Human readable text
12 Point Bold, 4.3mm, .0.17"
Pass thru of Data from DELJIT

Title: **REV #**
10 Point 2.5mm
AAM Rev # 10 Point
4 Characters alpha numeric
Title: **None**
Text: **Supplier Material OK**
9 Point Bold

Title: **QUANTITY**
6 Point 1.5mm, 0.06" max
Quantity Text 7 characters
22 Point Bold 4.5mm
Title: **PULL SIGNAL**
6 Point 1.5mm, 0.06" max
24 Point Text **BOLD 8 characters max**

AAM-GTPL-A Label Purpose: Use for a Single Container holding one or more parts with the SAME part number.

2D Data Required For AAM-GTPL-A Container Label (1J)

	Data	Description	EDI	Char.	Comments
	[)>	Message Header	N		
	06 GS	Format Header	N		
1J	1JUN123456789**SA2B4C6D8E**GS	LPN (w/Serial#)	Y	20	
	1T1234567891123456GS	LOT #	Y	16	Print Human Readable
	Q9999999GS	QTY	Y	7	
	9K12345678GS	ORDER ID #	Y	8	Numeric Only
	P123456789PR1GS	PART #	Y	13	
	15KS12345GS	PULL #	Y	8	
	2P3AGS	REV #	**Y**	3	
	2T12345678GS	HEAT #	**OPT**	8	Required for Steel Suppliers
	20LRAWPLT3GS	PLANT /DOCK	Y	8	
	21LK12345GS	GROUP/LOCATOR	Y	7	
	9D03MAR2004GS	DATE	Y	9	
	4Q1000GS	GROSS WEIGHT	**OPT**	7	
	11Q1000	TARE WEIGHT	**OPT**	7	
	RS	Format Trailer	N		
	EOT	Message Trailer	N		

OPT = OPTIONAL USE AS SPECIFIED BY AAM TRANSPORTATION OR PLANTS

NOTE: THE SEQUENCE OR ORDER IN THAT DATA IS ENCODED IN THE 2D BAR CODE IS NOT SIGNIFICANT. THE DATA IDENTIFIERS (DI) PERMIT SOFTWARE SYSTEMS TO LOCATE AND/OR DETERMINE WHICH DATA IS NEEDED. FOR MORE DETAILED SPECIFICATIONS ON BUILDING (2D) PDF417 STRUCTURE SEE THE AIAG B16 GTL DOCUMENT.

GTPL – B Master Label - FORMAT & FONT SPECS

ALL FONTS SHALL BE UPPER CASE BOLD ARIAL NARROW, HELVETICA CONDENSED OR

Title: **FROM**
6 Point 1.5mm, 0.06" max
Address 4 Lines Max
24 Char. Per line max
10 Point 2.5 mm 0.1"
Made in XXX or ASY in XXX
Truncate data if exceeds max length
10 Point, 2.5 mm, 0.1"

Title: **DESCRIPTION**
6 Point 1.5mm, 0.06" max
3 Lines max
12 Point
15 Character s per line

Title: **PART NUMBER**
6 Point 1.5mm, 0.06" max
Part Number Text
44 Point, 11.2mm, 0.44"
13 characters Part # max.

Title: **LICENSE PLATE**
6 Point 1.5mm, 0.06" max
Bar Code
Code 128
(13 mil) nominal
Height 12mm (.05) in min
Data Identifier 6J
Assigning Authority UN=DUNS
9 Digits Supplier DUNS number
9 Characters Container Serial # max (see Section D.6)
Human Readable Text
24 Point, 6.1mm, 0.24"

Note: Spaces are optional in human readable text only. Spaces shall not be included in Bar Code Data

Title: Reference Sub Block
Title: **MASTER LABEL**
36 Point Font
Bold Height 9mm (min)

Title: **TO:**
6 Point 1.5mm, 0.06" max
Address 4 Lines max
24 characters line max
10 Point BOLD
Title**: Plant / Dock**
6 Point 1.5mm, 0.06" max
8 character max
20 Point

Title: **None**
PDF 417 2D Bar Code
SEE DETAILED SPECS ON USE

Replenishment Sub Block
Title; **ORDER ID** (9K)
6 Point 15mm, 0.06" max
Bar Code: Code 128
34 mil nominal (min.)
Height 15mm (min).
Data Identifier Order ID (9K)
8 characters alpha numeric
Human readable text
12 Point Bold, 4.3mm, .0.17"
Pass thru of Data from DELJIT

SEE DETAILED SPECS WHEN TO PRINT OR TO SUPPRESS

Title: **REV #**
10 Point 2.5mm
AAM Rev # 10 Point
4 Characters alpha numeric

SEE DETAILED SPECS ON USE

Title: **QUANTITY**
6 Point 1.5mm, 0.06" max
Quantity Text 7 characters
18 Point Bold
Title: **# of Packs**
6 Point 1.5mm, 0.06" max
# of Packs Text 7 characters
18 Point Text BOLD 7 characters max

DETAILED SPECS FOR ORDER ID #
Rules for Printing or Supress Printing

Rule 1: For each 6J type label (AAM-GTPL-B MASTER), if all individual containers (1J) labels have the **SAME** Pull signal number the **ORDER ID SHALL** be printed on the label.
Rule 2: If the parts on the (master label) are **NOT** on *AAM Pull signals*, or IF the transport unit (skid) contains **MULTIPLE different Pull signals** then the Supplier SHALL **suppress printing the ORDER ID #.** In either case the individual containers SHALL have (two) 1J (AAM-GTPL-A) labels attached per AAM packaging specs in Section E (See packaging specs. The ORDER ID # SHALL be printed on each AAM-GTPL-A label)

AAM-GTPL–B Label Purpose: Used for a Master Transport Unit holding multiple containers with the SAME part number

2D Data Required For AAM-GTPL-B Master Label (6J)

Data	Description	EDI	Char.	Comments
]>	Message Header	N		
06 GS	Format Header	N		
6J 6JUN123456789**SA2B4C6D8E**GS	LPN (w/Serial#)	Y	20	
9K12345678GS	ORDER ID #	Y	8	Numeric
P123456789PR1GS	PART #	Y	13	
2Q9999999GS	TOTAL QUANTITY	Y	7	
7Q9999 GS	NUMBER OF PACKS (1J)	N	7	
RS	Format Trailer	N		
EOT	Message Trailer	N		
Optional Data				
4Q1000	GROSS WEIGHT	OPT	7	Specified by AAM Materials
11Q1000	TARE WEIGHT	OPT	7	Specified by AAM Materials

AAM GTPL – C Mixed Load Label - FORMAT & FONT SPECS

ALL FONTS SHALL BE UPPER CASE BOLD ARIAL NARROW, HELVETICA CONDENSED OR EQUIVALENT

Title: **FROM**
6 Point 1.5mm, 0.06" max
Address 4 Lines Max
24 Char. Per line max
10 Point 2.5 mm 0.1"
Made in XXX or ASY in XXX
Truncate data if exceeds max length
10 Point, 2.5 mm, 0.1"

Title: **Reference Sub Block B1**
PART # Text
13 char. max
10 Point,.2.5mm, 0.1"
TOTAL QTY Text
7 Characters
10 Point 2.5mm, 0.1"
 # OF PACKS Text
10 Point 2.5mm, 0.1"

Title: **LICENSE PLATE**
6 Point 1.5mm, 0.06" max
Bar Code
Code 128
(13 mil) nominal
Height 12mm (.05) in min
Data Identifier 5J
Assigning Authority UN=DUNS
9 Digits DUNS number
9 Characters Container Serial # max (see Section D.6)
Human Readable Text
24 Point, 6.1mm, 0.24"

Note: Spaces are optional in human readable text only. Spaces shall not be included in Bar Code Data

Title: **TO:**
6 Point 1.5mm, 0.06" max
Address 4 Lines max
24 characters line max
10 Point BOLD
Title**: Plant / Dock**
6 Point 1.5mm, 0.06" max
8 character max
20 Point

Title: **None**
PDF 417 2D Bar Code
SEE DETAILED SPECS ON USE

Repeat Reference Sub Block B1
On Line 2 (4 times)

SEE AIAG B-16 SPECS FOR OPTIONAL USE OF 8 ½ x11 mixed load detail sheet

Repeat Reference Sub Block B1
On Line 2 (4 times)

SEE AIAG B-16 SPECS FOR OPTIONAL USE OF 8 ½ x11 mixed load detail sheet

Title**:** Reference Sub Block
Title: **MIXED LOAD**
36 Point Font – Bold
Height 9MM (min)

Rules: For each 5J LPN (mixed load) labels the supplier SHALL NOT print the Order ID #, except in the 2D label block. See 2D detail spec sheet for data required.

AAM-GTPL–C Label Purpose: Used for a Mixed Transport Unit holding multiple containers with the DIFFERENT part number

2D Data Required For AAM-GTPL-C Mixed Load Label (5J)

	Data	Description	EDI	Char.	Comments
	[)>	Message Header	N		
	06 GS	Format Header	N		
5J	5JUN123456789**SA2B4C6D8E**GS	LPN (w/Serial#)	Y	20	
	RS	Format Trailer	N		
	06 GS	Format Header	N		
1J	1JUN123456789**SA2B4C6D8E**GS	LPN (w/Serial#)	X	20	
	9K12345678GS	ORDER ID #	Y	8	Numeric
Part # 1	P123456789PR1GS	PART #	Y	13	
	2Q9999999GS	TOTAL QUANTITY	Y	7	
	7Q9999	NUMBER OF PACKS (1J)	N	7	
	RS	Format Trailer	N		
	06 GS	Format Header	N		
	1JUN123456789**SA2B4C6D8E**GS	LPN (w/Serial#)	X	20	
Part # 2	9K12345678GS	ORDER ID #	Y	8	
	P123456789PR1GS	PART #	Y	13	
	2Q9999999GS	TOTAL QUANTITY	Y	7	
	7Q9999	NUMBER OF PACKS (1J)	N	4	
	RS	Format Trailer	N		
	06 GS	Format Header	N		
	1JUN123456789**SA2B4C6D8E**GS	LPN (w/Serial#)	X	20	
Part # 3	9K12345678GS	ORDER ID #	Y	8	
	P123456789PR1GS	PART #	Y	13	
	2Q9999999GS	TOTAL QUANTITY	Y	7	
	7Q9999	NUMBER OF PACKS (1J)	N	4	
	RS	Format Trailer	N		
	06 GS	Format Header	N		
	1JUN123456789**SA2B4C6D8E**GS	LPN (w/Serial#)	X	20	
Part # 4	9K12345678GS	ORDER ID #	Y	8	
	P123456789PR1GS	PART #	Y	13	
	2Q9999999GS	TOTAL QUANTITY	Y	7	
	7Q9999	NUMBER OF PACKS (1J)	N	4	
	RS	Format Trailer	N		

	06 GS	Format Header	N		
	1JUN123456789**SA2B4C6D8E**GS	LPN (w/Serial#)	X	20	
Part # 5	9K12345678GS	ORDER ID #	Y	8	
	P123456789PR1GS	PART #	Y	13	
	2Q9999999GS	TOTAL QUANTITY	Y	7	
	7Q9999	NUMBER OF PACKS (1J)	N	4	
	RS	Format Trailer	N		
	06 GS	Format Header	N		
	1JUN123456789**SA2B4C6D8E**GS	LPN (w/Serial#)	X	20	
Part # 6	9K12345678GS	ORDER ID #	Y	8	
	P123456789PR1GS	PART #	Y	13	
	2Q9999999GS	TOTAL QUANTITY	Y	7	
	7Q9999	NUMBER OF PACKS (1J)	N	4	
	RS	Format Trailer	N		
	06 GS	Format Header	N		
	1JUN123456789**SA2B4C6D8E**GS	LPN (w/Serial#)	X	20	
Part # 7	9K12345678GS	ORDER ID #	Y	8	
	P123456789PR1GS	PART #	Y	13	
	2Q9999999GS	TOTAL QUANTITY	Y	7	
	7Q9999	NUMBER OF PACKS (1J)	N	4	
	RS	Format Trailer	N		
	06 GS	Format Header	N		
	1JUN123456789**SA2B4C6D8E**GS	LPN (w/Serial#)	X	20	
Part # 8	9K12345678GS	ORDER ID #	Y	8	
	P123456789PR1GS	PART #	Y	13	
	2Q9999999GS	TOTAL QUANTITY	Y	7	
	7Q9999	NUMBER OF PACKS (1J)	N	4	
	RS	Format Trailer	N		
	EOT	Message Trailer	N		

2D total GTPL – C Label – 8 Part Numbers maximum……..546 (Approximate)
Note: More than 8 part numbers use 8 ½ x 11 sheets per AIAG B16 specs with multiple 2D blocks

Optional Data

4 1000	GROSS WEIGHT	OPT	7	Specified by AAM Materials
11Q1000	TARE WEIGHT	OPT	7	Specified by AAM Materials
2P3A	REV # (if applicable)	OPT	3	Only required for AAM
Prototype	LOT NUMBER	OPT	16	Specified by AAM Materials
	HEAT NUMBER	OPT	16	Specified by AAM Material

AAM-GTPL – A Label Data Sources

Information sent by AAM on the **DELJIT**

AAM-GTPL – B Label Data Sources

Information sent by AAM on the **DELJIT**

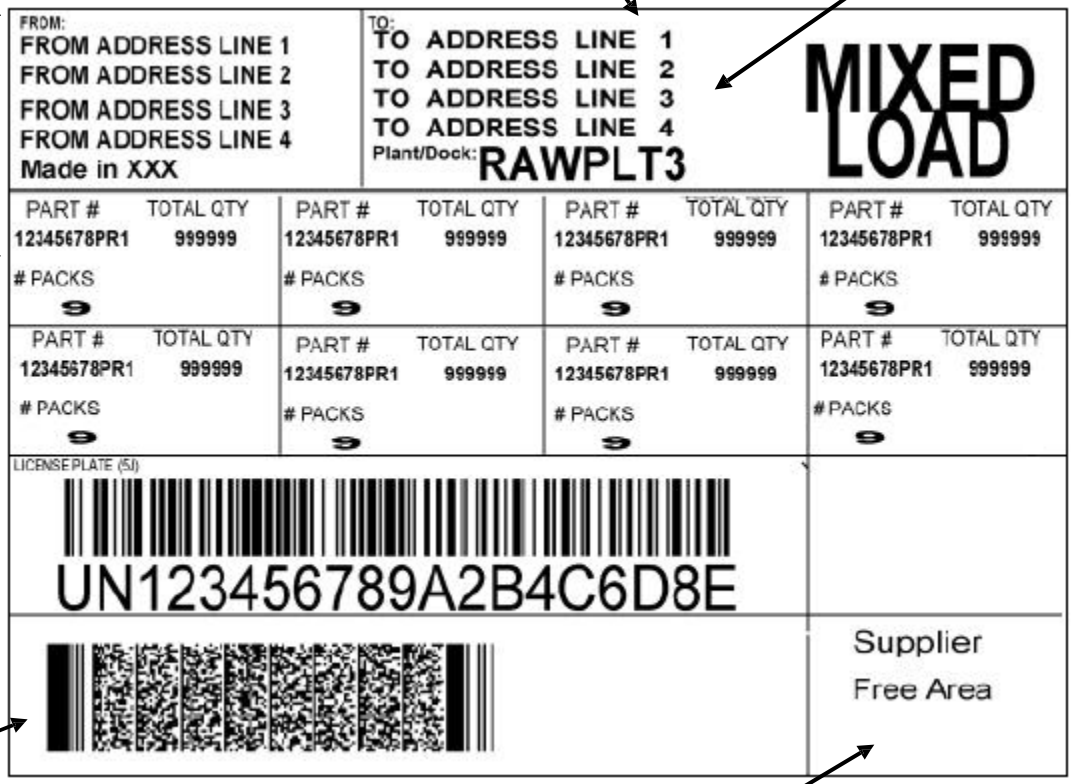
AAM-GTPL – C Label Data Sources

Information sent by AAM on the **DELJIT**

Ship from Address Lines
Comes from **NAD+SU** at segment group 2

Ship to Address Lines
Comes from **NAD+ST** at segment group 2

Location
Comes from **LOC+11** at segment group 9



Part Numbers
Comes from the **LIN** at segment group 7

Customer Part Number must match AAM Part Number on the order

MIXED LOAD
belongs in the upper right
ENCODED PDF
required as noted
UNRESTRICTED AREA
should be blank

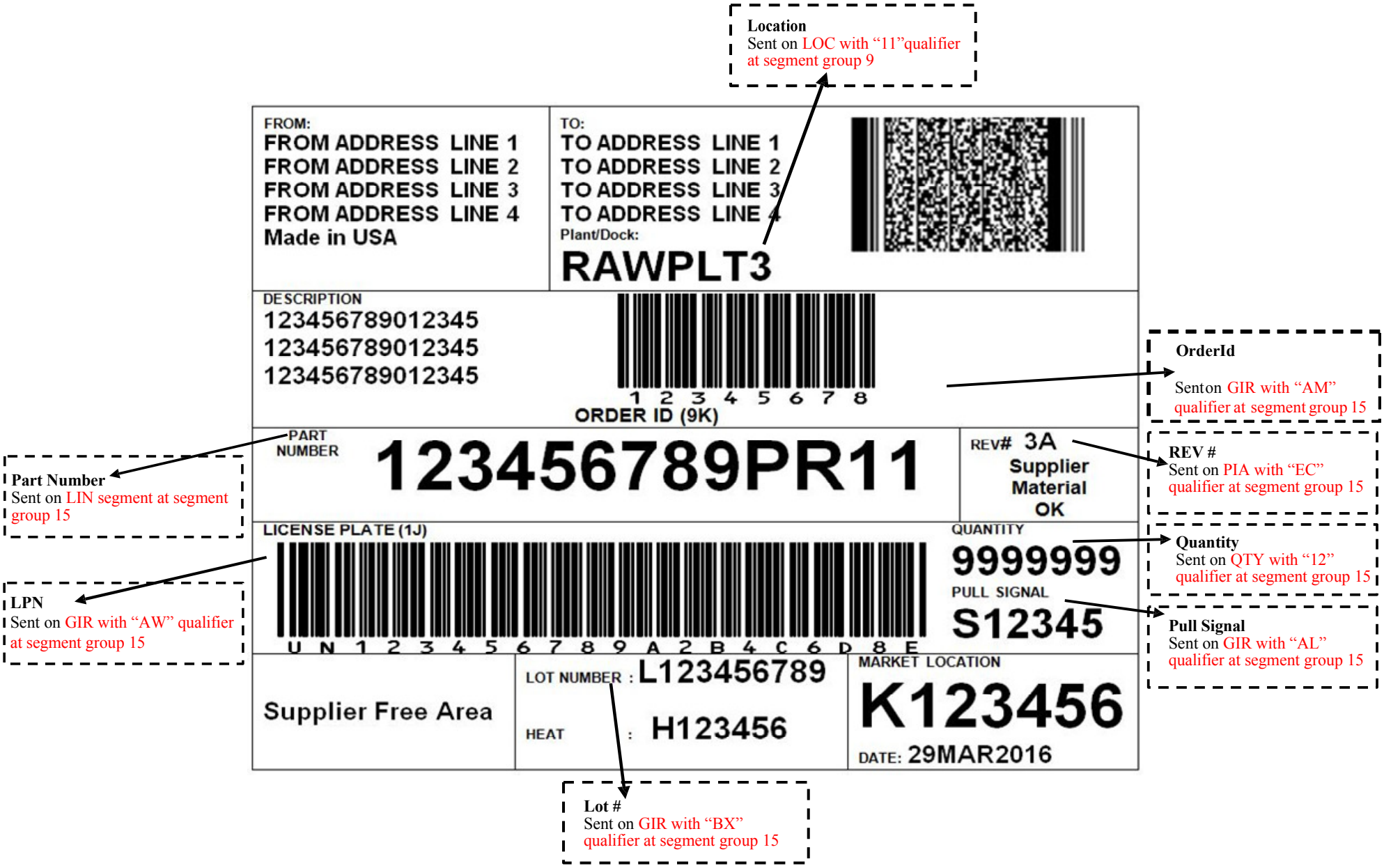
Encoded PDF 417 2D Bar Code
Code shall include data from details page in AAM label specs

Unrestricted Area
For Supplier use.

Note: Use appropriate Data Identifiers and Data syntax for all bar codes.

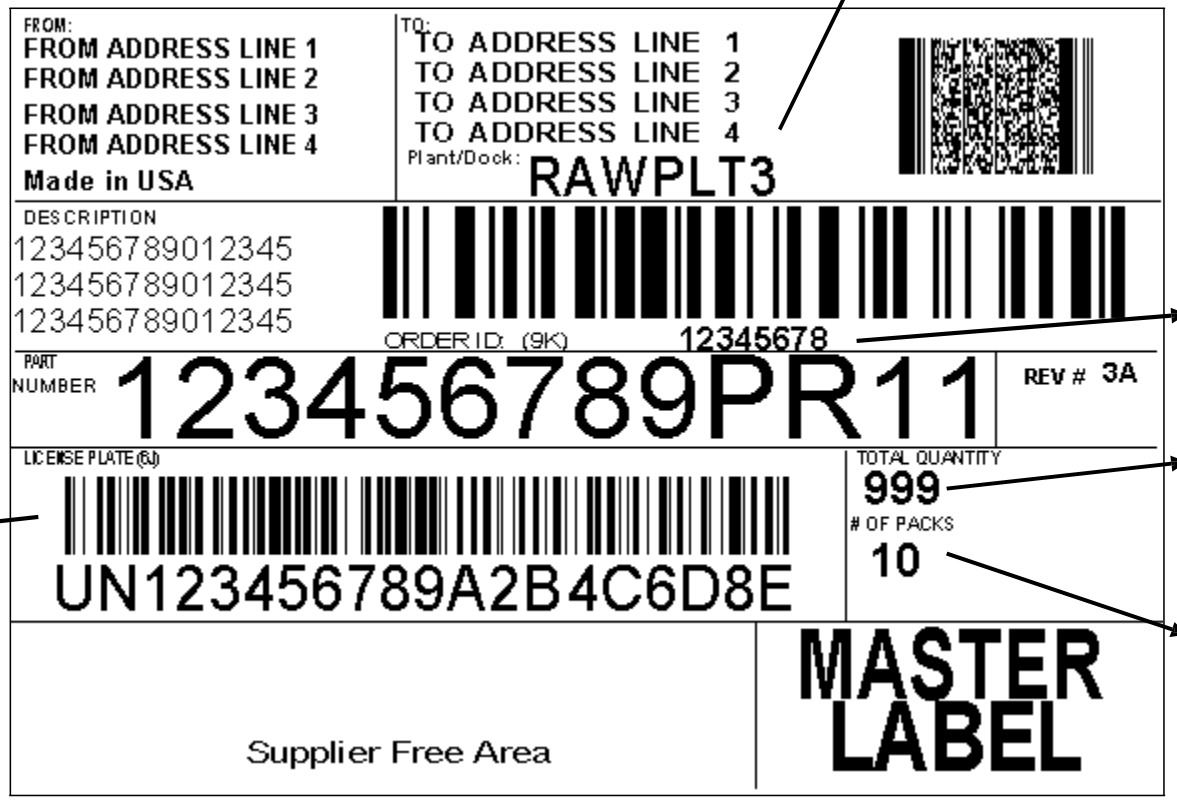
AAM-GTPL – A Label Data Sources

Information sent by AAM on the **DESADV**



AAM-GTPL – B Label Data Sources

Information sent by AAM on the **DESADV**



Location
Sent on LOC with "11"qualifier at segment group 9

Order Id
Sent on GIR with "AW" qualifier at segment group 13

Part Number
Sent on LIN segment at segment group 15

Note: Total Qty should match the detail of all individual containers (1J) on the DESADV for this transport unit

LPN
Sent on GIR with "AW" qualifier at segment group 13

Number of Packs
Sent on PAC at segment group 11

Important Note: See EDI Implementation Guidelines for DESADV Group 13 Segment GIR for more detailed explanations. Also see examples at the back of the DESADV guidelines.

AAM-GTPL – C Label Data Sources

Information sent by AAM on the **DESADV**

Location
Sent on LOC with "11"qualifier at segment group 9

Part Number
Sent on LIN segment at segment group 15

LPN
Sent on GIR with "AW" qualifier at segment group 13

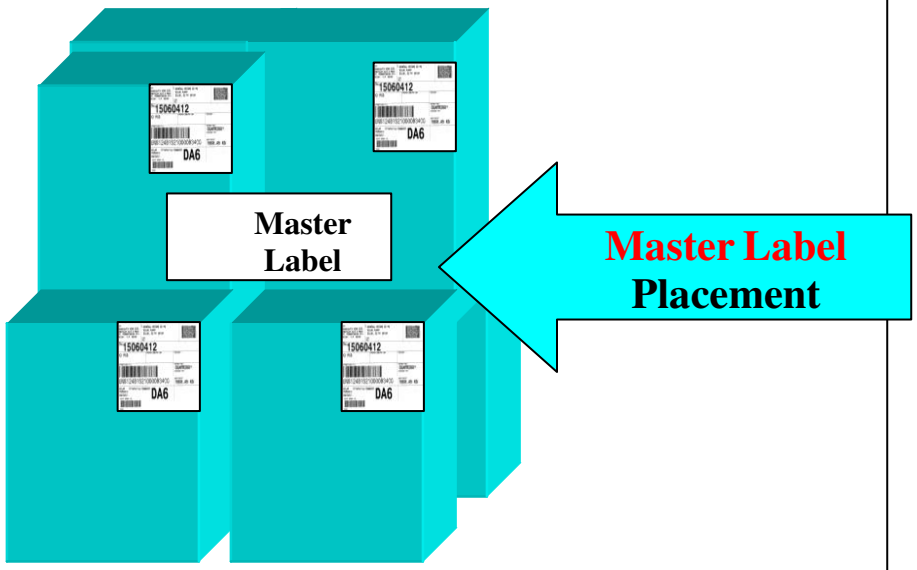
Note: Total Qty should match the detail of all individual containers (1J) on the DESADV for this transport unit

Number of Packs
Sent on PAC at segment group 11

Important Note: See EDI Implementation Guidelines for DESADV Group 13 Segment GIR for more detailed explanations. Also see examples at the back of the DESADV guidelines.

E. Packaging

There are two types of packaging, Outer and Inner. Inner packages utilize container labels (1J LPN type) and outer packages require the use of the Master Label (6J LPN), or on rare occasions the Mixed Load (5J LPN type). An OUTER package is any container that contains multiple packages of individual (inner) transport units. INNER packages are the smallest shippable package units of a material. Example: Pallets = (Outer) with boxes = (Inner).



If shrink wrapped apply to exterior of plastic, if not shrink wrapped apply so labels are scannable and not damaged, or wrinkled. Do Not place Master labels on top of the containers.

Label Placement:

(2) Container Labels on Adjacent Corners
(2) Master Labels on Opposite Sides of Outer Containers.

LPN's on both (2) labels per container SHALL be the same

Note: Some suppliers apply (4) Master labels on each side of the pallet. This is acceptable to AAM.

Note: All Master labels per transport unit or skid MUST have identical LPN's.

Important Note: Containers labels (inner) MUST have different unique LPN's from the Master labels

See Appendix for instructions on proper Label Placement per AIAG specs.

Appendix I Label Placement

Labels per AIAG packaging guidelines **SHALL** be placed no closer than 1.25 inches (32 mm) from any container edge. Labels application and positioning toward the center of the sides of rectangular, corrugated containers **SHOULD** be avoided due to excessive abrasion during transport and render the label un-readable!

For placement on various types of containers, label **SHOULD** be applied in an easily accessible location -See example:

For unit loads, the placement of the label **SHALL** be on the upper half of the unit load. The bottom edge of the label **SHALL NOT** be higher than 60 inches (152cm) from the bottom of the unit load.

Unit loads **SHALL** have identical labels on **two adjacent or opposite sides** to reduce the destruction of both labels in the event of damage.

Note: Individual AAM plants, as required may dictate additional labeling requirements.

8.3 Label Orientation

LABEL PLACEMENT AND ORIENTATION RULE	INTERPRETATION
Labels should be placed on the side of the container with the bars perpendicular to the base of the container.	See Figure 11

Figure 11. Label Orientation

LABEL PLACEMENT AND ORIENTATION RULE	INTERPRETATION
Each supplying location shall be responsible to ensure that bar code-matrix labels and tags are sufficiently secured and protected and applied wrinkle-free so they are readable at point of final customer usage.	
Label Placement on Master and Mixed Loads For master and mixed loads, the label shall be placed on the upper half of the unit load. The bottom edge of the label on a master and mixed load should not be higher than 60 inches (152 cm) from the bottom.	

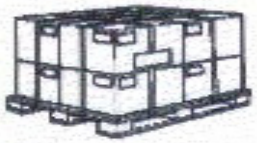
See AIAG B-10 Label Specifications documents for more details on placement. AIAG members can download the specifications from this site: http: //www.aiag.org.

Caution: All labels on the container must be identical.
Obsolete labels shall be rendered unusable by either being removed, defaced, or covered.

BOX OR CARTON

BASKET, WIRE MESH CONTAINER

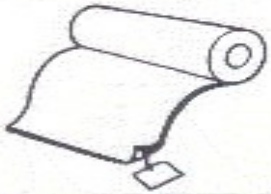
CARTONS ON PALLET



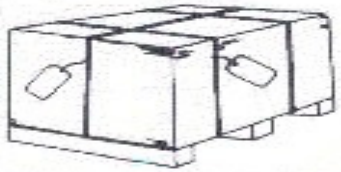
OPEN METAL BIN OR TUB

Caution: All labels on the container must be identical.
Obsolete labels shall be rendered unusable by either being removed, defaced, or covered.

ROLL

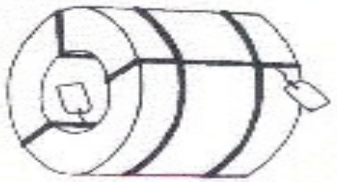


SHEETS/CUT LENGTHS/BLANKS



BALE

SINGLE COIL



Appendix II Glossary of Terms

Terms	Definition
1J Label	AAM-GTPL – A individual container label
5J Label	AAM–GTPL–B Mixed Load Label – for skids or packs having different part numbers
6J Label	AAM–GTPL–C Master Label for skids, packs having multiple containers of the same part, banded or shrink-wrapped.
1D Symbol	1D **one-dimensional** or linear symbol, such as Code 128. An array (linear sequence) of variable width rectangular bars and/or spaces, arranged in a predetermined pattern, following specific rules, to represent elements of data; these bar and space patterns are referred to as **characters**. A bar code symbol typically contains a leading quiet zone, a start character, data character(s) including a check character (if any), a stop character and a trailing quiet zone.
2D Symbol	2D **two-dimensional** symbol**.** A machine-readable symbol that must be examined both vertically and horizontally to read the entire message. A 2D symbol may be one of two types of machine-readable symbols: a Matrix Symbol or a Stacked Symbol. 2D symbols differ from linear bar codes in that they have the capability for high data content, small size, data efficiency, and error correction.
Alphanumeric	A character set that contains alphabetic characters (letters), numeric digits (numbers), and usually other characters such as punctuation marks.
Bar Code Symbol	The combination of symbol characters and features required by a particular Symbology, including quiet zones, start and stop characters, data characters, check characters and other auxiliary patterns, which together form a complete scan able entity.
Character (CH)	The smallest group of elements that represents one number, letter, punctuation mark or other information.
Code 128	For the purposes of this standard, Code 128 shall mean the symbology as described in ISO/IEC15417
Container	A receptacle or flexible covering for shipping goods. Example is a box, bag, package or pallet. (See also **Transport Unit** and **Pack, Package** or **Load.**)
Customer	In a transaction, the party that receives, buys, or consumes an item or service.
Customer Part Number	The part number as defined by the customer.
Data Element	The smallest named item of information that can convey data, analogous to a field in a data record or a word in a sentence.
Data Element Separator	The special character used to separate data elements in a data format.
Data Identifier (DI)	A specified character (or string of characters) that defines the general category or intended use of the data that follows. Data Identifiers are defined by ANSI MH10.8.2 / ISO 15418. The DI is not part of the data.

Terms	Definition
ECC (Error Correcting Code)	A technique used at the byte level to detect and correct data transmission errors. Supplemental bits introduced or source encoded into a data stream to allow automatic correction of erroneous bits and/or derivation of missing bits, in accordance with a specific computational algorithm. See Error Correction Level.
Element	A single bar or space in a linear or stacked symbol or a single cell (module) in a matrix symbol (not the same as **Data Element**).
Element Width	The thickness of an element measured from the leading edge of an element to the trailing edge of the same element (see **X dimension**.)
Heat Code / Batch Code	An identifier used by a mill to track a production run of a material for quality control. (Similar to Lot Number)
Human Readable Interpretation	The human readable letters, digits or other characters representing the data encoded in/and printed along with the linear bar code or 2D symbol.
Item	A single part or material purchased, manufactured and/or distributed.
Label	A piece of paper, plastic, card stock or metal that is marked (by printing or some other means) and attached to an object to convey information. For purposes of this document, attachment of a label is to be on the exterior of a container.
Lot Number	A quantity of homogeneous material traceable to the date of manufacture. The Lot number is defined by the Supplier. The Lot size shall not exceed one shift or one production run, whichever is smaller. Manufacturing records are to be traceable to the Lot number and should be maintained for 7 years after the manufacture of the parts. The content of the Supplier's manufacturing records must be reviewed with the respective AAM-SQD.
Manufacturer	Actual producer or fabricator of an item; not necessarily the supplier in a transaction.
Master Load	A multiple pack or unit load of common items (sharing a single part number), such as a pallet.
Message	A continuous stream of data elements, including formatting characters and delimiters, to be encoded in a (two-dimensional) symbol or set of symbols.
Message Envelope	A pair of elements consisting of a Message Header and a Message Trailer that delimits the start and end of a data stream in a given message.
Message Header	A character or group of characters that defines the start of a Message Envelope.
Message Trailer	A group of character used to identify the end of a Message Envelope.
Pack, Package or Load	A transport package (container) that provides protection and containment of items plus ease of handling by manual or mechanical means, for example: bags, cartons, pallets, bins and racks.
Pallet	A platform to hold unit loads, permitting stacking of materials and transport packages, and the movement of the materials as a single load. A pallet may be either expendable (e.g. wood) or returnable (e.g. plastic).
Part	An identifiable item that has a unique name and/or number assigned to it.
Part Number	A unique code that identifies a part, assembly, component or kit.
Quantity	On a label, the marking that indicates the number of parts or items or the amount in any other unit of measure that is contained within the package.
Quiet Zone	Areas free from interfering markings surrounding a bar code symbol and, in particular, preceding the start character and following the stop character. Also referred to as "light margin" or "clear area".
Reader	A device consisting of a scanner and a decoder.

Terms	Definition
Scanner	An electronic device to collect and convert reflected light from the elements (e.g., bars and spaces in linear symbols) of a symbol into electrical signals for processing by the decoder.
Serial Number	A string of numeric or alphanumeric characters in the issuer's information system used for uniquely identifying an individual item or entity for its life. This character string shall not be repeated within 365 days to a single customer.
Shall/Should	In this document, the word "shall" indicates a requirement and the word "should" indicates a recommendation.
Ship From	On a transport label, the address of the location where the carrier will return the shipment if the container is undeliverable.
Ship To	On a transport label, the address of the location where a carrier will deliver the shipment.
SQA	Supplier Quality Assurance is a department located at each assemble facility.
Structure	The order of data elements in a message.
Supplier	In a transaction, the party that produces provides or furnishes an item or service.
Symbol	A graphic array of light and dark elements that forms a complete scan able entity.
Symbology	A standard means of representing data in bar code form. Each symbology specification sets out its particular rules of composition or symbol architecture.
Syntax	The way in which data are combined to form messages. Syntax also includes rules governing the use of appropriate identifiers, delimiters, separator character(s) and other non-data characters within the message. Syntax is the equivalent of grammar in spoken language.
Transport Unit	One or more transport packages or other items held together by means such as strapping, interlocking, glue, shrink wrap, or net wrap, making them suitable for transport, stacking, and storage as a unit.
Unit Load	One or more transport containers or other items held together by means such as strapping, interlocking, glue, shrink wrap or net wrap, making them suitable for transport, stacking and storage as a unit.
X Dimension	The intended width of the narrowest elements (for bar codes or two-dimensional symbols) required by the application, symbology specification, or both.
Y Dimension	The intended height of the elements dictated by the application, symbology specification, or both.

Appendix III AAM Plant List

A comprehensive list of AAM sites can be found at
http://www.aam.com/Company-Overview/Global-Locations-8.html

Appendix IV Normative References

AIAG Documents
Automotive Industry Action Group
26200 Lahser Road, Suite 200
Southfield, Michigan 48034
Customer Service: 248-358-3003
Fax: 248-358-9760
Internet: http://www.aiag.org

ANSI and ISO Documents
American National Standards Institute
Attn: Customer Service
11 West 2nd Street
New York, NY 10036
Phone: 313-642-4980
Internet: http://www.ansi.org

AIM Documents
AIM Inc.
634 Alpha Drive
Pittsburgh, PA 15238
Phone: 412-963-8009
Internet: http://www.aimglobal.org

DUNS Documents
Dun & Bradstreet
One Diamond Hill Road
Murray Hill, NJ 07974
Phone: 908-665-5000
Fax: 908 665-5000
Internet: http://www.dnb.com