

North American Labeling Requirements

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TRW Automotive Livonia, MI

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# 1. Introduction

The information described in this document contains specifications for bar code labels used on material to be received at TRW facilities from suppliers and inter-company sources. This document was developed in conjunction with, and is an extraction of the following standards, developed by the Automotive Industry Action Group (AIAG) and the American National Standards Institute (ANSI).

Applicable Specifications:

Shipping/Parts Identification Label Standard, AIAG B-3 Version 3.00 Released 7/93 Trading Partner Labels, AIAG B-10 Version 2.00 Released 2/00 Parts Identification and Tracking Standard, AIAG B-4 Version 2.00 Released 2/98

Data Application Identifier Standard ANSI MH10.8.2

Bar Code Print Guideline ANSI X3.182

For further information and publications on AIAG standards contact: Automotive Industry Action Group, 26200 Lahser Road, Suite 200, Southfield, Michigan 48034, Phone (248) 358-3570.

# 2. Purpose

This labeling specification provides guidelines for the printing and placement of Shipping/Parts Identification Labels. These labels are designed to improve TRW Automotive and trading partner productivity by allowing effective and efficient capture of data for production counts, warehouse input/output, cycle counting, shipper generation, forwarding, freight transfer control, receiving, Electronic Data Interchange (EDI) with Advance Shipment Notice (ASN) and other inventory controls. Adherence to these specifications for labels will reduce labor costs, improve data accuracy, and increase overall systems value.

The TRW Automotive buyer **SHALL** be responsible to notify and enforce these requirements on the suppliers. Deviations from this standard may be used subject to approval by the Materials Manager at the receiving facility **AND** the TRW Automotive buyer. Deviations must be formally submitted to the TRW buyer or receiving facility Materials Manager and approved in writing.

This labeling specification applies to all products being shipped to **ANY** TRW Automotive location in North America, regardless of the suppliers location. Failure to comply with any of these requirements could result in the lowering of the Supplier Quality Rating and/or generate charge backs to supplier for additional handling fees that result from non-conformance to this specification.

All parts shipped after August 1, 2003 must be shipped in accordance with this standard.

Any questions or concerns regarding this specification should be directed to your TRW purchasing representative.

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

3.

# TYPES OF LABELS AND REQUIRED DATA FIELDS

#### 3.1 Label Types

Four types of labels are defined and required by TRW Automotive, depending on how material is packaged for shipment as described below. (*Exhibits are for reference only, the Supplier* **SHOULD** *utilize these formats. Actual labels may be different depending up printing capability of the Supplier and Data being supplied.*)

#### 3.2 Single Pack Carton Label (Ref Exhibit A)

**SHALL** be used to identify a single pack or carton containing the same part number. It is the most commonly used shipping/parts identification label.

#### 3.3 Master Load Pallet Label (Ref Exhibit B)

**SHALL** be used for containers, pallets, skids, etc., holding more than one single pack of the same part number. The Master Label is used to summarize the total contents of a single load or palletized shipping unit.

#### 3.4 Mixed Load Pallet Label (Ref Exhibit C)

**SHALL** be used for containers, pallets, skids, etc., holding more than one single pack of different part numbers.

#### 3.5

#### 3.63.5 Internal Container Label (Subpack Label) (Ref Exhibit E)

**SHALL** be used for internal containers when multiple containers or subpacks of the same part number are shipped inside a single pack carton container. This label is used in addition to labels for single or multiple containers.

# 3.73.6 Label application and usage table

The following table (*Figure 1*) will help you determine which type(s) of label(s) to use depending upon how the material is packaged and shipped.

### Figure 1 - Label Application and Usage

Packaging Method	Single pack carton Label	Master Load pallet Label	Mixed Load pallet Label	Internal Container Label
Single Container Same Part Number	Х	X		
Single Container, Multiple Lot / PO	Х	X (For each LOT or PO)		
Multiple Containers same Part Number /single pallet.	X	X		
Multiple Containers different Part Number /single pallet	Х	X (For Each Part Number)	X	
Internal pack (sub-pack)	X			Х

3.8

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3.93.7 Bar Code Label Required Data Fields Depending upon the bar code label type required the following table (*Figure 2*) defines the minimum required Bar Code and Human readable data fields for each label application...

Figure 2	-Description	of Data	Elements
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Description of each Data Identification Label in wh	Element format and the Parts ich it is used	Bar Code C	Vinboy	Data Identific Data	(ID)	Human Res.	Waxinum caaloo lox Excitation cara teentifies Data	, /				Internal	Packing Slip
		Bar Code	Human F	Data Ider	Data title ideni:	Human F	Maximum adalie Esciuding Data Identifiere Data	\$/ s	Single Pack Carton Label		Mixed Load Pallet Label	Container Label	/Delivery Note
Data Field	Description	Í	1 -	Data Ele	ment For	mat				Data Fie	eld Label Uasge	Application	
TRW Part Number	Part Number as assigned on the TRW Purchase Order	х	x	Р	х		18		х	х		x	
Quantity	Total Quantity of the same Part Number within the same container or master carton	х	х	Q	х		5		Х	Х		х	
Supplier Number	The Supplier code as assigned to you by TRW	Х	Х	۷	Х		7		Х	Х			
Serial Number - Single Pack	Unique container serial number assigned by the Supplier for a single container or pack of the same part number	x	x	s	x		10		x				
Serial Number - Master Pack	Unique pallet or master container serial number assigned by the supplier for more than one single container of different part numbers	x	х	4S	x		10			х			
Supplier Lot Number	Supplier manufacturing lot code assigned by the supplier for a container or containers	Х	х	1T	х		10		Х	х		x	
TRW Purchase Order Number	Purchase Order number as assigned by TRW for a given part number(s)	Х	х	к	х		10		Х	х			
Revision Level	Alpha Character representing the Eng. Revision level corresponding to the material within a single container	х	х	2P	х		3		x	х			
Packing Slip	Shipment Reference number assigned by the supplier	Х	х	11K	х		10			х			х
Date	Date indicating the date of manufacturing, date of packing, or date of shipment					х	N/A		Х				
Ship To	Shipping address of the destination plant					Х	N/A		Х	Х	Х		
Ship From	Company name, address, and phone number of the Supplier					х	N/A		X	х	х		
Part Description	Part description as stated on the TRW Purchase order					х	N/A		X				
Certification Status	Supplier certification status as determined by TRW Purchasing					х	N/A		Х				
Supplier Part Number	Part Number as assigned by the supplier	Х	Х	1P	Х							Х	

# 4. GENERAL LABEL INFORMATION - Format, Size and Material

#### 4.1 Format

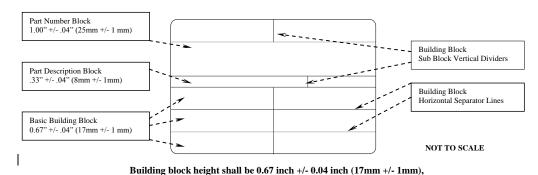
Label format is an open architecture structure utilizing modular "building block(s)" as described in the AIAG B-10 specification. Each data area **SHALL** have the Data Title and utilize Data Identifiers as shown in the label exhibits. Recommended label formats are described in exhibits A through E. Refer to AIAG B-10 specification, Version 2.00 released 2/00 for additional label formatting and data specifications not described in this specification. All labeling must conform to the aforementioned AIAG and ANSI specifications identified previously in this specification.

# 4.2 Building Blocks

Building blocks (*Figure 3*) are a horizontal basic unit structure used to simplify label formatting. The building block format is based on a 0.67" +/- 0.04" (17mm +/-1mm) height horizontal block, which may contain text, graphics or single bar code field containing human readable interpretation. Building blocks **SHOULD** be stacked vertically. A horizontal line extending the entire length of the label **SHALL** separate vertically stacked building blocks.

#### 4.3 Sub Block

A Sub Block is a method of dividing a Building Block into segments to allow additional data fields to be utilized within a horizontal Building Block. Sub Blocks are equivalent to the full Building Block height and **SHALL** be divided by vertical lines. The label **SHALL NOT** contain more than four (4) Sub Blocks within a Building Block. Sub Blocks can be any width. The Width **SHALL** be determined by the data being illustrated within the Sub Block.



# Figure 3 - Building Block Format - Carton Label

A vertical line SHALL divide building block or Sub-block segments

#### 4.4 Label Size

The size of the label is determined by the amount of data required and is the responsibility of the Supplier to choose the proper label size to accommodate the information relative to the data requirements in this specification. The number of building blocks required to illustrate the information on the label **SHALL** determine the label

unless otherwise noted, and SHALL be separated by a horizontal line.

height. The Supplier **SHALL** determine the label width. Recommended minimum label size is approximately 4"X 6" (100mm X150mm).

#### 4.5 Material and Print Quality

The label paper **SHALL** be white in color with black printing. The printing media **SHALL** be of proper carbon content to insure passing ANSI X3.182 Bar Code Print Quality guideline. The minimum symbol grade **SHALL** be:

- Minimum print quality grade = 1.5 (C)
- Measure aperture = 0.10 " (0.254mm)
- Inspection wavelength =660 nanometers +/- 10 nanometers

Adhesive types can be pressure sensitive or dry gummed as long as adherence to the package substrate is assured and application is wrinkle-free.

# 5.-6.<u>5.</u> BAR CODE TEXT and HUMAN READABLE CHARACTERS

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 6.2
6.3<u>5.1</u> Data Titles, Data Identifier Text and Human Readable Interpretation of Code 128 All Human Readable text must comply with the AIAG B-10 specification version 1.00 5/99 The Characters SHALL be clearly legible. A Sans Serif font such as Arial is recommended.

All human readable data SHALL be printed in upper case characters.

Human readable interpretation of the Bar Code symbol **SHALL NOT** include start/stop characters or human readable Data Identifier(s).

The following table *(Figure 4)* lists the recommended character text sizes for all labels except the Internal Container Label (sub-pack). Refer to section 7 Sub Pack/Internal Container Labeling for Sub Pack/Internal Container specifications.

# Figure 4 - Text Size and Dimensions

Data Element	Text Size	Notations
Data Titles	6 Point	Two lines maximum, Left Justified
Human Readable Data Identifiers	6 Point	In parenthesis, included in Data Title, or Left Justified directly above the Bar Code
Bar Code Human Readable interpretation	20 Point unless otherwise noted	Positioned directly above the Bar Code
Part Number Human Readable interpretation	32 Point	
Ship to:	12 Point	
Ship From	12 Point	
Manufacturing Date Code	20 Point	
Part Description	20 Point	
Supplier Certification Status	36 Point	
The Words Master Label	36 Point	
The Words Mixed Load	108 Point	

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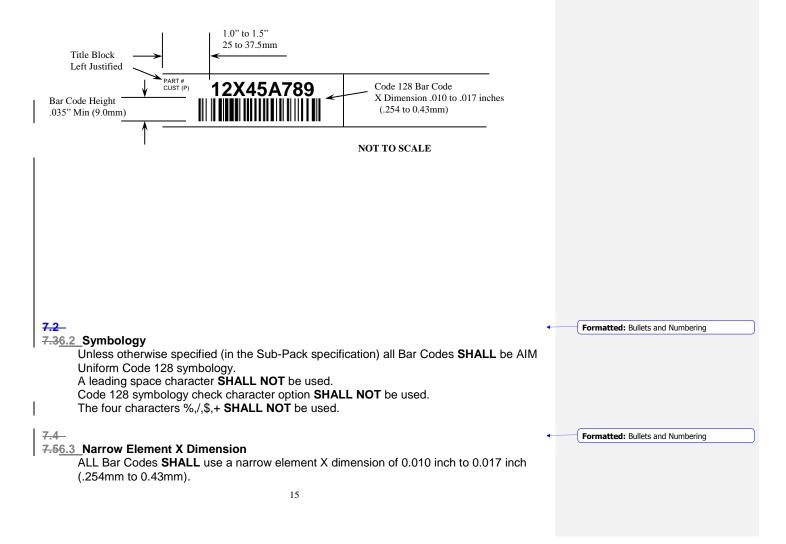
6.1

# 7-6. BAR CODE REQUIREMENTS

#### 7.16.1 Bar Code Block Format

Figure 5 outlines Bar Code Block layout. Except as noted under SubPack/ Internal Container Labeling, Bar Code Building block height is 0.67" +/- 0.04" (17mm +/-1mm) A sub block **SHALL NOT** contain more than one bar code symbol. Figure 5 illustrates use of a building block, Bar Code height, Title Block, Human Readable text alignment, Code 128 Bar Code and X Dimension.

# Figure 5 - Bar Code Building Block



(except Sub/Pack Internal Container Label).

7.6

### 7.76.4 Bar Code Height

Each Bar Code symbol **SHALL** be a minimum height of .35 inch (13 mm) except as defined under Subpack/Internal Container Labeling when using code 128 Symbology.

#### 7.8

#### 7.96.5 Bar Code Symbol Placement

SHALL be as illustrated in the exhibits relative to the type of label being used.

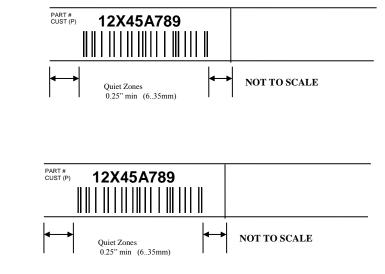
Using additional bar code symbols on shipping packages is not encouraged but may be appropriate in certain circumstances. Any additional code 128 symbols placed on the label or elsewhere on the container **SHALL** use data identifiers as defined in the American National Standards Institute (ANSI) Data Identifier Standard ANSI MH10.8.2

#### 7.106.6 Quiet Zones

The Bar Code symbol **SHALL** have leading and trailing quiet zones with minimum widths of

.25" (6.3mm) (figure 6).

# Figure 6 - Quiet Zones



#### 7.116.7 Data Identifiers

#### 7.11.16.7.1 Use of Data Identifiers

A data identifier (sometimes referred to as a DI, or a prefix) is one or more characters that defines a general category type or specific use of bar coded data. Data Identifiers are

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used as described in the ANSI MH10.8.2 specification. All Code 39 and 128 symbols **SHALL** contain Data Identifiers and **SHALL** conform to the ANSI MH10.8.2 Data Identifier standard. Data Identifiers are not considered part of the data they precede.

The data identifier(s) *(figure 7)* **SHALL** immediately follow the start character in the bar code symbol and will identify the type of information used in that symbol. **Care must be taken that the bar code data has the proper data identifier**. TRW requires data identifier use as specified in ANSI MH10.8.2 and ISO standards.

## 7.11.26.7.2 Data Identifier Listing

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The data identifiers listed below **SHALL** be used on TRW Automotive labels when these specific data fields are being used.

# Figure 7 - Data Identifier Listing

Data Identifier	Data Area
Р	Part Number
Q	Quantity
V	Supplier Number – Assigned by TRW
S	Serial Number – Single Pack Label
4S	Serial Number – Master Label
К	Purchase Order Number
11K	Packing Slip
1T	Supplier Lot Number
1P	Supplier Part Number – For use with Internal Carton or Sub Packs
2P	Revision Level

Note: That the serial number data identifiers for the Single Pack and Master Pack labels are different from one another.

# 8-7. LABEL LOCATION AND PROTECTION

#### 8.17.1 Label Location

Refer to the TRW Purchase Order or Material Release for any special application instructions of labels. Two labels **SHALL** be used for each Single Pack carton, Master or Mixed load container. The labels **SHALL** be on adjacent corners of the container. It is the Supplier's responsibility to adequately design packaging that provides sufficient container surface to insure label adherence and complete readability.

**Returnable Containers** 

In cases where returnable containers are used and the container has label holders on opposite sides the labels may be placed in these holders.

Labels **SHOULD** be located no closer than 1.25 inches (32 mm) from the edge of the container and 1.25 inches (152 cm) from the top of the container.

#### 8.27.2 Label Protection

Label protection **SHALL** be the responsibility of the Supplier to insure readability upon receipt at TRW. Label protection against moisture, weathering, abrasion, etc., is encouraged wherever practical. Laminates, window envelopes, and clear plastic pouches are examples of possible protection methods.

In choosing any protection method, care SHALL be taken to assure the protected labels meet reflectivity and contrast requirements and can be scanned with contact and non-contact devices.

#### 8.37.3 Returnable Containers

Returnable containers are reusable containers such as tubs or racks that are mutually designated by TRW Automotive and the supplier to move materials back and forth between the two trading partners.

All shipping/parts identification labels on returnable containers **SHALL** be removed before reuse in order to control movement, maintain cleanliness and assure properly identified contents.

# 9-8. BAR CODED PACKING SLIP – Optional

Note: A bar coded packing slip may be required by the TRW Automotive location being shipped to. Requests will be made directly to suppliers by those TRW facilities wishing to receive a bar coded packing slip.

#### 9.18.1 Packing Slip/Delivery Note Number

Each shipment **SHALL** have unique supplier shipping reference number called out on the packing slip, manifest or delivery note number. The supplier **SHALL** assign this number. This number links the material(s) being delivered to receiving reference data for shipment traceability and account reconciliation purposes.

#### 9.28.2 Packing Slip Bar Code Guidelines

The Supplier **SHALL** send with each shipment a packing slip, manifest or delivery note that **SHALL** have the packing slip, manifest or delivery note number bar coded to be used in expediting the delivery receipt process *(figure 8)*.

The bar code information under this section **SHALL** follow the bar coding guidelines as specified in sections 2, 3 and 4 in this document.

The human readable interpretation of the bar code **SHALL** be between 3 and 5 LPB. The minimum height of the bar code symbol **SHALL** be 0.5 inch (13mm). The human readable data identifier (11K) and Bar Code title block **SHALL** be present.

The maximum length of the packing slip number **SHALL NOT** exceed (16) alphanumeric characters plus the data identifier.

The supplier **SHOULD** make every effort to add the following information in Bar Code including Data Identifiers and human readable format using the specifications in this document.

- Purchase Order Number (Option to list the P.O. number on the Bar Code Carton Label or Bar Coded Packing Slip)
- TRW Part Number
- Total Packing Slip Quantity

Figure 8 - Bar Coded Packing Slip

Packing Slip



NOT TO SCALE

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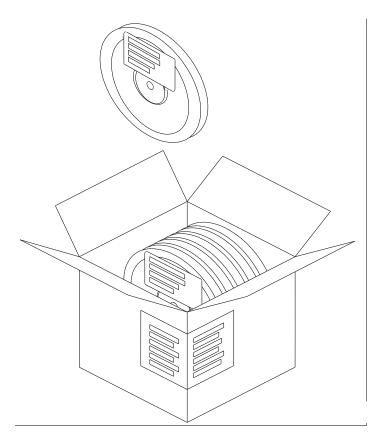
# 10-9. SUBPACK/INTERNAL CONTAINER LABELING

# 10.19.1 Data Area Characteristics-Internal Container Label (sub-pack)

The specifications in this section apply to the Internal Container Labeling.

This label application applies when material is packaged in smaller packages (subpacks), within a single pack carton that is intended to be used/consumed within the manufacturing process in the Internal Container (subpack) in which it is packaged. *(figure 9)* 

# Figure 9 – Electronic Components packaged on reel with multiple reels packaged in one container.



#### 10.29.2 Subpack Bar Code Symbology

The supplier **SHOULD** use code 39 symbology and follow the specifications outlined in sections 2,3 and 4 of this specification. In the event the area on the sub-pack is not large enough to support code 39 then code 128 **SHALL** be used. UCC/EAN Retail Application sub set **SHALL NOT** be used. In either case the data identifiers and human readable interpretation of the bar code **SHALL** follow this specification.

#### **10.39.3** Bar Code and Human Readable Requirements

The supplier **SHALL** provide the following information in bar code and human readable format (*figure 10*) including Data Identifiers (*figure 7*). TRW Part Number Sub-Pack Quantity Supplier Lot Identification Number

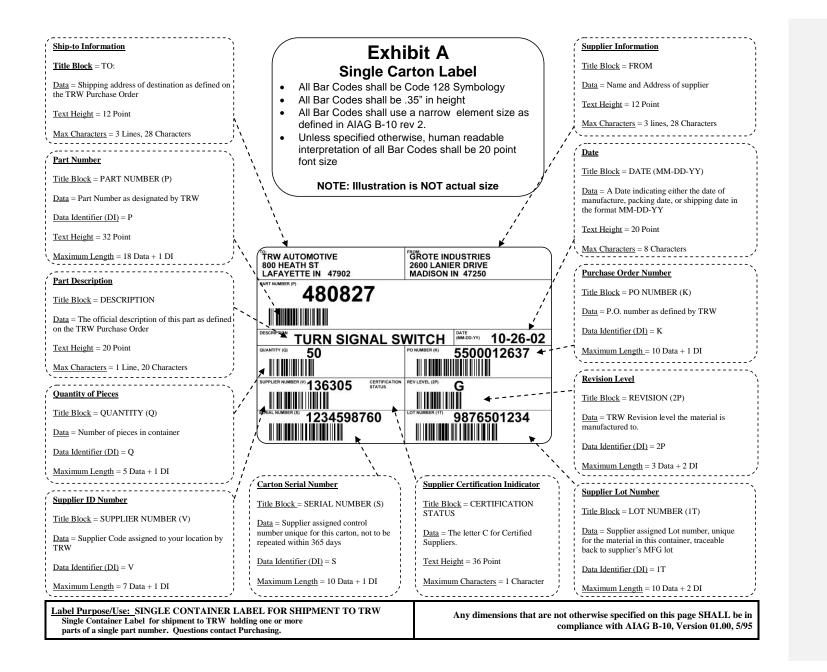
The Supplier **SHOULD** provide in human readable format the following data fields. Part description Supplier Code

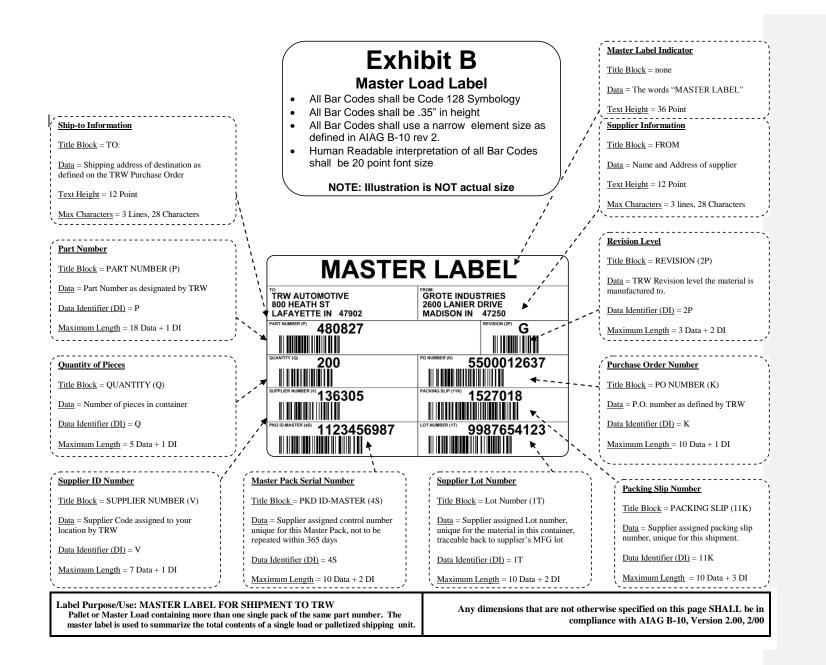
The maximum length of the Supplier Lot Identification Number **SHALL NOT** exceed (10) alphanumeric characters plus the data identifier.

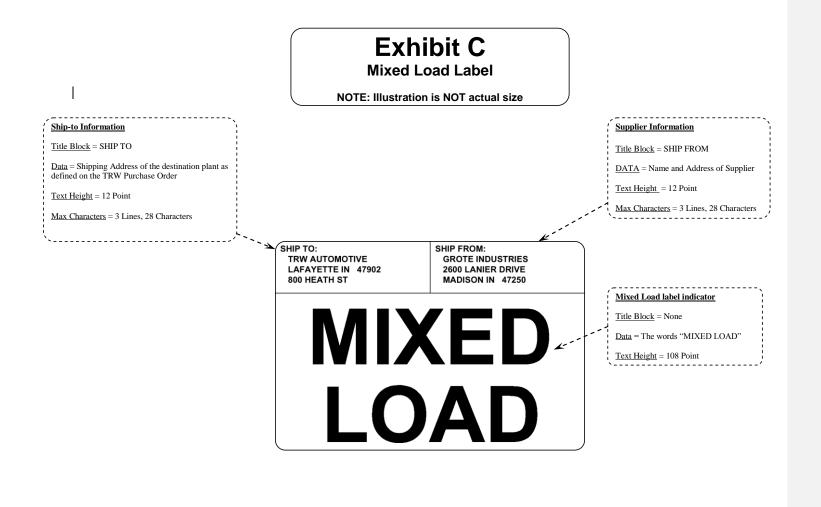
Depending upon the symbology used Sub-Pack bar code and human readable characters **SHALL** be a minimum height of: **Code 128** .125" (3 mm)

# Figure 10 - Internal Container Label

PART # 201451-01	PART# SUPP(IP) Y00D001L1
QUANTITY (0) 999999	
SUPP LOT 1948M0925	







Label Purpose/Use: MIXED LOAD LABEL FOR SHIPMENT TO TRW Pallet or Master Load containing more than one single pack of different part numbers. The MIXED LOAD label is used to indicate multiple part numbers on a single pallet or load

Any dimensions that are not otherwise specified on this page SHALL be in compliance with AIAG B-10, Version 2.00, 2/00

