

	SUPPLIER SHIPPING-PARTS IDENTIFICATION LABEL SPECIFICATION	REF: 80-QPP-D-038
		Rev: 4 – 14APR2020
		Approved by: M.J.J. Quail

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1. INTRODUCTION

These specifications provide guidelines for printing and applying a Shipping/Parts Identification Label. These labels are designed to improve supplier and customer productivity by allowing effective and efficient capture of data for production counts, warehouse input/output, cycle checking, shipping generation, forwarding, freight transfer control, receiving and other inventory controls.

IT IS THE RESPONSIBILITY OF THE SUPPLIER TO PROVIDE BAR CODED LABELS THAT MEET THESE SPECIFICATIONS.

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

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2. DEFINITIONS

Common Item Pack

A pack that contains all like items, i.e. same part/item numbers.

Item

A single part or material purchased, manufactured, and/or distributed.

Label

A strip of paper attached to an object to convey information.

Master Label

A label used to identify and summarize the contents of a multiple pack of common items.

Mixed Load Label

A label used to designate mixed item shipping packs. Each carton to have a 2D label.

Shipping/Parts Identification Label

A label used to identify the contents of a shipping pack.

Standard Quantity Pack

A pack that contains the same quantity of like items.

DLOC

ABC plant delivery location

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3. ***SIZE AND MATERIALS***

The size of the standard ABC Group of Companies **SHALL** be 4.0 in. (102 mm) high by 6.0 or 6.5 in. (165 mm) wide.

The label paper **SHALL** be white in color with black printing.

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4. DATA AREA CHARACTERISTICS

4 A:

The purchase order number and license plate (supplier DUNS number and serial number) **SHALL** be included on each label in the designated data areas and **SHALL** be displayed in both human readable characters as 1D bar code symbols. The description **SHOULD** contain the OEM part number and short description. The maximum length of the bar code symbol **SHOULD NOT** exceed 5.5 inches (140mm).

4.1 Data Areas and Titles

There are five required data area for each label: Part Number, Customer Part Number, Quantity, Purchase Order Number, and License plate (See Exhibit C-1A).

Data areas **SHALL** be separated by horizontal thin lines and **SHALL** contain their respective titles in the upper left-hand corners, as shown in the exhibits. Vertical separation lines and outer borders are optional. In the absence of vertical separation lines, human readable data in adjoining fields **SHALL** be clearly separated. Titles **SHOULD** be printed in 0.1-inch (2.5 mm) high letters. The data area titles are: PART, CUSTOMER PART, QUANTITY, CUSTOMER P.O., and LICENCE PLATE

Human readable information is recommended to show any zeros (0) with a distinguishable mark (e.g. a diagonal slash) to differentiate them from alphabetic O's.

4.2 Usage of Data Identifiers

A data identifier **SHALL** be used as per the following list. A data identifier immediately follows the start character of the bar code symbol and is used to identify the information to follow. The data identifier **SHALL** be in human readable under the title for the appropriate data area (see Exhibits). The data identifier **SHALL NOT** be included in the human readable interpretation of the bar code symbols.

P.O. NO.	(K)
LICENSE PLATE	(1J)

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4.3 Supplier Part Number Area

The human readable part number characters **SHALL** be bold and a minimum 0.5 inch (13 mm) high.

The customer SHALL designate the part number. To obtain ABC part number, please contact Purchasing Coordinators at the respective plants.

4.4 Customer Part Number Area

The customer SHALL designate the part number. To obtain ABC part number, please contact Purchasing Coordinators at the respective plants.

4.5 Description Area

The human readable description characters **SHALL** be a minimum of 0.375 inch (10 mm) high and **SHALL NOT** be bar coded. The description **SHOULD** contain the OEM part number (if applicable) as well as a short description to a maximum length of 30 alpha-numeric characters.

4.6 Quantity Area

The human readable quantity characters **SHALL** be a minimum of 0.5 inch (13 mm) high.

The unit of measure is assumed to be 'each' unless otherwise agreed between customer and supplier. When the unit of measure is 'each', no notation of unit of measure is required. When the unit of measure is not 'each', e.g., pounds, kilos, etc., it **SHOULD** be noted in human readable form. When used, the unit of measure **SHALL** be directly to the right of the human readable quantity and **SHALL** be a minimum of 0.2 inch (5 mm) high (see Exhibit C-1B). The unit of measure **SHALL NOT** be bar coded.

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4.7 *Purchase Order Number*

The human readable purchase order number characters **SHALL** be a minimum of 0.25 inch (6 mm) high.

The bar code symbol for the purchase order number **SHALL** be directly above the human readable characters, **SHALL** be a minimum of 0.5 inch (13 mm) high, and **SHALL** contain the data identifier (N). The maximum length anticipated for the purchase order number is nine (9) alpha-numeric characters plus the data identifier (K)

4.8 *Date*

The human readable date characters **SHALL** be located in the bottom right corner and **SHALL** be a minimum of 0.25 inch (6 mm) high.

4.9 *FROM*

The human readable from characters **SHALL** be located in the top left corner and **SHALL** be a minimum of 0.125 inch (3 mm) high.

4.10 *TO*

The human readable from characters **SHALL** be located in the top middle and **SHALL** be a minimum of 0.125 inch (3 mm) high

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4.11 License Plate

The human readable supplier number characters **SHALL** be a minimum of 0.3125 inch (8 mm) high and located at bottom left corner

The bar code symbol for the supplier number **SHALL** be directly above the human readable characters, **SHALL** be a minimum of 0.0.375 inch (10 mm) high and **SHALL** contain the data identifier (1J)

The license plate is a concatenation of supplier DUNS number & unique serial number. DUNS# is a 9-digit supplier assigned number.

4.12 Supplier Name

The supplier name, city, state and zip/postal code **SHALL** be in top left corner **SHOULD** be 0.125 inch (3 mm) high, using the **FROM:** title

4.13 DLOC Area

The Delivery Location **SHOULD** be 0.5 inch (13 mm) high, using **DLOC** title. DLOC info will be supplied by ABC plant

4.14 Supplier Space Area

The human readable Supplier Space Area characters **SHALL** be minimum of 0.375 inch (10 mm) high, The Supplier Space Area will be located bottom right

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5. 1D BAR CODE SYMBOLOGY

Bar codes **SHALL** be Code **128 symbology** and **SHALL** conform to the Bar Code Symbology Standard AIAG Guidelines. 5.1 through 5.4 cover additional specific requirements for the Shipping/Parts Identification Label.

5.1 Code Configuration

The four (4) characters (\$, /, +, %) of the Code 39 symbology **SHALL NOT** be used on the Shipping/Parts Identification Label.

5.2 Check Digits

Check Digits **SHALL NOT** be added to the bar codes or human readable interpretation.

5.3 Code Density and Dimensions

The bar heights **SHALL** be as specified in Section 4.0. For each bar code symbol, the average width of the narrow elements **SHALL** be within the range of .013 to .017 inch (0.33-0.43 mm). The ratio of 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. For optimum scanning, the leading and trailing quiet zone **SHOULD** be at least 0.25 inch (6.4 mm). Intercharacter gap width **SHOULD** be the same as the width of the average narrow elements, plus or minus the element width tolerance. See AIAG guidelines for definition of tolerance, element widths and quiet zones.

5.4 Reflectivity and Contrast

Reflectivity and contrast **SHALL** be measured at B900 nanometers. Symbols **SHALL** comply with all optical specifications of AIAG guidelines, and **SHALL** meet at least one of the following contrast requirements:

- 1) Print Contrast Signal $\geq 75\%$
- 2) Minimum Reflectance Difference $\geq 37.5\%$, or
- 3) ANSI Print Quality Grade **SHALL NOT** fall below that stated in Section 8.

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6.0 A 2D PDF -417 Symbology - DELIMITER / SEPARATOR

The PDF-417 2D symbology uses the following format delimiter and separator HEX characters

Maintain 2D Scan Format Header		SFMTHD
<hr/>		
Format Code: ABC2D		
Description: ABC 2D + License Plate Format		
.....		
.....		
Message Header Delimiter:	[] >	Hex: BA5D6E
Message Trailer Delimiter:	¢	Hex: 4A
Format Header Delimiter:	06	Hex: F0F6
Format Trailer Delimiter:	E2*	Hex: C5F25C
Field Separator:		Hex: 4F

6.0 B : DATA IDENTIFIER

The 2D barcode uses PDF-417 symbology and includes customer part number, quantity and supplier serial number (license plate)

PART with (P) data identifier

QTYR with (Q) data identifier

SSER with (S) data identifier

Maintain 2D Scan Format Fields					SFMTFP
2D Scan Format: ABC2D			Description: ABC 2D + License Plate Format		
*					
Prefix	Suffix	Field	Description	Type	
P		PART	Part Number	Detail	
Q		QTYR	Quantity Received	Detail	
S		SSER	Supplier Serial Number	Detail	

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6.0 B :EXAMPLE – SCANNED 2D DATA STRING

[] >E2*06 | SUN160931085005623407 | PTG26220M | N | Q42E2*¢

6. LABEL LOCATION AND PROTECTION

6.1 Label Location

Illustrations of the most common shipping packs and recommended label locations are shown in Exhibit C-1E. In most cases two (2) labels are specified. The bottom edge of the label **SHOULD** be parallel to the base of the package/container. To facilitate automated scanning of bar code symbols, the top edge of the label, where possible, **SHOULD** be 20 inches (508 mm) from the bottom of the container. Strapping and taping **SHALL NOT** obstruct the label. If the specified label cannot be affixed to the package/container because of container size or design, special arrangements will be required by customer and supplier.

6.2 Label Protection

Label protection against moisture, weathering, abrasion, etc., may be required in harsh environments and is encouraged wherever practical. Laminates, sprays, 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.

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7. MASTER AND MIXED LOAD LABELS

7.1 Multiple, Common Item Packs – Master Label

When the customer requires that the total content of a multiple pack of common items be identified, a Master Label **SHALL** be used. The total common item pack **SHOULD** be identified with a label in a location specified by the customer. To the extent possible, the labels **SHOULD** be placed in such a manner that when the pack is broken apart, the label is discarded (e.g. hang Master label from banding or attach to stretch wrap).

Preferred method – Banding, where possible. If not appropriate, attach to stretch wrap. A Master Label is required for each skid containing common item packs.

The Master Label **SHALL** be affixed to a fluorescent 8½” x 11” piece of paper, which **SHALL** have the heading “MASTER LABEL” printed in bold 1.0 inch (25.4 mm) high letters. The quantity on the Master Label **SHALL** be the total of all subpacks (See Exhibit C-1B).

7.2 Mixed Item Loads – Mixed Load Identification

When the customer requires that there be a mixed item load, a fluorescent 11” x 8½” piece of paper **SHALL** be used and **SHOULD** be placed in a location specified by the customer. To the extent possible, the paper **SHOULD** be placed in such a manner that when the pack is broken apart, the label is discarded (e.g. hang Mixed Load Label from banding or attached to stretch wrap). At the top of this paper, the heading “MIXED LOAD” **SHALL** be printed in bold 1.0” (25.4 mm) high letters (See Exhibit C-1C).

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8. QUALITY ASSURANCE REQUIREMENTS

An important aspect of any bar code system is that of quality. When labels cannot be decoded fast and accurately, the advantages of bar coding are lost.

Suppliers have a responsibility to provide bar code labels that meet customer and industry standards. Bar code labeling is an important part of the manufacturing process. Consequently, customers have a responsibility to alert suppliers of any persistent label non-conformance.

Auditing is an excellent technique to control quality. Performing audits of the print quality and the physical placement of labels will help assure success at the customer location.

Equipment is available to verify that bar code symbols meet AIAG requirements. Verification equipment may determine print quality as follows:

1. Analysis based upon AIAG traditional print measurement specifications and tolerances or,
2. Analysis utilizing AIAG guidelines, section 4.4, alternate (preferred) print quality grade determination (as adopted from American National Standards Institute parameters).

The Print Quality Guideline in AIAG, section 4.4, specifies the supplier **SHALL** be responsible for providing a minimum shipping label symbol grade of 1.5 at the customer location and a 2.5 (or higher) **SHOULD** be maintained at the time of printing. It is recommended that verification audits be used in conjunction with statistical process control to assure shipping label quality.

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SAMPLE LABEL APPROVAL FORM

Please send this form along with sample labels (**Part Label & Master Label**) to:

ABC Group Inc.
2 Norelco Drive
Toronto, ON M9L 2X6
Phone: (416) 747-2959
Fax: (416) 246-1552
Email: purchasing@abcgrp.com

Labels must be submitted as soon as possible.

Date: _____

Supplier Name							
Address							
Contact Name		Province/State		P.C./ZIP CODE			
Phone		Cell		Fax			
Email							

The following labels were approved:

Part Label ☐

Master Label ☐

Approved: _____

Date: _____

The following labels were **NOT**

Part Label ☐

Master Label ☐

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SAMPLE 2D LABEL FORMAT

FROM: SALGA PLASTICS INC. 241 ABC BOULEVARD,		TO: ABC TECHNOLOGIES C/O GF WAREHOUSE 515 STEAM PLANT ROAD	
		DLOC <div style="font-size: 24pt; text-align: center;">M18</div>	
QUANTITY <div style="font-size: 24pt; text-align: center;">400</div>	SUPPLIER PART <div style="font-size: 24pt; text-align: center;">GG81076M</div>	CUSTOMER P.O. (K)  <div style="font-size: 24pt; text-align: center;">123456789</div>	
CUSTOMER PART <div style="font-size: 24pt; text-align: center;">TG70121M</div>		DESCRIPTION <div style="font-size: 18pt; text-align: center;">UL MCM CUPHOLDER DOOR RAIL RH</div>	
LICENSE PLATE (1J)  <div style="font-size: 24pt; text-align: center;">UN160931085005556128</div>			DATE <div style="font-size: 24pt; text-align: center;">30.01.2020</div>

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EXAMPLE MASTER LABEL

MASTER	
CUSTOMER PART TG40530	
DESCRIPTION UG MCM RH BPill WB Slider Asy	VENDOR PART NO. GG82970
QUANTITY 400	
SERIAL (6J)  UN160931085005556154	

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EXAMPLE MIXED LABEL

MIXED

LOAD

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EXAMPLE OF LICENSE PLATE IN ASN FOR CARTON

License plate type Serial to be included in ABC Technology asn.

REF*LS = license plate type serial number. Vendor DUNS number followed by supplier designated serial number, not to be repeated in a 12-month period

IF 11 packages are present, then CLD segment must be followed by 11 REF segments with the qualifier of LS containing the license plate on the associated labels.

In the sample below, the CLD segment reports 11 containers, with an individual carton pack of 280pcs. The vendor DUNS= **123453789**

ST*856*0019~
BSN*00*00107935*20200120*1130~
DTM*011*20200120*1130~
HL*1**S~
MEA*PD*G*5137*LB~
MEA*PD*N*2057*LB~
TD1*LC34*11~
TD5*B*2*CUST*LT*Customer Truck~
TD3*TL*CUST*12020~
REF*PK*00107935~
N1*SF*ABC SUPPLIER *1***123456789**~ (this value can be DUNS or vendor number /conditionally)
N1*ST*ABC TECHNOLOGIES INC.*1*242420578~
HL*2*1*O~
LIN*1*BP*BRA817965*VC*53118*PO*91494~
SN1**3080*PC*232120~
PRF*91494~
CLD*11*280*LC34~
REF*LS***12345678940829735**~ (serials preceded by vendor's DUNS number)
REF*LS***12345678940829734**~
REF*LS***12345678940829744**~
REF*LS***12345678940829745**~
REF*LS***12345678940829739**~
REF*LS***12345678940830607**~
REF*LS***12345678940826857**~
REF*LS***12345678940826858**~
REF*LS***12345678940829746**~
REF*LS***12345678940829736**~
REF*LS***12345678940826856**~
CTT*2*3080~

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SE*30*0019~

EXAMPLE OF LICENSE PLATE IN ASN FOR MASTER LABEL

ST*856*000000001
 BSN*00*73665*200303*1229
 DTM*011*200303*1229*CT
 HL*1**S
 MEA*PD*G*82*LB
 MEA*PD*N**LB
 TD1*CNT90*10
 TD5*B*2*BSTW*LT
 TD3*TL*BSTW*123456
 REF*BM*73665
 REF*PK*73665
 N1*SU*ABC SUPPLIER *01*123456789
 N1*SF*SALGA PLASTICS INC.*01*160931085
 N1*ST*ABC TECHNOLOGIES*92*AB1
 N1*BT*ABC TECHNOLOGIES INC.
 HL*2*1*O
 LIN**BP*TG40530*EC*GG82970
 SN1**400*EA*1248
 PRF*6136
 HL*3*2*I
 REF*LS***123456789**005556154
 CLD*4*100
 REF*LS***123456789**005556150
 REF*LS***123456789**005556151
 REF*LS***123456789**005556152
 REF*LS***123456789**005556153
 CTT*3*400
 SE*28*000000001