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1 FAQ Global Transport Label (GTL) 4.1

2 General facts

2.1 What requirements are placed on the paper to be used?

Paper must be used that has a weight of at least 120 g/m². Furthermore, matte paper must be used, as glossy paper can lead to reduced quality.

2.2 What must be done if the lettering is cut off or protrudes into an adjacent field?

In this case, reduce the font to the suitable size. The proportional font types Arial or Arial Narrow or related fonts are to be used.

2.3 What requirements are placed on print quality?

The print quality for barcodes must correspond to at least level 3 (2.5 B). Detailed information on the individual barcodes and the underlying ISO standard can be found in the **GTL Guideline** on page 12. The GTL Guideline is available for you to download prior to login on www.vwgroupsupply.com in the path Cooperation -> Electronic Data Interchange -> EDI Guidelines -> EDI message guides Logistics.

However you must check whether the print-out is saturated. In other words, the barcodes must be neither grayish nor blurry, shifted, or have similar defects.

If you notice such a defect, please adjust your hardware or software.

2.4 Which barcodes must be used?

For the license plate, Barcode 128 must be exclusively used. For the 2-D barcode, the data matrix must be used.

2.5 What type of data matrix must be used?

The data matrix as per ECC 200 must be used.

2.6 How can the correct positioning of the barcode be checked?

Templates are saved on the Group Business Platform under Information -> Divisions -> Logistics -> TSB Generator. Please print this on film and then place it on your GTL. It will show whether the barcodes are positioned correctly.

2.7 For which plants can/must the GTL be used?

The GTL can be used for the plants that are referred to on page 2 of the GTL Guideline. However, you can also use it for all other plants. In doubt, please contact the appropriate plant.

2.8 Does Volkswagen provide the option to generate the GTL?

Yes, you can use the TSB Generator to generate the GTL. This is available for you to download – free of charge – after login on www.vwgroupsupply.com under Information -> Divisions -> Logistics -> TSB Generator.

2.9 Does a GTL have to be applied to every container or are there exceptions?

A GTL must be applied only to containers carrying parts. Mixed packages with virtual containers are an exception. In this case, the physical container does not require a GTL. Auxiliary packaging or containers that are used for stabilizing the position do not get a GTL.

2.10 Whom do I contact regarding the release of the GTL?

The competence team AME-T performs the release centrally. Please send your GTL for release to the following e-mail address: tsb-generator@vwgroupsupply.com.

3 Plain text

Von From A1		An To A2 Anlieferwerk / Anlieferstelle / Abladestelle Delivery Plant / Ship to Location / Unloading Point		A3 2-D barcode	
Ursprungsland Country of origin					
Lieferantnummer Supplier Number B1 Lieferscheinnummer Delivery note Number	Verbrauchsstelle Point of Use / Line handling code B2		Packmitteltyp Packaging Type B3 Füllmenge Quantity per Package		
Artikelnummer Article Number C1					
License Plate License Plate			Brutto-Gewicht / Netto-Gewicht Gross Weight / Net Weight Datum (Lieferschein-/Verfall-/Produktions-) Date (Dispatch / Expiry / production) Teilgenerationsstand Parts generation status D2 Chargennummer / Anzahl Packstücke Batch Number / Number of Packages		
E1 Supplier field			Verwendungsschlüssel Usage Code Artikelbezeichnung Article description E2		

3.1 Field A1 "From":

Address of the supplier using a maximum of three lines:

Company name

ZIP code, city

The country of origin must be labeled as follows:

2-digit ISO 3166-1 alpha-2 country code where the article was produced.

3.2 Field A2 "To":

Goods recipient using two lines:

Recipient plant

ZIP code, city

Delivery plant/Ship to location/Unloading point:

Plant code, e.g., 11/AKL/20126

You are informed of these contents in the supply call-off. You can find more detailed information in the GTL Guideline on page 19.

3.3 Field A3 "2-D barcode":

You must store the data matrix in this field.

You can find detailed information for the content and structure of the barcode in the GTL Guideline.

3.4 Field B1 "Supplier Number" and "Delivery Note Number":

The supplier number must be carried over as described in the supply call-off. At Volkswagen and Audi Europe, they are used as follows:

5-digit/ 1 index = XXXXX/Y or

7-digit/2 indices = XXXXXXX/YY

} Where possible, the index must be separated from the supplier number master in the plain text.

Leading zeros must be printed in the plain text. It is important that the stored supplier number is associated with the DUNS number in the field D1.

This rule concerns only the supplier number of Volkswagen/Audi.

The delivery note number must not contain more than 8 characters. It must not repeat within one calendar year.

3.5 Field B2 "Point of Use":

This field must only be filled if you receive the corresponding data transmitted in the supply call-off. In which segments this information is communicated to you is defined on page 19 of GTL Guideline.

3.6 Field B3 "Packaging Type" and "Quantity per Package":

Here, the packaging ID from the packaging data sheet of the Volkswagen Group must be stored.

The actual quantity of the respective packaging must be stored as the quantity per package. In a master label, the quantity per package corresponds to the content of the complete pallet.

The quantity unit must be stored as per ANSI MH 10.8.2, annex D, and is mandatory.

3.7 Field C1 "Article Number":

The article number must be carried over unaltered from the supply call-off. It must be observed that blank spaces are important parts of the article number and consequently must be carried over.

If the shipped articles are hazardous, the safety symbol must be stored right-justified next to the article number.

3.8 Field D1 "License Plate":

In this field, the license plate is stored. The License Plate field consists of barcode 128 and the associated plain text.

Data identifier of the label type using parentheses [2 characters: (1J), (5J), (6J)]

Figures for code-issuing agency [always "UN"]

DUNS number [your respective 9-digit DUNS number]

Package serial number [9-digit package serial number. Must not be repeated within a calendar year]

The individual contents are separated by a blank space in the plain text.

Barcode 128 includes the contents of the information stored in the plain text, but without special characters (delete blank spaces and parentheses).

3.9 Field D2 "General Shipping Information":

Here, various information for the shipment and the articles is stored as follows:

3.9.1 Gross weight/net weight

The gross weight and net weight must be stored including the quantity unit.

3.9.2 Date with prefix information:

The pertinent data information for the shipment must be entered. The following can be specified:

- Delivery note date = [prefix "D" YYYY-MM-DD e.g.: D-2012-12-01]
- Expiration date = [prefix "E" YYYY-MM-DD e.g.: E-2012-12-01]
- Date of production/manufacture = [prefix "P" YYYY-MM-DD e.g.: P-2012-12-01]

3.9.3 Parts generation status:

The parts generation status consists of the generation status (GS), hardware version (HW), and software version (SW). For further information, the Pre-Production Logistics department of the respective plant must be contacted.

3.9.4 Batch number:

The batch number information must always be entered if this is required in the Technical Supply Specification (TL). In the event of uncertainties, the appropriate dispatcher/purchaser must be contacted.

3.9.5 Number of packages:

For a master or mixed label, the field "Batch Number" is omitted and replaced by the quantity of packages in it. The quantity of the packages included must be stored with "Inner" as the quantity unit.

3.10 Field E1 "Supplier Field":

In this field, the supplier-specific information is stored. Those excluded are:

- 22-digit barcodes starting with "1J," "5J," or "6J"
- 14-digit barcodes interleaved (barcode type 2/5)
- Barcodes must not be used on the small label.

3.11 Field E2 "Usage Code" and "Article description":

The following contents must be stored as usage codes depending on the shipment:

- E for spare parts
- S for production parts

The article description must be stored in short text and must be unique.

3.11.1 Label ID:

If the generated label is a master or mixed label, the fields "Usage Code" and "Article description" are omitted and must be replaced respectively with the letterings "Master Label" or "Mixed Load".

4 Content of the Barcodes

4.1 Barcode 128 (License Plate)

4.1.1 As per which standard is the barcode 128 structured?

Barcode 128 must be created as per ISO/IEC 15417.

4.1.2 How is the content of barcodes 128 indicated?

Barcode 128 contains the complete content that is also shown in the plain text. Blank spaces and parentheses around the data identifier must be removed. The structure is described in more detail in section 3.8.

4.2 Data matrix

4.2.1 As per which standard is the data matrix created?

The data matrix must be created as per ISO/IEC 16022.

4.3 Which control characters are used in the 2-D barcodes?

The syntax control characters must be used as per ISO/IEC 15434. They are indicated as follows:

ASCII	Hex	Decimal	Designation
[]>	5B, 29, 3E	91, 41, 62	Compliance Indicator
_R S	1E	30	Format Trailer Character
06	30, 36	48, 54	Format Indicator for "ASC DIs"
_G S	1D	29	Data Field Separator
_E O _T	04	4	Message Trailer

You can find further information starting on page 25 of the current GTL Guideline.

4.4 How are the contents stored in the 2-D barcode?

The contents must be stored separated by a group separator. They always begin with the individual data identifier (DI). You can find an overview of the respective DIs in the current guideline starting on page 18.

4.5 How is the country of origin indicated?

The country of origin is indicated using the 2-digit ISO 3166-1 alpha-2 country code.

4.6 How is the supplier number indicated?

Please observe the description in section 3.4 here.

In any event, the supplier number must be indicated with the index. It must be observed that no visual separator must be included in the barcode.

4.7 How are the quantity units indicated?

The quantity units must be indicated as per ANSI MH 10.8.2, annex D. The established abbreviations are:

- "PC" for piece
- "LT" for liter
- "KG" for kilogram
- "MR" for meter

4.8 How are the dates stored?

The date must be stored with the respective DI followed by the date in the format YYYYMMDD. If an expiration date or date of manufacture is relevant in addition to the delivery note date, this must also be stored.

4.9 What is the F structure used for?

The F-Structure is used for the individual data elements to be classified hierarchically in a tree structure. The data identifier (DI) "F" is used for this. This assigns the individual contents to the hierarchical level.

4.10 How is the F-Structure set-up?

The F-Structure comprises 5 different components. It is set-up as follows:

DI	Position				Description	Format
	1 – 2	3 – 4	5	6		
F					Always DI "F"	a1
	##				Unique ID of this level (level ID) Starting with "01" then consecutively "02, 03, etc."	n2
		##			Unique ID of the superior level (parent ID) Starting with "00" then consecutively "01, 02, etc."	n2
			#		Child code shows whether there are subordinated levels 1 = there are subordinated levels; 0 = there are none	n1
				#	ID of the level (level code) A detailed overview can be found on page 29 of the guideline.	a1

You can obtain the setup of the F-structure for the individual label types from examples listed in the GTL Guideline. Starting on page 36 in the GTL Guideline, various examples for the individual label types are available.

5 Quality of the barcodes

5.1 Qualitative requirements for barcode 128

5.1.1 As per which standard is the quality of barcode 128 measured?

Barcode quality is tested as per ISO/IEC 15416.

5.1.2 What is the required quiet zones size?

The quiet zone is the area around the barcode that must not have any content.

It must be at least 4.3 mm on the left and right. Additionally, the 5-mm margin must be observed on the left side so that a quiet zone of at least 9.3 mm results here. Furthermore, a minimum 1-mm quiet zone must be available between the upper field limit and the barcode.

5.1.3 What is the minimum height that barcode 128 must have?

Barcode 128 must have a minimum height of 17 mm on the A5 label. On the small label, this is specified with 15 mm.

5.1.4 How large must the Z-module be in barcode 128?

The Z-module describes the average measured width of the most narrow element of the barcode in micrometers. It must be between 330 and 432 μm (13 – 17 mil) in barcode 128.

5.1.5 What is the numerical compression? When does it have to be used?

Numerical compression describes the toggling of character sets in barcode 128. At the start of barcode 128, character sets "A" or "B" must be used, as these are able to also put out letters from A – Z. However, these sets can decode only numbers from 0 – 9 in a symbol.

Character set "C," on the other hand, can indicate value pairs from 00 – 99 in a symbol. By toggling from character set "A/B" to character set "C," the barcode can be compressed. This is always indispensable if maintaining the quiet zone can no longer be ensured by the width of the barcode.

5.2 Qualitative requirements for the data matrix

5.2.1 As per which standard is the quality of the data matrix measured?

Barcode quality is tested as per ISO/IEC 15415.

5.2.2 What is the required quiet zones size?

The quiet zone is the area around the barcode that must not have any content.

It must be at least 2 mm in the data matrix at the top and bottom as well as on the left and right.

5.2.3 How large does the Z-module have to be in the data matrix?

The Z-module describes the average measured width of the most narrow element of the barcode in micrometers. It must be at least 330 μm (13 mil) in the data matrix.

5.2.4 What version of the data matrix must be used?

The data matrix as per ECC 200 must be used. This is characterized by a black "L-shaped finder pattern" and an opposed dotted timing pattern also in an "L-shape."



5.3 Overview of the qualitative requirement for all barcodes

	Data matrix	128 code
Quality standard	ISO/IEC 15415	ISO/IEC 15416
Quiet zones (minimum values)	2 mm on all sides	4.3 mm on left + right 1 mm on top
Barcode height (minimum value)	No specification	A5 = 17 mm Small label = 15 mm
Z-module In micrometers (μm)	At least 330 μm	Between 330 – 432 μm
ECC standard	Not available	Not available
Ratio	No specification	No specification