# PFG Customized 856 Ship Notice/Manifest

X12/V5010/856: 856 Ship Notice/Manifest

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# 856 Ship Notice/Manifest

#### Functional Group=SH

Purpose: This X12 Transaction Set contains the format and establishes the data contents of the Ship Notice/Manifest Transaction Set (856) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to list the contents of a shipment of goods as well as additional information relating to the shipment, such as order information, product description, physical characteristics, type of packaging, marking, carrier information, and configuration of goods within the transportation equipment. The transaction set enables the sender to describe the contents and configuration of a shipment in various levels of detail and provides an ordered flexibility to convey information. The sender of this transaction is the organization responsible for detailing and communicating the contents of a shipment, or shipments, to one or more receivers of the transaction set. The receiver of this transaction set can be any organization having an interest in the contents of a shipment or information about the contents of a shipment.

#### **General Usage:**

PFG Customized will support ASNs in the following structures:

Shipment-Order-Tare-Pack-Item (SOTPI)

Shipment-Order-Tare-Item (SOTI)

Shipment-Order-PAck-Item (SOPI)

#### **Heading:**

<u>Pos</u>	<u>ld</u>	Segment Name	<u>Req</u>	Max Use	<u>Repeat</u>	<u>Notes</u>	<u>Usage</u>
0100	ST	Transaction Set Header	M	1			Must use
0200	BSN	Beginning Segment for Ship Notice	M	1			Must use
0400	DTM	Date/Time Reference	M	2			Must use

#### Detail:

<u>Pos</u>	<u>ld</u>	Segment Name	<u>Req</u>	Max Use	<u>Repeat</u>	<u>Notes</u>	<u>Usage</u>
LOOP ID	<u>- HL</u>				200000	C2/0100L	
0100	HL	Hierarchical Level- Shipment	М	1		C2/0100	Must use
1100	TD1	Carrier Details (Quantity and Weight)	М	1			Must use
 1200	TD5	Carrier Details (Routing Sequence/Transit Time)	М	1			Must use
LOOP ID	- TD3				<u>1</u>		
1300	TD3	Carrier Details (Equipment)	0	1			Used
1400	TD4	Carrier Details (Special Handling, or Hazardous Materials, or Both)	0	1			Used
 1500	REF	Reference Information	М	3			Must use
LOOP ID	<u>- N1</u>				<u>2</u>		
2200	N1	Party Identification	M	1			Must use
2300	N2	Additional Name Information	0	1			Used
2400	N3	Party Location	M	2			Must use
 2500	N4	Geographic Location	М	1			Must use

<u>Pos</u>	<u>ld</u>	Segment Name	Req	Max Use	Repeat	<u>Notes</u>	<u>Usage</u>
LOOP I	D - HL				200000	C2/0100L	
0100	HL	Hierarchical Level- Order	M	1		C2/0100	Must use
0500	PRF	Purchase Order Reference	М	1			Must use
1500	REF	Reference Information	М	3			Must use
LOOP I	<u>D - HL</u>				<u>200000</u>	C2/0100L	
0100	HL	Hierarchical Level-Pack	M	1		C2/0100	Must use
0600	PO4	Item Physical Details	0	1			Used
1500	REF	Reference Information	0	1			Used
1900	MAN	Marks and Numbers Information	M	1			Must use
2000	DTM	Date/Time Reference	0	3			Used
2150	PAL	Pallet Type and Load Characteristics	0	1			Used
LOOP I	<u>D - HL</u>				200000	C2/0100L	
0100	HL	Hierarchical Level-Pack	M	1		C2/0100	Must use
0600	PO4	Item Physical Details	0	1			Used
1500	REF	Reference Information	0	1			Used
1900	MAN	Marks and Numbers Information	М	1			Must use
2000	DTM	Date/Time Reference	0	3			Used
2150	PAL	Pallet Type and Load Characteristics	0	1			Used
LOOP I	<u>D - HL</u>				200000	C2/0100L	
0100	HL	Hierarchical Level-Item	M	1		C2/0100	Must use
0200	LIN	Item Identification	M	1			Must use
0300	SN1	Item Detail (Shipment)	M	1			Must use
0600	PO4	Item Physical Details	0	1			Used
0700	PID	Product/Item Description	M	2			Must use
1500	REF	Reference Information	0	>1			Used
2000	DTM	Date/Time Reference	0	3			Used

#### **Summary:**

<u>Pos</u>	<u>ld</u>	Segment Name	Req	Max Use	Repeat	<u>Notes</u>	<u>Usage</u>
0100	CTT	Transaction Totals	0	1		N3/0100	Used
0200	SF	Transaction Set Trailer	М	1			Must use

#### Notes:

3/0100 Number of line items (CTT01) is the accumulation of the number of HL segments. If used, hash total (CTT02) is the sum of the value of units shipped (SN102) for each SN1 segment.

- 2/0100L The HL segment is the only mandatory segment within the HL loop, and by itself, the HL segment has no meaning.
- 2/0100 The HL segment is the only mandatory segment within the HL loop, and by itself, the HL segment has no meaning.
- 2/0100L The HL segment is the only mandatory segment within the HL loop, and by itself, the HL segment has no meaning.

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2/0100L	The HL segment is the only mandatory segment within the HL loop, and by itself, the HL segment has no meaning.
2/0100	The HL segment is the only mandatory segment within the HL loop, and by itself, the HL segment has no meaning.

## **ST** Transaction Set Header

Pos: 0100 Max: 1 Heading - Mandatory Loop: N/A Elements: 2

User Option (Usage): Must use

Purpose: To indicate the start of a transaction set and to assign a control number

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>				
ST01	143	Transaction Set Identifier Code	М	ID	3/3	Must use				
		Description: Code uniquely identifying a Transaction Set								
		CodeList Summary (Total Codes: 318, Included: 1)								
		Code Name								
		856 Ship Notice/Manifest								
ST02	329	Transaction Set Control Number	М	AN	4/9	Must use				
		<b>Description:</b> Identifying control number that functional group assigned by the originator		•		nsaction set				

#### **Semantics:**

- 1. The transaction set identifier (ST01) is used by the translation routines of the interchange partners to select the appropriate transaction set definition (e.g., 810 selects the Invoice Transaction Set).
- 2. The implementation convention reference (ST03) is used by the translation routines of the interchange partners to select the appropriate implementation convention to match the transaction set definition. When used, this implementation convention reference takes precedence over the implementation reference specified in the GS08.

# **BSN** Beginning Segment for Ship Notice

Pos: 0200 Max: 1 Heading - Mandatory Loop: N/A Elements: 4

User Option (Usage): Must use

Purpose: To transmit identifying numbers, dates, and other basic data relating to the transaction set

#### **Element Summary:**

Ref	<u>ld</u>	Eleme	ent Name	Req	Type	Min/Max	<u>Usage</u>				
BSN01	353	Transa	action Set Purpose Code	М	ID	2/2	Must use				
		Descri	Description: Code identifying purpose of transaction set								
		CodeL	CodeList Summary (Total Codes: 66, Included: 2)								
		<u>Code</u>	Code Name								
		00	Original								
			User Note 1:								
			Used as confirmation of shipments	direct to	Custom	nized					
		06	Confirmation								
			User Note 1:								
			Used as confirmation of shipments	direct to	o consum	ner					
BSN02	396	Shipm	nent Identification	М	AN	2/30	Must use				
			iption: A unique control number assi c shipment	gned by	the origi	inal shipper to	identify a				
BSN03	373	Date		М	DT	8/8	Must use				
			iption: Date expressed as CCYYMM lendar year	DD whe	ere CC re	presents the fi	rst two digits of				
BSN04	337	Time		М	TM	4/8	Must use				
		HHMM second	iption: Time expressed in 24-hour class, or HHMMSSDD, where H = hods (00-59) and DD = decimal seconds (0-9) and DD = hundredths (00-99)	urs (00- s; decim	23), M =	minutes (00-5	9), S = integer				

#### Syntax Rules:

1. C0706 - If BSN07 is present, then BSN06 is required.

#### **Semantics:**

- 1. BSN03 is the date the shipment transaction set is created.
- 2. BSN04 is the time the shipment transaction set is created.
- 3. BSN06 is limited to shipment related codes.

#### **Comments:**

1. BSN06 and BSN07 differentiate the functionality of use for the transaction set.

## **DTM** Date/Time Reference

Pos: 0400 Max: 2 Heading - Mandatory Loop: N/A Elements: 2

User Option (Usage): Must use

Purpose: To specify pertinent dates and times

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	<u>Req</u>	<u>Type</u>	Min/Max	<u>Usage</u>
DTM01	374	Date/Time Qualifier	М	ID	3/3	Must use

Description: Code specifying type of date or time, or both date and time

CodeList Summary (Total Codes: 1280, Included: 2)

Code Name

011 Shipped
User Note 1:

Mandatory

017 Estimated Delivery
User Note 1:

Mandatory

**Description:** Date expressed as CCYYMMDD where CC represents the first two digits of

DT

8/8

Must use

the calendar year

Date

#### **Syntax Rules:**

DTM02

373

- 1. R020305 At least one of DTM02, DTM03 or DTM05 is required.
- 2. C0403 If DTM04 is present, then DTM03 is required.
- 3. P0506 If either DTM05 or DTM06 is present, then the other is required.

# **Loop Hierarchical Level**

Pos: 0100 Repeat: 200000 Mandatory

Elements: N/A

Loop: HL

User Option (Usage): Must use

Purpose: To identify dependencies among and the content of hierarchically related groups of data segments

#### **Loop Summary:**

<u>Pos</u>	<u>ld</u>	Segment Name	<u>Req</u>	Max Use	<u>Repeat</u>	<u>Usage</u>
0100	HL	Hierarchical Level- Shipment	M	1		Must use
1100	TD1	Carrier Details (Quantity and Weight)	M	1		Must use
1200	TD5	Carrier Details (Routing Sequence/Transit Time)	М	1		Must use
1300		Loop TD3	0		1	Used
1400	TD4	Carrier Details (Special Handling, or Hazardous Materials, or Both)	0	1		Used
1500	REF	Reference Information	M	3		Must use
2200		Loop N1	M		2	Must use
0100		Loop HL	M		200000	Must use

# **HL** Hierarchical Level-Shipment

Pos: 0100 Max: 1 Detail - Mandatory Loop: HL Elements: 2

User Option (Usage): Must use

Purpose: To identify dependencies among and the content of hierarchically related groups of data segments

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>			
HL01	628	Hierarchical ID Number	М	AN	1/12	Must use			
		<b>Description:</b> A unique number assigned by segment in a hierarchical structure	the se	nder to id	dentify a particu	ılar data			
HL03	735	Hierarchical Level Code	М	ID	1/2	Must use			
		Description: Code defining the characteristic of a level in a hierarchical structure							
		CodeList Summary (Total Codes: 250, Inc	luded: 1	)					
		Code Name							
		S Shipment							

- 1. The HL segment is used to identify levels of detail information using a hierarchical structure, such as relating line-item data to shipment data, and packaging data to line-item data.
- 2. The HL segment defines a top-down/left-right ordered structure.
- 3. HL01 shall contain a unique alphanumeric number for each occurrence of the HL segment in the transaction set. For example, HL01 could be used to indicate the number of occurrences of the HL segment, in which case the value of HL01 would be "1" for the initial HL segment and would be incremented by one in each subsequent HL segment within the transaction.
- 4. HL02 identifies the hierarchical ID number of the HL segment to which the current HL segment is subordinate.
- 5. HL03 indicates the context of the series of segments following the current HL segment up to the next occurrence of an HL segment in the transaction. For example, HL03 is used to indicate that subsequent segments in the HL loop form a logical grouping of data referring to shipment, order, or item-level information.
- HL04 indicates whether or not there are subordinate (or child) HL segments related to the current HL segment.

# **TD1** Carrier Details (Quantity and Weight)

Pos: 1100 Max: 1 Detail - Mandatory Loop: HL Elements: 5

User Option (Usage): Must use

Purpose: To specify the transportation details relative to commodity, weight, and quantity

#### **Element Summary:**

<u>Ref</u> TD101	<u>ld</u> 103	Element Name Packaging Code	<u>Req</u> M	<u>Type</u> AN	Min/Max 3/5	<u>Usage</u> Must use				
		<b>Description:</b> Code identifying the type of packaging; Part 1: Packaging Form, Part 2: Packaging Material; if the Data Element is used, then Part 1 is always required								
		CodeList Summary (Total Codes: 155, Inc.  Code Name CTN Carton MXD Mixed PLT Pallet	cluded: 3	3)						
TD102	80	Lading Quantity	М	N0	1/7	Must use				
		Description: Number of units (pieces) of the lading commodity								
TD106	187	Weight Qualifier	С	ID	1/2	Used				
		Description: Code defining the type of weight User Note 1: If any of TD106, TD107 or TD108 is present, all are required  CodeList Summary (Total Codes: 52, Included: 1)								
		Code Name G Gross Weight	uuuu. 1)							
TD107	81	Weight	С	R	1/10	Used				
		Description: Numeric value of weight User Note 1: If any of TD106, TD107 or TD108 is present, all are required								
TD108	355	Unit or Basis for Measurement Code	С	ID	2/2	Used				
		<b>Description:</b> Code specifying the units in which a measurement has been taken <b>User Note 1:</b> <i>If any of TD106, TD107 or TD</i>								
		CodeList Summary (Total Codes: 844, Inc.  Code Name  LB Pound	cluded: 1	1)						

#### Syntax Rules:

- 1. C0102 If TD101 is present, then TD102 is required.
- 2. C0304 If TD103 is present, then TD104 is required.
- 3. C0607 If TD106 is present, then TD107 is required.
- 4. P0708 If either TD107 or TD108 is present, then the other is required.
- 5. P0910 If either TD109 or TD110 is present, then the other is required.

# **TD5** Carrier Details (Routing Sequence/Transit Time)

Pos: 1200 Max: 1 Detail - Mandatory Loop: HL Elements: 4

User Option (Usage): Must use

Purpose: To specify the carrier and sequence of routing and provide transit time information

#### **Element Summary:**

Ref	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>			
TD502	66	Identification Code Qualifier	0	ID	1/2	Used			
		<b>Description:</b> Code designating the system Code (67)	/method	d of code	structure used	for Identification			
		CodeList Summary (Total Codes: 241, Included: 1)							
		Code Name							
		2 Standard Carrier Alpha Code (SCAC	C)						
TD503	67	Identification Code	Χ	AN	2/4	Used			
		Description: Code identifying a party or other code							
		User Note 1: Min/Max = 2/4							
TD504	91	Transportation Method/Type Code	М	ID	1/2	Must use			
		Description: Code specifying the method or type of transportation for the shipment							
		CodeList Summary (Total Codes: 80, Included: 2)							
		Code Name							
		H Customer Pickup							
		M Motor (Common Carrier)							
TD505	387	Routing	М	AN	1/35	Must use			
		<b>Description:</b> Free-form description of the r	outing c	r reques	ted routing for	shipment, or the			

**Description:** Free-form description of the routing or requested routing for shipment, or the originating carrier's identity

#### Syntax Rules:

- 1. R0204050612 At least one of TD502, TD504, TD505, TD506 or TD512 is required.
- 2. C0203 If TD502 is present, then TD503 is required.
- 3. C0708 If TD507 is present, then TD508 is required.
- 4. C1011 If TD510 is present, then TD511 is required.
- 5. C1312 If TD513 is present, then TD512 is required.
- 6. C1413 If TD514 is present, then TD513 is required.
- 7. C1512 If TD515 is present, then TD512 is required.

#### **Semantics:**

1. TD515 is the country where the service is to be performed.

#### **Comments:**

1. When specifying a routing sequence to be used for the shipment movement in lieu of specifying each carrier within the movement, use TD502 to identify the party responsible for defining the routing sequence, and use TD503 to identify the actual routing sequence, specified by the party identified in TD502.

# **Loop Carrier Details (Equipment)**

Pos: 1300 Repeat: 1 Optional

Loop: TD3 Elements: N/A

User Option (Usage): Used

Purpose: To specify transportation details relating to the equipment used by the carrier

#### **Loop Summary:**

<u>Pos</u>	<u>ld</u>	Segment Name	<u>Req</u>	Max Use	<u>Repeat</u>	<u>Usage</u>
1300	TD3	Carrier Details (Equipment)	0	1		Used

# **TD3** Carrier Details (Equipment)

Pos: 1300 Max: 1 Detail - Optional Loop: TD3 Elements: 1

User Option (Usage): Used

Purpose: To specify transportation details relating to the equipment used by the carrier

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	<u>Req</u>	<u>Type</u>	Min/Max	<u>Usage</u>
TD301	40	<b>Equipment Description Code</b>	Χ	ID	2/2	Used

Description: Code identifying type of equipment used for shipment

User Note 1: Send if the shipment is temperature controlled

CodeList Summary (Total Codes: 139, Included: 1)

Code Name

RT Controlled Temperature Trailer (Reefer)

#### Syntax Rules:

- 1. E0110 Only one of TD301 or TD310 may be present.
- 2. C0203 If TD302 is present, then TD303 is required.
- 3. C0405 If TD304 is present, then TD305 is required.
- 4. P0506 If either TD305 or TD306 is present, then the other is required.

# TD4 Carrier Details (Special Handling, or Hazardous Materials, or Both)

Pos: 1400 Max: 1 Detail - Optional Loop: HL Elements: 1

User Option (Usage): Used

Purpose: To specify transportation special handling requirements, or hazardous materials information, or both

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>
TD401	152	Special Handling Code	Χ	ID	2/3	Used
<b>Description:</b> Code specifying special transportation handling instructions <b>User Note 1:</b> Send if the shipment contains hazardous material						

CodeList Summary (Total Codes: 556, Included: 1)

Code Name

HM Endorsed as Hazardous Material

#### **Syntax Rules:**

- 1. R010204 At least one of TD401, TD402 or TD404 is required.
- 2. C0203 If TD402 is present, then TD403 is required.

#### **Semantics:**

1. TD405 identifies if a Material Safety Data Sheet (MSDS) exists for this product. A "Y" indicates an MSDS exists for this product; an "N" indicates an MSDS does not exist for this product.

## **REF** Reference Information

Pos: 1500 Max: 3
Detail - Mandatory
Loop: HL Elements: 2

User Option (Usage): Must use

Purpose: To specify identifying information

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	<u>Req</u>	<u>Type</u>	Min/Max	<u>Usage</u>
REF01	128	Reference Identification Qualifier	М	ID	2/3	Must use

Description: Code qualifying the Reference Identification

**User Note 1:** One of either Bill of Lading, Carrier Pro Number or Tracking Number is required. A Tracking Number can be sent in place of a Carrier Pro number, but both should not be provided.

CodeList Summary (Total Codes: 1731, Included: 4)

Code Name

2I Tracking NumberBM Bill of Lading Number

CN Carrier's Reference Number (PRO/Invoice)

SN Seal Number

User Note 1: Optional

REF02 127 Reference Identification M AN 1/50 Must use

**Description:** Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier

#### **Syntax Rules:**

1. R0203 - At least one of REF02 or REF03 is required.

#### **Semantics:**

1. REF04 contains data relating to the value cited in REF02.

# **Loop Party Identification**

Pos: 2200 Repeat: 2 Mandatory

Loop: N1 Elements: N/A

User Option (Usage): Must use

Purpose: To identify a party by type of organization, name, and code

#### **Loop Summary:**

<u>Pos</u>	<u>ld</u>	Segment Name	<u>Req</u>	Max Use	<u>Repeat</u>	<u>Usage</u>
2200	N1	Party Identification	M	1		Must use
2300	N2	Additional Name Information	0	1		Used
2400	N3	Party Location	M	2		Must use
2500	N4	Geographic Location	M	1		Must use

# **N1** Party Identification

Pos: 2200 Max: 1
Detail - Mandatory
Loop: N1 Elements: 4

User Option (Usage): Must use

Purpose: To identify a party by type of organization, name, and code

#### **Element Summary:**

<u>Ref</u> N101	<u>ld</u> 98	Element Name Entity Identifier Code	<u>Req</u> M	<u>Type</u> ID	Min/Max 2/3	<u>Usage</u> Must use			
NIOI	30	<b>Description:</b> Code identifying an organizational entity, a physical location, property or an individual							
		CodeList Summary (Total Codes: 1500, Included: 2)							
		Code Name SF Ship From							
		User Note 1:  Mandatory							
		ST Ship To User Note 1:							
		Mandatory							
N102	93	Name	M	AN	1/60	Must use			
		Description: Free-form name							
N103	66	Identification Code Qualifier	С	ID	1/2	Used			
		<b>Description:</b> Code designating the system Code (67) <b>User Note 1:</b> Required when N101=ST	n/method	of code	structure used	d for Identification			
	CodeList Summary (Total Codes: 241, Included: 2)  Code Name								
		<ul><li>9 D-U-N-S+4, D-U-N-S Number with</li><li>92 Assigned by Buyer or Buyer's Ager</li></ul>		aracter S	uffix				
N104	67	Identification Code	С	AN	2/80	Used			
		<b>Description:</b> Code identifying a party or or <b>User Note 1:</b> Required when N101=ST	ther code	e					

#### Syntax Rules:

- 1. R0203 At least one of N102 or N103 is required.
- 2. P0304 If either N103 or N104 is present, then the other is required.

- This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.
- 2. N105 and N106 further define the type of entity in N101.

# **N2** Additional Name Information

Pos: 2300 Max: 1
Detail - Optional
Loop: N1 Elements: 1

User Option (Usage): Used

Purpose: To specify additional names

#### **Element Summary:**

 Ref
 Id
 Element Name
 Req
 Type
 Min/Max
 Usage

 N201
 93
 Name
 M
 AN
 1/60
 Must use

**Description:** Free-form name

# **N3** Party Location

Pos: 2400 Max: 2
Detail - Mandatory
Loop: N1 Elements: 2

User Option (Usage): Must use

Purpose: To specify the location of the named party

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	<u>Req</u>	<u>Type</u>	Min/Max	<u>Usage</u>
N301	166	Address Information	M	AN	1/55	Must use
		Description: Address information				
N302	166	Address Information	0	AN	1/55	Used

**Description:** Address information

# **N4** Geographic Location

Pos: 2500 Max: 1
Detail - Mandatory
Loop: N1 Elements: 4

User Option (Usage): Must use

Purpose: To specify the geographic place of the named party

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>
N401	19	City Name	М	AN	2/30	Must use
		Description: Free-form text for city name				
N402	156	State or Province Code	М	ID	2/2	Must use
		<b>Description:</b> Code (Standard State/Provin agency	ce) as d	lefined by	/ appropriate g	overnment
N403	116	Postal Code	М	ID	3/15	Must use
		<b>Description:</b> Code defining international poblanks (zip code for United States)	ostal zo	ne code	excluding pund	ctuation and
N404	26	Country Code	0	ID	2/3	Used
		Description: Code identifying the country				

#### Syntax Rules:

- 1. E0207 Only one of N402 or N407 may be present.
- 2. C0605 If N406 is present, then N405 is required.
- 3. C0704 If N407 is present, then N404 is required.

- 1. A combination of either N401 through N404, or N405 and N406 may be adequate to specify a location.
- 2. N402 is required only if city name (N401) is in the U.S. or Canada.

# **Loop Hierarchical Level**

Pos: 0100 Repeat: 2000000 Mandatory

Loop: HL Elements: N/A

User Option (Usage): Must use

Purpose: To identify dependencies among and the content of hierarchically related groups of data segments

#### **Loop Summary:**

<u>Pos</u>	<u>ld</u>	Segment Name	<u>Req</u>	Max Use	<u>Repeat</u>	<u>Usage</u>
0100	HL	Hierarchical Level- Order	M	1		Must use
0500	PRF	Purchase Order Reference	M	1		Must use
1500	REF	Reference Information	M	3		Must use
0100		Loop HL	0		200000	Used

### **HL** Hierarchical Level- Order

Pos: 0100 Max: 1 Detail - Mandatory Loop: HL Elements: 3

User Option (Usage): Must use

Purpose: To identify dependencies among and the content of hierarchically related groups of data segments

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>	
HL01	628	Hierarchical ID Number	M	AN	1/12	Must use	
		<b>Description:</b> A unique number assigned by segment in a hierarchical structure	y the se	nder to ic	lentify a particu	ılar data	
HL02	734	Hierarchical Parent ID Number	M	AN	1/12	Must use	
		<b>Description:</b> Identification number of the n data segment being described is subordina	•	er hierar	chical data seg	ment that the	
HL03	735	Hierarchical Level Code	M	ID	1/2	Must use	
		<b>Description:</b> Code defining the characterist	tic of a	level in a	hierarchical st	ructure	
		CodeList Summary (Total Codes: 250, Included: 1)					
		Code Name					
		O Order					

- 1. The HL segment is used to identify levels of detail information using a hierarchical structure, such as relating line-item data to shipment data, and packaging data to line-item data.
- 2. The HL segment defines a top-down/left-right ordered structure.
- 3. HL01 shall contain a unique alphanumeric number for each occurrence of the HL segment in the transaction set. For example, HL01 could be used to indicate the number of occurrences of the HL segment, in which case the value of HL01 would be "1" for the initial HL segment and would be incremented by one in each subsequent HL segment within the transaction.
- 4. HL02 identifies the hierarchical ID number of the HL segment to which the current HL segment is subordinate.
- 5. HL03 indicates the context of the series of segments following the current HL segment up to the next occurrence of an HL segment in the transaction. For example, HL03 is used to indicate that subsequent segments in the HL loop form a logical grouping of data referring to shipment, order, or item-level information.
- HL04 indicates whether or not there are subordinate (or child) HL segments related to the current HL segment.

# **PRF** Purchase Order Reference

Pos: 0500 Max: 1 Detail - Mandatory Loop: HL Elements: 2

User Option (Usage): Must use

Purpose: To provide reference to a specific purchase order

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	<u>Req</u>	<u>Type</u>	Min/Max	<u>Usage</u>
PRF01	324	Purchase Order Number	М	AN	1/22	Must use
		Description: Identifying number for Purcha	ase Orde	er assign	ed by the orde	rer/purchaser
PRF04	373	Date	0	DT	8/8	Used

**Description:** Date expressed as CCYYMMDD where CC represents the first two digits of

the calendar year

#### **Semantics:**

1. PRF04 is the date assigned by the purchaser to purchase order.

## **REF** Reference Information

Pos: 1500 Max: 3
Detail - Mandatory
Loop: HL Elements: 2

User Option (Usage): Must use

Purpose: To specify identifying information

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>	<u>Usage</u>		
REF01	128	Reference Identification Qualifier	М	ID	2/3	Must use		
		Description: Code qualifying the Reference Identification						
		CodeList Summary (Total Codes: 1731, Included: 3)						

Code Name

19 Division Identifier

User Note 1:
Optional

CO Customer Order Number

User Note 1:

Required if present on the Purchase Order

IA Internal Vendor Number

**User Note 1:** 

Mandatory - Customized assigned Vendor ID

REF02 127 Reference Identification M AN 1/50 Must use

**Description:** Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier

#### **Syntax Rules:**

1. R0203 - At least one of REF02 or REF03 is required.

#### **Semantics:**

1. REF04 contains data relating to the value cited in REF02.

# **Loop Hierarchical Level**

Pos: 0100 Repeat: 200000

Optional

Loop: HL Elements: N/A

User Option (Usage): Used

Purpose: To identify dependencies among and the content of hierarchically related groups of data segments

#### **User Note 1:**

Pallet Level is optional, but should be provided if the ASN being sent is a Shipment-Order-Tare-Pack-Item (SOTPI) structure

#### **Loop Summary:**

<u>Pos</u>	<u>ld</u>	Segment Name	<u>Req</u>	Max Use	<u>Repeat</u>	<u>Usage</u>
0100	HL	Hierarchical Level-Pack	M	1		Must use
0600	PO4	Item Physical Details	0	1		Used
1500	REF	Reference Information	0	1		Used
1900	MAN	Marks and Numbers Information	M	1		Must use
2000	DTM	Date/Time Reference	0	3		Used
2150	PAL	Pallet Type and Load Characteristics	0	1		Used
0100		Loop HL	M		200000	Must use

## **HL** Hierarchical Level-Pack

Pos: 0100 Max: 1
Detail - Mandatory
Loop: HL Elements: 3

User Option (Usage): Must use

Purpose: To identify dependencies among and the content of hierarchically related groups of data segments

#### **Element Summary:**

Ref	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>		
HL01	628	Hierarchical ID Number	M	AN	1/12	Must use		
		<b>Description:</b> A unique number assigned by segment in a hierarchical structure	y the se	nder to id	dentify a particu	ılar data		
HL02	734	Hierarchical Parent ID Number	M	AN	1/12	Must use		
		<b>Description:</b> Identification number of the n data segment being described is subordina	•	er hierar	chical data seg	ment that the		
HL03	735	Hierarchical Level Code	М	ID	1/2	Must use		
		Description: Code defining the characteris	tic of a	level in a	hierarchical st	ructure		
		CodeList Summary (Total Codes: 250, Included: 1)						
		Code Name						
		T Shipping Tare						

- 1. The HL segment is used to identify levels of detail information using a hierarchical structure, such as relating line-item data to shipment data, and packaging data to line-item data.
- 2. The HL segment defines a top-down/left-right ordered structure.
- 3. HL01 shall contain a unique alphanumeric number for each occurrence of the HL segment in the transaction set. For example, HL01 could be used to indicate the number of occurrences of the HL segment, in which case the value of HL01 would be "1" for the initial HL segment and would be incremented by one in each subsequent HL segment within the transaction.
- 4. HL02 identifies the hierarchical ID number of the HL segment to which the current HL segment is subordinate.
- 5. HL03 indicates the context of the series of segments following the current HL segment up to the next occurrence of an HL segment in the transaction. For example, HL03 is used to indicate that subsequent segments in the HL loop form a logical grouping of data referring to shipment, order, or item-level information.
- HL04 indicates whether or not there are subordinate (or child) HL segments related to the current HL segment.

# **PO4** Item Physical Details

Pos: 0600 Max: 1 Detail - Optional Loop: HL Elements: 3

User Option (Usage): Used

Purpose: To specify the physical qualities, packaging, weights, and dimensions relating to the item

#### **Element Summary:**

Ref	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>		
PO405	187	Weight Qualifier	М	ID	1/2	Must use		
		Description: Code defining the type of wei	ght					
		CodeList Summary (Total Codes: 52, Incl	uded: 1)					
		Code Name						
		G Gross Weight						
PO406	384	Gross Weight per Pack	M	R	1/9	Must use		
		Description: Numeric value of gross weigh	nt per pa	ıck				
PO407	355	Unit or Basis for Measurement Code	M	ID	2/2	Must use		
		<b>Description:</b> Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken						
		CodeList Summary (Total Codes: 844, Inc	cluded: 1	1)				
		Code Name						
		LB Pound						

#### Syntax Rules:

- 1. P0203 If either PO402 or PO403 is present, then the other is required.
- 2. C0506 If PO405 is present, then PO406 is required.
- 3. P0607 If either PO406 or PO407 is present, then the other is required.
- 4. P0809 If either PO408 or PO409 is present, then the other is required.
- 5. C1013 If PO410 is present, then PO413 is required.
- 6. C1113 If PO411 is present, then PO413 is required.
- 7. C1213 If PO412 is present, then PO413 is required.
- 8. L13101112 If PO413 is present, then at least one of PO410, PO411 or PO412 is required.
- 9. C1716 If PO417 is present, then PO416 is required.
- 10. C1804 If PO418 is present, then PO404 is required.

#### **Semantics:**

- 1. PO415 is used to indicate the relative layer of this package or range of packages within the layers of packaging. Relative Position 1 (value R1) is the innermost package.
- 2. PO416 is the package identifier or the beginning package identifier in a range of identifiers.
- 3. PO417 is the ending package identifier in a range of identifiers.
- 4. PO418 is the number of packages in this layer.

#### **Comments:**

 PO403 - The "Unit or Basis for Measure Code" in this segment position is for purposes of defining the unit of measure of the "Size" identified in the PO402. For example: If the carton contains 24 12-Ounce packages, it would be described as follows: Data element 356 = "24"; Data element 357 = "12"; Data element 355 = "OZ".

2. PO413 defines the unit of measure for PO410, PO411, and PO412.

# **REF** Reference Information

Pos: 1500 Max: 1
Detail - Optional
Loop: HL Elements: 2

User Option (Usage): Used

Purpose: To specify identifying information

#### **User Note 1:**

This segment should be sent for products produced that have Lot/Batch Numbers associated to them. Can be sent at Pallet level if the Lot/Batch applies to the full pallet, else send at the item level

#### **Element Summary:**

Ref	<u>ld</u>	Element Name	Req	Type	Min/Max	<u>Usage</u>			
REF01	128	Reference Identification Qualifier	М	ID	2/3	Must use			
		Description: Code qualifying the Reference Identification							
		CodeList Summary (Total Codes: 1731, Included: 1)							
		Code Name							
		LT Lot Number							
REF02	127	Reference Identification	М	AN	1/50	Must use			
		<b>Description:</b> Reference information as defi specified by the Reference Identification Qu		a particu	lar Transactior	Set or as			

#### **Syntax Rules:**

1. R0203 - At least one of REF02 or REF03 is required.

#### **Semantics:**

1. REF04 contains data relating to the value cited in REF02.

# MAN Marks and Numbers Information

Pos: 1900 Max: 1 Detail - Mandatory Loop: HL Elements: 2

User Option (Usage): Must use

Purpose: To indicate identifying marks and numbers for shipping containers

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	<u>Req</u>	<u>Type</u>	Min/Max	<u>Usage</u>				
MAN01	88	Marks and Numbers Qualifier	М	ID	1/2	Must use				
		Description: Code specifying the application or source of Marks and Numbers (87)								
		CodeList Summary (Total Codes: 21, Included: 2)								
		Code Name								
		CP Carrier-Assigned Package ID Numb	oer							
		GM EAN.UCC Serial Shipping Containe	er Code (	(SSCC) a	and Application	Identifier				
MAN02	87	Marks and Numbers	M	AN	1/48	Must use				
		Description: Marks and numbers used to	identify a	a shipme	nt or parts of a	shipment				
		User Note 1: When MANO1 = GM, Min/Ma	ax is 20/2	20						

#### **Syntax Rules:**

- 1. P0405 If either MAN04 or MAN05 is present, then the other is required.
- 2. C0605 If MAN06 is present, then MAN05 is required.

#### **Semantics:**

- MAN01/MAN02 and MAN04/MAN05 may be used to identify two different marks and numbers assigned to the same physical container.
- 2. When both MAN02 and MAN03 are used, MAN02 is the starting number of a sequential range and MAN03 is the ending number of that range.
- 3. When both MAN05 and MAN06 are used, MAN05 is the starting number of a sequential range, and MAN06 is the ending number of that range.

- 1. When MAN01 contains code "UC" (U.P.C. Shipping Container Code) and MAN05/MAN06 contain a range of ID numbers, MAN03 is not used. The reason for this is that the U.P.C. Shipping Container code is the same on every carton that is represented in the range in MAN05/MAN06.
- 2. MAN03 and/or MAN06 are only used when sending a range(s) of ID numbers.
- 3. When both MAN02/MAN03 and MAN05/MAN06 are used to send ranges of ID numbers, the integrity of the two ID numbers must be maintained.

# **DTM** Date/Time Reference

Pos: 2000 Max: 3
Detail - Optional
Loop: HL Elements: 2

User Option (Usage): Used

Purpose: To specify pertinent dates and times

#### **User Note 1:**

Send if applicable to the whole pallet, else use item level

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Eleme	ent Name	<u>Req</u>	<u>Type</u>	Min/Max	<u>Usage</u>
DTM01	374	Date/	Time Qualifier	М	ID	3/3	Must use
		Descr	ription: Code specifying type of date	or time,	or both o	late and time	
		Code	List Summary (Total Codes: 1280, Ir	ncluded:	3)		
		<u>Code</u>	<u>Name</u>				
		036	Expiration				
		405	Production				
		511	Shelf Life Expiration				

**Description:** Date expressed as CCYYMMDD where CC represents the first two digits of

DT

8/8

Must use

the calendar year

#### **Syntax Rules:**

373

DTM02

- 1. R020305 At least one of DTM02, DTM03 or DTM05 is required.
- 2. C0403 If DTM04 is present, then DTM03 is required.

**Date** 

3. P0506 - If either DTM05 or DTM06 is present, then the other is required.

# PAL Pallet Type and Load Characteristics

Pos: 2150 Max: 1 Detail - Optional Loop: HL Elements: 2

User Option (Usage): Used

**Purpose:** To identify the type and physical attributes of the pallet, and, gross weight, gross volume, and height of the load and the pallet

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	<u>Req</u>	<b>Type</b>	Min/Max	<u>Usage</u>
PAL02	884	Pallet Tiers	0	N0	1/3	Used
		Description: The number of layers per pal	let			
PAL03	885	Pallet Blocks	0	N0	1/3	Used
Description: The number of pieces (cartons) per layer on the pallet						

#### Syntax Rules:

- 1. P0506 If either PAL05 or PAL06 is present, then the other is required.
- 2. C0710 If PAL07 is present, then PAL10 is required.
- 3. C0810 If PAL08 is present, then PAL10 is required.
- 4. C0910 If PAL09 is present, then PAL10 is required.
- 5. L10070809 If PAL10 is present, then at least one of PAL07, PAL08 or PAL09 is required.
- 6. P1112 If either PAL11 or PAL12 is present, then the other is required.
- 7. P1314 If either PAL13 or PAL14 is present, then the other is required.

#### **Semantics:**

- 1. PAL04 (Pack) is the number of pieces on the pallet.
- 2. PAL05 (Unit Weight) is the weight of the pallet alone, before loading.
- 3. PAL07 and PAL08 (Length and Width) are the dimensions of the pallet before loading.
- 4. PAL09 (Height) is the height of the pallet and load.
- 5. PAL11 and PAL13 (Gross Weight and Gross Volume) are measured after loading and includes the pallet.

# **Loop Hierarchical Level**

Pos: 0100 Repeat: 2000000 Mandatory

Loop: HL Elements: N/A

User Option (Usage): Must use

Purpose: To identify dependencies among and the content of hierarchically related groups of data segments

#### **User Note 1:**

If Pallet HL loop was provided, this HL loop should be sent as a 'P' (Pack/Carton)

#### **Loop Summary:**

<u>Pos</u>	<u>ld</u>	Segment Name	Req	Max Use	Repeat	<u>Usage</u>
0100	HL	Hierarchical Level-Pack	M	1		Must use
0600	PO4	Item Physical Details	0	1		Used
1500	REF	Reference Information	0	1		Used
1900	MAN	Marks and Numbers Information	M	1		Must use
2000	DTM	Date/Time Reference	0	3		Used
2150	PAL	Pallet Type and Load Characteristics	0	1		Used
0100		Loop HL	М		200000	Must use

## **HL** Hierarchical Level-Pack

Pos: 0100 Max: 1 Detail - Mandatory Loop: HL Elements: 3

User Option (Usage): Must use

Purpose: To identify dependencies among and the content of hierarchically related groups of data segments

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	<u>Req</u>	<u>Type</u>	Min/Max	<u>Usage</u>		
HL01	628	Hierarchical ID Number	M	AN	1/12	Must use		
		<b>Description:</b> A unique number assigned segment in a hierarchical structure	by the se	nder to ic	lentify a particu	ular data		
HL02	734	Hierarchical Parent ID Number	М	AN	1/12	Must use		
		<b>Description:</b> Identification number of the data segment being described is subordi	•	er hierar	chical data seg	ment that the		
HL03	735	Hierarchical Level Code	М	ID	1/2	Must use		
		Description: Code defining the character	eristic of a	level in a	hierarchical st	ructure		
		CodeList Summary (Total Codes: 250, Included: 2)						
		Code Name						
		P Pack						
		T Shipping Tare						

- 1. The HL segment is used to identify levels of detail information using a hierarchical structure, such as relating line-item data to shipment data, and packaging data to line-item data.
- 2. The HL segment defines a top-down/left-right ordered structure.
- 3. HL01 shall contain a unique alphanumeric number for each occurrence of the HL segment in the transaction set. For example, HL01 could be used to indicate the number of occurrences of the HL segment, in which case the value of HL01 would be "1" for the initial HL segment and would be incremented by one in each subsequent HL segment within the transaction.
- 4. HL02 identifies the hierarchical ID number of the HL segment to which the current HL segment is subordinate.
- 5. HL03 indicates the context of the series of segments following the current HL segment up to the next occurrence of an HL segment in the transaction. For example, HL03 is used to indicate that subsequent segments in the HL loop form a logical grouping of data referring to shipment, order, or item-level information.
- HL04 indicates whether or not there are subordinate (or child) HL segments related to the current HL segment.

# **PO4** Item Physical Details

Pos: 0600 Max: 1 Detail - Optional Loop: HL Elements: 3

User Option (Usage): Used

Purpose: To specify the physical qualities, packaging, weights, and dimensions relating to the item

#### **Element Summary:**

Ref	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>		
PO405	187	Weight Qualifier	М	ID	1/2	Must use		
		Description: Code defining the type of we	ight					
		CodeList Summary (Total Codes: 52, Incl	uded: 1)					
		Code Name						
		G Gross Weight						
PO406	384	Gross Weight per Pack	М	R	1/9	Must use		
		Description: Numeric value of gross weigh	nt per pa	ack				
PO407	355	Unit or Basis for Measurement Code	М	ID	2/2	Must use		
		<b>Description:</b> Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken						
		CodeList Summary (Total Codes: 844, Ind	cluded: '	1)				
		Code Name						
		LB Pound						

#### Syntax Rules:

- 1. P0203 If either PO402 or PO403 is present, then the other is required.
- 2. C0506 If PO405 is present, then PO406 is required.
- 3. P0607 If either PO406 or PO407 is present, then the other is required.
- 4. P0809 If either PO408 or PO409 is present, then the other is required.
- 5. C1013 If PO410 is present, then PO413 is required.
- 6. C1113 If PO411 is present, then PO413 is required.
- 7. C1213 If PO412 is present, then PO413 is required.
- 8. L13101112 If PO413 is present, then at least one of PO410, PO411 or PO412 is required.
- 9. C1716 If PO417 is present, then PO416 is required.
- 10. C1804 If PO418 is present, then PO404 is required.

#### **Semantics:**

- 1. PO415 is used to indicate the relative layer of this package or range of packages within the layers of packaging. Relative Position 1 (value R1) is the innermost package.
- 2. PO416 is the package identifier or the beginning package identifier in a range of identifiers.
- 3. PO417 is the ending package identifier in a range of identifiers.
- 4. PO418 is the number of packages in this layer.

#### **Comments:**

 PO403 - The "Unit or Basis for Measure Code" in this segment position is for purposes of defining the unit of measure of the "Size" identified in the PO402. For example: If the carton contains 24 12-Ounce packages, it would be described as follows: Data element 356 = "24"; Data element 357 = "12"; Data element 355 = "OZ".

2. PO413 defines the unit of measure for PO410, PO411, and PO412.

# **REF** Reference Information

Pos: 1500 Max: 1
Detail - Optional
Loop: HL Elements: 2

User Option (Usage): Used

Purpose: To specify identifying information

#### **User Note 1:**

This segment should be sent for products produced that have Lot/Batch Numbers associated to them. Can be sent at Pallet/Carton level if the Lot/Batch applies to the full pallet/carton, else send at the item level

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>				
REF01	128	Reference Identification Qualifier	М	ID	2/3	Must use				
		Description: Code qualifying the Reference Identification								
		CodeList Summary (Total Codes: 1731, Included: 1)								
		Code Name								
		LT Lot Number								
REF02	127	Reference Identification	X	AN	1/50	Used				
		<b>Description:</b> Reference information as defi		a particu	ılar Transactio	n Set or as				

#### **Syntax Rules:**

1. R0203 - At least one of REF02 or REF03 is required.

#### **Semantics:**

1. REF04 contains data relating to the value cited in REF02.

# MAN Marks and Numbers Information

Pos: 1900 Max: 1 Detail - Mandatory Loop: HL Elements: 2

User Option (Usage): Must use

Purpose: To indicate identifying marks and numbers for shipping containers

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>		
MAN01	88	Marks and Numbers Qualifier	М	ID	1/2	Must use		
		Description: Code specifying the applicati	on or so	urce of N	larks and Num	bers (87)		
		CodeList Summary (Total Codes: 21, Included: 2)						
		Code Name						
		CP Carrier-Assigned Package ID Numb	er					
		GM EAN.UCC Serial Shipping Containe	r Code (	SSCC) a	and Application	Identifier		
MAN02	87	Marks and Numbers	М	AN	1/48	Must use		
		Description: Marks and numbers used to identify a shipment or parts of a shipment						
		User Note 1: When MAN01 = GM, Min/Max is 20/20						

#### Syntax Rules:

- 1. P0405 If either MAN04 or MAN05 is present, then the other is required.
- 2. C0605 If MAN06 is present, then MAN05 is required.

#### **Semantics:**

- MAN01/MAN02 and MAN04/MAN05 may be used to identify two different marks and numbers assigned to the same physical container.
- 2. When both MAN02 and MAN03 are used, MAN02 is the starting number of a sequential range and MAN03 is the ending number of that range.
- 3. When both MAN05 and MAN06 are used, MAN05 is the starting number of a sequential range, and MAN06 is the ending number of that range.

- 1. When MAN01 contains code "UC" (U.P.C. Shipping Container Code) and MAN05/MAN06 contain a range of ID numbers, MAN03 is not used. The reason for this is that the U.P.C. Shipping Container code is the same on every carton that is represented in the range in MAN05/MAN06.
- 2. MAN03 and/or MAN06 are only used when sending a range(s) of ID numbers.
- 3. When both MAN02/MAN03 and MAN05/MAN06 are used to send ranges of ID numbers, the integrity of the two ID numbers must be maintained.

## **DTM** Date/Time Reference

Pos: 2000 Max: 3
Detail - Optional
Loop: HL Elements: 2

User Option (Usage): Used

Purpose: To specify pertinent dates and times

#### **User Note 1:**

Send if applicable to the whole pallet/carton, else use item level

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	<u>Req</u>	<u>Type</u>	Min/Max	<u>Usage</u>			
DTM01	374	Date/Time Qualifier	M	ID	3/3	Must use			
		Description: Code specifying type of date or time, or both date and time							
		CodeList Summary (Total Codes: 1280, Included: 3)							
		Code Name							
		036 Expiration							
		405 Production							
		511 Shelf Life Expiration							
DTM02	373	Date	М	DT	8/8	Must use			

**Description:** Date expressed as CCYYMMDD where CC represents the first two digits of the calendar year

#### **Syntax Rules:**

- 1. R020305 At least one of DTM02, DTM03 or DTM05 is required.
- 2. C0403 If DTM04 is present, then DTM03 is required.
- 3. P0506 If either DTM05 or DTM06 is present, then the other is required.

# PAL Pallet Type and Load Characteristics

Pos: 2150 Max: 1 Detail - Optional Loop: HL Elements: 2

User Option (Usage): Used

**Purpose:** To identify the type and physical attributes of the pallet, and, gross weight, gross volume, and height of the load and the pallet

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>
PAL02	884	Pallet Tiers	0	N0	1/3	Used
		Description: The number of layers per pal	let			
PAL03	885	Pallet Blocks	0	N0	1/3	Used
		<b>Description:</b> The number of pieces (cartor	ns) per la	ayer on tl	he pallet	

### Syntax Rules:

- 1. P0506 If either PAL05 or PAL06 is present, then the other is required.
- 2. C0710 If PAL07 is present, then PAL10 is required.
- 3. C0810 If PAL08 is present, then PAL10 is required.
- 4. C0910 If PAL09 is present, then PAL10 is required.
- 5. L10070809 If PAL10 is present, then at least one of PAL07, PAL08 or PAL09 is required.
- 6. P1112 If either PAL11 or PAL12 is present, then the other is required.
- 7. P1314 If either PAL13 or PAL14 is present, then the other is required.

#### **Semantics:**

- 1. PAL04 (Pack) is the number of pieces on the pallet.
- 2. PAL05 (Unit Weight) is the weight of the pallet alone, before loading.
- 3. PAL07 and PAL08 (Length and Width) are the dimensions of the pallet before loading.
- 4. PAL09 (Height) is the height of the pallet and load.
- 5. PAL11 and PAL13 (Gross Weight and Gross Volume) are measured after loading and includes the pallet.

# **Loop Hierarchical Level**

Pos: 0100 Repeat: 2000000 Mandatory

Loop: HL Elements: N/A

User Option (Usage): Must use

Purpose: To identify dependencies among and the content of hierarchically related groups of data segments

#### **Loop Summary:**

<u>Pos</u>	<u>ld</u>	Segment Name	<u>Req</u>	Max Use	<u>Repeat</u>	<u>Usage</u>
0100	HL	Hierarchical Level-Item	M	1		Must use
0200	LIN	Item Identification	M	1		Must use
0300	SN1	Item Detail (Shipment)	M	1		Must use
0600	PO4	Item Physical Details	Ο	1		Used
0700	PID	Product/Item Description	M	2		Must use
1500	REF	Reference Information	Ο	>1		Used
2000	DTM	Date/Time Reference	0	3		Used

### **HL** Hierarchical Level-Item

Pos: 0100 Max: 1
Detail - Mandatory
Loop: HL Elements: 3

User Option (Usage): Must use

Purpose: To identify dependencies among and the content of hierarchically related groups of data segments

#### **Element Summary:**

Ref	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>	
HL01	628	Hierarchical ID Number	M	AN	1/12	Must use	
		<b>Description:</b> A unique number assigned by segment in a hierarchical structure	the ser	nder to id	entify a particul	ar data	
HL02	734	Hierarchical Parent ID Number	М	AN	1/12	Must use	
		<b>Description:</b> Identification number of the ned data segment being described is subordinated.	•	er hierard	chical data segr	nent that the	
HL03	735	Hierarchical Level Code	М	ID	1/2	Must use	
		<b>Description:</b> Code defining the characterist	tic of a l	evel in a	hierarchical str	ucture	
		CodeList Summary (Total Codes: 250, Included: 1)					
		Code Name					
		I Item					

- 1. The HL segment is used to identify levels of detail information using a hierarchical structure, such as relating line-item data to shipment data, and packaging data to line-item data.
- 2. The HL segment defines a top-down/left-right ordered structure.
- 3. HL01 shall contain a unique alphanumeric number for each occurrence of the HL segment in the transaction set. For example, HL01 could be used to indicate the number of occurrences of the HL segment, in which case the value of HL01 would be "1" for the initial HL segment and would be incremented by one in each subsequent HL segment within the transaction.
- 4. HL02 identifies the hierarchical ID number of the HL segment to which the current HL segment is subordinate.
- 5. HL03 indicates the context of the series of segments following the current HL segment up to the next occurrence of an HL segment in the transaction. For example, HL03 is used to indicate that subsequent segments in the HL loop form a logical grouping of data referring to shipment, order, or item-level information.
- HL04 indicates whether or not there are subordinate (or child) HL segments related to the current HL segment.

# **LIN** Item Identification

Pos: 0200 Max: 1
Detail - Mandatory
Loop: HL Elements: 9

User Option (Usage): Must use

Purpose: To specify basic item identification data

#### **User Note 1:**

One of Customized SKU (SK), Vendor Part Number (VN) or UPC (UA) must be returned as sent on the Purchase Order

Recommended to send all part numbers received back on the 856

#### **Element Summary:**

Ref	<u>ld</u>	Element Name	Req	Type	Min/Max	<u>Usage</u>				
LIN01	<del></del> 350	Assigned Identification		AN	1/20	Must use				
		<b>Description:</b> Alphanumeric chara	cters assigned fo	r differen	tiation within a	a transaction set				
		User Note 1: Return as sent on the Purchase Order								
LIN02	235	Product/Service ID Qualifier	М	ID	2/2	Must use				
		<b>Description:</b> Code identifying the type/source of the descriptive number used in Product/Service ID (234)								
		User Note 1: One of Buyer or Ve	ndor Part Number	r is requii	red as sent on	the order				
		CodeList Summary (Total Codes	s: 519, Included: 4	<b>!</b> )						
		Code Name								
		SK Stock Keeping Unit (SKU)								
		User Note 1:								
		Customized assigned SK	U							
		UA U.P.C./EAN Case Code (2	-5-5)							
		UK GTIN 14-digit Data Structu								
		VN Vendor's (Seller's) Item Nu	ımber							
LIN03	234	Product/Service ID	M	AN	1/48	Must use				
		Description: Identifying number f	or a product or se	ervice						
LIN04	235	Product/Service ID Qualifier	Χ	ID	2/2	Used				
		<b>Description:</b> Code identifying the type/source of the descriptive number used in Product/Service ID (234)								
		CodeList Summary (Total Codes	s: 519, Included: 4	<b>!</b> )						
		Code Name								
		SK Stock Keeping Unit (SKU)								
		User Note 1:								
		Customized assigned SK	U							
		UA U.P.C./EAN Case Code (2	-5-5)							
		UK GTIN 14-digit Data Structu	re							
		VN Vendor's (Seller's) Item Nu	mber							
LIN05	234	Product/Service ID	Χ	AN	1/48	Used				

Ref	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>	
		Description: Identifying number for a pro-	duct or se	ervice			
LIN06	235	Product/Service ID Qualifier	Х	ID	2/2	Used	
		<b>Description:</b> Code identifying the type/so Product/Service ID (234)	urce of th	ne descri <sub>l</sub>	otive number u	sed in	
		CodeList Summary (Total Codes: 519, Ir	cluded:	4)			
		Code Name					
		SK Stock Keeping Unit (SKU)					
		User Note 1:					
		Customized assigned SKU					
		UA U.P.C./EAN Case Code (2-5-5)					
		UK GTIN 14-digit Data Structure					
		VN Vendor's (Seller's) Item Number					
LIN07	234	Product/Service ID	Χ	AN	1/48	Used	
		Description: Identifying number for a pro-	duct or se	ervice			
LIN08	235	Product/Service ID Qualifier	Χ	ID	2/2	Used	
		<b>Description:</b> Code identifying the type/so Product/Service ID (234)	urce of th	ne descri <sub>l</sub>	otive number u	sed in	
		CodeList Summary (Total Codes: 519, Ir	cluded:	4)			
		Code Name					
		SK Stock Keeping Unit (SKU)					
		User Note 1:					
		Customized assigned SKU					
		UA U.P.C./EAN Case Code (2-5-5)					
		UK GTIN 14-digit Data Structure					
		VN Vendor's (Seller's) Item Number					
LIN09	234	Product/Service ID	Χ	AN	1/48	Used	
		Description: Identifying number for a product or service					

#### Syntax Rules:

- 1. P0405 If either LIN04 or LIN05 is present, then the other is required.
- 2. P0607 If either LIN06 or LIN07 is present, then the other is required.
- 3. P0809 If either LIN08 or LIN09 is present, then the other is required.
- 4. P1011 If either LIN10 or LIN11 is present, then the other is required.
- 5. P1213 If either LIN12 or LIN13 is present, then the other is required.
- 6. P1415 If either LIN14 or LIN15 is present, then the other is required.
- 7. P1617 If either LIN16 or LIN17 is present, then the other is required.
- 8. P1819 If either LIN18 or LIN19 is present, then the other is required.
- 9. P2021 If either LIN20 or LIN21 is present, then the other is required.
- 10. P2223 If either LIN22 or LIN23 is present, then the other is required.
- 11. P2425 If either LIN24 or LIN25 is present, then the other is required.
- 12. P2627 If either LIN26 or LIN27 is present, then the other is required.
- 13. P2829 If either LIN28 or LIN29 is present, then the other is required.

14. P3031 - If either LIN30 or LIN31 is present, then the other is required.

#### **Semantics:**

1. LIN01 is the line item identification

- 1. See the Data Dictionary for a complete list of IDs.
- 2. LIN02 through LIN31 provide for fifteen different product/service IDs for each item. For example: Case, Color, Drawing No., U.P.C. No., ISBN No., Model No., or SKU.

# **SN1** Item Detail (Shipment)

Pos: 0300 Max: 1 Detail - Mandatory Loop: HL Elements: 2

User Option (Usage): Must use

Purpose: To specify line-item detail relative to shipment

#### **Element Summary:**

Ref SN102	<u>ld</u> 382		ent Name per of Units Shipped	Req M	<u>Type</u> R	Min/Max 1/10	<u>Usage</u> Must use
			ription: Numeric value of units shipper or transaction set	ed in ma	nufactur	er's shipping ur	nits for a line
SN103	355	Unit	or Basis for Measurement Code	М	ID	2/2	Must use
		<b>Description:</b> Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken					
		Code	List Summary (Total Codes: 844, Inc	cluded: 8	o)		
		<u>Code</u>	<u>Name</u>				
		CA	Case				
		EA	Each				
		KG	Kilogram				
		LB	Pound				
		PK	Package				

#### **Syntax Rules:**

1. P0506 - If either SN105 or SN106 is present, then the other is required.

#### **Semantics:**

- 1. SN101 is the ship notice line-item identification.
- 2. SN105 is quantity ordered.

#### **Comments:**

1. SN103 defines the unit of measurement for both SN102 and SN104.

# **PO4** Item Physical Details

Pos: 0600 Max: 1 Detail - Optional Loop: HL Elements: 3

User Option (Usage): Used

Purpose: To specify the physical qualities, packaging, weights, and dimensions relating to the item

#### **User Note 1:**

Send if the item is a catch weight item

#### **Element Summary:**

Ref	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>			
PO405	187	Weight Qualifier	М	ID	1/2	Must use			
		Description: Code defining the type of weight							
		CodeList Summary (Total Codes: 52, Included: 1)							
		Code Name							
		G Gross Weight							
PO406	384	Gross Weight per Pack	М	R	1/9	Must use			
		Description: Numeric value of gross weigh	nt per pa	ick					
PO407	355	Unit or Basis for Measurement Code	М	ID	2/2	Must use			
		<b>Description:</b> Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken							
		CodeList Summary (Total Codes: 844, Included: 1)							
		Code Name							
		LB Pound							

#### **Syntax Rules:**

- 1. P0203 If either PO402 or PO403 is present, then the other is required.
- 2. C0506 If PO405 is present, then PO406 is required.
- 3. P0607 If either PO406 or PO407 is present, then the other is required.
- 4. P0809 If either PO408 or PO409 is present, then the other is required.
- 5. C1013 If PO410 is present, then PO413 is required.
- 6. C1113 If PO411 is present, then PO413 is required.
- 7. C1213 If PO412 is present, then PO413 is required.
- 8. L13101112 If PO413 is present, then at least one of PO410, PO411 or PO412 is required.
- 9. C1716 If PO417 is present, then PO416 is required.
- 10. C1804 If PO418 is present, then PO404 is required.

#### **Semantics:**

- 1. PO415 is used to indicate the relative layer of this package or range of packages within the layers of packaging. Relative Position 1 (value R1) is the innermost package.
- 2. PO416 is the package identifier or the beginning package identifier in a range of identifiers.
- 3. PO417 is the ending package identifier in a range of identifiers.
- 4. PO418 is the number of packages in this layer.

 PO403 - The "Unit or Basis for Measure Code" in this segment position is for purposes of defining the unit of measure of the "Size" identified in the PO402. For example: If the carton contains 24 12-Ounce packages, it would be described as follows: Data element 356 = "24"; Data element 357 = "12"; Data element 355 = "OZ".

2. PO413 defines the unit of measure for PO410, PO411, and PO412.

# **PID** Product/Item Description

Pos: 0700 Max: 2 Detail - Mandatory Loop: HL Elements: 3

User Option (Usage): Must use

Purpose: To describe a product or process in coded or free-form format

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>			
PID01	349	Item Description Type	М	ID	1/1	Must use			
		Description: Code indicating the format of a description							
		CodeList Summary (Total Codes: 3, Included: 1)							
		Code Name							
		F Free-form							
PID02	750	Product/Process Characteristic Code	М	ID	2/3	Must use			
		Description: Code identifying the general	class of	a produc	t or process ch	aracteristic			
		CodeList Summary (Total Codes: 238, Inc	luded: 1	)					
		Code Name		,					
		08 Product							
PID05	352	Description	М	AN	1/80	Must use			
		Description: A free-form description to cla	rify the r	elated da	ata elements ar	nd their content			

#### **Syntax Rules:**

- 1. C0403 If PID04 is present, then PID03 is required.
- 2. R0405 At least one of PID04 or PID05 is required.
- 3. C0703 If PID07 is present, then PID03 is required.
- 4. C0804 If PID08 is present, then PID04 is required.
- 5. C0905 If PID09 is present, then PID05 is required.

#### **Semantics:**

- 1. Use PID03 to indicate the organization that publishes the code list being referred to.
- 2. PID04 should be used for industry-specific product description codes.
- 3. PID08 describes the physical characteristics of the product identified in PID04. A "Y" indicates that the specified attribute applies to this item; an "N" indicates it does not apply. Any other value is indeterminate.
- 4. PID09 is used to identify the language being used in PID05.

- 1. If PID01 equals "F", then PID05 is used. If PID01 equals "S", then PID04 is used. If PID01 equals "X", then both PID04 and PID05 are used.
- 2. Use PID06 when necessary to refer to the product surface or layer being described in the segment.
- 3. PID07 specifies the individual code list of the agency specified in PID03.

# **REF** Reference Information

Pos: 1500 Max: >1 Detail - Optional Loop: HL Elements: 2

User Option (Usage): Used

Purpose: To specify identifying information

#### **User Note 1:**

This segment should be sent for products produced that have Lot/Batch Numbers associated to them

#### **Element Summary:**

Ref	<u>ld</u>	Element Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>		
REF01	128	Reference Identification Qualifier	М	ID	2/3	Must use		
	Description: Code qualifying the Reference Identification							
		CodeList Summary (Total Codes: 1731, Included: 1)						
		Code Name						
		LT Lot Number						
REF02	127	Reference Identification	М	AN	1/50	Must use		
		<b>Description:</b> Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier						
		User Note 1: If applicable, this must be sent						

#### **Syntax Rules:**

1. R0203 - At least one of REF02 or REF03 is required.

#### **Semantics:**

1. REF04 contains data relating to the value cited in REF02.

## **DTM** Date/Time Reference

Pos: 2000 Max: 3
Detail - Optional
Loop: HL Elements: 2

Used

User Option (Usage): Used

Purpose: To specify pertinent dates and times

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Eleme	ent Name	Req	<u>Type</u>	Min/Max	<u>Usage</u>	
DTM01	374	Date/	Time Qualifier	М	ID	3/3	Must use	
		Desci	Description: Code specifying type of date or time, or both date and time					
		CodeList Summary (Total Codes: 1280, Included: 3)						
		<u>Code</u>	<u>Name</u>					
		036	Expiration					
		405	Production					
		511	Shelf Life Expiration					

**Description:** Date expressed as CCYYMMDD where CC represents the first two digits of

Χ

DT

8/8

the calendar year

#### **Syntax Rules:**

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DTM02

- 1. R020305 At least one of DTM02, DTM03 or DTM05 is required.
- 2. C0403 If DTM04 is present, then DTM03 is required.

Date

3. P0506 - If either DTM05 or DTM06 is present, then the other is required.

### **CTT** Transaction Totals

Pos: 0100 Max: 1 Summary - Optional Loop: N/A Elements: 1

User Option (Usage): Used

Purpose: To transmit a hash total for a specific element in the transaction set

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	<u>Req</u>	<u>Type</u>	Min/Max	<u>Usage</u>
CTT01	354	Number of Line Items	M	N0	1/6	Must use

Description: Total number of line items in the transaction set

#### **Syntax Rules:**

- 1. P0304 If either CTT03 or CTT04 is present, then the other is required.
- 2. P0506 If either CTT05 or CTT06 is present, then the other is required.

#### **Comments:**

1. This segment is intended to provide hash totals to validate transaction completeness and correctness.

# **SE** Transaction Set Trailer

Pos: 0200 Max: 1 Summary - Mandatory Loop: N/A Elements: 2

User Option (Usage): Must use

**Purpose:** To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments)

#### **Element Summary:**

<u>Ref</u>	<u>ld</u>	Element Name	<u>Req</u>	<u>Type</u>	Min/Max	<u>Usage</u>		
SE01	96	Number of Included Segments	М	N0	1/10	Must use		
		<b>Description:</b> Total number of segments in segments	cluded ir	n a trans	action set inclu	iding ST and SE		
SE02	329	Transaction Set Control Number	М	AN	4/9	Must use		
		<b>Description:</b> Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set						

#### **Comments:**

1. SE is the last segment of each transaction set.