DigiKey

856 Advance Ship Notice

X12/V4010/856 : 856 Ship Notice/Manifest

Version: 2.0

Created:	9/5/2023
Modified:	10/13/2023

Notes

1. DigiKey is aware of instances where an item is small enough or it makes sense to consolidate/pack a mix of items into a single outer carton for shipping efficiencies. The expectation is suppliers will continue to consolidate (mixed items) into a single outer carton. Mixed items must be packed by product in separate inner cartons, and each inner carton must be labeled with our Barcoded Shipping label. In the ASN data the HL Pack needs to represent each of the inner cartons.

2. DigiKey needs to track quantities of products at the Lot number/date code level. Suppliers need to be aware that if a shipment contains orders that have items with more than one lot number and date code combination, each lot number/date code combination needs to be separate HL Pack loops.

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856   Ship Notice/Manifest

Functional Group=SH

Purpose: This Draft Standard for Trial Use 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.

Heading:

Pos	Id	Segment Name	Req	Max Use	Repeat	Notes	Usage
010	ST	Transaction Set Header	M	1			Must use
020	BSN	Beginning Segment for Ship Notice	M	1			Must use

Detail:

Pos	Id	Segment Name	Req	Max Use	Repeat	Notes	Usage
LOOP ID - HL					**200000**	**C2/010L**	
010	HL	Hierarchical Level	M	1			Must use
110	TD1	Carrier Details (Quantity and Weight)	M	20			Must use
120	TD5	Carrier Details (Routing Sequence/Transit Time)	M	12			Must use
150	REF	Reference Identification	M	>1			Must use
200	DTM	Date/Time Reference	M	10			Must use
LOOP ID - N1					**200**		
220	N1	Name	M	1			Must use
240	N3	Address Information	M	2			Must use
250	N4	Geographic Location	M	1			Must use
LOOP ID - HL					**200000**	**C2/010L**	
010	HL	Hierarchical Level	M	1			Must use
050	PRF	Purchase Order Reference	M	1			Must use
150	REF	Reference Identification	M	>1			Dependent
LOOP ID - HL					**200000**	**C2/010L**	
010	HL	Hierarchical Level	M	1			Must use
190	MAN	Marks and Numbers	M	>1			Must use
LOOP ID - HL					**1**	**C2/010L**	
010	HL	Hierarchical Level	M	1			Must use
020	LIN	Item Identification	M	1			Must use
030	SN1	Item Detail (Shipment)	M	1			Must use
070	PID	Product/Item Description	O	200			Must use
150	REF	Reference Identification	O	>1			Dependent
200	DTM	Date/Time Reference	O	10			Used

Summary:

Pos	Id	Segment Name	Req	Max Use	Repeat	Notes	Usage
010	CTT	Transaction Totals	M	1			Used
020	SE	Transaction Set Trailer	M	1			Must use

Comments:

2/010L   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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User Note 1:
General Usage:

Advance Ship Notice - As confirmation of shipment and content information for visibility and automation of receiving, trading partners will be required to provide the ASN/Ship Notice details for all electronically created orders.

DigiKey requires the ASN data sent just after the shipment pulls away from the Ship From location to ensure the data arrives prior to the physical delivery.

Trading Partners must send the ASN data in -

• SOPI (Shipment, Order, Pack/Carton, Item - used for loose Cartons and pallets containing more than one SKU) format. With this format, the Trading Partner is indicating they have provided the GS1 Shipping label at the Carton level and that the ASN data contains that barcode number.

ST   Transaction Set Header

Pos: 010 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:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
ST01	143	**Transaction Set Identifier Code**	M	ID	3/3	Must use

Description: Code uniquely identifying a Transaction Set

Code List Summary (Total Codes: 298, Included: 1)

Code	Name
856	Ship Notice/Manifest

Ref	Id	Element Name	Req	Type	Min/Max	Usage
ST02	329	**Transaction Set Control Number**	M	AN	4/9	Must use

Description: Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set

Semantics:

1. The transaction set identifier (ST01) used by the translation routines of the interchange partners to select the appropriate transaction set definition (e.g., 810 selects the Invoice Transaction Set).

BSN Beginning Segment for Ship Notice

User Option (Usage): Must use
Purpose: To transmit identifying numbers, dates, and other basic data relating to the transaction set

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
BSN01	353	**Transaction Set Purpose Code**	M	ID	2/2	Must use

Description: Code identifying purpose of transaction set
User Note 1: *Please return '06' when the PO BEG02 = DS/POC BCH02 = DS*

Code List Summary (Total Codes: 65, Included: 2)

Code	Name
00	Original
06	Confirmation

Ref	Id	Element Name	Req	Type	Min/Max	Usage
BSN02	396	**Shipment Identification**	M	AN	2/30	Must use

Description: A unique control number assigned by the original shipper to identify a specific shipment
User Note 1: *Unique Shipment ID Number*

Ref	Id	Element Name	Req	Type	Min/Max	Usage
BSN03	373	**Date**	M	DT	8/8	Must use

Description: Date expressed as CCYYMMDD
User Note 1: *ASN create date.*

Ref	Id	Element Name	Req	Type	Min/Max	Usage
BSN04	337	**Time**	M	TM	4/8	Must use

Description: Time expressed in 24-hour clock time as follows: HHMM, or HHMMSS, or HHMMSSD, or HHMMSSDD, where H = hours (00-23), M = minutes (00-59), S = integer seconds (00-59) and DD = decimal seconds; decimal seconds are expressed as follows: D = tenths (0-9) and DD = hundredths (00-99)
User Note 1: *ASN create time.*

Semantics:

1. BSN03 is the date the shipment transaction set is created.
2. BSN04 is the time the shipment transaction set is created.

Loop Hierarchical Level

Pos: 010	**Repeat: 200000**
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:

Pos	Id	Segment Name	Req	Max Use	Repeat	Usage
010	HL	Hierarchical Level	M	1		Must use
110	TD1	Carrier Details (Quantity and Weight)	M	20		Must use
120	TD5	Carrier Details (Routing Sequence/Transit Time)	M	12		Must use
150	REF	Reference Identification	M	>1		Must use
200	DTM	Date/Time Reference	M	10		Must use
220		Loop N1	M		200	Must use

HL Hierarchical Level

Pos: 010	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:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
HL01	628	**Hierarchical ID Number**	O	AN	1/12	Must use

Description: A unique number assigned by the sender to identify a particular data segment in a hierarchical structure

Ref	Id	Element Name	Req	Type	Min/Max	Usage
HL03	735	**Hierarchical Level Code**	M	ID	1/2	Must use

Description: Code defining the characteristic of a level in a hierarchical structure

Code List Summary (Total Codes: 170, Included: 1)

Code	Name
S	Shipment

Comments:

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. 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.

TD1 Carrier Details (Quantity and Weight)

Pos: 110	**Max: 20**
Detail - Mandatory	
Loop: HL	**Elements: 2**

User Option (Usage): Must use
Purpose: To specify the transportation details relative to commodity, weight, and quantity

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
TD101	103	**Packaging Code**	M	AN	3/5	Must use

> **Description:** 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
>
> **Code List Summary - Part 1/2** (Total Codes: 148, Included: 3)
>
> | Code | Name |
> |---|---|
> | CTN | Carton |
> | PCS | Pieces |
> | PLT | Pallet |

Ref	Id	Element Name	Req	Type	Min/Max	Usage
TD102	80	**Lading Quantity**	X	N0	1/7	Must use

> **Description:** Number of units (pieces) of the lading commodity

Syntax Rules:

1. C0102 - If TD101 is present, then TD102 is required.

TD5 Carrier Details (Routing Sequence/Transit Time)

Pos: 120	**Max: 12**
Detail - Mandatory	
Loop: HL	**Elements: 5**

User Option (Usage): Must use
Purpose: To specify the carrier and sequence of routing and provide transit time information

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
TD501	133	**Routing Sequence Code**	O	ID	1/2	Used

Description: Code describing the relationship of a carrier to a specific shipment movement

Code List Summary (Total Codes: 23, Included: 1)

Code	Name
B	Origin/Delivery Carrier (Any Mode)

Ref	Id	Element Name	Req	Type	Min/Max	Usage
TD502	66	**Identification Code Qualifier**	X	ID	1/2	Dependent

Description: Code designating the system/method of code structure used for Identification Code (67)

Code List Summary (Total Codes: 215, Included: 1)

Code	Name
2	Standard Carrier Alpha Code (SCAC)

Ref	Id	Element Name	Req	Type	Min/Max	Usage
TD503	67	**Identification Code**	X	AN	2/80	Dependent

Description: Code identifying a party or other code

Ref	Id	Element Name	Req	Type	Min/Max	Usage
TD504	91	**Transportation Method/Type Code**	M	ID	1/2	Must use

Description: Code specifying the method or type of transportation for the shipment

Code List Summary (Total Codes: 71, Included: 7)

Code	Name
A	Air
H	Customer Pickup
M	Motor (Common Carrier)
O	Containerized Ocean
P	Private Carrier
R	Rail
U	Private Parcel Service

Ref	Id	Element Name	Req	Type	Min/Max	Usage
TD505	387	**Routing**	X	AN	1/35	Dependent

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.

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.

REF   Reference Identification

Pos: 150	**Max: >1**
Detail - Mandatory	
Loop: HL	**Elements: 2**

User Option (Usage): Must use
Purpose: To specify identifying information

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
REF01	128	**Reference Identification Qualifier**	M	ID	2/3	Must use

Description: Code qualifying the Reference Identification

Code List Summary (Total Codes: 1503, Included: 3)

Code	Name
2I	Tracking Number
BM	Bill of Lading Number
CN	Carrier's Reference Number (PRO/Invoice)

Ref	Id	Element Name	Req	Type	Min/Max	Usage
REF02	127	**Reference Identification**	X	AN	1/30	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.

User Note 1:

Tracking Number is required.

DTM   Date/Time Reference

Pos: 200	**Max: 10**
Detail - Mandatory	
Loop: HL	**Elements: 2**

User Option (Usage): Must use
Purpose: To specify pertinent dates and times

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
DTM01	374	**Date/Time Qualifier**	M	ID	3/3	Must use

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

Code List Summary (Total Codes: 1112, Included: 1)

Code	Name
011	Shipped

Ref	Id	Element Name	Req	Type	Min/Max	Usage
DTM02	373	**Date**	M	DT	8/8	Must use

Description: Date expressed as CCYYMMDD

Syntax Rules:

1. R020305 - At least one of DTM02, DTM03 or DTM05 is required.

Loop Name

Pos: 220	Repeat: 200
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:

Pos	Id	Segment Name	Req	Max Use	Repeat	Usage
220	N1	Name	M	1		Must use
240	N3	Address Information	M	2		Must use
250	N4	Geographic Location	M	1		Must use

N1 Name

User Option (Usage): Must use
Purpose: To identify a party by type of organization, name, and code

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
N101	98	**Entity Identifier Code**	M	ID	2/3	Must use

Description: Code identifying an organizational entity, a physical location, property or an individual

Code List Summary (Total Codes: 1312, Included: 2)

Code	Name
SF	Ship From
ST	Ship To

Ref	Id	Element Name	Req	Type	Min/Max	Usage
N102	93	**Name**	X	AN	1/60	Used

Description: Free-form name

Ref	Id	Element Name	Req	Type	Min/Max	Usage
N103	66	**Identification Code Qualifier**	X	ID	1/2	Used

Description: Code designating the system/method of code structure used for Identification Code (67)
All valid standard codes are used. (Total Codes: 215)

Ref	Id	Element Name	Req	Type	Min/Max	Usage
N104	67	**Identification Code**	X	AN	2/80	Used

Description: Code identifying a party or other code
User Note 1: *If provided on the order (850/860), required on the ASN*

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.

Comments:

1. 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.

N3 Address Information

Pos: 240   Max: 2
Detail - Mandatory
Loop: N1   Elements: 2

User Option (Usage): Must use
Purpose: To specify the location of the named party

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
N301	166	**Address Information**	M	AN	1/55	Must use
		Description: Address information				
N302	166	**Address Information**	O	AN	1/55	Used
		Description: Address information				

N4   Geographic Location

Pos: 250	**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:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
N401	19	**City Name**	M	AN	2/30	Must use
		Description: Free-form text for city name				
N402	156	**State or Province Code**	O	ID	2/2	Used
		Description: Code (Standard State/Province) as defined by appropriate government agency				
N403	116	**Postal Code**	M	ID	3/15	Must use
		Description: Code defining international postal zone code excluding punctuation and blanks (zip code for United States)				
N404	26	**Country Code**	M	ID	2/3	Used
		Description: Code identifying the country				

Comments:

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: 010	**Repeat: 200000**
	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:

Pos	Id	Segment Name	Req	Max Use	Repeat	Usage
010	HL	Hierarchical Level	M	1		Must use
050	PRF	Purchase Order Reference	M	1		Must use
150	REF	Reference Identification	M	>1		Dependent

HL   Hierarchical Level

Pos: 010	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	Id	Element Name	Req	Type	Min/Max	Usage
HL01	628	**Hierarchical ID Number**	M	AN	1/12	Must use

    Description: A unique number assigned by the sender to identify a particular data segment in a hierarchical structure

Ref	Id	Element Name	Req	Type	Min/Max	Usage
HL02	734	**Hierarchical Parent ID Number**	O	AN	1/12	Used

    Description: Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to

Ref	Id	Element Name	Req	Type	Min/Max	Usage
HL03	735	**Hierarchical Level Code**	M	ID	1/2	Must use

    Description: Code defining the characteristic of a level in a hierarchical structure

    Code List Summary (Total Codes: 170, Included: 1)

Code	Name
O	Order

Comments:

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.
6. HL04 indicates whether or not there are subordinate (or child) HL segments related to the current HL segment.

PRF   **Purchase Order Reference**

Pos: 050   Max: 1
Detail - Mandatory
Loop: HL   Elements: 1

User Option (Usage): Must use
Purpose: To provide reference to a specific purchase order

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
PRF01	324	**Purchase Order Number**	M	AN	1/22	Must use

Description: Identifying number for Purchase Order assigned by the orderer/purchaser

REF Reference Identification

Pos: 150	Max: >1
Detail - Mandatory	
Loop: HL	**Elements: 2**

User Option (Usage): Dependent
Purpose: To specify identifying information

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
REF01	128	**Reference Identification Qualifier**	M	ID	2/3	Must use

Description: Code qualifying the Reference Identification

Code List Summary (Total Codes: 1503, Included: 2)

Code	Name
CO	Customer Order Number
PK	Packing List Number

Ref	Id	Element Name	Req	Type	Min/Max	Usage
REF02	127	**Reference Identification**	X	AN	1/30	Used

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.

Loop Hierarchical Level

Pos: 010	**Repeat: 200000**
	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:

Pos	Id	Segment Name	Req	Max Use	Repeat	Usage
010	HL	Hierarchical Level	M	1		Must use
190	MAN	Marks and Numbers	M	>1		Must use

HL   Hierarchical Level

Pos: 010   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	Id	Element Name	Req	Type	Min/Max	Usage
HL01	628	**Hierarchical ID Number**	M	AN	1/12	Must use

Description: A unique number assigned by the sender to identify a particular data segment in a hierarchical structure

Ref	Id	Element Name	Req	Type	Min/Max	Usage
HL02	734	**Hierarchical Parent ID Number**	O	AN	1/12	Used

Description: Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to

Ref	Id	Element Name	Req	Type	Min/Max	Usage
HL03	735	**Hierarchical Level Code**	M	ID	1/2	Must use

Description: Code defining the characteristic of a level in a hierarchical structure

Code List Summary (Total Codes: 170, Included: 1)

Code	Name
P	Pack

Comments:

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.
6. HL04 indicates whether or not there are subordinate (or child) HL segments related to the current HL segment.

MAN   Marks and Numbers

User Option (Usage): Must use
Purpose: To indicate identifying marks and numbers for shipping containers

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
MAN01	88	**Marks and Numbers Qualifier**	M	ID	1/2	Must use

Description: Code specifying the application or source of Marks and Numbers (87)
User Note 1: *GM must be provided.*

Code List Summary (Total Codes: 20, Included: 1)

Code	Name
GM	SSCC-18 and Application Identifier

Ref	Id	Element Name	Req	Type	Min/Max	Usage
MAN02	87	**Marks and Numbers**	M	AN	1/48	Must use

Description: Marks and numbers used to identify a shipment or parts of a shipment
User Note 1: *Must be unique value per item.*

User Note 2: *2-digit application code with 18 digit SSCC.*

Ref	Id	Element Name	Req	Type	Min/Max	Usage
MAN04	88	**Marks and Numbers Qualifier**	X	ID	1/2	Used

Description: Code specifying the application or source of Marks and Numbers (87)

Code List Summary (Total Codes: 20, Included: 1)

Code	Name
CP	Carrier-Assigned Package ID Number

Ref	Id	Element Name	Req	Type	Min/Max	Usage
MAN05	87	**Marks and Numbers**	X	AN	1/48	Used

Description: Marks and numbers used to identify a shipment or parts of a shipment

Syntax Rules:

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

Semantics:

1. 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.

Comments:

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. 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.

Loop Hierarchical Level

Pos: 010	Repeat: 1
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:

Pos	Id	Segment Name	Req	Max Use	Repeat	Usage
010	HL	Hierarchical Level	M	1		Must use
020	LIN	Item Identification	M	1		Must use
030	SN1	Item Detail (Shipment)	M	1		Must use
070	PID	Product/Item Description	O	200		Must use
150	REF	Reference Identification	O	>1		Dependent
200	DTM	Date/Time Reference	O	10		Used

HL   Hierarchical Level

	Pos: 010	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	Id	Element Name	Req	Type	Min/Max	Usage
HL01	628	**Hierarchical ID Number**	M	AN	1/12	Must use

Description: A unique number assigned by the sender to identify a particular data segment in a hierarchical structure

| HL02 | 734 | **Hierarchical Parent ID Number** | O | AN | 1/12 | Used |

Description: Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to

| HL03 | 735 | **Hierarchical Level Code** | M | ID | 1/2 | Must use |

Description: Code defining the characteristic of a level in a hierarchical structure

Code List Summary (Total Codes: 170, Included: 1)

Code	Name
I	Item

Comments:

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.
6. HL04 indicates whether or not there are subordinate (or child) HL segments related to the current HL segment.

LIN   Item Identification

User Option (Usage): Must use
Purpose: To specify basic item identification data

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
LIN01	350	**Assigned Identification**	O	AN	1/20	Used

Description: Alphanumeric characters assigned for differentiation within a transaction set
User Note 1: *Must match value sent on the Order (850/860)*

Ref	Id	Element Name	Req	Type	Min/Max	Usage
LIN02	235	**Product/Service ID Qualifier**	M	ID	2/2	Must use

Description: Code identifying the type/source of the descriptive number used in Product/Service ID (234)

Code List Summary (Total Codes: 477, Included: 1)

Code	Name
VP	Vendor's (Seller's) Part Number

Ref	Id	Element Name	Req	Type	Min/Max	Usage
LIN03	234	**Product/Service ID**	M	AN	1/48	Must use

Description: Identifying number for a product or service

Ref	Id	Element Name	Req	Type	Min/Max	Usage
LIN04	235	**Product/Service ID Qualifier**	X	ID	2/2	Must use

Description: Code identifying the type/source of the descriptive number used in Product/Service ID (234)

Code List Summary (Total Codes: 477, Included: 1)

Code	Name
BP	Buyer's Part Number

Ref	Id	Element Name	Req	Type	Min/Max	Usage
LIN05	234	**Product/Service ID**	X	AN	1/48	Must use

Description: Identifying number for a product or service

Ref	Id	Element Name	Req	Type	Min/Max	Usage
LIN06	235	**Product/Service ID Qualifier**	X	ID	2/2	Used

Description: Code identifying the type/source of the descriptive number used in Product/Service ID (234)

Code List Summary (Total Codes: 477, Included: 1)

Code	Name
UP	U.P.C. Consumer Package Code (1-5-5-1)

Ref	Id	Element Name	Req	Type	Min/Max	Usage
LIN07	234	**Product/Service ID**	X	AN	1/48	Used

Description: Identifying number for a product or service

Ref	Id	Element Name	Req	Type	Min/Max	Usage
LIN08	235	**Product/Service ID Qualifier**	X	ID	2/2	Must use

Description: Code identifying the type/source of the descriptive number used in Product/Service ID (234)

Code List Summary (Total Codes: 477, Included: 1)

Code	Name
CH	Country of Origin Code

Ref	Id	Element Name	Req	Type	Min/Max	Usage
LIN09	234	**Product/Service ID**	X	AN	1/48	Must use

Description: Identifying number for a product or service

Ref	Id	Element Name	Req	Type	Min/Max	Usage
LIN10	235	**Product/Service ID Qualifier**	X	ID	2/2	Used

Description: Code identifying the type/source of the descriptive number used in

Product/Service ID (234)
User Note 1: *Product Date Code required for applicable items.*

Code List Summary (Total Codes: 477, Included: 1)

Code	Name
PJ	Product Date Code (A code indicating the period during which a product was manufactured.)

LIN11	234	**Product/Service ID**		X	AN	1/48	Used

Description: Identifying number for a product or service
User Note 1: *ECIA date code (first 2 digits are the year and the other 2 digits are the week) all representing the date manufactured. If products are not requiring Tracing then set this value to NT*

LIN12	235	**Product/Service ID Qualifier**		X	ID	2/2	Used

Description: Code identifying the type/source of the descriptive number used in Product/Service ID (234)
All valid standard codes are used. (Total Codes: 477)

LIN13	234	**Product/Service ID**		X	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.

Semantics:

1. LIN01 is the line item identification

Comments:

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)

<table>
<tr><td>Pos: 030</td><td>Max: 1</td></tr>
<tr><td colspan="2" align="center">Detail - Mandatory</td></tr>
<tr><td>Loop: HL</td><td>Elements: 2</td></tr>
</table>

User Option (Usage): Must use
Purpose: To specify line-item detail relative to shipment

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
SN102	382	**Number of Units Shipped**	M	R	1/10	Must use

Description: Numeric value of units shipped in manufacturer's shipping units for a line item or transaction set

Ref	Id	Element Name	Req	Type	Min/Max	Usage
SN103	355	**Unit or Basis for Measurement Code**	M	ID	2/2	Must use

Description: 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: 794, Included: 1)

Code	Name
EA	Each

Semantics:

1. SN101 is the ship notice line-item identification.

PID Product/Item Description

Pos: 070   Max: 200
Detail - Optional
Loop: HL   Elements: 3

User Option (Usage): Must use
Purpose: To describe a product or process in coded or free-form format

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
PID01	349	**Item Description Type**	M	ID	1/1	Must use

Description: Code indicating the format of a description

Code List Summary (Total Codes: 3, Included: 1)

Code	Name
F	Free-form

Ref	Id	Element Name	Req	Type	Min/Max	Usage
PID02	750	**Product/Process Characteristic Code**	O	ID	2/3	Used

Description: Code identifying the general class of a product or process characteristic

Code List Summary (Total Codes: 217, Included: 1)

Code	Name
08	Product

Ref	Id	Element Name	Req	Type	Min/Max	Usage
PID05	352	**Description**	X	AN	1/80	Must use

Description: A free-form description to clarify the related data elements and their content

Syntax Rules:

1. R0405 - At least one of PID04 or PID05 is required.

Comments:

1. If PID01 equals "F", then PID05 is used.

REF   Reference Identification

Pos: 150	Max: >1
Detail - Optional	
Loop: HL	**Elements: 2**

User Option (Usage): Dependent
Purpose: To specify identifying information

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
REF01	128	**Reference Identification Qualifier**	O	ID	2/3	Used

         Description: Code qualifying the Reference Identification

         Code List Summary (Total Codes: 1503, Included: 2)

Code	Name
LT	Lot Number
SE	Serial Number

Ref	Id	Element Name	Req	Type	Min/Max	Usage
REF02	127	**Reference Identification**	X	AN	1/30	Used

         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.

User Note 1:

Lot Number and Serial Number required for applicable items.

DTM   Date/Time Reference

Pos: 200	Max: 10
Detail - Optional	
Loop: HL	Elements: 2

User Option (Usage): Used
Purpose: To specify pertinent dates and times

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
DTM01	374	**Date/Time Qualifier**	O	ID	3/3	Used

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

Code List Summary (Total Codes: 1112, Included: 2)

Code	Name
036	Expiration
094	Manufacture

Ref	Id	Element Name	Req	Type	Min/Max	Usage
DTM02	373	**Date**	X	DT	8/8	Used

Description: Date expressed as CCYYMMDD

Syntax Rules:

1. R020305 - At least one of DTM02, DTM03 or DTM05 is required.

User Note 1:

Expiration Date and Manufacture Date are required for applicable items.

CTT   Transaction Totals

User Option (Usage): Used
Purpose: To transmit a hash total for a specific element in the transaction set

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
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.

SE   Transaction Set Trailer

Pos: 020	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:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
SE01	96	**Number of Included Segments**	M	N0	1/10	Must use

    Description: Total number of segments included in a transaction set including ST and SE segments

Ref	Id	Element Name	Req	Type	Min/Max	Usage
SE02	329	**Transaction Set Control Number**	M	AN	4/9	Must use

    Description: 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.

Sample

```
ISA|00|        |00|        |01|TEST        |ZZ|DKEUS          |230802|1715|U|00401|100002636|0|P|^}
GS|SH|TEST|DKEUS|20230802|1715|3636|X|004010}
ST|856|3636}
BSN|00|0080318438|20230816|1606}
HL|1||S}
TD1|CTN|3}
TD5|B|2|CHOP|M}
REF|CN|0080318438}
DTM|011|20230816}
N1|ST|DIGI-KEY CORP.|1|0000000840}
N3|602  125th Ave. S.}
N4|THIEF RIVER FALLS|MN|56701|US}
N1|SF|KYOCERA AVX COMPONENTS CORP|91|999999999}
N3|123 MAIN STREET.}
N4|ANY CITY|MN|55440|US}
HL|2|1|O}
PRF|3936228}
REF|PK|4074738}
HL|3|2|P}
MAN|GM|00000268320000586642}
HL|4|3|I}
LIN|00005|VP|KC2520C25.0000C1LE00|BP|478-KC2520C25.0000C1LE00TR-ND|||CH|JPN|PJ|2250}
SN1||8000|EA}
PID|F|08|||XTAL OSC XO 25.0000MHZ CMOS SMD}
REF|LT|91T1ST}
DTM|036|20241204}
DTM|094|20221204}
HL|5|2|P}
MAN|GM|00000268320000586659}
HL|6|5|I}
LIN|00012|VP|KC3225K2.04800C1GE00|BP|478-KC3225K2.04800C1GE00TR-ND|||CH|JPN|PJ|2252}
SN1||2000|EA}
PID|F|08|||XTAL OSC XO 2.0480MHZ CMOS SMD}
REF|LT|91T3G5}
DTM|036|20241218}
DTM|094|20221218}
HL|7|2|P}
MAN|GM|00000268320000586666}
HL|8|7|I}
LIN|00027|VP|MC2016K50.0000C16ESH|BP|478-MC2016K50.0000C16ESHTR-ND|||CH|JPN|PJ|2309}
SN1||2000|EA}
PID|F|08|||XTAL OSC XO 50.0000MHZ CMOS SMD}
REF|LT|91TD4J}
DTM|036|20250226}
DTM|094|20230226}
CTT|8}
SE|45|3636}
GE|1|3636}
IEA|1|100002636}
```