



# 3M EDI ANSI 4010 X12 856 Advance Ship Notice

## Introduction

The purpose of this document is to explain the process of sending the Advance Ship Notice (ASN) to one of 3M's customers. The primary purpose of the ASN is to provide our customer with an electronic copy of a supplier's Bill of Lading or Packing Slip so we can send shipments as efficiently and accurately as possible.

The ANSI X12 version presented in this guideline is 004010. 3M EDI 856 supports only this standard guideline/map, thus will not be able to accommodate any customer specific requirements.

## Key Points

- Each ASN is represented by a unique ASN number for each shipment. We prefer to combine multiple purchase orders within a single ASN or shipment, however if customer requirement is to send separate ASN for each unique PO, we can do that as well.
- Each ASN must pertain to only one DC.
- All backorders / resends can be issued with unique ASN Number
- The ASN number(s) is clearly stated on the Bill of Lading or Packing Slips.
- All ASN's should be acknowledged within 24 hours of their receipt with a 997 Functional Acknowledgement.
- Customer will be receiving Delivery Number not Invoice Number in REF02 at Order Level. 3M will not have an invoice number at the time of shipment.
- If a customer would like 3M to provide Country of Origin for an item in the Shipment, 3M will be able to pass in in the LIN10 and LIN11 with "CH" qualifiers with appropriate notes in the Shipment level REF03 with REF01 qualifier of L1.



## SSCC Labeling Requirements

Following are some of the more common shipment scenarios and how 3M will send the SSCC labels. SSCC labels are only sent from Label capable ship from locations for pallets, cartons on pallet, loose cartons, a carton with multiple items on it and small parcel shipments. In case any of 3M's customer does not require ASN without label, we can restrict them no to send to the customers.

## ASN Structure

3M supports below ASN structures:

**SOTI** - Shipment, Order, Tare, Item

**SOPI** - Shipment, Order, Package, Item

**SOI** - Shipment, Order, Item

Our preference is to send the SOTI structure with one ASN per Shipment having pallet labeling. Each ASN should pertain to one destination and one vendor number and can contain multiple purchase orders.



# 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
001	ISA	Interchange Control Header	M	1			Mandatory
002	GS	Functional Group Header	M	1			Mandatory
010	ST	Transaction Set Header	M	1			Mandatory
020	BSN	Beginning Segment for Ship Notice - at Header Level	M	1			Mandatory

#### Detail:

Pos	Id	Segment Name	Req	Max Use	Repeat	Notes	Usage
<b>LOOP ID - HL</b>					<b>1</b>		
010	HL	Hierarchical Level - SHIPMENT DETAIL	M	1			Mandatory
110	TD1	Carrier Details (Quantity and Weight) - at Shipment Level	O	5			Optional
120	TD5	Carrier Details (Routing Sequence/Transit Time) - at Shipment Level	O	1			Mandatory
130	TD3	Carrier Details (Equipment) - at Shipment Level	O	1			Optional
150	REF	Reference Identification - at Shipment Level	O	1			Optional
200	DTM	Date/Time Reference - at Shipment Level	O	1			Mandatory
<b>LOOP ID - N1</b>					<b>1</b>		
220	N1	Name - Ship From - at Shipment Level	O	1			Mandatory
240	N3	Address Information - at Shipment Level	O	1			Optional
250	N4	Geographic Location - at Shipment Level	O	1			Optional
<b>LOOP ID - HL</b>					<b>1</b>		
010	HL	Hierarchical Level - ORDER DETAIL	M	1			Mandatory
050	PRF	Purchase Order Reference - at Order Level	M	1			Mandatory
150	REF	Reference Identification - at Order Level	M	3			Mandatory
<b>LOOP ID - HL</b>					<b>200000</b>		
010	HL	Hierarchical Level - TARE (PALLET) DETAIL	M	1			Conditional



190	MAN	Marks and Numbers for Tare (Pallet) Level	O	1		Conditional
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<b>LOOP ID - HL</b>		<b>200000</b>				
010	HL	Hierarchical Level - ITEM DETAIL	M	1		Mandatory
020	LIN	Item Identification - at Item Level	M	1		Mandatory
030	SN1	Item Detail (Shipment) - at Item Level	O	1		Mandatory
070	PID	Product/Service Description	O	200		

### Summary:

<u>Pos</u>	<u>Id</u>	<u>Segment Name</u>	<u>Req</u>	<u>Max Use</u>	<u>Repeat</u>	<u>Notes</u>	<u>Usage</u>
010	CTT	Transaction Totals	O	1			Mandatory
020	SE	Transaction Set Trailer	M	1			Mandatory

### Heading:

<u>Pos</u>	<u>Id</u>	<u>Segment Name</u>	<u>Req</u>	<u>Max Use</u>	<u>Repeat</u>	<u>Notes</u>	<u>Usage</u>
021	GE	Functional Group Trailer	M	1			Mandatory
022	IEA	Interchange Control Trailer	M	1			Mandatory

### Transaction Set Notes

- 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.

### Transaction Set Comments

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



# ISA Interchange Control Header

Pos: 001	Max: 1
Heading - Mandatory	
Loop: N/A	Elements: 16

User Option (Usage): Mandatory

Purpose: To start and identify an interchange of zero or more functional groups and interchange-related control segments

## Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
ISA01	I01	<b>Authorization Information Qualifier</b>	M	ID	2/2	Mandatory
		<b>Description:</b> Code to identify the type of information in the Authorization Information				
		<u>Code</u>		<u>Name</u>		
		00		No Authorization Information Present (No Meaningful Information in I02)		
ISA02	I02	<b>Authorization Information</b>	M	AN	10/10	Mandatory
		<b>Description:</b> Information used for additional identification or authorization of the interchange sender or the data in the interchange; the type of information is set by the Authorization Information Qualifier (I01)				
		<b>Element User Note:</b> This element should be filled with spaces				
ISA03	I03	<b>Security Information Qualifier</b>	M	ID	2/2	Mandatory
		<b>Description:</b> Code to identify the type of information in the Security Information				
		<u>Code</u>		<u>Name</u>		
		00		No Security Information Present (No Meaningful Information in I04)		
ISA04	I04	<b>Security Information</b>	M	AN	10/10	Mandatory
		<b>Description:</b> This is used for identifying the security information about the interchange sender or the data in the interchange; the type of information is set by the Security Information Qualifier (I03)				
ISA05	I05	<b>Interchange ID Qualifier</b>	M	ID	2/2	Mandatory
		<b>Description:</b> Qualifier to designate the system/method of code structure used to designate the sender or receiver ID element being qualified				
		<b>All valid X12 codes are used.</b>				
ISA06	I06	<b>Interchange Sender ID</b>	M	AN	15/15	Mandatory
		<b>Description:</b> Identification code published by the sender for other parties to use as the receiver ID to route data to them; the sender always codes this value in the sender ID element				
ISA07	I05	<b>Interchange ID Qualifier</b>	M	ID	2/2	Mandatory
		<b>Description:</b> Qualifier to designate the system/method of code structure used to designate the sender or receiver ID element being qualified				
ISA08	I07	<b>Interchange Receiver ID</b>	M	AN	15/15	Mandatory
		<b>Description:</b> Identification code published by the receiver of the data; When sending, it is used by the sender as their sending ID, thus other parties sending to them will use this as a receiving ID to route data to them				
ISA09	I08	<b>Interchange Date</b>	M	DT	6/6	Mandatory
		<b>Description:</b> Date of the interchange				
ISA10	I09	<b>Interchange Time</b>	M	TM	4/4	Mandatory
		<b>Description:</b> Time of the interchange				
ISA11	I10	<b>Interchange Control Standards Identifier</b>	M	ID	1/1	Mandatory

**Description:** Code to identify the agency responsible for the control standard used by the message that is enclosed by the interchange header and trailer

**All valid X12 codes are used.**

ISA12 I11 **Interchange Control Version Number** M ID 5/5 Mandatory

**Description:** This version number covers the interchange control segments

<u>Code</u>	<u>Name</u>
00400	Standard Issued as ANSI X12

ISA13 I12 **Interchange Control Number** M N0 9/9 Mandatory

**Description:** A control number assigned by the interchange sender

**Element User Note:**

ISA14 I13 **Acknowledgment Requested** M ID 1/1 Mandatory

**Description:** Code sent by the sender to request an interchange acknowledgment (TA1)

<u>Code</u>	<u>Name</u>
0	No Acknowledgment Requested

ISA15 I14 **Usage Indicator** M ID Mandatory 1/1

**Description:** Code to indicate whether data enclosed by this interchange envelope is test, production or information

<u>Code</u>	<u>Name</u>
P	Production Data
T	Test Data

ISA16 I15 **Component Element Separator** M 1/1 Mandatory

**Description:** Type is not applicable; the component element separator is a delimiter and not a data element; this field provides the delimiter used to separate component data elements within a composite data structure; this value must be different than the data element separator and the segment terminator

**Segment User Example:**

ISA}00} }00} }01}006173082 }14}072271711HDP }240216}2047}{}00406}000032915}0}P}>~

GS

## Functional Group Header

Pos: 002	Max: 1
Heading - Mandatory	
Loop: N/A	Elements: 8

User Option (Usage): Mandatory

Purpose: To indicate the beginning of a functional group and to provide control information

## Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
GS01	479	<b>Functional Identifier Code</b> <b>Description:</b> Code identifying a group of application related transaction sets	M	ID	2/2	Mandatory
		<u>Code</u> <u>Name</u> SH                              Ship Notice/Manifest (856)				
GS02	142	<b>Application Sender's Code</b> <b>Description:</b> Code identifying party sending transmission; codes agreed to by trading partners	M	AN	2/15	Mandatory
GS03	124	<b>Application Receiver's Code</b> <b>Description:</b> Code identifying party receiving transmission. Codes agreed to by trading partners	M	AN	2/15	Mandatory
GS04	373	<b>Date</b> <b>Description:</b> Date expressed as CCYYMMDD	M	DT	8/8	Mandatory
GS05	337	<b>Time</b> <b>Description:</b> Time expressed in 24-hour clock time as follows: HHMM, or HHMMSS, or HHMMSSDD, 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)	M	TM	4/8	Mandatory
GS06	28	<b>Group Control Number</b> <b>Description:</b> Assigned number originated and maintained by the sender	M	NO	1/9	Mandatory
GS07	455	<b>Responsible Agency Code</b> <b>Description:</b> Code used in conjunction with Data Element 480 to identify the issuer of the standard	M	ID	1/2	Mandatory
		<u>Code</u> <u>Name</u> X                                      Accredited Standards Committee X12				
GS08	480	<b>Version / Release / Industry Identifier Code</b> <b>Description:</b> Code indicating the version, release, subrelease, and industry identifier of the EDI standard being used, including the GS and GE segments; if code in DE455 in GS segment is X, then in DE 480 positions 1-3 are the version number; positions 4-6 are the release and subrelease, level of the version; and positions 7-12 are the industry or trade association identifiers (optionally assigned by user); if code in DE455 in GS segment is T, then other formats are allowed	M	AN	1/12	Mandatory
		<u>Code</u> <u>Name</u> 004010                      Draft Standards Approved for Publication by ASC X12 Procedures Review Board  through October 1997				

## Segment User Example:

GS}SH}006173082}072271711HDP}20240216}2047}19347}X}004060~



# ST Transaction Set Header

Pos: 010	Max: 1
Heading - Mandatory	
Loop: N/A	Elements: 2

**User Option (Usage):** Mandatory

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

## Element Summary:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>	<u>Usage</u>
ST01	143	<b>Transaction Set Identifier Code</b>	M	ID	3/3	Mandatory
		<b>Code</b> <b>Name</b>				
		856                Ship Notice/Manifest				
		<b>Description:</b> Assigned number originated and maintained by the sender				
ST02	329	<b>Transaction Set Control Number</b>	M	AN	4/9	Mandatory
		<b>Description:</b> Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set				
		<b>Element User Note:</b>				

## Segment User Note:

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).

## Segment User Example:

ST}856}24667~



# BSN Beginning Segment for Ship Notice - at Header Level

Pos: 020	Max: 1
Heading - Mandatory	
Loop: N/A	Elements: 5

User Option (Usage): Mandatory

Purpose: It is used 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	Mandatory								
<p><b>Description:</b> Assigned number originated and maintained by the sender</p> <table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>00</td> <td>Original</td> </tr> <tr> <td>05</td> <td>Replace</td> </tr> <tr> <td>06</td> <td>Confirmation (Drop Ship)</td> </tr> </tbody> </table>							Code	Name	00	Original	05	Replace	06	Confirmation (Drop Ship)
Code	Name													
00	Original													
05	Replace													
06	Confirmation (Drop Ship)													
<p><b>Element User Note:</b> "05" will only be used for resending ASN</p>														
BSN02	396	Shipment Identification	M	AN	2/30	Mandatory								
<p><b>Description:</b> A unique control number assigned by the original shipper to identify a specific shipment</p>														
BSN03	373	Date	M	DT	8/8	Mandatory								
<p><b>Description:</b> Date expressed as CCYYMMDD</p>														
<p><b>Element User Note:</b> This is the date the ASN was created.</p>														
BSN04	337	Time	M	TM	4/8	Mandatory								
<p><b>Description:</b> 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)</p>														
<p><b>Element User Note:</b> The time the ASN was created, expressed in four digits as HHMM.</p>														

## Segment User Note:

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

## Segment User Example:

BSN}14}8089022564}20240216}2034~



# HL DETAIL

## Hierarchical Level - SHIPMENT

Pos: 010	Max: 1
Detail - Mandatory	
Loop: HL	Elements: 2

**User Option (Usage):** Mandatory

**Purpose:** It is used to identify dependencies among and the content of hierarchically related groups of data segments

### Element Summary:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>	<u>Usage</u>
HL01	628	<b>Hierarchical ID Number</b> <b>Description:</b> A unique number assigned by the sender to identify a particular data segment in a hierarchical structure	M	AN	1/12	Mandatory
HL03	735	<b>Hierarchical Level Code</b> <b>Description:</b> Code defining the characteristic of a level in a hierarchical structure	M	ID	1/2	Mandatory
		<b>Code</b>		<b>Name</b>		
		S		Shipment		

### Segment User Note:

- 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.  
The HL segment defines a top-down/left-right ordered structure.
- 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.
- HL02 identifies the hierarchical ID number of the HL segment to which the current HL segment is subordinate.
- 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.

### Segment User Example:

Detail ASN With GS1-128 Labeling at Pallet Level:

```
HL}1}}S (shipment)
HL}2}1}O (order)
HL}3}2}T (first pallet linked to order level)
HL}4}3}I (item linked to first pallet)
HL}5}2}T (second pallet linked to order level)
HL}6}5}I (item linked to second pallet)
HL}7}5}I (item linked to second pallet)
```

Summary ASN Without GS1-128 Labeling:

```
HL}1}}S (shipment)
HL}2}1}O (order)
HL}3}2}I (item linked to order level)
```

# TD1 Carrier Details (Quantity and Weight) - at Shipment Level

Pos: 110	Max: 5
Detail - Optional	
Loop: HL	Elements: 5

User Option (Usage): Mandatory

Purpose: It is used to specify the transportation details relative to commodity, weight, and quantity

### Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage						
TD101	103	<b>Packaging Code</b> <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	O	AN	3/5	Mandatory						
		<table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>CTN25</td> <td>Carton Corrugated or Solid</td> </tr> <tr> <td>PLT</td> <td>Pallet</td> </tr> </tbody> </table>	Code	Name	CTN25	Carton Corrugated or Solid	PLT	Pallet				
Code	Name											
CTN25	Carton Corrugated or Solid											
PLT	Pallet											
TD102	80	<b>Lading Quantity</b> <b>Description:</b> Number of units (pieces) of the lading commodity	C	N0	1/7	Mandatory						
TD106	187	<b>Weight Qualifier</b> <b>Description:</b> Code defining the type of weight	O	ID	1/2	Optional						
		<table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>G</td> <td>Gross Weight</td> </tr> </tbody> </table>	Code	Name	G	Gross Weight						
Code	Name											
G	Gross Weight											
TD107	81	<b>Weight</b> <b>Description:</b> Numeric value of weight	C	ID	1/10	Conditional						
TD108	355	<b>Unit or Basis for Measurement Code</b> <b>Description:</b> Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	C	ID	2/2	Conditional						
		<table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>LB</td> <td>Pound</td> </tr> </tbody> </table>	Code	Name	LB	Pound						
Code	Name											
LB	Pound											

### Segment User Note:

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

### Segment User Example:

TD1}CTN}36}}}}G}83}LB~

# TD5 Carrier Details (Routing Sequence/Transit Time) - at Shipment Level

Pos: 120	Max: 1
Detail - Mandatory	
Loop: HL	Elements: 4

User Option (Usage): Mandatory

Purpose: It is used to specify the carrier and sequence of routing and provide transit time information.

## Element Summary:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>	<u>Usage</u>
TD502	66	<b>Identification Code Qualifier</b>	O	ID	1/2	Optional
<b>Description:</b> Code designating the system/method of code structure used for Identification Code (67)						
		<u>Code</u>	<u>Name</u>			
		2	Standard Carrier Alpha Code (SCAC)			
		91	Assigned by Seller or Seller's Agent			
TD503	67	<b>Identification Code</b>	C	AN	2/80	Conditional
<b>Description:</b> Code identifying a party or other code						
TD504	91	<b>Transportation Method/Type Code</b>	C	ID	1/2	Conditional
<b>Description:</b> Code specifying the method or type of transportation for the shipment						
		<u>Code</u>	<u>Name</u>			
		A	Air			
		AE	Air Express			
		CE	Customer Pickup/ Customer's Expense			
		L	Contact Carrier			
		LT	Less Than Trailer Load			
		M	Motor (Common Carrier)			
		PG	Pooled Piggyback (Outbound shipment consisting of a trailer on a railcar from a consolidation point to a final destination via rail move)			
		R	Rail			
		S	Ocean			
		U	Private Parcel Service			
TD505	387	<b>Routing</b>	C	AN	1/35	Conditional
<b>Description:</b> Free-form description of the routing or requested routing for shipment, or the originating carrier's identity						



### Segment User Note:

1. At least one of TD502 TD504 TD505 TD506 or TD512 is required.
2. If TD502 is present, then TD503 is required.

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.

### Segment User Example:

TD5}}2}SEFL}}SOUTHEASTERN FREIGHT LINES INC~



# TD3 Carrier Details (Equipment) - at Shipment Level

Pos: 130	Max: 1
Detail - Optional	
Loop: HL	Elements: 3

User Option (Usage): Optional

*Purpose: It is used to specify transportation details relating to the equipment used by the carrier. If you are sending the ASN for a consignment purchase order, this segment is required.*

### Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage				
TD301	40	<b>Equipment Description Code</b> <b>Description:</b> Code specifying the method or type of transportation for the shipment	C	ID	2/2	Conditional				
		<table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>TL</td> <td>Trailer (not otherwise specified)</td> </tr> </tbody> </table>	Code	Name	TL	Trailer (not otherwise specified)				
Code	Name									
TL	Trailer (not otherwise specified)									
TD302	206	<b>Equipment Initial</b> <b>Description:</b> Prefix or alphabetic part of an equipment unit's identifying number	O	AN	1/4	Optional				
TD303	207	<b>Equipment Number</b> <b>Description:</b> Sequencing or serial part of an equipment unit's identifying number (pure numeric form for equipment number is preferred)	C	AN	1/10	Mandatory				

### Segment User Notes:

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

### Segment User Example:

TD3}TL}}650137036

# REF Reference Identification - at Shipment Level

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

User Option (Usage): Optional

Purpose: It is used to specify identifying information.

## Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
REF01	128	Reference Identification Qualifier	M	ID	2/3	Mandatory
<b>Description:</b> Code qualifying the Reference Identification						
		<u>Code</u>	<u>Name</u>			
		CN	Carrier's Reference Number (PRO/Invoice)			
		BM	Bill of Landing number			
		L1	Letter or Notes			
REF02	127	Reference Identification	C	AN	1/30	Conditional
<b>Description:</b> Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier						

## Segment User Notes:

1. At least one of REF02 or REF03 is required.
2. If either C04003 or C04004 is present, then the other is required.
3. If either C04005 or C04006 is present, then the other is required.
4. REF04 contains data relating to the value cited in REF02.

## Segment User Example:

REF}BM}FPNA914992~

# DTM Date/Time Reference - at Shipment Level

Pos: 200	Max: 1
Detail - Mandatory	
Loop: HL	Elements: 2

User Option (Usage): Mandatory

Purpose: It is used to specify pertinent ship dates and times.

## Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
DTM01	374	Date/Time Qualifier	M	ID	3/3	Mandatory
<b>Description:</b> Code specifying type of date or time, or both date and time						
		<u>Code</u>	<u>Name</u>			
		011	Shipped			
		017	Estimated Delivery			
		067	Current Schedule Delivery			
DTM02	373	Date	C	DT	8/8	Conditional
<b>Description:</b> Date expressed as CCYYMMDD						

## Segment User Notes:

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

## Segment User Example:

DTM}011}20240216~



# N1 Level

## Name - Ship From - at Shipment

Pos: 220	Max: 1
Detail - Mandatory	
Loop: N1	Elements: 4

User Option (Usage): Mandatory

Purpose: It is used to identify a party by type of organization, name, and code.

### Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage						
N101	98	<b>Entity Identifier Code</b>  <b>Description:</b> Code identifying an organizational entity, a physical location, property or an individual  <table border="1"> <tr> <th>Code</th> <th>Name</th> </tr> <tr> <td>SF</td> <td>Ship From</td> </tr> <tr> <td>ST</td> <td>Ship To</td> </tr> </table>	Code	Name	SF	Ship From	ST	Ship To	M	ID	2/3	Mandatory
Code	Name											
SF	Ship From											
ST	Ship To											
N102	93	<b>Name</b>  <b>Description:</b> Free-form name	C	AN	1/60	Conditional						
N103	66	<b>Identification Code Qualifier</b>  <b>Description:</b> Code designating the system/method of code structure used for Identification Code (67)  <table border="1"> <tr> <th>Code</th> <th>Name</th> </tr> <tr> <td>92</td> <td>Assigned by Buyer or Buyer's Agent</td> </tr> </table>	Code	Name	92	Assigned by Buyer or Buyer's Agent	C	ID	1/2	Conditional		
Code	Name											
92	Assigned by Buyer or Buyer's Agent											
N104	67	<b>Identification Code</b>  <b>Description:</b> Code identifying a party or other code	C	AN	2/80	Conditional						

### Segment User Note:

- At least one of N102 or N103 is required.
  - 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.
  - N105 and N106 further define the type of entity in N101.

### Segment User Example:

N1}ST}SUPPLYWORKS ATLANTA}92}006~

# N3 Address Information - at Shipment Level

Pos: 240	Max: 1
Detail - Optional	
Loop: N1	Elements: 1

**User Option (Usage):** Optional

*Purpose: It is used to specify the location of the named party.*

## Element Summary:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>	<u>Usage</u>
N301	166	Address Information	M	AN	1/55	Mandatory
<b>Description:</b> Address information						

## Segment User Note:

## Segment User Example:

N3}1532 North Main Street

# N4 Geographic Location - at Shipment Level

Pos: 250	Max: 1
Detail - Optional	
Loop: N1	Elements: 4

User Option (Usage): Optional

Purpose: It is used to specify the geographic place of the named party.

## Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
N401	19	<b>City Name</b> Description: Free-form text for city name	O	AN	2/30	Optional
N402	156	<b>State or Province Code</b> Description: Code (Standard State/Province) as defined by appropriate government agency	O	ID	0/2	Optional
N403	116	<b>Postal Code</b> Description: Code defining international postal zone code excluding punctuation and blanks (zip code for United States)	O	ID	0/15	Optional
N404	26	<b>Country Code</b> Description: Code identifying the country	O	ID	2/3	Optional

## Segment User Note:

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

## Segment User Example:

N4;DORAVILLE;GA;303403168;US~

# HL DETAIL

## Hierarchical Level - ORDER

Pos: 010	Max: 1
Detail - Mandatory	
Loop: HL	Elements: 3

User Option (Usage): Mandatory

Purpose: It is used 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	<b>Hierarchical ID Number</b> <b>Description:</b> A unique number assigned by the sender to identify a particular data segment in a hierarchical structure	M	AN	1/12	Mandatory
HL02	734	<b>Hierarchical Parent ID Number</b> <b>Description:</b> Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to	O	AN	1/12	Mandatory
HL03	735	<b>Hierarchical Level Code</b> <b>Description:</b> Code defining the characteristic of a level in a hierarchical structure	M	ID	1/2	Mandatory
		<u>Code</u>		<u>Name</u>		
		O		Order		

### Segment User Note:

- 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.
- The HL segment defines a top-down/left-right ordered structure.
- 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.
- HL02 identifies the hierarchical ID number of the HL segment to which the current HL segment is subordinate.
- 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.

### Segment User Example:

Detail ASN With GS1-128 Labeling at Pallet Level:

```
HL}1}}S (shipment)
HL}2}1}O (order)
HL}3}2}T (first pallet linked to order level)
HL}4}3}I (item linked to first pallet)
HL}5}2}T (second pallet linked to order level)
HL}6}5}I (item linked to second pallet)
HL}7}5}I (item linked to second pallet)
```

Summary ASN Without GS1-128 Labeling:

```
HL}1}}S (shipment)
HL}2}1}O (order)
HL}3}2}I (item linked to order level)
```

# PRF Purchase Order Reference - at Order Level

Pos: 050	Max: 1
Detail - Mandatory	
Loop: HL	Elements: 2

**User Option (Usage):** Mandatory

**Purpose:** It is used to provide reference to a specific purchase order.

## Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
PRF01	324	<b>Purchase Order Number</b> <b>Description:</b> Identifying number for Purchase Order assigned by the orderer/purchaser	M	AN	1/22	Mandatory
PRF04	373	<b>Date</b> <b>Description:</b> Date expressed as CCYYMMDD	O	DT	8/8	Optional

## Segment User Note:

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

## Segment User Example:

PRF}007768755}}20240213~

# REF Level

## Reference Identification - at Order

Pos: 150	Max: 3
Detail - Mandatory	
Loop: HL	Elements: 2

User Option (Usage): Mandatory

Purpose: It is used to specify identifying information.

### Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
REF01	128	Reference Identification Qualifier	M	ID	2/3	Mandatory
<b>Description:</b> Code qualifying the Reference Identification						
		<u>Code</u>	<u>Name</u>			
		IA	Internal Vendor Number			
		IV	Seller's Invoice Number			
REF02	127	Reference Identification	C	AN	1/30	Conditional
<b>Description:</b> Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier						

### Segment User Note:

1. At least one of REF02 or REF03 is required.
2. If either C04003 or C04004 is present, then the other is required.
3. If either C04005 or C04006 is present, then the other is required.
4. REF04 contains data relating to the value cited in REF02.

### Segment User Example:

REF}BM}FPNA914992~

# HL Hierarchical Level - TARE (PALLET) DETAIL

Pos: 010	Max: 1
Detail - Mandatory	
Loop: HL	Elements: 3

User Option (Usage): Conditional

Purpose: It is used 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	<b>Hierarchical ID Number</b> <b>Description:</b> A unique number assigned by the sender to identify a particular data segment in a hierarchical structure	M	AN	1/12	Mandatory
HL02	734	<b>Hierarchical Parent ID Number</b> <b>Description:</b> Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to	O	AN	1/12	Optional
HL03	735	<b>Hierarchical Level Code</b> <b>Description:</b> Code defining the characteristic of a level in a hierarchical structure	M	ID	1/2	Mandatory
		<b>Code</b>		<b>Name</b>		
		T		Shipping Tare		
		P		Pack		

## Segment User Notes:

- 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.
- The HL segment defines a top-down/left-right ordered structure.
- 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.
- HL02 identifies the hierarchical ID number of the HL segment to which the current HL segment is subordinate.
- 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.

## Segment User Example:

Detail ASN With GS1-128 Labeling at Pallet Level:

```
HL}1}}S (shipment)
HL}2}1}O (order)
HL}3}2}T (first pallet linked to order level)
HL}4}3}I (item linked to first pallet)
HL}5}2}T (second pallet linked to order level)
HL}6}5}I (item linked to second pallet)
HL}7}5}I (item linked to second pallet)
```

Summary ASN Without GS1-128 Labeling:

```
HL}1}}S (shipment)
HL}2}1}O (order)
HL}3}2}I (item linked to order level)
```

# MAN Marks and Numbers for Tare (Pallet) Level

Pos: 190	Max: 1
Detail - Mandatory	
Loop: HL	Elements: 2

User Option (Usage): Optional

Purpose: It is used 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	Mandatory
<b>Description:</b> Code specifying the application or source of Marks and Numbers (87)						
		<u>Code</u>	<u>Name</u>			
		GM	SSCC-18 and Application Identifier			
		CP	Carrier-Assigned Package ID Number			
MAN02	87	Marks and Numbers	M	AN	1/48	Mandatory
<b>Description:</b> Marks and numbers used to identify a shipment or parts of a shipment						

## Segment User Note:

1. If either MAN04 or MAN05 is present, then the other is required.
2. If MAN06 is present, then MAN05 is required.
3. MAN01/MAN02 and MAN04/MAN05 may be used to identify two different marks and numbers assigned to the same physical container.
4. 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.
5. 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.
6. 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.
7. MAN03 and/or MAN06 are only used when sending a range(s) of ID numbers.
8. 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.

## Segment User Example:

MAN}GM}0000000000000000~



# HL Hierarchical Level - ITEM DETAIL

Pos: 010	Max: 1
Detail - Mandatory	
Loop: HL	Elements: 3

User Option (Usage): Mandatory

Purpose: It is used 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	<b>Hierarchical ID Number</b> <b>Description:</b> A unique number assigned by the sender to identify a particular data segment in a hierarchical structure	M	AN	1/12	Mandatory
HL02	734	<b>Hierarchical Parent ID Number</b> <b>Description:</b> Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to	O	AN	1/12	Mandatory
HL03	735	<b>Hierarchical Level Code</b> <b>Description:</b> Code defining the characteristic of a level in a hierarchical structure	M	ID	1/2	Mandatory
		<b>Code</b>		<b>Name</b>		
		I		Item		

### Segment User Note:

- 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.
- The HL segment defines a top-down/left-right ordered structure.
- 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.
- HL02 identifies the hierarchical ID number of the HL segment to which the current HL segment is subordinate.
- 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.

### Segment User Example:

Detail ASN With GS1-128 Labeling at Pallet Level:

```
HL}1}}S (shipment)
HL}2}1}O (order)
HL}3}2}T (first pallet linked to order level)
HL}4}3}I (item linked to first pallet)
HL}5}2}T (second pallet linked to order level)
HL}6}5}I (item linked to second pallet)
HL}7}5}I (item linked to second pallet)
```

Summary ASN Without GS1-128 Labeling:

```
HL}1}}S (shipment)
HL}2}1}O (order)
HL}3}2}I (item linked to order level)
```



LIN

# Item Identification - at Item Level

Pos: 020	Max: 1
Detail - Mandatory	
Loop: HL	Elements: 7

User Option (Usage): Mandatory

Purpose: This segment is Mandatory for Both Detail ASNs and Summary ASNs. It is used to specify basic item identification data.

## Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
LIN01	350	<b>Assigned Identification</b> <b>Description:</b> Alphanumeric characters assigned for differentiation within a transaction set	O	AN	1/20	Optional
LIN02	235	<b>Product/Service ID Qualifier</b> <b>Description:</b> Code identifying the type/source of the descriptive number used in Product/Service ID (234) <b>Code</b> <b>Name</b> BP            Buyer's Part Number UK            U.P.C./EAN Shipping Container Code (1-2-5-5-1, 14-digit bar code) UP            U.P.C. Consumer Package Code (1-5-5-1, 12-digit bar code) VP            Vendor's (Seller's) Part Number CH            County of Origin	M	ID	2/2	Mandatory
LIN03	234	<b>Product/Service ID</b> <b>Description:</b> Identifying number for a product or service	M	AN	1/48	Mandatory
LIN04	235	<b>Product/Service ID Qualifier</b> <b>Description:</b> Code identifying the type/source of the descriptive number used in Product/Service ID (234) <b>Code</b> <b>Name</b> BP            Buyer's Part Number UK            U.P.C./EAN Shipping Container Code (1-2-5-5-1, 14-digit bar code) UP            U.P.C. Consumer Package Code (1-5-5-1, 12-digit bar code) VP            Vendor's (Seller's) Part Number CH            County of Origin	C	ID	2/2	Conditional
LIN05	234	<b>Product/Service ID</b> <b>Description:</b> Code identifying the type/source of the descriptive number used in Product/Service ID (234)	C	AN	1/48	Conditional
LIN06	235	<b>Product/Service ID Qualifier</b> <b>Description:</b> Code identifying the type/source of the descriptive number used in Product/Service ID (234) <b>Code</b> <b>Name</b> BP            Buyer's Part Number UK            U.P.C./EAN Shipping Container Code (1-2-5-5-1, 14-digit bar code) UP            U.P.C. Consumer Package Code (1-5-5-1, 12-digit bar code) VP            Vendor's (Seller's) Part Number CH            County of Origin	C	ID	2/2	Conditional
LIN07	234	<b>Product/Service ID</b> <b>Description:</b> Identifying number for a product or service	C	AN	1/48	Conditional



LIN08	235	<b>Product/Service ID Qualifier</b>	C	ID	2/2
		<b>Description:</b> Code identifying the type/source of the descriptive number used in Product/Service ID			
		<b>Code</b>		<b>Name</b>	
		BP		Buyer's Part Number	
		UK		U.P.C./EAN Shipping Container Code (1-2-5-5-1, 14-digit bar code)	
		UP		U.P.C. Consumer Package Code (1-5-5-1, 12-digit bar code)	
		VP		Vendor's (Seller's) Part Number	
		CH		County of Origin	
LIN09	234	<b>Product/Service ID</b>	C	AN	1/48
		<b>Description:</b> Identifying number for a product or service			
LIN10	235	<b>Product/Service ID Qualifier</b>	C	ID	2/2
		<b>Description:</b> Code identifying the type/source of the descriptive number used in Product/Service ID			
		<b>Code</b>		<b>Name</b>	
		BP		Buyer's Part Number	
		UK		U.P.C./EAN Shipping Container Code (1-2-5-5-1, 14-digit bar code)	
		UP		U.P.C. Consumer Package Code (1-5-5-1, 12-digit bar code)	
		VP		Vendor's (Seller's) Part Number	
		CH		County of Origin	
LIN11	234	<b>Product/Service ID</b>	C	AN	1/48
		<b>Description:</b> Identifying number for a product or service			

### Segment User Note:

1. If either LIN04 or LIN05 is present, then the other is required.
2. If either LIN06 or LIN07 is present, then the other is required.
3. If either LIN08 or LIN09 is present, then the other is required.
4. If either LIN10 or LIN11 is present, then the other is required.
5. LIN01 is the line item identification.

### Segment User Example:

LIN}0001}VP}59258}UK}103103}UP}04801 1592589~

# SN1 Level

## Item Detail (Shipment) - at Item

Pos: 030	Max: 1
Detail - Optional	
Loop: HL	Elements: 3

User Option (Usage): Mandatory

Purpose: It is used to specify line-item detail relative to shipment.

### Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
SN101	350	<b>Assigned Identification</b> <b>Description:</b> Alphanumeric characters assigned for differentiation within a transaction set	O	AN	1/20	Optional
SN102	382	<b>Number of Units Shipped</b> <b>Description:</b> Numeric value of units shipped in manufacturer's shipping units for a line item or transaction set	M	R	1/10	Mandatory
SN103	355	<b>Unit or Basis for Measurement Code</b> <b>Description:</b> Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken <b>All valid X12 codes are used.</b>	M	ID	2/2	Mandatory

### Segment User Notes:

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

### Semantic Notes:

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

### Comments:

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

### Segment User Example:

SN1}0001}3}CA~



# PID

## Product/Item Description

Pos: 070	Max: 200
Detail - Mandatory	
Loop: HL	Elements: 2

User Option (Usage): Optional

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	Mandatory
<b>Description:</b> Code indicating the format of a description						
		<u>Code</u>	<u>Name</u>			
		F	Free-form			
PID05	352	Description	C	AN	1/80	Conditional
<b>Description:</b> A free-form description to clarify the related data elements and their content						

### Segment User Notes:

1. If PID04 is present, then PID03 is required.
2. At least one of PID04 or PID05 is required.
3. If PID07 is present, then PID03 is required.
4. If PID08 is present, then PID04 is required.
5. If PID09 is present, then PID05 is required.

### Semantic Notes:

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.

### Comments:

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.

### Segment User Example:

PID}F}}}}5100 RED BUFFER PAD 20IN X 14IN 10/CS~

# CTT Transaction Totals

Pos: 010	Max: 1
Summary - Optional	
Loop: N/A	Elements: 2

User Option (Usage): Mandatory

**Purpose:** It is used 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	Mandatory
<b>Description:</b> Total number of HL segments in the transaction set						
CTT02	347	Hash Total	O	R	1/10	Optional
<b>Description:</b> Sum of values of the specified data element. All values in the data element will be summed without regard to decimal points (explicit or implicit) or signs. Truncation will occur on the left most digits if the sum is greater than the maximum size of the hash total of the data element.						

## Segment User Notes:

1. If either CTT03 or CTT04 is present, then the other is required.
2. 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.

## Segment User Example:

CTT}14}54~



# SE Transaction Set Trailer

Pos: 020	Max: 1
Summary - Mandatory	
Loop: N/A	Elements: 2

User Option (Usage): Mandatory

**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	<b>Number of Included Segments</b> <b>Description:</b> Total number of segments included in a transaction set including ST and SE segments	M	N0	1/10	Mandatory
SE02	329	<b>Transaction Set Control Number</b> <b>Description:</b> Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	M	AN	4/9	Mandatory

### Segment User Note:

- SE is the last segment of each transaction set.

### Segment User Example:

SEJ59J24667~

GE

## Functional Group Trailer

Pos: 021	Max: 1
Heading - Mandatory	
Loop: N/A	Elements: 2

**User Option (Usage):** Mandatory

**Purpose:** To indicate the end of a functional group and to provide control information

## Element Summary:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>	<u>Usage</u>
GE01	97	<b>Number of Transaction Sets Included</b>	M	N0	1/6	Mandatory
		<b>Description:</b> Total number of transaction sets included in the functional group or interchange (transmission) group terminated by the trailer containing this data element				
GE02	28	<b>Group Control Number</b>	M	N0	1/9	Mandatory
		<b>Description:</b> Assigned number originated and maintained by the sender				

## Segment User Example:

GE}1}19347~



# IEA

## Interchange Control Trailer

Pos: 022	Max: 1
Heading - Mandatory	
Loop: N/A	Elements: 2

User Option (Usage): Mandatory

*Purpose: To define the end of an interchange of zero or more functional groups and interchange-related control segments*

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>	<u>Usage</u>
IEA01	I16	<b>Number of Included Functional Groups</b> <i>Description:</i> Total number of segments included in a transaction set including ST and SE segments	M	N0	1/5	Mandatory
IEA02	I12	<b>Interchange Control Number</b> <i>Description:</i> A control number assigned by the interchange sender	M	N0	9/9	Mandatory

### Segment User Note:

### Segment User Example:

IEA}1}000000001



**EXAMPLE:**

**SOPI – ASN with Carton label with/without pallet**

ISA}00}3M COMPANY}00}3M COMPANY}01}3MID }01}CUSTOMERID  
{200428}1521}U}00401}000028915}0}P}{~

GS}SH}3MID}CUSTOMERID}20200428}1521}23014}X}004010~

ST}856}23012~

BSN}00}012345612}20200428}1518~

HL}1}}S~

TD1}CTN25}2}}}}G}16}LB~

TD5}}2}RYLC~

REF}BM}BOL12345~

REF}CN}TRACKID~

DTM}011}20200428~

DTM}067}20200511~

N1}SF}3M COMPANY}92}123789~

N3}STREET ADDRESS~

N4}CITY}MN}12345}US~

N1}ST}SHIPTO NAME}92}9999~

N3}STREET ADDRESS~

N4}CITY}NY}99999}US~

HL}2}1}O~

PRF}11111199~

**HL}3}2}P~**

MAN}GM}00132456789123456789~

HL}4}3}I~

LIN}89}VP}7100075944}IN}13333}UP}051111551888~



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SN}}1}EA~

PID}F}}}

**HL}5}2}P~**

MAN}GM}00987654321987654321~

HL}6}5}I~

LIN}90}VP}7100143546}IN}14444}UP}051111551999~

SN}}4}BX~

CTT}5~

SE}29}23012~

GE}1}23014~

IEA}1}000028915~



**EXAMPLE:**

**SOI – ASN without labels**

ISA}00}3M COMPANY}00}3M  
COMPANY}01}3MID}01}CUSTOMERID}200428}1521}U}00401}000028915}0}P}{~  
GS}SH}3MID}CUSTOMERID}20200428}1521}23014}X}004010~  
ST}856}23012~  
BSN}00}012345612}20200428}1518~  
HL}1}}S~  
TD1}CTN25}2}}}}G}16}LB~  
TD5}2}RYLC~  
TD3}TL}}650137036  
REF}BM}BOL12345~  
REF}CN}TRACKID~  
DTM}011}20200428~  
DTM}067}20200511~  
N1}SF}3M COMPANY}92}123789~  
N3}1532 North Main Street  
N4}DORAVILLE}GA}303403168}US~  
N1}ST}SUPPLYWORKS ATLANTA}92}006~  
N3}1245 Market Street~  
N4}Atlanta}GA}99999}US~  
HL}2}1}O~  
PRF}11111199~  
REF}BM}FPNA914992~  
HL}3}2}T  
MAN}GM}45356



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HL}4}3}I~

LIN}89}VP}7100075944}BP}13333}UP}051111551888~

SN1}}1}EA~

HL}5}2}I~

LIN}90}VP}7100143546}IN}14444}UP}051111551999~

SN1}}4}BX~

CTT}4~

SE}29}23012~

GE}1}23014~

IEA}1}000028915~



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**EXAMPLE:**

**SOTI – ASN with Pallet label**

ISA}00}3M COMPANY}00}3M  
COMPANY}01}3MID }01}CUSTOMERID }200428}1521}U}00401}000028915}0}P}{~  
GS}SH}3MID}CUSTOMERID}20200428}1521}23014}X}004010~  
ST}856}23012~  
BSN}00}012345612}20200428}1518~  
HL}1}}S~  
TD1}CTN25}10}}}}G}100}LB~  
TD5}}2}RYLC~  
REF}BM}BOL12345~  
REF}CN}TRACKID~  
DTM}011}20200428~  
DTM}017}20200511~  
DTM}067}20200511~  
N1}SF}3M COMPANY}92}123789~  
N3}STREET ADDRESS~  
N4}CITY}MN}12345}US~  
N1}ST}SHIPTO NAME}92}9999~  
N3}STREET ADDRESS~  
N4}CITY}NY}99999}US~  
HL}2}1}O~  
PRF}11111199~  
HL}3}2}T~  
MAN}GM}00132456789123456788~  
HL}4}3}I~  
LIN}89}VP}7100075944}BP}13333}UP}051111551888~  
SN1}}1}EA~  
PID}F}}}}PRODUCTDESCRIPTION1~  
HL}5}4}I~  
LIN}90}VP}7100143546}BP}14444}UP}051111551999~  
SN1}}4}BX~



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PID}F}}}}PRODUCTDESCRIPTION2~

CTT}5~

SE}29}23012~

GE}1}23014~

IEA}1}000028915~