Introduction

This guideline provides a description and technical lay-out of the data segments sent in 3M's EDI ship notices (ASC X12 transaction set 856). 3M can send many valid ASC X12 data segments and elements; however, this guideline includes only those that are most commonly sent. If you have data requirements that are not covered in this document, please consult your 3M EDI contact.

The ASC X12 version presented in this guideline is 004010. If you cannot receive ship notices in 004010, please consult your 3M EDI contact for information on other ASC X12 versions sent by 3M.

This transaction set allows 3M to send shipment notification to your company electronically via EDI.

The 856 Ship Notice/Manifest transaction set uses hierarchical levels or "HL loops". To fully document the use of these structures, hierarchical charts have been added to the Data Segment Sequence Chart Section of this guideline. The "Hierarchical Structures Used" charts show the looping structures sent by 3M. At present, 3M sends either the Shipment/Order/Item or the Shipment/Order/Tare/Item structure. The Shipment/Order/Tare/Item structure is only used if 3M is also providing the SSCC-18 serial number and bar coded label.

Examples of ship notices and their ASC X12 interpretation can be found at the back of this guideline.

Note: For illustration purposes only, all examples use an asterisk (*) as the data element separator and a caret (^) as the segment terminator. In actual practice, values must be chosen that do not conflict with the data.

856 Ship Notice/Manifest

Functional Group ID SH

Introduction:

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.

DATA SEGMENT SEQUENCE CHART

Heading:

	Pos. No.	Seg. ID	Name	Req. Des.	Max.Use	Loop Repeat	Notes and Comments
Must Use	010	ST	Transaction Set Header	M	1		
Must Use	020	BSN	Beginning Segment for Ship Notice	M	1		

Detail:

	Pos. No.	Seg. ID	Name	Req. Des.	Max.Use	Loop Repeat	Notes and Comments
			LOOP ID - HL			200000	
Must Use	010	HL	Hierarchical Level	M	1		c1
	020	LIN	Item Identification	O	1		
	030	SN1	Item Detail (Shipment)	O	1		
	050	PRF	Purchase Order Reference	O	1		
	110	TD1	Carrier Details (Quantity and Weight)	O	20		
	120	TD5	Carrier Details (Routing Sequence/Transit Time)	O	12		
	150	REF	Reference Identification	O	>1		
	190	MAN	Marks and Numbers	O	>1		
	200	DTM	Date/Time Reference	O	10		
			LOOP ID - N1			200	
	220	N1	Name	O	1		
	240	N3	Address Information	O	2		
	250	N4	Geographic Location	O	1		

Summary:

	Pos. No.	Seg. ID	Name	Req. Des.	Max.Use	Loop Repeat	Notes and Comments
	010	CTT	Transaction Totals	O	1		n1
Must Use	020	SE	Transaction Set Trailer	M	1		

Transaction Set Notes

1. 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

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

856 Ship Notice/Manifest

Functional Group ID SH

HIERARCHICAL STRUCTURES USED

SHIPMENT/ORDER/ITEM

Heading:

Page No.	Pos. No.	Seg. ID	Name	Req. Des.	Max.Use	Loop Repeat	Notes and Comments
3	010	ST	Transaction Set Header	M	1		
4	020	BSN	Beginning Segment for Ship Notice	M	1		

Detail:

Page No.	Pos. No.	Seg. ID	Name	Req. Des.	Max.Use	Loop Repeat	Notes and Comments
			LOOP ID - HL			200000	
5	010	HL	Hierarchical Level - SHIPMENT LEVEL	M	1		c1
6	110	TD1	Carrier Details (Quantity and Weight)	O	20		
7	120	TD5	Carrier Details (Routing Sequence/Transit Time)	O	12		
9	150	REF	Reference Identification	O	>1		
10	200	DTM	Date/Time Reference	O	10		
			LOOP ID - N1			200	
11	220	N1	Name	O	1		
12	240	N3	Address Information	O	2		
13	250	N4	Geographic Location	O	1		
			LOOP ID - HL			200000	
14	010	HL	Hierarchical Level - ORDER LEVEL	M	1		c2
16	050	PRF	Purchase Order Reference	O	1		
17	150	REF	Reference Identification	O	>1		
			LOOP ID - HL			200000	
21	010	HL	Hierarchical Level - ITEM LEVEL	M	1		c3
23	020	LIN	Item Identification	O	1		
25	030	SN1	Item Detail (Shipment)	O	1		

Summary:

Page No.	Pos. No.	Seg. ID	Name	Req. Des.	Max.Use	Loop Repeat	Notes and Comments
26	010	CTT	Transaction Totals	O	1		n1
27	020	SE	Transaction Set Trailer	M	1		

856 Ship Notice/Manifest

Functional Group ID=SH

HIERARCHICAL STRUCTURES USED

SHIPMENT/ORDER/TARE/ITEM

The Shipment/Order/Tare/Item structure is only used if 3M is also providing the SSCC-18 serial number and bar coded label.

Heading:

Page No.	Pos. No.	Seg. ID	Name	Req. Des.	Max.Use	Loop Repeat	Notes and Comments
3	010	ST	Transaction Set Header	M	1		
4	020	BSN	Beginning Segment for Ship Notice	M	1		

Detail:

Page No.	Pos. No.	Seg. ID	Name	Req. Des.	Max.Use	Loop Repeat	Notes and Comments
			LOOP ID - HL			200000	
5	010	HL	Hierarchical Level - SHIPMENT LEVEL	M	1		c1
6	110	TD1	Carrier Details (Quantity and Weight)	O	20		
7	120	TD5	Carrier Details (Routing Sequence/Transit Time)	O	12		
9	150	REF	Reference Identification	O	>1		
10	200	DTM	Date/Time Reference	O	10		
			LOOP ID - N1			200	
11	220	N1	Name	O	1		
12	240	N3	Address Information	O	2		
13	250	N4	Geographic Location	O	1		
			LOOP ID - HL			200000	
14	010	HL	Hierarchical Level - ORDER LEVEL	M	1		c2
16	050	PRF	Purchase Order Reference	O	1		
17	150	REF	Reference Identification	O	>1		
			LOOP ID - HL			200000	
18	010	HL	Hierarchical Level - TARE LEVEL	M	1		c3
20	190	MAN	Marks and Numbers	O	>1		
			LOOP ID - HL			200000	
21	010	HL	Hierarchical Level - ITEM LEVEL	M	1		c4
23	020	LIN	Item Identification	O	1		
25	030	SN1	Item Detail (Shipment)	O	1		

Summary:

Page No.	Pos. No.	Seg. ID	Name	Req. Des.	Max.Use	Loop Repeat	Notes and Comments
26	010	CTT	Transaction Totals	O	1		n1
27	020	SE	Transaction Set Trailer	M	1		

Segment: **ST** **Transaction Set Header**
Position: 010
Loop:
Level: Heading
Usage: Mandatory
Max Use: 1
Purpose: To indicate the start of a transaction set and to assign a control number
Syntax Notes:
Semantic Notes: **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).
Comments:
Notes: 3M Example(s): ST*856*000006359^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**ST01**	**143**	**Transaction Set Identifier Code** Code uniquely identifying a Transaction Set 856 Ship Notice/Manifest	**M ID 3/3**
Required	**ST02**	**329**	**Transaction Set Control Number** Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set Sender-assigned sequential control number to match control number on SE segment.	**M AN 4/9**

Segment: **BSN** **Beginning Segment for Ship Notice**
Position: 020
Loop:
Level: Heading
Usage: Mandatory
Max Use: 1
Purpose: To transmit identifying numbers, dates, and other basic data relating to the transaction set
Syntax Notes: **1** If BSN07 is present, then BSN06 is required.
Semantic Notes: **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.
Notes: 3M Example(s):
BSN*00*DKND111222*19991209*1310^
BSN*00*AX13131*19991209*1241^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**BSN01**	**353**	**Transaction Set Purpose Code** Code identifying purpose of transaction set 00 Original	**M ID 2/2**
Required	**BSN02**	**396**	**Shipment Identification** A unique control number assigned by the original shipper to identify a specific shipment Element BSN02 will contain the Bill of Lading number, when available. If no Bill of Lading number is available, element BSN02 will contain the 3M invoice number.	**M AN 2/30**
Required	**BSN03**	**373**	**Date** Date expressed as CCYYMMDD Creation date of the ASN.	**M DT 8/8**
Required	**BSN04**	**337**	**Time** 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) Creation time of the ASN in HHMM format.	**M TM 4/8**

Segment: **HL** **Hierarchical Level - SHIPMENT LEVEL**
Position: 010
Loop: HL Mandatory
Level: Detail
Usage: Mandatory
Max Use: 1
Purpose: To identify dependencies among and the content of hierarchically related groups of data segments
Syntax Notes:
Semantic Notes:
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.
The HL segment defines a top-down/left-right ordered structure.

2 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.

3 HL02 identifies the hierarchical ID number of the HL segment to which the current HL segment is subordinate.

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.

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

Notes: 3M Comments: Level: Shipment

The HL segments define the looping and hierarchical structure of transaction set 856. The HL segment at the shipment level will only occur once and will be the first HL segment in the transaction set.

3M Example(s): HL*1**S^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**HL01**	**628**	**Hierarchical ID Number** A unique number assigned by the sender to identify a particular data segment in a hierarchical structure 1	**M AN 1/12**
Required	**HL03**	**735**	**Hierarchical Level Code** Code defining the characteristic of a level in a hierarchical structure S Shipment	**M ID 1/2**

Segment: **TD1** **Carrier Details (Quantity and Weight)**
Position: 110
Loop: HL Mandatory
Level: Detail
Usage: Optional
Max Use: 20
Purpose: To specify the transportation details relative to commodity, weight, and quantity
Syntax Notes:
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.
Semantic Notes:
Comments:
Notes: 3M Comments: Level: Shipment

3M Example(s): TD1**25*****79*LB^

Data Element Summary

Ref. Des.	Data Element	Name	Attributes
TD102	**80**	**Lading Quantity** Number of units (pieces) of the lading commodity Number of pieces (usually cartons) included in this shipment.	**X N0 1/7**
TD107	**81**	**Weight** Numeric value of weight Total weight of cartons in this shipment.	**X R 1/10**
TD108	**355**	**Unit or Basis for Measurement Code** Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken LB Pound	**X ID 2/2**

Segment: **TD5** **Carrier Details (Routing Sequence/Transit Time)**
Position: 120
Loop: HL Mandatory
Level: Detail
Usage: Optional
Max Use: 12
Purpose: To specify the carrier and sequence of routing and provide transit time information
Syntax Notes:
1 At least one of TD502 TD504 TD505 TD506 or TD512 is required.
2 If TD502 is present, then TD503 is required.
3 If TD507 is present, then TD508 is required.
4 If TD510 is present, then TD511 is required.
5 If TD513 is present, then TD512 is required.
6 If TD514 is present, then TD513 is required.
7 If TD515 is present, then TD512 is required.
Semantic Notes:
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.
Notes: 3M Comments: Level: Shipment

3M Example(s): TD5**2*PRES*LT*PRESTON TRUCKING COMPANY^

Data Element Summary

Ref. Des.	Data Element	Name	Attributes
TD502	**66**	**Identification Code Qualifier** Code designating the system/method of code structure used for Identification Code (67) Element TD503 will contain the SCAC code of the carrier for this shipment. 2 Standard Carrier Alpha Code (SCAC)	**X ID 1/2**
TD503	**67**	**Identification Code** Code identifying a party or other code	**X AN 2/80**
TD504	**91**	**Transportation Method/Type Code** Code specifying the method or type of transportation for the shipment AE Air Express LT Less Than Trailer Load (LTL) M Motor (Common Carrier) T Best Way (Shippers Option) U Private Parcel Service See ASC X12 code list for additional codes.	**X ID 1/2**
TD505	**387**	**Routing** Free-form description of the routing or requested routing for shipment, or the originating carrier's identity	**X AN 1/35**

Carrier Name

Segment: **REF** **Reference Identification**
Position: 150
Loop: HL Mandatory
Level: Detail
Usage: Optional
Max Use: >1
Purpose: To specify identifying information
Syntax 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.
Semantic Notes: **1** REF04 contains data relating to the value cited in REF02.
Comments:
Notes: 3M Comments: Level: Shipment

3M Example(s):
REF*BM*OAND754272^
REF*CN*516646432^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification BM Bill of Lading Number CN Carrier's Reference Number (PRO/Invoice)	**M ID 2/3**
Required	**REF02**	**127**	**Reference Identification** Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	**X AN 1/30**

Segment: **DTM** **Date/Time Reference**
Position: 200
Loop: HL Mandatory
Level: Detail
Usage: Optional
Max Use: 10
Purpose: To specify pertinent dates and times
Syntax 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.
Semantic Notes:
Comments:
Notes: 3M Comments: Level: Shipment
3M Example(s): DTM*011*19991209^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**DTM01**	**374**	**Date/Time Qualifier** Code specifying type of date or time, or both date and time 011 Shipped	**M ID 3/3**
Required	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD	**X DT 8/8**

Segment: **N1** **Name**
Position: 220
Loop: N1 Optional
Level: Detail
Usage: Optional
Max Use: 1
Purpose: To identify a party by type of organization, name, and code
Syntax Notes:
1 At least one of N102 or N103 is required.
2 If either N103 or N104 is present, then the other is required.
Semantic Notes:
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.
Notes: 3M Comments: Level: Shipment

3M Example(s):
N1*ST*XYZ CORPORATION^
N1*ST**92*0024^
N1*SF*3M - ONTARIO^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**N101**	**98**	**Entity Identifier Code** Code identifying an organizational entity, a physical location, property or an individual SF Ship From ST Ship To	**M ID 2/3**
	N102	**93**	**Name** Free-form name	**X AN 1/60**
	N103	**66**	**Identification Code Qualifier** Code designating the system/method of code structure used for Identification Code (67) If N103/N104 are used for the ship-to code, they are used in lieu of other ship-to name and address information (i.e., element N102 and N3 and N4 segments will not be included). 3M can store and return to the customer a code that the customer has assigned to the ship-to location. 1 D-U-N-S Number, Dun & Bradstreet 9 D-U-N-S+4, D-U-N-S Number with Four Character Suffix 91 Assigned by Seller or Seller's Agent	**X ID 1/2**
	N104	**67**	**Identification Code** Code identifying a party or other code	**X AN 2/80**

Segment: **N3** **Address Information**
Position: 240
Loop: N1 Optional
Level: Detail
Usage: Optional
Max Use: 2
Purpose: To specify the location of the named party
Syntax Notes:
Semantic Notes:
Comments:
Notes: 3M Comments: Level: Shipment

Used in ship-to N1 loop only if address information cannot be identified by a code in element N104. Can be used in ship-from N1 loop, if requested.

3M Example(s): N3*200 N. MAIN STREET^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**N301**	**166**	**Address Information** Address information	**M AN 1/55**

Segment: **N4** **Geographic Location**
Position: 250
Loop: N1 Optional
Level: Detail
Usage: Optional
Max Use: 1
Purpose: To specify the geographic place of the named party
Syntax Notes: **1** If N406 is present, then N405 is required.
Semantic Notes:
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.
Notes: 3M Comments: Level: Shipment

Used in ship-to N1 loop only if address information cannot be identified by a code in N104. Can be used in ship-from N1 loop, if requested.

3M Example(s): N4*ST. PAUL*MN*551441000^

Data Element Summary

Ref. Des.	Data Element	Name	Attributes
N401	**19**	**City Name** Free-form text for city name	**O AN 2/30**
N402	**156**	**State or Province Code** Code (Standard State/Province) as defined by appropriate government agency	**O ID 2/2**
N403	**116**	**Postal Code** Code defining international postal zone code excluding punctuation and blanks (zip code for United States)	**O ID 3/15**

Segment: **HL** **Hierarchical Level - ORDER LEVEL**
Position: 010
Loop: HL Mandatory
Level: Detail
Usage: Mandatory
Max Use: 1
Purpose: To identify dependencies among and the content of hierarchically related groups of data segments
Syntax Notes:
Semantic Notes:
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.
The HL segment defines a top-down/left-right ordered structure.

2 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.

3 HL02 identifies the hierarchical ID number of the HL segment to which the current HL segment is subordinate.

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.

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

Notes: 3M Comments: Level: Order

The HL segments define the looping and hierarchical structure of transaction set 856. Order level HL segments are subordinate to the shipment level HL segment. Refer to the "Hierarchical Structures Used" chart.

3M Example(s): HL*2*1*O^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**HL01**	**628**	**Hierarchical ID Number** A unique number assigned by the sender to identify a particular data segment in a hierarchical structure	**M AN 1/12**
Required	**HL02**	**734**	**Hierarchical Parent ID Number** Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to 1 Element Hl02 contains the Hierarchical ID Number of the shipment level HL segment. The order level is subordinate to the shipment level.	**O AN 1/12**

Required	**HL03**	**735**	**Hierarchical Level Code**	**M**	**ID 1/2**

Code defining the characteristic of a level in a hierarchical structure

O Order

Segment: **PRF** **Purchase Order Reference**
Position: 050
Loop: HL Mandatory
Level: Detail
Usage: Optional
Max Use: 1
Purpose: To provide reference to a specific purchase order
Syntax Notes:
Semantic Notes: **1** PRF04 is the date assigned by the purchaser to purchase order.
Comments:
Notes: 3M Comments: Level: Order

3M Example(s):
PRF*00095^
PRF*123456***19991207^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**PRF01**	**324**	**Purchase Order Number** Identifying number for Purchase Order assigned by the orderer/purchaser	**M AN 1/22**
	PRF04	**373**	**Date** Date expressed as CCYYMMDD	**O DT 8/8**

Segment: **REF** **Reference Identification**
Position: 150
Loop: HL Mandatory
Level: Detail
Usage: Optional
Max Use: >1
Purpose: To specify identifying information
Syntax 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.
Semantic Notes: **1** REF04 contains data relating to the value cited in REF02.
Comments:
Notes: 3M Comments: Level: Order

3M Example(s): REF*IV*EM00001^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification IV Seller's Invoice Number	**M ID 2/3**
Required	**REF02**	**127**	**Reference Identification** Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	**X AN 1/30**

Segment: **HL** **Hierarchical Level - TARE LEVEL**
Position: 010
Loop: HL Mandatory
Level: Detail
Usage: Mandatory
Max Use: 1
Purpose: To identify dependencies among and the content of hierarchically related groups of data segments
Syntax Notes:
Semantic Notes:
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.
The HL segment defines a top-down/left-right ordered structure.

2 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.

3 HL02 identifies the hierarchical ID number of the HL segment to which the current HL segment is subordinate.

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.

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

Notes: 3M Comments: Level: Tare (Shipping Container [e.g. pallet or carton])

The HL segments define the looping and hierarchical structure of transaction set 856. If used, tare level HL segments are subordinate to the order level HL segment. Refer to the "Hierarchical Structures Used" chart. This hierarchical level is only used if 3M is also providing the SSCC-18 serial number and bar coded label.

3M Example(s): HL*3*2*T^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**HL01**	**628**	**Hierarchical ID Number** A unique number assigned by the sender to identify a particular data segment in a hierarchical structure	**M AN 1/12**
Required	**HL02**	**734**	**Hierarchical Parent ID Number** Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to If tare level HL loops are used, element HL02 contains the Hierarchical ID Number of the order level HL segment to which the tare is subordinate.	**O AN 1/12**

Required	**HL03**	**735**	**Hierarchical Level Code**	**M**	**ID 1/2**

Code defining the characteristic of a level in a hierarchical structure

T Shipping Tare

Segment: **MAN** **Marks and Numbers**
Position: 190
Loop: HL Mandatory
Level: Detail
Usage: Optional
Max Use: >1
Purpose: To indicate identifying marks and numbers for shipping containers
Syntax Notes:
1 If either MAN04 or MAN05 is present, then the other is required.
2 If MAN06 is present, then MAN05 is required.
Semantic Notes:
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 MAN03 and/or MAN06 are only used when sending a range(s) of ID numbers. 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.
Notes: 3M Comments: Level: Tare (Shipping Container [e.g. pallet or carton])
3M Example(s): MAN*GM*00100212004800015035^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**MAN01**	**88**	**Marks and Numbers Qualifier**	**M ID 1/2**
			Code specifying the application or source of Marks and Numbers (87) This number matches the UCC/EAN 128 serial number on the label. GM SSCC-18 and Application Identifier	
Required	**MAN02**	**87**	**Marks and Numbers**	**M AN 1/48**
			Marks and numbers used to identify a shipment or parts of a shipment	

Segment: **HL** **Hierarchical Level - ITEM LEVEL**
Position: 010
Loop: HL Mandatory
Level: Detail
Usage: Mandatory
Max Use: 1
Purpose: To identify dependencies among and the content of hierarchically related groups of data segments
Syntax Notes:
Semantic Notes:
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.
The HL segment defines a top-down/left-right ordered structure.

2 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.

3 HL02 identifies the hierarchical ID number of the HL segment to which the current HL segment is subordinate.

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.

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

Notes: 3M Comments: Level: Item

The HL segments define the looping and hierarchical structure of transaction set 856. Item level HL segments are subordinate to the order level or the tare level, if used. Refer to the "Hierarchical Structures Used" chart.

3M Example(s): HL*4*3*I^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**HL01**	**628**	**Hierarchical ID Number** A unique number assigned by the sender to identify a particular data segment in a hierarchical structure	**M AN 1/12**
Required	**HL02**	**734**	**Hierarchical Parent ID Number** Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to If tare level HL loops are used, element HL02 contains the Hierarchical ID Number of the tare level HL segment to which the item is subordinate. Otherwise, element HL02 contains the Hierarchical ID Number of the	**O AN 1/12**

order level HL segment to which the item is subordinate.

Required	**HL03**	**735**	**Hierarchical Level Code**	**M**	**ID 1/2**

Code defining the characteristic of a level in a hierarchical structure

I Item

Segment: **LIN** **Item Identification**
Position: 020
Loop: HL Mandatory
Level: Detail
Usage: Optional
Max Use: 1
Purpose: To specify basic item identification data
Syntax Notes:
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 If either LIN12 or LIN13 is present, then the other is required.
6 If either LIN14 or LIN15 is present, then the other is required.
7 If either LIN16 or LIN17 is present, then the other is required.
8 If either LIN18 or LIN19 is present, then the other is required.
9 If either LIN20 or LIN21 is present, then the other is required.
10 If either LIN22 or LIN23 is present, then the other is required.
11 If either LIN24 or LIN25 is present, then the other is required.
12 If either LIN26 or LIN27 is present, then the other is required.
13 If either LIN28 or LIN29 is present, then the other is required.
14 If either LIN30 or LIN31 is present, then the other is required.
Semantic Notes:
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.
Notes: 3M Comments: Level: Item

3M prefers the UPC number for product identification. If you wish to see your part number on the 856, it should be included on your EDI purchase order.

3M Example(s): LIN*001*UP*021200002137*BP*22345^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
	LIN01	**350**	**Assigned Identification** Alphanumeric characters assigned for differentiation within a transaction set Sequential line number or purchase order line number. 3M can return the purchase order line number only if it was included on an EDI purchase order.	**O AN 1/20**
Required	**LIN02**	**235**	**Product/Service ID Qualifier** Code identifying the type/source of the descriptive number used in Product/Service ID (234) BP Buyer's Part Number IN Buyer's Item Number	**M ID 2/2**

			SK	Stock Keeping Unit (SKU)		
			UI	U.P.C. Consumer Package Code (1-5-5)		
			UK	U.P.C./EAN Shipping Container Code (1-2-5-5-1) A 14-digit code that uniquely identifies the manufacturer's shipping unit, including the packaging indicator and check digit; the first digit is the packaging indicator, the next two digits are the number system characters, the next five digits are the manufacturer ID number, the second five digits are the item code, and the final digit is the check digit		
			UP	U.P.C. Consumer Package Code (1-5-5-1)		
			VN	Vendor's (Seller's) Item Number		
Required	**LIN03**	**234**	**Product/Service ID** Identifying number for a product or service		**M**	**AN 1/48**
	LIN04	**235**	**Product/Service ID Qualifier** Code identifying the type/source of the descriptive number used in Product/Service ID (234) See LIN02 for code list.		**X**	**ID 2/2**
	LIN05	**234**	**Product/Service ID** Identifying number for a product or service		**X**	**AN 1/48**
	LIN06	**235**	**Product/Service ID Qualifier** Code identifying the type/source of the descriptive number used in Product/Service ID (234) See LIN02 for code list.		**X**	**ID 2/2**
	LIN07	**234**	**Product/Service ID** Identifying number for a product or service		**X**	**AN 1/48**

Segment: **SN1** **Item Detail (Shipment)**
Position: 030
Loop: HL Mandatory
Level: Detail
Usage: Optional
Max Use: 1
Purpose: To specify line-item detail relative to shipment
Syntax 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.
Notes: 3M Comments: Level: Item

3M Example(s): SN1**20*CA^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**SN102**	**382**	**Number of Units Shipped** Numeric value of units shipped in manufacturer's shipping units for a line item or transaction set	**M R 1/10**
Required	**SN103**	**355**	**Unit or Basis for Measurement Code** Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken BX Box CA Case CT Carton EA Each FT Foot KT Kit LB Pound PK Package RL Roll See ASC X12 code list for additional codes.	**M ID 2/2**

Segment: **CTT** **Transaction Totals**
Position: 010
Loop:
Level: Summary
Usage: Optional
Max Use: 1
Purpose: To transmit a hash total for a specific element in the transaction set
Syntax 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.
Semantic Notes:
Comments: **1** This segment is intended to provide hash totals to validate transaction completeness and correctness.
Notes: 3M Example(s): CTT*5^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**CTT01**	**354**	**Number of Line Items** Total number of line items in the transaction set Number of HL segments.	**M N0 1/6**

Segment: **SE** **Transaction Set Trailer**
Position: 020
Loop:
Level: Summary
Usage: Mandatory
Max Use: 1
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)
Syntax Notes:
Semantic Notes:
Comments: **1** SE is the last segment of each transaction set.
Notes: 3M Example(s): SE*33*000006359^

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Required	**SE01**	**96**	**Number of Included Segments** Total number of segments included in a transaction set including ST and SE segments	**M N0 1/10**
Required	**SE02**	**329**	**Transaction Set Control Number** Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set This will match the control number on the ST segment for this transaction set.	**M AN 4/9**

Ship Notice Examples

This section contains two examples to illustrate the use of Transaction Set 856.

Example 1

This is an example to illustrate the use of the Transaction Set 856 with Shipment/Order/Item hierarchical structure.

SHIP NOTICE

12/9/1999
1:10 PM

SHIP FROM:
3M – Dekalb
3050 Corporate Dr
Dekalb IL 60115-9299

SHIP TO:
XYZ Corporation
200 N Main Street
St. Paul MN 55144-1000

Shipment Weight: 35 Pounds

Lading Quantity: 30 Cartons
Less than trailer load

Bill of Lading: DKND111222
SCAC: SEFL (Southeastern Freight Lines)
Carrier PRO Number: 234826363

Ship Date: 12/9/1999

P.O. Number	Invoice Number	Quantity Shipped	UPC Number
00095	AX13131	20 Cases	021200002137
		27 Each	021200010729
		10 Rolls	021200010736

ASC X12 FORMAT	INTERPRETATION
ST*856*000002176^	ASC X12 Transaction Set: 856 Transaction Set Control Number: 000002176
BSN*00*DKND111222*19991209 *1310^	Original Ship Notice Shipment ID: DKND111222 Ship Notice Creation Date: 12/09/1999 Ship Notice Creation Time: 1:10 PM
HL*1**S^	Shipment Level Information
TD1**30*****35*LB^	Number of Cartons: 30 Gross Weight: 35 pounds
TD5**2*SEFL*LT *SOUTHEASTERN FREIGHT LINES^	Carrier SCAC: SEFL Transportation Method Mode: LT=less than trailer load Carrier Name: Southeastern Freight Lines
REF*BM*DKND111222^	Bill of Lading Number: DKND111222
REF*CN*234826363^	Carrier's Reference Number (Carrier's PRO/Invoice): 234826363
DTM*011*19991209^	Date Shipped: 12/09/1999
N1*SF*3M – DEKALB^	Ship From: 3M – Dekalb
N3*3050 CORPORATE DR^	3050 Corporate Drive
N4*DEKALB*IL*601159299^	Dekalb, IL 60115-9299
N1*ST*XYZ CORPORATION^	Ship To: XYZ Corporation
N3*200 N MAIN STREET^	200 N. Main Street
N4*ST. PAUL*MN *551441000^	St. Paul, MN 551441000
HL*2*1*O^	Order Level Information
PRF*00095^	Purchase Order Number: 00095
REF*IV*AX13131^	Invoice Number: AX13131
HL*3*2*I^	Item Level Information
LIN**UP*021200002137^	UPC Consumer Package Code: 021200002137

SN120*CA^**	Quantity: 20 Unit of Measurement: CA=case
HL*4*2*I^	Item Level Information
LINUP*021200010729^**	UPC Consumer Package Code: 021200010729
SN127*EA^**	Quantity: 27 Unit of Measurement: EA=each
HL*5*2*I^	Item Level Information
LINUP*021200010736^**	UPC Consumer Package Code: 021200010736
SN110*RL^**	Quantity: 10 Unit of Measurement: RL=roll
CTT*5^	Number of HL Loops: 5
SE*28*000002176^	Number of Segments: 28 Transaction Set Control Number: 000002176

NOTE: Sample ship notice contains fictitious data.

Example 2

This is an example to illustrate the use of the Transaction Set 856 with Shipment/Order/Tare/Item hierarchical structure.

SHIP NOTICE

12/9/1999
12:41 PM

SHIP FROM:
3M – Ontario
5151 Philadelphia
Ontario CA 91761-2814

SHIP TO:
ABC Company #0024
72 East Front Street
St. Paul MN 55144-1000

Shipment Weight: 79 Pounds

Lading Quantity: 25 cartons
Less than trailer load

Bill of Lading: OAND754272
SCAC: PRES (Preston Trucking Company)
Carrier PRO Number: 516646432

Ship Date: 12/9/1999

P.O. Number	Invoice Number	UCC/EAN Number	Quantity Shipped	Part Numbers
123456	EM00001	00100212004800015035	15 Cases	021200002137 22345
123699	EM00025	00100212004654892603	27 Each	021200010729 10795
			10 Rolls	021200010736 43666

ASC X12 FORMAT	INTERPRETATION
ST*856*000006359^	ASC X12 Transaction Set: 856 Transaction Set Control Number: 000006359
BSN*00*OAND754272*19991209 *1241^	Original Ship Notice Shipment ID: OAND754272 Ship Notice Creation Date: 12/09/1999 Ship Notice Creation Time: 12:41 PM
HL*1**S^	Shipment Level Information
TD1**25*****79*LB^	Lading Quantity (Pieces): 25 Gross Weight: 79 pounds
TD5**2*PRES*LT*PRESTON TRUCKING COMPANY^	Carrier SCAC: PRES Transportation Method Mode: LT=less than trailer load Carrier Name: Preston Trucking Company
REF*BM*OAND754272^	Bill of Lading Number: OAND754272
REF*CN*516646432^	Carrier's Reference Number (Carrier's PRO/Invoice): 516646432
DTM*011*19991209^	Date Shipped: 12/09/1999
N1*SF*3M – ONTARIO^	Ship From: 3M - Ontario
N3*5151 PHILADELPHIA^	5151 Philadelphia
N4*ONTARIO*CA*917612814^	Ontario, CA 91761-2814
N1*ST**92*0024^	Ship To: ABC Company Buyer-Assigned Location Number: 0024 72 East Front Street St. Paul, MN 55144-1000
HL*2*1*O^	Order Level Information
PRF*123456***19991207^	Purchase Order Number: 123456 Purchase Order Date: 12/07/1999
REF*IV*EM00001^	Invoice Number: EM00001
HL*3*2*T^	Tare (Shipping Container [e.g., pallet or carton]) Level Information
MAN*GM *00100212004800015035^	UCC/EAN 128 Number: 00100212004800015035
HL*4*3*I^	Item Level Information

LIN*001*UP*021200002137*BP *22345^	Ship Notice Line Number: 001 UPC Consumer Package Code: 021200002137 Buyer's Part Number: 22345
SN115*CA^**	Quantity: 15 Unit of Measure: CA=case
HL*5*1*O^	Order Level Information
PRF*123699*19991208^**	Purchase Order Number: 123699 Purchase Order Date: 12/08/1999
REF*IV*EM00025^	Invoice Number: EM00025
HL*6*5*T^	Tare (Shipping Container [e.g., pallet or carton]) Level Information
MAN*GM *00100212004654892603^	UCC/EAN 128 Number: 00100212004654892603
HL*7*6*I	Item Level Information
LIN*002*UP*021200010729*BP *10795^	Ship Notice Line Number: 002 UPC Consumer Package Code: 021200010729 Buyer's Part Number: 10795
SN127*EA^**	Quantity: 27 Unit of Measure: EA=each
HL*8*6*I^	Item Level Information
LIN*003*UP*021200010736*BP *43666^	Ship Notice Line Number: 003 UPC Consumer Package Code: 021200010736 Buyer's Part Number: 43666
SN110*RL^**	Quantity: 10 Unit of Measurement: RL=roll
CTT*8^	Number of HL Loops: 8
SE*33*000006359^	Number of Segments: 33 Transaction Set Control Number: 000006359

NOTE: Sample ship notice contains fictitious data.