

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.

Notes:

Notes to Trading Partner:

The HL Shipment and HL Item Level loops are required.

The HL Order Level Loop should only be used by Primary Metals suppliers. Primary metals applies to shipments of coils of steel.

When the HL Order Level Loop is used, use the HL Item Level Loop specified for use with the HL Order Level Loop. The requirements for the HL Item Level Loop are different than the requirements for the HL Item Level Loop that is to be used for non-primary-metals shipments.

Heading:

<u>Attributes</u>	<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Base Attributes</u>	<u>Max. Use</u>	<u>Loop Repeat</u>	<u>Notes and Comments</u>
M	010	ST	Transaction Set Header	M	1		
M	020	BSN	Beginning Segment for Ship Notice	M	1		
Must Use	040	DTM	Date/Time Reference	O	2		

Detail:

<u>Attributes</u>	<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Base Attributes</u>	<u>Max. Use</u>	<u>Loop Repeat</u>	<u>Notes and Comments</u>
LOOP ID - HL							1
M	010	HL	Hierarchical Level - SHIPMENT LEVEL	M	1		c1
Must Use	080	MEA	Measurements	O	2		
Must Use	110	TD1	Carrier Details (Quantity and Weight)	O	1		
Must Use	120	TD5	Carrier Details (Routing Sequence/Transit Time)	O	1		
Must Use	130	TD3	Carrier Details (Equipment)	O	1		
	140	TD4	Carrier Details (Special Handling, or Hazardous Materials, or Both)	O	5		
Must Use	150	REF	Reference Identification	O	>1		
LOOP ID - N1							2
Must Use	220	N1	Name	O	1		
	260	REF	Reference Identification	O	3		
	300	ETD	Excess Transportation Detail	O	1		
LOOP ID - SAC							>1

	320	SAC	Service, Promotion, Allowance, or Charge Information	O	1	
LOOP ID - HL						99999
Must Use	010	HL	Hierarchical Level - ORDER LEVEL - PRIMARY METALS SUPPLIERS ONLY	O	1	
Must Use	020	LIN	Item Identification	O	1	
Must Use	030	SN1	Item Detail (Shipment)	O	1	
Must Use	050	PRF	Purchase Order Reference	O	1	
LOOP ID - HL						99999
Must Use	010	HL	Hierarchical Level - ITEM LEVEL - PRIMARY METALS SUPPLIERS ONLY	O	1	
Must Use	080	MEA	Measurements	O	1	
Must Use	150	REF	Reference Identification	O	1	
LOOP ID - CLD						200
	170	CLD	Load Detail	O	1	
	180	REF	Reference Identification	O	200	
LOOP ID - HL						99999
M	010	HL	Hierarchical Level - ITEM LEVEL - NON-PRIMARY-METALS SUPPLIERS	M	1	
Must Use	020	LIN	Item Identification	O	1	
Must Use	030	SN1	Item Detail (Shipment)	O	1	
Must Use	050	PRF	Purchase Order Reference	O	1	
	150	REF	Reference Identification	O	>1	
LOOP ID - CLD						200
	170	CLD	Load Detail	O	1	
	180	REF	Reference Identification	O	200	
	300	ETD	Excess Transportation Detail	O	1	
LOOP ID - SAC						1
	320	SAC	Service, Promotion, Allowance, or Charge Information	O	1	

Summary:

<u>Attributes</u>	<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Base Attributes</u>	<u>Max. Use</u>	<u>Loop Repeat</u>	<u>Notes and Comments</u>
Must Use	010	CTT	Transaction Totals	O	1		n1
M	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.

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:
Business Rules: Variable Name: STST
Notes: **Data Examples**

ST*856*9360001~

Data Element Summary

User	Ref.	Data		
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	ST01	143	Transaction Set Identifier Code	M ID 3/3
			Code uniquely identifying a Transaction Set	
			856 Ship Notice/Manifest	
M	ST02	329	Transaction Set Control Number	M AN 4/9
			Identifying control number that must be unique within the transaction set	
			functional group assigned by the originator for a transaction set	

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: **Data Examples**

BSN*00*DY12386718*20180112*1430~

Data Element Summary				
User Attribute	Ref. Des.	Data Element	Name	Attributes
M	BSN01	353	Transaction Set Purpose Code	M ID 2/2
			Code identifying purpose of transaction set	
			00 Original	
M	BSN02	396	Shipment Identification	M AN 2/30
			A unique control number assigned by the original shipper to identify a specific shipment	
			Notes:	
			The shipment identification number (ASN number) must be unique and cannot be repeated within a one-year period. We recommend using the packing list number as the ASN number.	
M	BSN03	373	Date	M DT 8/8
			Date expressed as CCYYMMDD	
			Notes:	
			ASN Creation Date	
M	BSN04	337	Time	M TM 4/8
			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)	
			Notes:	
			ASN Creation Time	

Segment:	DTM Date/Time Reference
Position:	040
Loop:	
Level:	Heading
Usage:	Optional (Must Use)
Max Use:	2
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:	Notes HSI requires the DTM(011) segment, but the DTM(017) segment is optional.
	Data Examples DTM*011*20180112*1430*ET~ DTM*017*20180113*0800*ET~

Data Element Summary					
User Attribute	Ref. Des.	Data Element	Name	Attributes	
M	DTM01	374	Date/Time Qualifier	M	ID 3/3
			Code specifying type of date or time, or both date and time		
			011 Shipped		
			017 Estimated Delivery		
Must Use	DTM02	373	Date	X	DT 8/8
			Date expressed as CCYYMMDD		
			Notes:		
			When DTM01 = "011", this will be the shipment date		
			When DTM01 = "017", this will be the estimated delivery date		
Must Use	DTM03	337	Time	X	TM 4/8
			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)		
			Notes:		
			When DTM01 = "011", this will be the shipment time		
			When DTM01 = "017", this will be the estimated delivery time		
	DTM04	623	Time Code	O	ID 2/2
			Code identifying the time. In accordance with International Standards Organization standard 8601, time can be specified by a + or - and an indication in hours in relation to Universal Time Coordinate (UTC) time; since + is a restricted character, + and - are substituted by P and M in the codes that follow		
			Notes:		
			When DTM01 = "011", this will be the shipment origin time zone		
			When DTM01 = "017", this will be the destination time zone		
			Refer to 004010 Data Element Dictionary for acceptable code values.		

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:

Notes
HL Shipment Level Loop

Data Examples

HL*1**S~

Data Element Summary

User	Ref.	Data		
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	HL01	628	Hierarchical ID Number	M AN 1/12
			A unique number assigned by the sender to identify a particular data segment in a hierarchical structure	
	HL02	734	Hierarchical Parent ID Number	O AN 1/12
			Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to	
M	HL03	735	Hierarchical Level Code	M ID 1/2
			Code defining the characteristic of a level in a hierarchical structure	
			S Shipment	
	HL04	736	Hierarchical Child Code	O ID 1/1
			Code indicating if there are hierarchical child data segments subordinate to the level being described	
			Refer to 004010 Data Element Dictionary for acceptable code values.	

Segment: **MEA** Measurements

Position: 080

Loop: HL Mandatory

Level: Detail

Usage: Optional (Must Use)

Max Use: 2

Purpose: To specify physical measurements or counts, including dimensions, tolerances, variances, and weights (See Figures Appendix for example of use of C001)

Syntax Notes: 1 At least one of MEA03 MEA05 MEA06 or MEA08 is required.

2 If MEA05 is present, then MEA04 is required.

3 If MEA06 is present, then MEA04 is required.

4 If MEA07 is present, then at least one of MEA03 MEA05 or MEA06 is required.

5 Only one of MEA08 or MEA03 may be present.

Semantic Notes: 1 MEA04 defines the unit of measure for MEA03, MEA05, and MEA06.

Comments: 1 When citing dimensional tolerances, any measurement requiring a sign (+ or -), or any measurement where a positive (+) value cannot be assumed, use MEA05 as the negative (-) value and MEA06 as the positive (+) value.

Notes: **Notes**

HL Shipment Level Loop

Two MEA segments are required at the Shipment Level to provide shipment gross and net weight information.

Data Examples

MEA*PD*G*1020*LB~

MEA*PD*N*1018*LB~

Data Element Summary

<u>User</u>	<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>		
Must Use	MEA01	737	Measurement Reference ID Code	O ID 2/2
			Code identifying the broad category to which a measurement applies	
			PD Physical Dimensions	
Must Use	MEA02	738	Measurement Qualifier	O ID 1/3
			Code identifying a specific product or process characteristic to which a measurement applies	
			G Gross Weight	
			N Actual Net Weight	
Must Use	MEA03	739	Measurement Value	X R 1/20
			The value of the measurement	
	MEA04	C001	Composite Unit of Measure	X
			To identify a composite unit of measure (See Figures Appendix for examples of use)	
M	C00101	355	Unit or Basis for Measurement Code	M ID 2/2
			Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	
			KG Kilogram	
			LB Pound	

Segment: **TD1** Carrier Details (Quantity and Weight)
Position: 110
Loop: HL Mandatory
Level: Detail
Usage: Optional (Must Use)
Max Use: 1
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

HL Shipment Level Loop

Data Examples

TD1*PLT71*3~

Data Element Summary

<u>User</u>	<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>		
Must Use	TD101	103	Packaging Code	O AN 3/5
			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 Refer to 004010 Data Element Dictionary for acceptable code values.	
Must Use	TD102	80	Lading Quantity	X N0 1/7
			Number of units (pieces) of the lading commodity	

Segment: **TD5** **Carrier Details (Routing Sequence/Transit Time)**

Position: 120

Loop: HL Mandatory

Level: Detail

Usage: Optional (Must Use)

Max Use: 1

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: **Notes**

HL Shipment Level Loop

Data Examples

TD5*B*2*AMML*M~

Data Element Summary

User	Ref.	Data			
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>	
Must Use	TD501	133	Routing Sequence Code	O ID 1/2	
			Code describing the relationship of a carrier to a specific shipment movement		
			B Origin/Delivery Carrier (Any Mode)		
Must Use	TD502	66	Identification Code Qualifier	X ID 1/2	
			Code designating the system/method of code structure used for Identification Code (67)		
			2 Standard Carrier Alpha Code (SCAC)		
Must Use	TD503	67	Identification Code	X AN 2/80	
			Code identifying a party or other code		
			Notes:		
			SCAC Code		
Must Use	TD504	91	Transportation Method/Type Code	X ID 1/2	
			Code specifying the method or type of transportation for the shipment		
			Notes:		
			Any valid X12 code except ZZ		
	TD507	309	Location Qualifier	O ID 1/2	
			Code identifying type of location		
			Notes:		
			If TD504 = 'A', use code value "OR", meaning Origin (Shipping Point).		
			OR Origin (Shipping Point)		
			PP Pool Point		
	TD508	310	Location Identifier	X AN 1/30	
			Code which identifies a specific location		
			Notes:		
			If TD507 = "PP", this will be the pool point		
			If TD507 = "OR", this will be the airport code (e.g. DTW for Detroit Metro Airport)		

Segment: **TD3** Carrier Details (Equipment)
Position: 130
Loop: HL Mandatory
Level: Detail
Usage: Optional (Must Use)
Max Use: 1
Purpose: To specify transportation details relating to the equipment used by the carrier
Syntax 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.

Semantic Notes:
Comments:
Notes:

Notes

HL Shipment Level Loop

Data Examples

TD3*TL*DCBA*176391~

Data Element Summary

<u>User</u>	<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>		
Must Use	TD301	40	Equipment Description Code Code identifying type of equipment used for shipment Notes: Any valid X12 code Refer to 004010 Data Element Dictionary for acceptable code values.	X ID 2/2
	TD302	206	Equipment Initial Prefix or alphabetic part of an equipment unit's identifying number	O AN 1/4
Must Use	TD303	207	Equipment Number Sequencing or serial part of an equipment unit's identifying number (pure numeric form for equipment number is preferred)	X AN 1/10

Segment:	REF Reference Identification
Position:	150
Loop:	HL Mandatory
Level:	Detail
Usage:	Optional (Must Use)
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:	Notes HL Shipment Level Loop The REF(BM) and REF(PK) segments are mandatory. If the shipment is sent via air, send the Air Waybill Number in the REF(BM) segment. Data Examples REF*BM*32688~ REF*PK*123640~

Data Element Summary				
User	Ref.	Data		
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	REF01	128	Reference Identification Qualifier	M ID 2/3
			Code qualifying the Reference Identification	
			BM Bill of Lading Number	
			PK Packing List Number	
Must Use	REF02	127	Reference Identification	X AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	
			Notes:	
			If REF01 = "BM", this will be the bill-of-lading number	
			If REF01 = "PK", this will be the packing list number	

Segment: **N1** Name
Position: 220
Loop: N1 Optional(Must Use)
Level: Detail
Usage: Optional(Must Use)
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: **Notes**

HL Shipment Level Loop/N1 Loop

Data Examples

N1*SF*SUPPLIER NAME*92*59999~

N1*ST*HENDERSON STAMPING PLANT 2*92*HSI2~

Data Element Summary

User	Ref.	Data	Name	Attributes
Attribute	Des.	Element		
M	N101	98	Entity Identifier Code	M ID 2/3
			Code identifying an organizational entity, a physical location, property or an individual	
			SF Ship From	
			ST Ship To	
	N102	93	Name	X AN 1/60
			Free-form name	
Must Use	N103	66	Identification Code Qualifier	X ID 1/2
			Code designating the system/method of code structure used for Identification Code (67)	
			92 Assigned by Buyer or Buyer's Agent	
Must Use	N104	67	Identification Code	X AN 2/80
			Code identifying a party or other code	

Notes:

When N101 = SF, this will contain the HSI-assigned supplier number
When N101 = ST, this will contain the HSI plant code (as sent in 830)

Segment: **HL** Hierarchical Level - ORDER LEVEL - PRIMARY METALS SUPPLIERS ONLY
Position: 010
Loop: HL Optional (Must Use)
Level: Detail
Usage: Optional (Must Use)
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:

Notes
HL Order Level Loop - PRIMARY METALS SUPPLIERS ONLY (shipments of coils of steel)

HL Order Level Loop not to be used if not shipping primary metals.

Data Examples

HL*2*1*O~

Data Element Summary

User	Ref.	Data		
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	HL01	628	Hierarchical ID Number A unique number as signed by the sender to identify a particular data segment in a hierarchical structure	M AN 1/12
Must Use	HL02	734	Hierarchical Parent ID Number Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to	O AN 1/12
M	HL03	735	Hierarchical Level Code Code defining the characteristic of a level in a hierarchical structure	M ID 1/2
			O Order	
	HL04	736	Hierarchical Child Code Code indicating if there are hierarchical child data segments subordinate to the level being described Refer to 004010 Data Element Dictionary for acceptable code values.	O ID 1/1

Segment:	LIN Item Identification
Position:	020
Loop:	HL Optional (Must Use)
Level:	Detail
Usage:	Optional (Must Use)
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:	Notes
	HL Order Level Loop - PRIMARY METALS SUPPLIERS ONLY
	Data Examples
	LIN**BP*ZP13976-DP~

Data Element Summary				
User	Ref.	Data		
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	LIN02	235	Product/Service ID Qualifier	M ID 2/2
			Code identifying the type/source of the descriptive number used in Product/Service ID (234)	
			BP Buyer's Part Number	
M	LIN03	234	Product/Service ID	M AN 1/48
			Identifying number for a product or service	
			Notes:	
			HSI Item Number	

Segment: **SN1** Item Detail (Shipment)
Position: 030
Loop: HL Optional (Must Use)
Level: Detail
Usage: Optional (Must Use)
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:

HL Order Level Loop - PRIMARY METALS SUPPLIERS ONLY

Data Examples

SN1**60880*24*15148179~

Data Element Summary

User	Ref.	Data		
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	SN102	382	Number of Units Shipped	M R 1/10
			Numeric value of units shipped in manufacturer's shipping units for a line item or transaction set	
M	SN103	355	Unit or Basis for Measurement Code	M ID 2/2
			Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	
			24 Theoretical Pounds	
	SN104	646	Quantity Shipped to Date	O R 1/15
			Number of units shipped to date	

Segment: **PRF** **Purchase Order Reference**
Position: 050
Loop: HL Optional (Must Use)
Level: Detail
Usage: Optional (Must Use)
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:

Notes

HL Order Level Loop - PRIMARY METALS SUPPLIERS ONLY

Data Examples

PRF*55019113~

Data Element Summary

<u>User</u>	<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>		
M	PRF01	324	Purchase Order Number	M AN 1/22
			Identifying number for Purchase Order assigned by the orderer/purchaser	

Segment:	HL Hierarchical Level - ITEM LEVEL - PRIMARY METALS SUPPLIERS ONLY
Position:	010
Loop:	HL Optional (Must Use)
Level:	Detail
Usage:	Optional (Must Use)
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:	Notes HL Item Level Loop within HL Order Level Loop - PRIMARY METALS SUPPLIERS ONLY Data Examples HL*3*2*I~

Data Element Summary				
User Attribute	Ref. Des.	Data Element	Name	Attributes
M	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
Must Use	HL02	734	Hierarchical Parent ID Number Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to	O AN 1/12
M	HL03	735	Hierarchical Level Code Code defining the characteristic of a level in a hierarchical structure I Item	M ID 1/2
	HL04	736	Hierarchical Child Code Code indicating if there are hierarchical child data segments subordinate to the level being described Refer to 004010 Data Element Dictionary for acceptable code values.	O ID 1/1

Segment: **MEA** Measurements

Position: 080

Loop: HL Optional (Must Use)

Level: Detail

Usage: Optional (Must Use)

Max Use: 1

Purpose: To specify physical measurements or counts, including dimensions, tolerances, variances, and weights (See Figures Appendix for example of use of C001)

Syntax Notes: 1 At least one of MEA03 MEA05 MEA06 or MEA08 is required.

2 If MEA05 is present, then MEA04 is required.

3 If MEA06 is present, then MEA04 is required.

4 If MEA07 is present, then at least one of MEA03 MEA05 or MEA06 is required.

5 Only one of MEA08 or MEA03 may be present.

Semantic Notes: 1 MEA04 defines the unit of measure for MEA03, MEA05, and MEA06.

Comments: 1 When citing dimensional tolerances, any measurement requiring a sign (+ or -), or any measurement where a positive (+) value cannot be assumed, use MEA05 as the negative (-) value and MEA06 as the positive (+) value.

Notes: **Notes**

HL Item Level Loop within HL Order Level Loop -
PRIMARY METALS SUPPLIERS ONLY

Data Examples

MEA*PD*WT*30440*01~

Data Element Summary

User	Ref.	Data			Attributes
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>	<u>Name</u>		
Must Use	MEA01	737	Measurement Reference ID Code		O ID 2/2
			Code identifying the broad category to which a measurement applies		
			PD Physical Dimensions		
Must Use	MEA02	738	Measurement Qualifier		O ID 1/3
			Code identifying a specific product or process characteristic to which a measurement applies		
			WT Weight		
Must Use	MEA03	739	Measurement Value		X R 1/20
			The value of the measurement		
Must Use	MEA04	C001	Composite Unit of Measure		X
			To identify a composite unit of measure (See Figures Appendix for examples of use)		
M	C00101	355	Unit or Basis for Measurement Code		M ID 2/2
			Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken		
			01 Actual Pounds		

Segment: **REF** **Reference Identification**
Position: 150
Loop: HL Optional (Must Use)
Level: Detail
Usage: Optional (Must Use)
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:

Notes

HL Item Level Loop within HL Order Level Loop -
PRIMARY METALS SUPPLIERS ONLY

Data Examples

REF*HC*843D66520~

Data Element Summary

<u>User</u>	<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>		
M	REF01	128	Reference Identification Qualifier	M ID 2/3
			Code qualifying the Reference Identification	
			HC Heat Code	
Must Use	REF02	127	Reference Identification	X AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	
			Notes:	
			Heat Code	

Segment: **CLD** Load Detail
Position: 170
Loop: CLD Optional
Level: Detail
Usage: Optional
Max Use: 1
Purpose: To specify the number of material loads shipped
Syntax Notes: 1 If CLD05 is present, then CLD04 is required.
Semantic Notes: 1 CLD05 is used to dimension the value given in CLD04.
Comments: 1 The CLD data segment may be used to provide information to aid in the preparation of move tags and/or bar coded labels.
Notes: Notes

HL Item Level Loop/CLD Loop within HL Order Level Loop -

PRIMARY METALS SUPPLIERS ONLY

Data Examples

CLD*1*30440***LB~

Data Element Summary

User	Ref.	Data		
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	CLD01	622	Number of Loads	M N0 1/5
			Number of customer-defined loads shipped by the supplier	
M	CLD02	382	Number of Units Shipped	M R 1/10
			Numeric value of units shipped in manufacturer's shipping units for a line item or transaction set	

Segment: **REF** **Reference Identification**
Position: 180
Loop: CLD Optional
Level: Detail
Usage: Optional
Max Use: 200
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:

Notes

HL Item Level Loop/CLD Loop within HL Order Level Loop -
PRIMARY METALS SUPPLIERS ONLY

Data Examples

REF*LS*932366-1A~

Data Element Summary

<u>User</u>	<u>Ref.</u>	<u>Data</u>	<u>Attributes</u>	
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>	<u>Name</u>	
M	REF01	128	Reference Identification Qualifier	M ID 2/3
			Code qualifying the Reference Identification	
			LS Bar-Coded Serial Number	
Must Use	REF02	127	Reference Identification	X AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	

Segment: **HL** Hierarchical Level - ITEM LEVEL - NON-PRIMARY-METALS SUPPLIERS

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:

HL Item Level Loop - NON-PRIMARY-METALS SUPPLIERS - No HL Order Level Loop

Data Examples

HL*2*1*I~

Data Element Summary

User	Ref.	Data	Name	Attributes
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>		
M	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
Must Use	HL02	734	Hierarchical Parent ID Number Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to	O AN 1/12
M	HL03	735	Hierarchical Level Code Code defining the characteristic of a level in a hierarchical structure I Item	M ID 1/2
	HL04	736	Hierarchical Child Code Code indicating if there are hierarchical child data segments subordinate to the level being described Refer to 004010 Data Element Dictionary for acceptable code values.	O ID 1/1

Segment:	LIN Item Identification
Position:	020
Loop:	HL Mandatory
Level:	Detail
Usage:	Optional (Must Use)
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:	Notes

HL Item Level Loop - NON-PRIMARY-METALS SUPPLIERS - No HL Order Level Loop

Data Examples

LIN**BP*ZP13976-DP*EC*A~

Data Element Summary				
User Attribute	Ref. Des.	Data Element	Name	Attributes
M	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	M ID 2/2
M	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) EC Engineering Change Level	X ID 2/2
	LIN05	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 (Must Use)	
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:	Notes HL Item Level Loop - NON-PRIMARY-METALS SUPPLIERS - No HL Order Level Loop Data Examples SN1**16000*EA*48000~	

Data Element Summary				
User	Ref.	Data		
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	SN102	382	Number of Units Shipped	M R 1/10
			Numeric value of units shipped in manufacturer's shipping units for a line item or transaction set	
M	SN103	355	Unit or Basis for Measurement Code	M ID 2/2
			Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	
			Refer to 004010 Data Element Dictionary for acceptable code values.	
	SN104	646	Quantity Shipped to Date	O R 1/15
			Number of units shipped to date	

Segment: **PRF** Purchase Order Reference
Position: 050
Loop: HL Mandatory
Level: Detail
Usage: Optional (Must Use)
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:

Notes

HL Item Level Loop - NON-PRIMARY-METALS SUPPLIERS - No HL Order Level Loop

Data Examples

PRF*55026043~

Data Element Summary

<u>User</u>	<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>		
M	PRF01	324	Purchase Order Number	M AN 1/22
			Identifying number for Purchase Order assigned by the orderer/purchaser	

Segment: **CLD** **Load Detail**
Position: 170
Loop: CLD Optional
Level: Detail
Usage: Optional
Max Use: 1
Purpose: To specify the number of material loads shipped
Syntax Notes: 1 If CLD05 is present, then CLD04 is required.
Semantic Notes: 1 CLD05 is used to dimension the value given in CLD04.
Comments: 1 The CLD data segment may be used to provide information to aid in the preparation of move tags and/or bar coded labels.
Notes: **Notes**

HL Item Level Loop/CLD Loop - NON-PRIMARY-METALS SUPPLIERS - No HL Order Level Loop

Data Examples

CLD*3*2700~PLT90~

Data Element Summary

User	Ref.	Data	Name	Attributes
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>		
M	CLD01	622	Number of Loads Number of customer-defined loads shipped by the supplier	M N0 1/5
M	CLD02	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
Must Use	CLD03	103	Packaging Code 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 Refer to 004010 Data Element Dictionary for acceptable code values.	O AN 3/5

Segment: **REF** **Reference Identification**
Position: 180
Loop: CLD Optional
Level: Detail
Usage: Optional
Max Use: 200
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:

Notes

HL Item Level Loop/CLD Loop - NON-PRIMARY-METALS SUPPLIERS - No HL Order Level Loop

Data Examples

REF*LS*11193193~

Data Element Summary

<u>User</u>	<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>		
M	REF01	128	Reference Identification Qualifier	M ID 2/3
			Code qualifying the Reference Identification	
			LS Bar-Coded Serial Number	
Must Use	REF02	127	Reference Identification	X AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	

Segment: **CTT** Transaction Totals
Position: 010
Loop:
Level: Summary
Usage: Optional (Must Use)
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: **Data Examples**
CTT*2*165200~

Data Element Summary				
User	Ref.	Data		
<u>Attribute</u>	<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	CTT01	354	Number of Line Items	M N0 1/6
Total number of line items in the transaction set				
Must Use	CTT02	347	Hash Total	O R 1/10
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.				
Example:				
-.0018 First occurrence of value being hashed.				
.18 Second occurrence of value being hashed.				
1.8 Third occurrence of value being hashed.				
18.01 Fourth occurrence of value being hashed.				

1855 Hash total prior to truncation.				
855 Hash total after truncation to three-digit field.				

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: **Data Examples**

SE*53*9360001~

Data Element Summary

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

Sample Document (SOI) Primary Metals Only

ISA*00* *00* *ZZ*SUPPISAID *ZZ*HSPI
*170828*1559*U*00401*000004803*0*P*>~
GS*SH*SUPPGSID*058412461*20170828*1559*4803*X*004010~
ST*856*4806~
BSN*00*1286369*20171106*0850~
DTM*011*20171106*0850*ET~
HL*1**S~
MEA*PD*G*75863*LB~
MEA*PD*N*75863*LB~
TD1*COL52*3~
TD5*B*2*AMML*M~
TD3*TL**0534~
REF*BM*1286369~
REF*PK*1286369~
N1*SF**92*311111~
N1*ST**92*0872~
HL*2*1*0~
LIN**BP*6228~
SN1**60880*24*15148179~
PRF*55019107~
HL*3*2*I~
MEA*PD*WT*30440*01~
REF*HC*843D66520~
CLD*1*30440~
REF*LS*936640-1A~
HL*4*2*I~
MEA*PD*WT*30440*01~
REF*HC*843D66520~
CLD*1*30440~
REF*LS*936640-1B~
HL*5*1*0~
LIN**BP*608800S~
SN1**14983*24*19173625~
PRF*55019107~
HL*6*5*I~
MEA*PD*WT*14983*01~
REF*HC*842B40020~
CLD*1*14983~
REF*LS*915022-1B~
CTT*6*75863~
SE*38*4806~
GE*1*4803~
IEA*1*000004803~

Sample Document (SI) Non Primary Metals

ISA*00* *00* *ZZ*SUPPISAID *ZZ*HSPI
*170828*1559*U*00401*000060514*0*P*>~
GS*SH*SUPPGSID*058412461*20170828*1559*60526*X*004010~
ST*856*000001~
BSN*00*529926*20170831*1858~
DTM*011*20170831*1856*ET~
DTM*017*20170831*2100*ET~
HL*1**S~
MEA*PD*G*603*LB~
MEA*PD*N*600*LB~
TD1*CNT79*3~
TD5*B*2*CUST*M~
TD3*TL**6015008~
REF*BM*529926~
REF*PK*389173~
N1*SF*SHIP-FROM NAME*92*399999~
N1*ST*Henderson Stamping Plant 2*92*HSI2~
HL*2*1*I~
LIN**BP*P2216771*EC*A~
SN1**800*EA*4900~
PRF*55120~
CLD*2*800~
REF*LS*936640~
REF*LS*936642~
HL*3*1*I~
LIN**BP*P2216772~
SN1**12000*EA*7650~
PRF*55120~
CLD*3*4000~
REF*LS*936771~
REF*LS*936772~
REF*LS*936773~
CTT*2*1870~
SE*31*000001~
GE*1*60526~
IEA*1*000060514~

Document Revision

Version	Date	Comment	Author
1.0	Nov-18-2025	Document creation.	Kyle Putnam