EDI IMPLEMENTATION GUIDE

856 ADVANCED SHIP NOTICE
REGULAR (NON-RAW METAL)

ANSI X12 V4010

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, and 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.

Suppliers must have the capability of transmitting almost all of the segments and elements described below. There are many other loops, segments and elements that can be used in an AIAG v4010 856 but those are not described in this document. In general, Flex-N-Gate can successfully receive any AIAG-compliant data, but the Flex-N-Gate software will only process and use the below entries described.

The far-left column below describes Flex-N-Gate's requirements. Again, almost every segment and element in this 856 will be marked "Always", indicating that it must be sent in every 856, and that it must be sent in the specified loops. The few exceptions to these rules will be noted in the comments.

Please note that Flex-N-Gate will use the BSN02 (Shipment ID) as a packing slip number. REF*BM and REF*PK can be transmitted in the 856, but the Flex-N-Gate software will ignore these segments. Ideally, suppliers will use the same value for SID, BOL, Packing Slip, and invoice.

Revisions:

02/15/2024

- **Updated the HL Tare Level repeat loop 200000**

09/14/2022

- **Updated the BSN02 and overall length**
- **Updated the REF PK notes**

07/09/2019

- **Added the fact that we prefer the ASN and invoice be the same ID.**
- **Updated the BSN02 notes**
- **Mandated the DTM 017 – Expected Date. Requirement for FNG Plants.**
- **TDl This should equal the number of containers that hold parts with serials, not including the masters (i.e. Containers not pallets)**
- **Added the mandatory REF CN after the TD3 for the Carrier pro tracking number, if you have one.**
- **Added Tare level (LIN package and REF LS) after the shipment level and before the Order level. These segments have become mandatory for Flex-N-Gate facilities. Currently this is the serial from the External package label (Master/standalone/mixed).**
- **Mandated the SN104 Quantity shipped to date history.**
- **Added 3 samples (Master/standalone/mixed) #SAMPLES**
- **Added EDI packaging Codes # EDI PACKAGING CODES**
- **Added Note about ASN number that any character after the 15th will be truncated and could cause a duplicate ASN. An ASN number is a unique supplier-assigned number that cannot repeat within a one-year period. This will be treated as Packing Slip Number in Flex-N-Gate software.**

06/24/2019

- **Updated the REF LT sub element to be in minimum REF 05.**

10/07/2025

- **Updated the REF LS segment to have the expiry date with ZZ qualifier.**

04/01/2026

- **Removed the sub element ":" for the LS segment. Whatever is used in ISA segment has to be used for the LS sub element.**

07/14/2026

- **Added the mandatory DTM*17 to the examples.**

07/30/2026

- **Fixed wording in SN102 at Order level. Removed verbiage about coils and added Total number of pieces.**

09/16/2026

- **Added ASN structure example for a Tank Truck delivery of Resin for example. 2D serial label should be included with paperwork from Driver. Prefer a PDF version.**

Heading:

FNG USAGE	POS. NO.	SEG. ID	NAME	AIAG USAGE	MAX USE	LOOP REPEAT	NOTES AND COMMENTS
Always	010	ST	Transaction Set Header	M	l		
Always	020	BSN	Beginning Segment for Ship Notice	M			
Always	040	DTM	Date/Time Reference	M	10		

Shipment Level:

FNG USAGE	POS. NO.	SEG. ID	NAME	AIAG USAGE	MAX USE	LOOP REPEAT	NOTES AND COMMENTS
			LOOPID-HL			200000	
Always	010	HL	Hierarchical Level	M	l		
Always	080	MEA	Measurements	O	40		
Always	110	TDI	Carrier Details (Quantity and Weight)	O	20		
Always	120	TD5	Carrier Details (Routing Sequence/Transit Time)		0 12		
Always	130	TD3	Carrier Details (Equipment)	O	12		
			LOOPID-Nl			200	
Always	220	Nl	Name	O			

Tare Level:

FNG USAGE	POS. NO.	SEG. ID	NAME	AIAG USAGE	MAX USE	LOOP REPEAT	NOTES AND COMMENTS
			LOOPID-HL			l	
Always	010	HL	Hierarchical Level	O			
Always	020	LIN	Item package Identification	O			
Always	150	REF	Reference Identification	O			

Order Level:

FNG USAGE	POS. NO.	SEG. ID	NAME	AIAG USAGE	MAX USE	LOOP REPEAT	NOTES AND COMMENTS
			LOOPID-HL			200000	
Always	010	HL	Hierarchical Level	M			
Always	020	LIN	Item Identification	M			
Always	030	SN1	Item Detail Shipment	M			
Always	050	PRF	Purchase Order Reference	M			
See comments	150	REF	Reference Identification	M	>1		
			LOOPID-CLD			200	
Always	170	CLO	Load Description	M	1		
See comments	180	REF	Reference Identification	M	500		

Summary:

FNG USAGE	POS. NO.	SEG. ID	NAME	AIAG USAGE	MAX USE	LOOP REPEAT	NOTES AND COMMENTS
Always	010	CTT	Transaction Totals	M	1		
Always	020	SE	Transaction Set Trailer	M			

Transaction Set Notes

1. Number of line items (CTT0l) 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 SNl segment.

Segment: **ST** **Transaction Set Header**
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: The transaction set identifier (ST0l) is used by the translation routines of the interchange partners to select The appropriate transaction set definitions (e.g. 810 selects the Invoice Transaction Set).
Comments: The transaction Set Control Number (ST02) in this header must match the Transaction Set Control Number (SE02) in the Transaction Set Trailer (SE).

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**ST01**	**143**	**Transaction Set Identifier Code** Code uniquely Identifying a Transaction Set 856 Ship Notice / Manifest	**M ID 3/3**
Always	**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.	**M AN 4/9**

Segment: **BSN** **Beginning Segment for Ship Notice**
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:
Semantic Notes: BSN03 is the date the shipment transaction set is created.
BSN04 is the time the shipment transaction set is created.
Comments:

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**BSN01**	**353**	**Transaction Set Purpose Code** Code identifying purpose of transaction set 00 Original 01 Cancellation 05 Replace	**M ID 2/2**
Always	**BSN02**	**396**	**Shipment Identification** A unique control number assigned by the original Shipper to identify a specific shipment. The supplier Designated number cannot be repeated within a one year Period. This number will be treated as the Packing Slip Number in Flex-N-Gate's software.	**M AN 2/15**
NOTE:	**Any info after the 15th character will be truncated and may flag the Shipment Identification as being a duplicated entry.**			
Always	**BSN03**	**373**	**ASN Date** Date expressed as CCYYMMDD	**M DT 8/8**
Always	**BSN04**	**337**	**ASN Time** Time expressed in 24-hour clock time as follows: HHMM, where H = hours (00-23), M = minutes (00-59).	**M TM 4/8**

Segment: **DTM** **Date / Time Reference**
Loop:
Level: Heading
Usage: Mandatory
Max Use: 10
Purpose: To specify pertinent dates and times
Syntax Notes: At least one DTM02 DTM03 or DTM05 is required.
If DTM04 is present, then DTM03 is required.
Semantic Notes: For DTM04 use valid X12 codes such as ED, ET, CD, CT, etc.
Comments: Some of the facilities will monitor the DTM 017 Expected date. If you are unsure of this date please verify with the Receiving plant if it is a mandatory requirement.

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**DTM01**	**374**	**Date/Time Qualifier** 011 Shipped Date 017 Expected Date	**M ID 3/3**
Always	**DTM02**	**373**	**Ship Date** Date expressed as CCYYMMDD	**X DT 8/8**
Always	**DTM03**	**337**	**Ship Time** Time expressed in 24-hour clock time as follows: HHMM, where H = hours (00-23), M = minutes (00-59).	**X TM 4/8**
Always	**DTM04**	**623**	**Shipper's Time Zone Code**	**O ID 2/2**

Segment: **HL** **Hierarchical Level**
Loop: HL Mandatory
Level: Detail Shipment
Usage: Mandatory
Max Use: 1
Purpose: To identify dependencies among the content of hierarchically related groups of data segments
Syntax Notes:
Semantic Notes:
Comments: 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 within The transactions.

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 I the HL loop form a logical grouping of data referring to shipment, order, or Item-level information.

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**HL01**	**628**	**Hierarchical ID Number** A unique number assigned by the sender to identify A particular data segment in a hierarchical structure. Use "1" for this occurrence of the HL at the shipment Level, increment by 1 for each subsequent HL segment Within the transaction.	**M AN 1/12**
Always	**HL03**	**735**	**Hierarchical Level Code** Code defining the characteristic of a level in a Hierarchical structure. S Shipment	**M ID 1/2**

Segment: **MEA** **Measurements**
Loop: HL Mandatory
Level: Detail Shipment
Usage: Optional
Max Use: 40
Purpose: To specify physical measurements or counts, including dimensions, tolerances, variances and weights.
Syntax Notes:
Semantic Notes: MEA04 defines the unit of measure for MEA03
Comments:

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**MEA01**	**737**	**Measurement Reference ID Code** Code identifying the broad category to which a Measurement applies. PD Physical Dimensions	**O ID 2/2**
Always	**MEA02**	**738**	**Measurement Qualifier** Code identifying a specific product or process Characteristic to which a measurement applies G Gross Weight N ACTUAL Net Weight	**O ID 1/3**
Always	**MEA03**	**739**	**Measurement Value** The value of the measurement	**X R 1/20**
Always	**MEA04**	**355**	**Unit or Basis for Measurement Code** To identify a composite unit of measure. Code Specifying the units in which a value is being Expressed, or manner in which a measurement Has been taken. Use any Valid X12 measurement code.	**M ID 2/2**

Segment: **TD1** **Carrier Details (Quantity and Weight)**
Loop: HL Mandatory
Level: Detail Shipment
Usage: Optional
Max Use: 20
Purpose: To specify the transportation details relative to commodity, weight, and quantity.
Syntax Notes: If TD101 is present then TD102 is required.
Semantic Notes:
Comments: This should equal the number of containers that is serialized, NOT including the masters / mixed serials. (I.E. Containers not Pallets).
Required at the Shipment level. The TD1 segment should match what is on the Bill of Lading. In case of mixed loads use 'MIX90' in TD101 and the total number of containers (returnable and non-returnable) in TD102.
Note: ***FNG can only accept one TD1 segment per ASN***
Examples:
TD1~CTN25~2
TD1~BIN58~2

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**TD101**	**103**	**Packaging Code** Code identifying the type of Packaging Use any Valid X12 Packaging code.	**O AN 3/5**
Always	**TD102**	**80**	**Bill of Lading Quantity** Number of units (containers) on the BOL	**X NO 1/7**

Segment: **TD5** **Carrier Details (Routing Sequence / Transit Time)**
Loop: HL Mandatory
Level: Detail Shipment
Usage: Optional
Max Use: 12
Purpose: To specify carrier and sequence of routing and provide transit time information.
Syntax Notes: At least one of TD502, TD504 TD506 or TD512 is required.
If TD502 is present, then TD503 is required.
If TD507 is present, then DT508 is required.
Semantic Notes:
Comments: 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

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**TD501**	**133**	**Routing Sequence Code** Code describing the relationship of a carrier to a Specific movement. B Origin / Delivery carrier	**O ID 1/2**
Always	**TD502**	**66**	**Identification Code Qualifier** Code designating the system / method of code structure Used for Identification Code (67) 2 Standard Carrier Alpha SCAC code.	**X ID 1/2**
Always	**TD503**	**67**	**Identification Code** Use 4-digit SCAC code of trucking company.	**X AN 2/4**
Always	**TD504**	**91**	**Transportation Method / Type Code** Code specifying the method or type of transportation for the shipment. Any valid Xl2 code except mutually defined "ZZ".	**X ID ½**
Always	**TD507**	**309**	**Location Qualifier** Code identifying type of locations. IfTD504 = 'A', use code value "OR", meaning Origin (Shipping Point). OR Origin (Shipping Point) PP Pool Point	**O ID ½**
Always	**TD508**	**310**	**Location Qualifier** Code which identifies a specific location. Give pool code if TD507 is PP. Give Airport code identifier if TD507 is OR for an air Shipment (i.e. DTW = Detroit Metro Airport).	**X AN 1/30**

Segment: **TD3** **Carrier Details (Equipment)**
Loop: HL Mandatory
Level: Detail Shipment
Usage: Optional
Max Use: 12
Purpose: To specify transportation details relating to the equipment used by the carrier
Syntax Notes: Only one of TD301 or TD310 may be present.
If TD302 is present, then TD303 is required.
Semantic Notes:
Comments: **The Carrier Pro Tracking number is put in the REF CN segment.**

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**TD301**	**40**	**Equipment Description Code** Code identifying type of equipment used for shipment Any valid Xl2 code except mutually defined.	**X ID 2/2**
Always	**TD302**	**206**	**Equipment Initial** Prefix or alphabetic part of an equipment unit's identifying Number.	**O AN 1/4**
Always	**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**
Loop: HL Mandatory
Level: Detail Shipment
Usage: Optional
Max Use: >1
Purpose: To specify identifying information
Syntax Notes: At least one of REF02 or REF03 is required.
Semantic Notes:
Comments: While it is very common for a Bill of Lading and Packing List to be sent in the REF02 at this level, The Flex-N-Gate software will not process this segment.
Please see the 830 introductory comments.
The CN is a mandatory REF segment for the Carrier Pro Tracking number, if you have one.
The PK is an optional REF segment for the Packing Slip if you do not map this info, then the ASN Number found in the **BSN02** segment will be used.

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
See comments	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification AW Air Waybill Number FR Freight Bill PK Packing List Number CN Carrier Pro Tracking Number	**M ID 2/3**
See comments	**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: **N1** **Name**
Loop: HL / N1 Repeat: 200
Level: Detail Shipment
Usage: Optional
Max Use: 1
Purpose: To identify a party by type of organization, name, and code.
Syntax Notes: At least one of N102 or N103 is required
If either N103 or N104 is present, then the other is required.
Semantic Notes:
Comments: 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. This means that what we send you on the 830, needs to be returned. N1 SU is a mandatory qualifier / ID and this should match your GS segment as well As your Label Supplier ID.

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**N101**	**98**	**Entity Identifier Code** Code identifying an organizational entity, a Physical location, property or an individual ST Ship To SU Supplier / Manufacturer SF Ship From	**M ID 2/3**
Always	**N102**	**93**	**Name** Free Form name.	**X AN 1/60**
Always	**N103**	**66**	**Identification Code Qualifier** Code designation the system / method of code Structure used for Identification Code (67)	**X ID 1/2**
Always	**N104**	**67**	**Identification Code** Code identifying a party or other code. This should match your GS segment, unless Otherwise directed / required. This is the same Supplier ID found in the 830 and Used as the Supplier ID on the Label.	**X AN 2/80**

Segment: **HL** **Hierarchical Level**
Loop: HL Repeat: 200000
Level: Detail Tare
Usage: Mandatory
Max Use: 1
Purpose: To identify dependencies among the content of hierarchically related groups of data segments
Syntax Notes:
Semantic Notes:
Comments: 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.

HL0l shall contain a unique alphanumeric number for each occurrence of the HL segment in the transaction set. For example, HL0l could be used to indicate the number of occurrences of the HL segment, in which case the value of HL01 would be "l" 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.

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**HL01**	**628**	**Hierarchical ID Number** A unique number assigned by the sender to identify a Particular data segment in a hierarchical structure. Use “1” for this occurrence of the HL at the shipment Level, increment by 1 for each subsequent HL segment Within the transaction.	**M AN 1/12**
Always	**HL02**	**734**	**Hierarchal 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**
Always	**HL03**	**735**	**Hierarchical Level Code** Code defining the characteristic of a level in a Hierarchical structure. T Tare	**M ID 1/2**

Segment: **LIN** **Item Identification**
Loop: HL
Level: Detail Tare
Usage: Mandatory
Max Use: 1
Purpose: To specify basic item identification data
Syntax Notes:
Semantic Notes:
Comments: See the Data Dictionary for a complete list of IDs.
LIN02 thought LIN03 provide the Master Packaging Code.

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**LIN02**	**235**	**Product / Service ID Qualifier** Code identifying the type / source of the descriptive number used in Product / Service ID (234) PG Packaging Code	**M ID 2/2**
Always	**LIN03**	**234**	**Product / Service ID**	**M AN 1/48**

Segment: **REF** **Reference Identification**
Loop: HL Repeat 1
Level: Detail Tare
Usage: Mandatory
Max Use: 12
Purpose: To specify identifying information
Syntax Notes: At least one of REF02 is required.
Semantic Notes:
Comments: This segment has become Mandatory for Flex N Gate facilities.
This is the serial from the External Package Label (Master / Mixed / Standalone).

REF LS, ensure that the "S" or "M" is not included as part of the ASN.
Should be imbedded in the Serial Barcode of the LABEL only.

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
See comments	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification LS Bar-Coded Serial Number for External package. Provide the Serial bar code label information at the Tare Level	**M ID 2/3**
See comments	**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**
Loop: HL Repeat: 200000
Level: Detail Order
Usage: Mandatory
Max Use: 1
Purpose: To identify dependencies among the content of hierarchically related groups of data segments
Syntax Notes:
Semantic Notes:
Comments: 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.

HL0l shall contain a unique alphanumeric number for each occurrence of the HL segment in the transaction set. For example, HL0l could be used to indicate the number of occurrences of the HL segment, in which case the value of HL01 would be "l" 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.

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**HL01**	**628**	**Hierarchical ID Number** A unique number assigned by the sender to identify a Particular data segment in a hierarchical structure. Use “1” for this occurrence of the HL at the shipment Level, increment by 1 for each subsequent HL segment Within the transaction.	**M AN 1/12**
Always	**HL02**	**734**	**Hierarchal 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**
Always	**HL03**	**735**	**Hierarchical Level Code** Code defining the characteristic of a level in a Hierarchical structure. O Order	**M ID 1/2**

Segment: **LIN** **Item Identification**
Loop: HL
Level: Detail Order
Usage: Mandatory
Max Use: 1
Purpose: To specify basic item identification data
Syntax Notes:
Semantic Notes:
Comments: See the Data Dictionary for a complete list of IDs.

LIN02 thought 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 No.

While it is very common for a Purchase Order Number to be sent in the LIN05, the Flex-N-Gate software will not use this element. Only the PO# in the PRF01 will be used.

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**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 from 830 RC Returnable Container Code	**M ID 2/2**
Always	**LIN03**	**234**	**Product / Service ID** Identifying number for a product or service	**M AN 1/48**
See comments	**LIN04**	**235**	**Product / Service ID Qualifier** Code identifying the type / source of the descriptive Number used in Product / Service ID (234) VP Vendor's Part Number PO Purchase Order (Must also be in the PRF Segment) EC Engineering Change	**X ID 2/2**
See comments	**LIN05**	**234**	**Product / Service ID** Identifying number for a product or service LIN06 through LIN31 provide for 13 additional pairs of data Elements 235 and 234.	**X AN 1/48**

Segment: **SN1** **Item Detail (Shipment)**
Loop: HL
Level: Detail -- Order
Usage: Mandatory
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.

Data Element Summary

FNG Usage	Ref. Des.	Data Element	Name	Attributes
Always	**SN102**	**382**	**Total number of Units shipped** Numeric total of units shipped in manuf. shipping units for a line item or transaction set	**M R 1/10**
Always	**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 This must be the same Unit of Measure sent in the corresponding 830, in the UIT01. EX: UIT*EA	**M ID 2/2**
Always	**SN104**	**646**	**Quantity Shipped to Date** Number of units shipped to date, including this shipment	**O R 1/15**
Always	**SN105**	**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 Use any valid X12 code except mutually defined, "ZZ".	**X ID 2/2**

Segment: **PRF** **Purchase Order Reference**
Loop: HL
Level: Detail Order
Usage: Mandatory
Max Use: 1
Purpose: To provide reference to a specific purchase order (Should match the PO found on 830)
Syntax Notes:
Semantic Notes: PRF04 is the date assigned by the Purchaser to purchase order.
Comments:

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**PRF01**	**324**	**Purchase Order Number** Identifying number for Purchase Order assigned by the Buyer / Purchaser The PO on 856 must be a match to the 830 Release PO.	**M AN 1/22**

Segment: **CLD** **Load Detail**
Loop: HL / CLD
Level: Detail Order
Usage: Mandatory
Max Use: 500
Purpose: To specify the standard pack along with the number of containers shipped.
Syntax Notes:
Semantic Notes:
Comments: This segment will transmit the total number of materials shipped for the Preceding Order level LIN. There may be multiple depending on the shipment.

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**CLD01**	**622**	**Number of Loads** Number of containers shipped by the supplier.	**M N 01/05**
Always	**CLD02**	**382**	**Number of Units Shipped** Numeric value of units shipped in manufacturer's container For a line item or transaction set. Total quantity per container	**M R 1/10**
Always	**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. Any valid X12 code except for mutually defined "ZZ".	**O AN 3/5**

Segment: **REF** **Reference Identification**
Loop: CLD
Level: Detail Order
Usage: Mandatory
Max Use: 500
Purpose: To specify identification information.
Syntax Notes: At least one of REF02 or REF03 is required
Semantic Notes:
Comments: The REF LS should be the container label for the parts.
REF05 is Mandatory for some of the plants that require the LT.
The actual lot number is a SUB element of the REF03 and must be preceded by a LS serial.

EXAMPLE:
REF*LS*085226474LT:LB00529702:ZZ:20270312~**
Sub element is ":" as used in ISA
ISA*00* *00* *ZZ*VENDORDUNS *01*205644524 *250821*1305*U*00401*000000662*0*P*:~)

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification. Serial Barcode info at the Order Level. LS Barcoded serial number	**M ID 2/3**
Always	**REF02**	**127**	**Reference Identification** Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier.	**X AN 1/22**
	NOTES: Barcode Serial Number. For the REF LS, ensure that the qualifiers used on the label are not part of the ASN.			
Condition	**REF04**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification. LT Lot Number Add sub element (should match to the sub element used in the ISA segment)	**X AN 1/22**
Condition	**REF05**	**127**	**Reference Identification** Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier.	**X AN 1/22**
	NOTES: Lot numbers may be mandated by plant and must be placed after the Serial number. If Lot is not mandated, then it can be left off of the ASN.			
Condition	**REF06**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification. ZZ Mutually defined This is to precede the Shelf Life of a manufactured product And will be mandated by the plants if needed. Add sub element Before and After "ZZ"	**X AN 1/22**
Condition	**REF07**	**127**	**Expiry Date** Shelf-Life Expiration CCYYMMDD	**X AN 1/22**
	NOTES: Plant may require an expiration date for goods being shipped. The plants themselves will alert Manufacturer if this is a need.			

Segment: **CTT** **Transaction Totals**
Loop:
Level: Summary
Usage: Mandatory
Max Use: 1
Purpose: To transmit a hash total for a specific element in the transaction set.
Syntax Notes: If either CTT03 or CTT04 is present, the other is required.
Semantic Notes:
Comments: This segment is intended to provide hash totals to validate transaction completeness and correctness.

EXAMPLE: **CTT*3~**

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**CTT01**	**354**	**Number of Line Items** Total number of line items in the transaction set	**M N0 1/6**
Always	**CTT02**	**347**	**Hash Total** Sum of values of the specified data element. Hash total of quantity shipped (SN102). Not used by Flex-N-Gate	**O R 1/10**

Segment: **SE** **Transaction Set Trailer**
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: SE is the last segment of each transaction set.

EXAMPLE: SE*35*0001~

Data Element Summary

FNG USAGE	REF DESCR	DATA ELEMENT	NAME	ATTRIBUTES
Always	**SE01**	**96**	**Number of Included Segments** Total number of segments included in a transaction set Including ST and SE segments.	**M N0 1/10**
Always	**SE02**	**329**	**Transaction Set Control Number** Identifying control number that must be unique within transaction set functional group assigned by the originator For a transaction set.	**M AN 4/9**

Samples

ASN with Mixed Label.

ASN below has 1 Pallet with 2 different part numbers which requires a Mixed Label.
Also contains Lot number and Expiration Dates.

```
ISA*00*          *00*          *ZZ*VENDORDUNS   *01*205644524      *250821*1305*U*00401*000000662*0*P*:~
GS*SH*VENDORDUNS*205644524*20250821*1305*63484327*X*004010~
ST*856*0001~
BSN*00*34064A*20251118*1431~
DTM*011*20251118*1431~
DTM*017*20251120*0700~
HL*1**S~
MEA*PD*G*5285*LB~
MEA*PD*N*4285*LB~
TD1*CTN90*8~
TD5*B*2*DFNG*M~
TD3*TL**657105~
REF*CN*CARRPRONO~
N1*ST*FLEX-N-GATE*1*FNGPNTDUNS~
N1*SU*VENDOR*1*VENDORDUNS~
        HL*2*1*T~
        LIN**PG*PLT90~
        REF*LS*P2529071810002~
                HL*3*1*O~
                LIN**BP*PC999999~
                SN1**900*EA*18420~
                PRF*00001~
                        CLD*4*225*CTN90~
                        REF*LS*S25270703G0047**LT:TC8989899:ZZ:20260515~
                        REF*LS*S25260629G0152**LT:TC8989899:ZZ:20260515~
                        REF*LS*S25260629G0155**LT:TC8989899:ZZ:20260515~
                        REF*LS*S25270703G0048**LT:TC8989899:ZZ:20260515~
                HL*4*1*O~
                LIN**BP*PC888888~
                SN1**768*EA*18768~
                PRF*00001~
                        CLD*4*192*CTN90~
                        REF*LS*S25370912G0020**LT:TC8989897:ZZ:20260510~
                        REF*LS*S25370912G0030**LT:TC8989897:ZZ:20260510~
                        REF*LS*S25370912G0029**LT:TC8989897:ZZ:20260510~
                        REF*LS*S25370912G0042**LT:TC8989897:ZZ:20260510~
CTT*4~
SE*35*000000662~
GE*1*63484327~
IEA*1*000000662~
```

ASN with Master Label.

ASN below has 2 Pallets with 1 part number which requires a Master Label.
Also contains Lot number and Expiration Dates.

```
ISA*00*          *00*          *ZZ*VENDORDUNS   *01*205644524      *250821*1305*U*00401*000000662*0*P*:~
GS*SH*VENDORDUNS*205644524*20250821*1305*63484327*X*004010~
ST*856*0001~
BSN*00*34064A*20251118*1431~
DTM*011*20251118*1431~
DTM*017*20251120*0700~
HL*1**S~
MEA*PD*G*5285*LB~
MEA*PD*N*4285*LB~
TD1*CTN90*8~
TD5*B*2*DFNG*M~
TD3*TL**657105~
REF*CN*CARRPRONO~
N1*ST*FLEX-N-GATE*1*FNGPNTDUNS~
N1*SU*VENDOR*1*VENDORDUNS~
        HL*2*1*T~
        LIN**PG*PLT90~
        REF*LS*P2529071810003~
                HL*3*1*O~
                LIN**BP*PC999999~
                SN1**900*EA*18420~
                PRF*00001~
                        CLD*4*225*CTN90~
                        REF*LS*S25270703G0047**LT:TC8989899:ZZ:20260515~
                        REF*LS*S25260629G0152**LT:TC8989899:ZZ:20260515~
                        REF*LS*S25260629G0155**LT:TC8989899:ZZ:20260515~
                        REF*LS*S25270703G0048**LT:TC8989899:ZZ:20260515~
        HL*4*1*T~
        LIN**PG*PLT90~
        REF*LS*P2529071810004~
                HL*6*1*O~
                LIN**BP*PC888888~
                SN1**768*EA*18768~
                PRF*00001~
                        CLD*4*192*CTN90~
                        REF*LS*S25370912G0020**LT:TC8989897:ZZ:20260510~
                        REF*LS*S25370912G0030**LT:TC8989897:ZZ:20260510~
                        REF*LS*S25370912G0029**LT:TC8989897:ZZ:20260510~
                        REF*LS*S25370912G0042**LT:TC8989897:ZZ:20260510~
CTT*6~
SE*38*000000662~
GE*1*63484327~
IEA*1*000000662~
```

ASN with Pallets not containing a grouping of containers – Containers are standalones. EX: Palletized box

ASN below uses Containers that are not stacked or grouped on a Pallet.
Also contains Lot number and Expiration Dates.

```
ISA*00*          *00*          *ZZ*VENDORDUNS   *01*205644524      *250821*1305*U*00401*000000662*0*P*:~
GS*SH*VENDORDUNS*205644524*20250821*1305*63484327*X*004010~
ST*856*0001~
BSN*00*34064A*20251118*1431~
DTM*011*20251118*1431~
DTM*017*20251120*0700~
HL*1**S~
MEA*PD*G*5285*LB~
MEA*PD*N*4285*LB~
TD1*CTN90*8~
TD5*B*2*DFNG*M~
TD3*TL**657105~
REF*CN*CARRPRONO~
N1*ST*FLEX-N-GATE*1*FNGPNTDUNS~
N1*SU*VENDOR*1*VENDORDUNS~
        HL*2*1*T~
        LIN**PG*PLT90~
        REF*LS* S25270703G0047~
                HL*3*1*O~
                LIN**BP*PC999999~
                SN1**900*EA*18420~
                PRF*00001~
                        CLD*1*900*CTN90~
                        REF*LS*S25270703G0047**LT:TC8989899:ZZ:20260515~
        HL*4*1*T~
        LIN**PG*PLT90~
        REF*LS* S25370912G0020~
                HL*6*1*O~
                LIN**BP*PC888888~
                SN1**768*EA*18768~
                PRF*00001~
                        CLD*1*768*CTN90~
                        REF*LS*S25370912G0020**LT:TC8989897:ZZ:20260510~
CTT*4~
SE*32*000000662~
GE*1*63484327~
IEA*1*000000662~
```

ASN that covers a tank truck load for silo's, etc.
Serial label must accompany paperwork from driver. PDF version preferred.

ISA*00* *00* *ZZ*VENDOR DUNS *01*FNG PLANT DUNS *260903*1722*U*00401*000002135*0*P*<~
GS*SH*VENDORDUNS*FNGPLANTDUNS*20260903*1722*2135*X*004010~
ST*856*2255~
BSN*00*8002454984*20260903*1712~
DTM*011*20260903*1648*ED~
HL*1**S~
MEA*PD*G*41336*LB~
MEA*PD*N*41336*LB~
TD1*TKT90*1~ **This would be flagged as TKT90*1**
TD5*B*0*TRID*LT~
TD3*TL*C*1NA~
N1*ST*FLEX N GATE PLANT NAME*1*102525826~
N1*SF**1*VENDOR SUPPLIER CODE~
N1*SU*VENDOR NAME*1*VENDOR SUPPLIER CODE~
HL*2*1*T~
LIN**PG*TKT90~ **USE TKT90 = Tank truck (TKT) / standard (90)**
REF*LS*4545929HA1~ **This serial would represent the full shipment, provided it is truly only one part number.**
HL*3*2*O~
LIN**BP*FROM 830*****PO*39171~
SN1****41336*LB***41336~ **Full weight of product shipped. UOM should be a match to the 830 UOM**
PRF*39171~
REF*PK*8002454984~
REF*BM*8002454984~
CLD*1*41336*TKT90~ **Should be full weight of product - 1 container - Container code TKT90**
REF*LS*4545929HA1~ **This serial would be the same serial found in the Tare level.**
CTT*3*1654~
SE*25*2255~
GE*1*2135~
IEA*1*000002135~

Some of the more common container choices for TD1 and LIN

EDI Packaging codes

Table 103 Container Types (Packaging Codes X.12 element 103)	
Code	Definition
BIN52	Bin - Iron or Steel
BIN79	Bin - Plastic
BOX25	Box - Corrugated or Solid
BOX79	Box - Plastic
CRT71	Crate
CTN25	Carton - Corrugated or Solid
MIX90	Mixed Container Types
PLT71	Pallet
PLT79	Pallets - Plastic
RCK58	Rack - Metal
SKD71	Skid

TKT90 TANK – STANDARD Used for shipments via a Tank truck