GS1

EDI 856 Foodservice
Ship Notice - Explained

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Agenda

- Introduction to 856 Ship Notice/Manifest Transaction
- Introduction to 856 Transaction Hierarchy
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  - Detail: Tare Level
  - Detail: Pack Level
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- Summary

Ship Notice/Manifest Transaction

Introduction to 856 Ship Notice/Manifest Transaction

- The transaction allows the supplier to notify the receiver that a shipment will be forthcoming

- The transaction must be transmitted by the sender to the receiver so that it is received before the shipment arrives

- While EDI is traditionally thought-of as using 'batch' processing, implementation of the transaction may require more 'real-time' processes in order to ensure that the transaction arrives in a timely manner

- The information within the transaction is dependent on sender processes – both manual and automated – that accurately capture product identification, quantities, lot or serial number information, and relevant dates on the shipped product. Such information helps enable track and trace processes.

- This document represents the GS1 US Foodservice implementation

Introduction to 856 Ship Notice/Manifest Transaction

- The 997 Functional Acknowledgment transaction is transmitted as a response from the receiver's EDI system to the sender's EDI system that the 856 transaction was received. It also indicates the receiving system's ability to process the transaction. The 856 Ship Notice/Manifest transaction information is then forwarded to the receiver's application system(s) for processing.

  - If there is a need to acknowledge receipt of the product, the 861 Receiving Advice/Acceptance Certificate transaction may be implemented by the trade parties. The 861 transaction can provide either a notice of product receipt or product acceptance to the sender.

- Refer to the GS1 US Foodservice 856 Ship Notice/Manifest Transaction Implementation Guideline for detailed implementation guidance
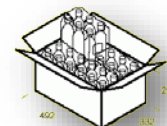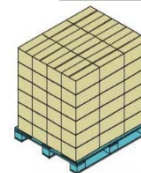
Introduction to 856 Transaction Hierarchy

- The 856 Ship Notice/Manifest transaction is designed for the sender to clearly state the structure and contents of the shipment

- Each shipment requires a unique shipment identifier issued by the sender

- The trade parties need to discuss the product hierarchy or data hierarchies they will support

  - A Shipment is comprised of one or more Orders

  - An Order may be comprised of tare (pallets), packs and items from one or more production Batches

  - A hierarchy code (data element BSN05) is used to identify the type of hierarchy used within the data transmission

    - Hierarchy codes used are

      - 0008 Shipment, Order, Tare Pack

      - 0009 Shipment, Order, Tare, Pack, Batch, Item

Introduction to 856 Transaction Hierarchy

- **Shipment Level**
  - Information pertaining to the entire shipment as it moves from origin location to a receiving location
  - Includes Truck, Container, Pallet, Pack, etc.
- **Order Level**
  - Data related to the buyers purchase order(s)
- **Tare Level**
  - Data related to product on pallets
- **Package Level**
  - Data related to shipping cartons, bags, etc.
  - May include Carton Identification
  - May include Carton reference information
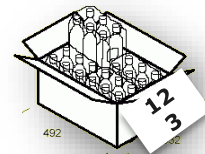 - Includes use of GTIN

Traded
Unit (GTIN)

Introduction to 856 Transaction Hierarchy

- **Batch Level**
  - Data related to cartons, bags, etc. with the same GTIN but from a different manufacturer 'run'
  - Each batch has unique batch 'reference' information
  - Batch level is only used when there is more than one batch of product (otherwise the Pack level is used for the batch information)

- **Item Level**
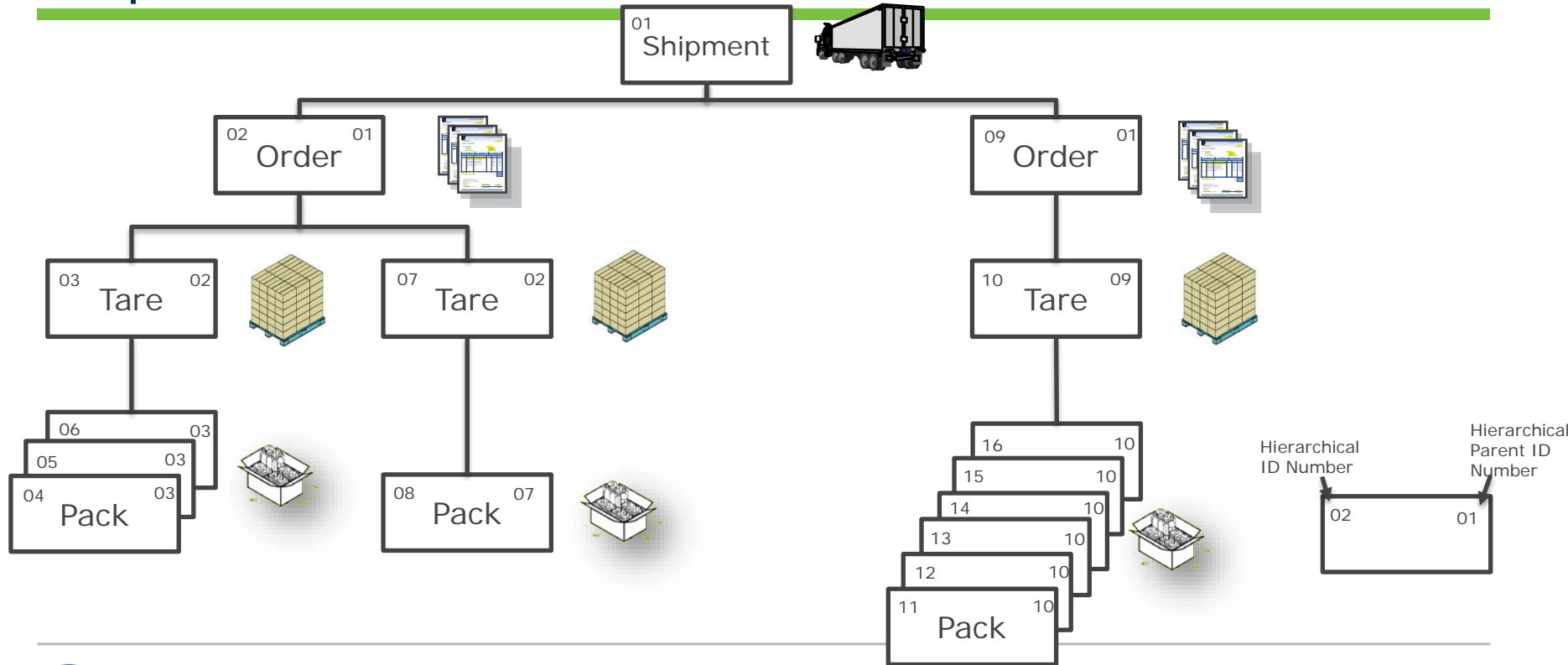 - Typically the 'lowest level' of a product, and may represent an individual item within the Pack or Batch
  - Used when there is a need to identify the item with the shipment information

Traded Unit (GTIN) with unique reference information

Sample Structure – no batch or item Shipment/Order/Tare/Pack

Sample Structure – No Tare level
Shipment/Order/Pack/Batch/Item
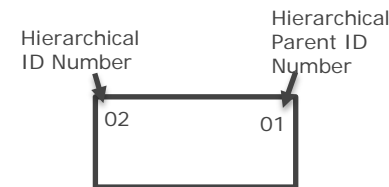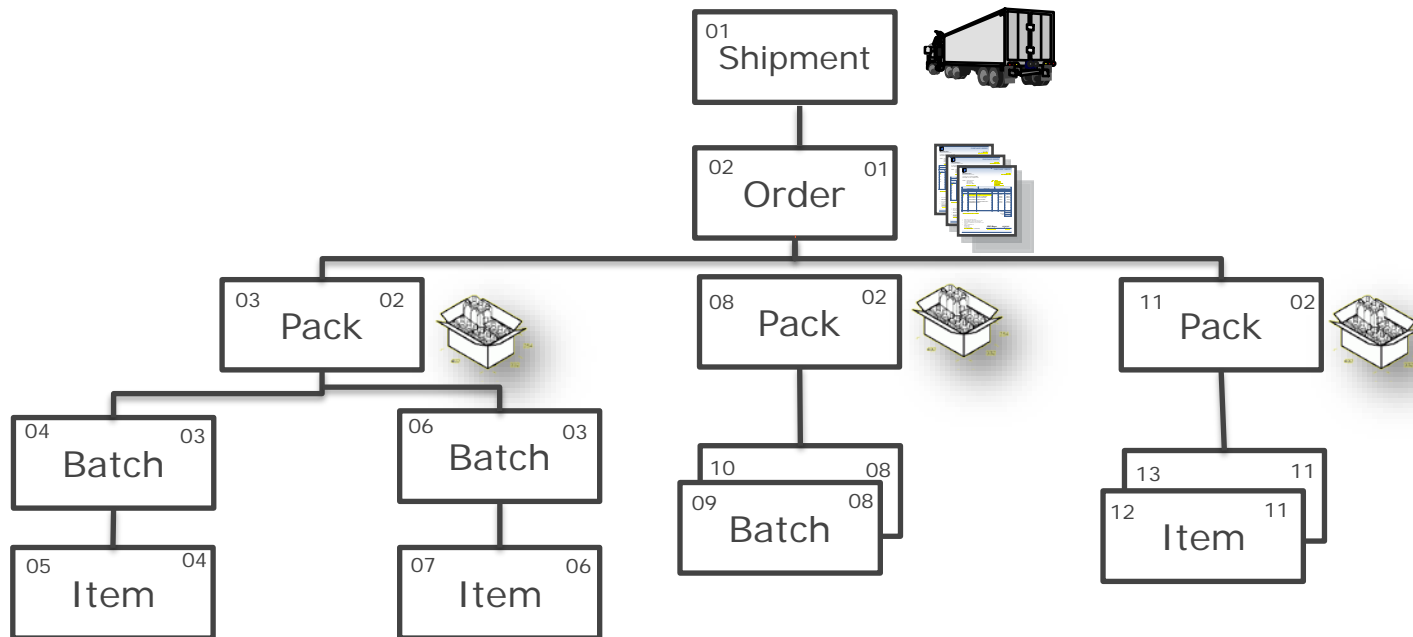
EDI Message

Transaction Header Section Segments

- Header Section - Identifies the transaction set and provides information pertaining to the entire transaction
  - ST   Transaction Set Header
  - BSN   Beginning Segment for Ship Notice

- ST*856*0001~   ⟵   Identifies the transaction as an 856 Ship Notice with control number 0001
- BSN*00*SI39383092*20190813*0600*0008~

Unique Shipment ID

Hierarchical structure code

Date/Time of transaction creation

Hierarchical Detail Loops

- HL Loop Hierarchical Level – Shipment

  Information pertaining to the entire shipment; Required HL loop

- HL Loop Hierarchical Level – Order

  Information pertaining to an order; Order level is typically used between trade parties

- HL Loop Hierarchical Level – Tare

  Information pertaining to pallets in an order

- HL Loop Hierarchical Level – Pack

  Information pertaining to cases/containers, etc. of product

- HL Loop Hierarchical Level - Batch

  Information pertaining to batches of product containers

- HL Loop Hierarchical Level – Item

  Information pertaining to the consumption product

Note: Hierarchical loop usage is determined by industry/trading partner agreement

Detail: Hierarchical Level - Shipment

- HL Hierarchical Level - Shipment
- TD1 Carrier Details (Quantity and Weight)
- TD5 Carrier Details (Routing Sequence/Transit Time)
- TD3 Carrier Details (Equipment)
- REF Reference Information
- DTM Date/Time Reference
- N1 Party Identification
- N2 Additional Name Information (not used in the example)
- N3 Party Location
- N4 Geographic Location
- REF Reference Information

Note: All segments used within Foodservice for the Shipment Level are shown above.

HL – Shipment level Example

- HL*1**S~
- TD1*PLT*4****G*1200*LB*1000*CF~
- TD5**2*ACLU*U**CL~
- TD3*CN~
- REF*BM*BOM83492093~
- DTM*011*20190813*0530~
- N1*SF*Ship From location name*UL*1234567890123~
- N3*300 Charles Ewing Blvd~
- N4*Ewing*NJ*08628*US~
- REF*IT*123467891234*
- N1*SU*Supplier/Manufacturer name*UL*1234567890124~
- N3*300 Charles Ewing Blvd~
- N4*Ewing*NJ*08628*US~
- REF*IT*ABC1234*
- N1*ST*Ship To location name*UL*1234567890124~
- N3*300 Charles Ewing Blvd~
- N4*Ewing*NJ*08628*US~
- REF*IT*DEF5678*

Identifies the Shipment level

4 pallets with a gross weight of 1200 pounds

SCAC code is ACLU, private parcel service, complete shipment

Containers are being used

Bill of Lading number

Ship date is August 13, 2019 at 5:30 AM local time

Ship From Party name and GLN, address, and internal customer number

Supplier name and GLN, address, and internal customer number

Ship To Party name and GLN, address, and internal customer number

Detail: Hierarchical Level – Order

- HL Hierarchical Level - Order

- SN1 Item Detail

- PRF Purchase Order Reference

- TD1 Carrier Details (quantity and weight) (not used in the example)

- REF Reference Information (not used in the example)

- N1 Party Identification

- N2 Additional Name Information

- N3 Party Location

- N4 Geographic Location

- REF Reference Information (not used in the example)

Note: All segments used within Foodservice for the Order Level are shown above.

HL – Order Example

- HL*2*1*O~   **Identifies the Order level**
- SN1**100*CA~   The order has 100 cases
- PRF*PO123456~   Purchaser's order number is PO123456
- TD1******G*2500*LB~   The order's gross weight is 2500 pounds
- REF*IL*N2994~   Vendor's order number

Detail: Hierarchical Level – Tare (Pallet)

- HL Hierarchical Level - Tare
- SN1 Item Detail (Shipment)
- MAN Marks and Numbers Information
- PAL Pallet Type and Load Characteristics
- N1 Party Identification
- N2 Additional Name Information
- N3 Party Location
- N4 Geographic Location
- REF Reference Information

Note: All segments used within Foodservice for the Tare Level are shown above.

HL – TARE Example

- HL*3*2*T*~   Identifies the Tare level
- SN1*1*PL~   There is 1 pallet
- MAN*GM*00123456789012345678~   The GS1 SSCC value on the pallet
- PAL*4~   This is a standard pallet

DETAIL – Hierarchical level - Pack

- HL Hierarchical Level - Item
- LIN Item Identification
- SN1 Item Detail (Shipment)
- PO4 Item Physical Details
- PKG Marking, Packaging, Loading
- REF Reference Information
- MAN Marks and Numbers Information
- DTM Date/Time Reference
- N1 Party Identification
- N2 Additional Name Information
- N3 Party Location
- N4 Geographic Location
- REF Reference Information

Note: All segments used within Foodservice for the Pack Level are shown above.

HL: Pack Example

- HL*4*3*P~   Identifies the Pack level
- LIN*01*UK*12345678901234~   Pack Product GTIN
- SN1*25*CA~   25 cases
- PO4*N*25*LB~   Net Weight of 25 pounds
- DTM*036*20191120~   Product use by date
- DTM*405*20190618~   Product production date
- DTM*510*20190620~   Product packaging date
- DTM*511*20191120~   Product shelf life expiration date

HL: Pack Example with BATCH Information

- HL*4*3*P~ — Identifies the Pack level
- LIN*01*UK*12345678901234*LT*Lot123~ — Pack Product GTIN, Batch Lot information
- SN1*25*CA~ — 25 cases
- PO4*N*25*LB~ — Net Weight of 25 pounds
- DTM*036*20191120~ — Product use by date
- DTM*405*20190618~ — Product production date
- DTM*510*20190620~ — Product packaging date
- DTM*511*20191120~ — Product shelf life expiration date

Detail: Hierarchical Level – BATCH

- HL Hierarchical Level - Batch
- SN1 Item Detail (Shipment)
- PO4 Item Physical Details
- REF Reference Information
- MAN Marks and Numbers Information
- DTM Date/Time Reference

Note: All segments used within Foodservice for the Batch Level are shown above.

HL: batch Example

- HL*5*4*BT~   Identifies the Batch level
- SN1*25*CA~   Quantity of product in the batch
- REF*BT*X19283~   Product batch number
- MAN*SM*00123456789012345678~   Shipper-assigned number to the batch
- DTM*036*20191120~   Product use by date
- DTM*405*20190618~   Batch production date
- DTM*511*20191120~   Batch shelf life expiration date

Note: The Batch Level is used when there is more than one batch of product. The SN1 segment provides the count of product in the batch. The PO4 segment provides net or gross weight of the batch product. The REF segment provides the lot/batch number. If the product is labeled, the MAN segment may be used. The product / batch date(s) are provided by the DTM segment. Information from the Pack level is not duplicated in the Batch level.

Detail: Hierarchical Level – item

- HL Hierarchical Level - Item
- LIN Item Identification
- PO4 Item Physical Details
- PID Product/Item Description
- DTM Date/Time Reference

Note: All segments used within Foodservice for the Item Level are shown above.

HL: Item Example

- HL*6*5*I~   Identifies the Item level
- LIN*01*UK*12345678901234~   Line Item Product GTIN
- PO4**2*LB*N~   Net Weight of 2 pounds
- DTM*ZZZ*20191120~   Product best before date

Transaction Summary segments

- **CTT Transaction Total**   Includes total number of HL segments in the transaction
- **SE Transaction Set Trailer**   Transaction end, with transaction set control number and count of segments included

- **CTT*6~**   Total of six HL segments
- **SE*50*0001~**   50 segments in the transaction set, with control number
  0001

Note: Last segments in the transaction example.

The SE segment provides the count of segments transmitted, and the unique transaction set control number from the ST02 data element.

Foodservice – Meat and Poultry – Produce Ship Notice/Manifest Comparison Spreadsheet

Combined 856 Implementation Guidance

- The spreadsheet will allow users to identify Segments, Data Elements and Codes which are required for each of the different industry requirements.

- The spreadsheet has two tabs, one, the first one has a list of all the utilized Segments and a list of all differences for code values. The second one is identifying the Data Elements utilized.

- The spreadsheet is intended to be used together with the guideline documents.

- The spreadsheet compares 3 different industry requirements with the original UCS 856.

  - MP UCS = Meat & Poultry

  - PTI UCS = Produce Traceability Initiative (PTI)

  - FS UCS = Foodservice (Jan 2020)

Loc	Segment	Segment	MP UCS	PTI UCS	FS UCS Jan 2020	Element	Codes
	100	ST	Y	Y	Y		
	200	BSN	Y	Y	Y		
HL	Shipment		Y	Y	Y		
	100	HL	Y	Y	Y		
	1100	TD1	Y	Y	Y		
	1200	TD5	Y	NOT USED	Y		
	1500	REF	Y	Y	Y		
	1900	MAN	Y	Y	NOT USED		
	2000	DTM	Y	Y	Y		
N1			Y	Y	Y		
	2200	N1	Y	Y	Y		

856 Comparison - Segments   856 Comparison - Elements

Combined 856 Implementation Guidance - Segments

Notes/Assumptions

- These are key considerations that determined how the information from the individual implementations was structured within the combined version:

Notes/Assumptions:
All changes being made to FS implementation
Anything used in excess by FS is retained
If segment is not used by PT, MP, FS then ignore
If segment is used by only MP or PT, direct port into FS
All notes to be ported from MP and PT into FS

Combined 856 Implementation Guidance-Segments

The legend and the columns for MP, PTI and FS

- The columns indicate segment use in each implementation before aggregation
- They allow filtration relevant to the implementation you use

MP UCS	PTI UCS	FS UCS	Elements	Codes	Notes
Y	Y	NOT USED			**SEG MAN** - Add DEs and CVs from MP for full coverage
Y	Y	NOT USED			**SEG TD1** - Add DEs and CVs from MP for full coverage
Y	Y	NOT USED			Add MP version into the new FS document
Y	Y	NOT USED			Add notes from MP and PT together and transfer to FS

Combined 856 Implementation Guidance - Segments

The Codes and Notes columns for updates

- Green indicates there were no changes required in the aggregation
- Red indicates a change was required
- The notes column offers details on the change

Codes	Notes
	Add notes from MP and PT together and transfer to FS
	DE 128 - Add code values URI and USD to FS list from MP DE 127 - FS is listed as Must Use, MP is listed as Used

- The most common updates were:
  - Adding code values to a data element's list
  - Adjusting decimal place usage guidance
  - Incorporating new elements into the implementation

Combined 856 Implementation Guidance – Data Elements

The columns for of the spreadsheet show the MP, PTI and FS elements

- The columns indicate element use in each implementation before aggregation
- They allow filtration relevant to the implementation you use

Table Area	Loop Position	Loop ID	Segment Po	Segment ID	Base UCS	MP UCS	PTI UCS	FS UCS	User Option	Element Po	Composite	Element ID
Heading			100	ST	Y	Y	Y	Y	Must use			
					Y	y	y	y	Must use	1		143
					Y	y	y	y	Must use	2		329
Heading			200	BSN	Y	Y	Y	Y	Must use			
					Y	y	y	y	Must use	1		353
					Y	y	y	y	Must use	2		396
					Y	y	y	y	Must use	3		373
					Y	y	y	y	Must use	4		337
					Y	y	y	y	Used	5		1005

Combined 856 Implementation Guidance – Data Elements

The Codes and Notes columns for updates

- "Y" indicates that the Data Element is required for that industry requirement.
- A blank field indicates that the Data Element is not used for that industry requirement.

Added								y	Used	4	736
Detail			600	PO4	Y				Used		
					Y				Used	8	385
					Y				Used	9	355
Detail			1000	PKG	Y	Y			Used		
					Y	y			Used	1	349

Key Data Elements

Key Data Elements (KDEs)

- KDEs provide essential information about time and place of the event, the party reporting the event, and the identification of the product involved. In addition, KDEs include related essential information about the transformation, transportation, or depletion of a traceable product.

- The next two slides will show the KDE's identified by the Foodservice Initiative and where they are represented in the 856 EDI transaction.

Key Data Elements (KDEs)

KDE	EDI Level	Segment	Position	Value/Code
Event Location	Detail 2/2200	N1	N102	*Ship From location name*
Data Owner	Detail 2/2200	N1	N102	*Supplier/Manufacturer name*
	Detail 2/2200	N1	N102	*Ship To location name*
Activity Number	Header 1/0200	BSN	BSN02	*Shipment Identification of the ASN*
Date/Time of data capture	Header 1/0200	BSN	BSN03	*Date*
	Header 1/0200	BSN	BSN04	*Time*
Product Identifier	Detail 2/0200	LIN	LIN03	*GTIN-14*
Batch/Lot or Serial Number	Detail 2/1500	LIN	LIN04	*Lot Number*
	Detail 2/1500	REF	REF02	*Serial Number*
Quantity	Detail 2/1100	TD1	TD102	*Quantity*
Unit of Measure (UOM}	Detail 2/1100	TD1	TD101	PLT
	Detail 2/0300	SN1	SN102	PL
	Detail 2/0300	SN1	SN102	CA

Key Data Elements (KDEs)

GTIN	AI (01)	Detail 2/0200	LIN	LIN03	*GTIN-14*
Production Date	AI (11)	Details 2/2000	DTM	DTM02	*Production Date*
Packaging Date	AI (13)	Details 2/2000	DTM	DTM02	*Date Packed*
Best Before Date	AI (15)	Details 2/1000	PKG	PKG05	*Best Before Date*
Sell By Date	AI (16)	Details 2/2000	DTM	DTM02	*Shelf Life Expiration*
Expiration Date	AI (17)	Details 2/2000	DTM	DTM02	*Expiration*
Batch/ Lot Number	AI (10)	Detail 2/0200	LIN	LIN04	*Lot Number*
Serial Number	AI (21)	Detail 2/1500	REF	REF02	*Serial Number*
Net Weight	AI (3202)	Detail 2/0600	PO4	PO406	*Actual Net Weight*
		Detail 2/0600	PO4	PO407	*Unit of Measure*
Shipment ID		Detail 2/1500	REF	REF02	*Bill of Lading Number*
Order Reference Number		Detail 2/0500	PRF	PRF01	*Purchase Order Number*
Pallet ID		Detail 2/1900	MAN	MAN02	*Serial Shipping Container Code*
Package ID		Detail 2/0200	LIN	LIN03	*GTIN-14*

Summary

- The 856 Ship Notice/Manifest transaction can form the basis for a 'track and trace' process between the trade parties

- Accuracy of the shipment information is critical to the trade relationship

- The trade parties should make use of the GS1 identifiers (GTIN, GLN, SSCC, etc.) in the transaction sets

- The 856 Comparison Spreadsheet allows user to identify the Segments and Data Element requirements for their implementation

- The Foodservice KDEs are clearly mapped to the corresponding EDI Data Elements

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