

ADVANCE SHIP NOTICE – BCA EDI IMPLEMENTATION GUIDE X12 version 4010 – 856 Transaction Boeing 787 SCMP

Document Status

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Document Revision History

Version #	Date	Author's Name	Revisions Made
1.0	June 1, 2006	L. Durham	Initial draft version of document.
2.0	June 7, 2006	L. Durham	Updated version with feedback from QA assessment.
3.0	June 22, 2006	L. Durham	Revised Appendix A to include Buyer-specific formats for PO Number.
3.1	August 10, 2006	K. Moriarty	Added Item-Level REF segment for Receiver Reference Number.
4.0	Nov. 8, 2006	L. Durham	Corrected the Element IDs for the REF*PK segment (page 13).
4.1	Jan. 30, 2007	L. Durham	Updated requirements for ASN Number (BSN02 element).
4.2	Oct. 7, 2008	Ann Lamica	1) Removed Exostar contact names 2) Added ASN label matching criteria in Appendix B 3) Added a note at the end of the following segments and indicated the segment Status as Required by Boeing: header level DTM; shipment level REF; Item level LIN, SN1, PRF, and TD1. Note reads: "Refer to Appendix B for information on the use of this segment's contents on the Boeing BCA ASN shipping label." 4) Updated CTT Status as Required by Boeing Note: this version was actually a working draft only and never published

Version #	Date	Author's Name	Revisions Made
4.3	January 9, 2009	Ann Lamica	Enhanced revision notes for Oct 7, 2008 entry above Updated Appendix B with respect to Packing List References Note this version was for review
4.4	June 3, 2009	Ann Lamica	only, final version is 4.4 Edited Appendix B to remove reference to packing list
4.4	June 13, 2012	Ann Lamica	Modified cover page to add BCA and to update the Exostar address. Also removed Appendix B as Boeing has ASN Barcode Label documentation available
4.5	Dec 15, 2015	Ann Lamica	Appendix A and the example have been updated to reflect a 21 character Bar Coded Serial Number Format (License Plate Number) instead of the previous 24 character Bar Code. The last 3 characters containing the carton count have been dropped for new implementations.
4.5.1	February 17, 2016	Ann Lamica	Added Boeing ISA & GS receiver ID information
5.0	December 2, 2016	Ann Lamica	New functionality has been added to the ASN. In early 2017 with the release of the 16.1 ASN Enhancement, suppliers will be able to send replacement (updated) ASNs to Boeing 787 SCMP via MachineLink. ASNs will no longer be rejected for use of a duplicate ASN number. Refer to the notes in the BSN Segment for additional information on how to send a replacement ASN. Updated Exostar address on cover page Moved the information from Appendix A regarding the ASN Barcode requirements to the REF Segment containing the License Plate number and moved the PO Number information to the PRF Segment. Updated the Introduction to indicate that the Barcode Label Specifications are now to be obtained from Boeing instead of Exostar.
5.1	December 16, 2016	Ann Lamica	Added element level notes to elements that can be updated with the new functionality enabled in 16.1 ASN Enhancement.

Version #	Date	Author's Name	Re	visions Made
5.2	July 17, 2019	Ann Lamica	1)	Barcode length modified to 24 characters from 21. Boeing has requested suppliers provide the carton count in the last 3 characters.
			2)	Recommended delimiters added at end of ISA segment.

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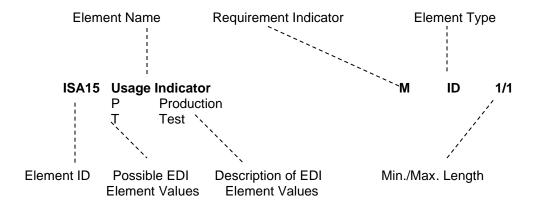
Introduction

This Guide is designed for Suppliers who want to send Advance Ship Notices in EDI X12 format. These Advance Ship Notices are initiated by the Suppliers; the data is received by Exostar and forwarded to the appropriate Buying Party.

The EDI formats defined in this Guide adhere to the Accredited Standards Committee (ASC) X12 standards for EDI, version 4010. The overall structure of the EDI Advance Ship Notice (856 transaction set) is defined on page 2.

The subsequent pages of this Guide define the usage for each individual EDI segment. For each specific segment, the Guide lists only the elements that may appear in these Advance Ship Notices. Elements that are not present in this Guide are optional elements that are not required for this application.

For each element that can be utilized in this EDI Advance Ship Notice, the Guide defines the element type and possible usage. The following diagram depicts an example of this:



As depicted above, certain EDI elements will have specific EDI element values indicated in the Guide. If an element does not have a specific EDI value(s), a text description is provided indicating the content for this element.

The Requirement Indicator provides the X12 standard requirement for each element. The values for this are indicator are M (Mandatory), O (Optional), and X (Relational). This Guide adheres to all X12 requirements involving the usage of mandatory and relational data elements in the 856 transaction set.

The following information is also included:

- Instructions for obtaining the specifications for the Boeing ASN Barcode Shipping label from Boeing are included in the REF Segment containing the License Plate number.
- A sample EDI Advance Ship Notice is provided at the end of this Guide.

856 Transaction Set Structure

	TAG	NAME	STATUS	REPEAT	LOOP REPE
	ISA GS	Interchange Control Header Functional Group Header	M M	1 1	
	Heade	r			
POS.	TAG	NAME	STATUS	REPEA	T LOOP REPEA
010 020 040	ST BSN DTM	Transaction Set Header Beginning Segment for Ship Notice Date/Time Reference	М М О	1 1 10	
	Detai	l - Shipment Level			
POS.	TAG	NAME	STATUS	REPEAT	LOOP REPEAT
	LOOP	P ID - HL (Shipment)	М		200000
010 150	HL REF	Hierarchical Level Reference Identification	М	1 >2	
	LOOP	D ID - N1 (Supplier)	0		200
220	<u>N1</u>	Name	М	1	
	LOOP	D - N1 (Ship To)	0		200
220	<u>N1</u>	Name	М	1	
	Detai	l - Item Level			
		P ID - HL (Item)	М		200000
	LOOE				
	HL	Hierarchical Level	М	1	
020	HL LIN	Hierarchical Level Item Identification	0	1	
020 030	HL	Hierarchical Level Item Identification Item Detail (Shipment) Purchase Order Reference	0 0 0		
020 030 050 110	HL LIN SN1 PRF TD1	Hierarchical Level Item Identification Item Detail (Shipment) Purchase Order Reference Carrier Details (Quantity and Weight	0 0 0	1 1 1 20	
020 030 050	HL LIN SN1 PRF	Hierarchical Level Item Identification Item Detail (Shipment) Purchase Order Reference	0 0 0	1 1 1	
020 030 050 110	HL LIN SN1 PRF TD1	Hierarchical Level Item Identification Item Detail (Shipment) Purchase Order Reference Carrier Details (Quantity and Weight Reference Identification	0 0 0	1 1 1 20	
	HL LIN SN1 PRF TD1 REF	Hierarchical Level Item Identification Item Detail (Shipment) Purchase Order Reference Carrier Details (Quantity and Weight Reference Identification	0 0 0 0 0 0 0 0	1 1 1 20 1	LOOP REPEAT
020 030 050 110 150	HL LIN SN1 PRF TD1 REF	Hierarchical Level Item Identification Item Detail (Shipment) Purchase Order Reference Carrier Details (Quantity and Weight Reference Identification	0 0 0 0 0 0 0 0	1 1 1 20 1	LOOP REPEAT
020 030 050 110 150 POS.	HL LIN SNI PRF TD1 REF Summa.	Hierarchical Level Item Identification Item Detail (Shipment) Purchase Order Reference Carrier Details (Quantity and Weight Reference Identification ry NAME Transaction Totals	0 0 0 0 0 0 0 STATUS	1 1 20 1	LOOP REPEAT

Segment/Element Data Content

This section of the EDI Implementation Guide details the specific usage of segments and data elements for the 856 Advance Ship Notice transaction set. Within a specific segment, such as the BSN segment, specific values for the data elements are provided.

Level: N/A
Position: N/A
Loop: N/A
Status: Mandatory
Purpose: To start and

To start and identify an interchange of one or more functional groups and

interchange-related control segments.

ID ISA01 Authorization Information Qualifier М 2/2 No Authorization Information Present 00 ISA02 Authorization Information ΑN M 10/10 This element will be blank-filled. **ISA03** Security Information Qualifier M ID 2/2 No Security Information Present **ISA04** Security Information 10/10 M AN This element will be blank-filled. ISA05 Interchange ID Qualifier ID 2/2 M This value to be provided by the Supplier. All valid X12 values for this attribute are supported. ISA06 Interchange Sender ID M AN 15/15 This value to be provided by the Supplier. ISA07 Interchange ID Qualifier M ID 2/2 This value will be dependent upon the Buyer on whose behalf Exostar is receiving this 856 transaction. Common value is: 12 Telephone Number ISA08 Interchange Receiver ID ΑN M 15/15 This value will be dependent upon the Buyer on whose behalf Exostar is receiving this 856 transaction. ISA09 Interchange Date M DT 6/6 Format is YYMMDD. **ISA10** Interchange Time 4/4 M TM Format is HHMM. ISA11 Interchange Control Standards Identifier ID 1/1 U.S. EDI Community

ISA12	Interchange Control Version Number 00401	М	ID	1/1
ISA13	Interchange Control Number Unique interchange control number assigned by	M the Sup	N0 plier.	9/9
ISA14	Acknowledgement Requested 0 No Interchange Acknowledgement Requested.	M	ID	1/1
ISA15	Usage Indicator P Production T Test	М	ID	1/1
ISA16	Component Element Separator Delimiter used to separate component elements Within a composite data element.	M		1/1

Boeing ISA Receiver IDs and Qualifiers:				
Usage		ISA Qualifier	ISA Receiver ID	
Production		12	4252660502	
Test		12	4252660502	
Delimiters: Suppliers are requeste Exostar Delimiters	d to use the following ED	I delimiters:	Sub-Element/Component Separator	
Production	l (pipe)	•	^	
i ioduction	l (bibe)	~	.,,	

| (pipe)

٨

Test

GS Functional Group Header

Level: N/A
Position: N/A
Loop: N/A

Status: Mandatory.

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

information.

GS08 Version/Release

004010

GS01 Functional Identifier Code М ID 2/2 SH Ship Notice/Manifest **GS02** Application Sender's Code 2/15 М ΑN This value to be provided by the Supplier. **GS03** Application Receiver's Code M AN 2/15 This value will be dependent upon the Buyer on whose behalf Exostar is receiving this 856 transaction. GS04 Date DT 8/8 M Format is CCYYMMDD. GS05 Time M TM 4/8 Format is HHMMSSdd. **GS06** Group Control Number М N0 1/9 Unique group control number assigned by the Supplier. **GS07** Responsible Agency Code M ID 1/2 ASC X12 Χ

Boeing GS Receiver IDs:				
Usage	787 Program Orders Boeing.Puget Sound.ERP LN-BCA	Non-787 Program Orders Boeing.Puget Sound.BAAN ERP-BCA		
Production	4252660502	BCAERP		
Test	ERPTEST	BCAERPTEST		

M

ΑN

1/12

ST Transaction Set Header

Level: Header
Position: 010
Loop: N/A

Status: Mandatory.

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

ST01 Functional Identifier Code M ID 3/3

856 Advance Ship Notice

ST02 Transaction Set Control Number M AN 4/9

Assigned by the Supplier. Within a specific Functional

Group, this value must be unique.

BSN Beginning Segment for Purchase Order

Level: Header
Position: 020
Loop: N/A
Status: Mandatory.

Purpose: To indicate the beginning of the Purchase Order Transaction Set and

transmit identifying numbers and dates.

BSN01 Transaction Set Purpose Code M ID 2/2

00 Original

BSN01 may be updated to include "05" Replace, however, Exostar will treat both "00" and "05" equally as an insert/update and will use the value "Original" for both. Supplier may send "00" or "05".

BSN02 Shipment Identification

A unique control number assigned by the Supplier to identify a specific shipment. The same number can be reused only to send updates to that specific ASN. Refer to the notes below on sending updated ASNs.

М

AN

2/30

Please limit the Shipment Identification to a maximum of ten characters. The first character cannot be an "A". Exostar uses this character to identify manually-generated ASNs.

BSN03 Date M DT 8/8

Issue date of the Advance Ship Notice (ASN).

Format is CCYYMMDD.

BSN04 Time M TM 4/8

Issue time for the ASN. Format is HHMMSSdd.

Sending Replacement (Updated) ASNs:

New functionality has been added to the integrated ASNs. ASNs sent using a previously sent ASN Number will no longer be rejected as a duplicate. Updates to the integrated EDI ASN will be processed in the same manner as new ASNs but the content will be used to locate and replace the existing ASN.

For example, if the supplier sent an incorrect warehouse number or quantity in the original ASN, that value may be corrected in a replacement (updated) ASN to the correct value. The updated ASNs will be posted to the UI and will be sent on to Boeing assuming there are no errors in the ASN. If Boeing has not yet received the shipment then the replacement ASN will be utilized for the receipt. The replacement (updated) ASN should contain all the original segments and elements with changes being made only to the appropriate fields being corrected. Notes have been added to this Implementation Guide identifying each element that may be updated.

A new file name (date/time stamp) must be assigned by the supplier in order to successfully send the revised ASN to Exostar. EDI suppliers would also be expected to generate new envelopes replacing the ISA, GS, GE and IEA segments.

DTM Date/Time Reference

Level: Header Position: 040 Loop: N/A

Status: Required by Boeing

Purpose: To specify pertinent dates and times.

Two iterations of this DTM segment are required – one to provide the Departure Date/Time (DTM01 element = 011) and one to provide the Estimated Arrival Date/Time (DTM01 element = 035).

Exostar requires both the Date (DTM02) and Time (DTM03) to be provided.

DTM01 Date/Time Qualifier M ID 3/3

011 Shipped035 Delivered

DTM02 Date X DT 8/8

Departure Date Estimated Arrival Date

DTM02 Departure and Arrival Dates may be updated on a replacement ASN.

DTM03 Communication Number Qualifier X TM 4/8

Estimated Departure Time Estimated Arrival Time

HL Hierarchical Level

Level: Detail - Shipment Level

Position: 010 Loop: HL

Status: Mandatory.

Purpose: To identify dependencies among and the content of hierarchically related

groups of data segments.

There are two levels of HL loops in this implementation of the 856 transaction set – Shipment (HL03 element = S) and Item (HL03 element = I). Within an 856 transaction, there must be one iteration of the Shipment-level HL loop, followed by multiple Item-level HL loops (one Item-level HL loop per item contained in the shipment).

The usage of the Shipment-level HL segment is documented below.

HL01	Hierarchical ID Number A unique number that identifies this hierarchic	AN	1/12	
HL03	Hierarchical Level Code S Shipment	M	ID	1/2
HL04	Hierarchical Child Code 1 Subordinate HL segment present.	0	ID	1/1

In this 856 implementation, the HL04 element is required.

REF Reference Identification

Level: Detail – Shipment level

Position: 150 Loop: HL

Status: Required by Boeing.

Purpose: To specify identifying information.

Four iterations of the REF segment are required within the Shipment-level HL loop. This iteration of the REF segment is used to provide the Originating Company Identifier.

REF01 Reference Identification Qualifier
TN Transaction Reference Number

REF02 Reference Identification
Originating Company Identifier

X AN 1/30

Note: The value for Originating Company Identifier is provided by the Buyer in an N902 element (N901 = 8M) in the Purchase Order or Purchase Order Change transaction set.

REF Reference Identification

Level: Detail – Shipment level

Position: 150 Loop: HL

Status: Required by Boeing

Purpose: To specify identifying information.

Four iterations of the REF segment are required within the Shipment-level HL loop. This iteration of the REF segment is used to provide the Bar-Coded Serial Number.

REF01 Reference Identification Qualifier M ID 2/3 LS Bar-Coded Serial Number

REF02 Reference Identification X AN 1/30

Bar-coded serial number.

REF02 Bar-coded serial number (License Plate) may be updated on a replacement ASN.

Note: Certain Buyers may have specific requirements for the content and structure of this attribute. Please refer to the notes below for Buyer-specific requirements.

Buyer-specific Requirements for Bar-coded Serial Number:

Boeing ASN Bar Code Information:

Bar Coded Serial Number Format (License Plate Number)

The License Plate Number is to be 24 characters in length and consists of three sub-sections:

Positions Content

1-2 UN ("UN" is a literal value)

3-11 9-digit Supplier's DUNS Number

12-21 10-digit Packing Slip Number or any unique Supplier assigned number that cannot be used to identify a different shipment

22-24 Total number of containers for ASN

The 24 character barcode number should be reflected on both the label and in the EDI 856 ASN.

ASN Bar Code Label References

Please review the appropriate label documentation: D36001-1 Barcode Standards and D37512-3 Advance Ship Notice Label accessible in the Product Standards Data System (PSDS) to determine actual label requirements. However, please note that the label standards for the Boeing Enterprise Label does call for a 21 character barcode. Boeing has requested that suppliers use the 24 characters so that the number of cartons displays correctly on the 787 UI.

Accessing PSDS at The Boeing Company:

Boeing Packaging standards are available to authorized users in the <u>Product Standards Data System</u> (<u>PSDS</u>). These standards will not be found by doing an internal Boeing web search.

BCA and BDS suppliers to The Boeing Company gain access to PSDS through the Boeing Partners

Network (BPN). To get a BPN account the supplier will need to work with its Boeing procurement agent to gain a supplier code (BEST code) and to sign an Electronic Access Agreement (EAA). The supplier then submits an Account Request Form with PSDS listed on the Application(s) Required field to the Boeing Access Support Group. Processing this request may take up to three full business days.

REF Reference Identification

Level: Detail – Shipment level

Position: 150 Loop: HL

Status: Required by Boeing

Purpose: To specify identifying information.

Four iterations of the REF segment are required within the Shipment-level HL loop. This iteration of the REF segment is used to provide either the Bill of Lading Number or Shipment Tracking Number.

REF01	Reference Identification Qualifier BM Bill of Lading Number		M	ID	2/3
REF02	Either	ence Identification the Bill of Lading Number or the ent Tracking Number.	X	AN	1/30

REF02 Bill of Lading/Shipment Tracking Number may be updated on a replacement ASN.

REF Reference Identification

Level: Detail - Shipment Level

Position: 150 Loop: HL

Status: Required by Boeing

Purpose: To specify identifying information.

Four iterations of the REF segment are required in the Shipment-level HL loop. This iteration of the REF segment is used to provide the Packing Slip Number.

REF01	Reference Identification Qualifier		M	ID	2/3
	PK	Packing List Number			
REF02		nce Identification g Slip number.	X	AN	1/30

REF02 Packing Slip Number may be updated on a replacement ASN.

N1 Name

Level: Detail – Shipment level

Position: 220 Loop: N1

Status: The N1 loop is optional, but if utilized, the N1 segment is mandatory.

Purpose: To identify a party by type of organization, name, and code.

Two iterations of the N1 loop are required within the Shipment-level HL loop. This iteration is used to identify the Supplier.

N101	Entity Identifier Code SU Supplier/Manufacturer	M	ID	2/3
N103	Identification Code Qualifier 92 Assigned by Buyer	X	ID	1/2
N104	Identification Code Supplier code.	X	AN	2/80

Note: The Supplier Code provided in the N104 element above must correspond to the Supplier Code provided by the Buyer in the Purchase Order or Purchase Order Change transaction set. In these transactions, the Supplier Code is also present in the N104 element, where N101 = SU.

N1 Name

Level: Detail – Shipment level

Position: 220 Loop: N1

Status: The N1 loop is optional, but if utilized, the N1 segment is mandatory.

Purpose: To identify a party by type of organization, name, and code.

Two iterations of the N1 loop are required within the Shipment-level HL loop. This iteration is used to provide the Ship To Warehouse code.

N101	Entity Identifier Code ST Ship To	M	ID	2/3
N103	Identification Code Qualifier 54 Warehouse	X	ID	1/2
N104	Identification Code Warehouse code.	X	AN	2/80

N104 Warehouse Code may be updated on a replacement ASN.

Note: The Warehouse Code provided in the N104 element above must correspond to the Warehouse Code provided by the Buyer in the Purchase Order or Purchase Order Change transaction set. In these transactions, the Warehouse Code is also present in the N104 element, where N101 = ST.

HL Hierarchical Level

Level: Detail – Item Level

Position: 010 Loop: HL

Status: Mandatory.

Purpose: To identify dependencies among and the content of hierarchically related

groups of data segments.

There are two levels of HL loops in this implementation of the 856 transaction set – Shipment (HL03 element = S) and Item (HL03 element = I). Within an 856 transaction, there must be one iteration of the Shipment-level HL loop, followed by multiple Item-level HL loops (one Item-level HL loop per item contained in the shipment).

The usage of the Item-level HL segment is documented below.

HL01	Hierarchical ID Number A unique number that identifies this hierarchical	M I level.	AN	1/12
HL02	Hierarchical Parent ID Number The value for Hierarchical ID Number for the SI HL loop, which is the "parent" loop to all the Itel loops.	•		1/12
HL03	Hierarchical Level Code I ltem	M	ID	1/2
HL04	Hierarchical Child Code 0 No subordinate HL segment present.	0	ID	1/1

In this 856 implementation, the HL02 and HL04 elements are required.

LIN Item Identification

Level: Detail – Item level

Position: 020 Loop: HL

Status: Required by Boeing

Purpose: To specify basic item identification information.

For this 856 implementation, the LIN segment is required.

LIN02 Product/Service ID Qualifier M ID 2/2

BP Buyer Part Number

LIN03 Product/Service ID M AN 1/48

Buyer Part number.

The value of the LIN03 element above must correspond with the Buyer Part Number provided in the PO107 element of the Purchase Order (or the POC09 element of the Purchase Order Change).

LIN04 Product/Service ID Qualifier X ID 2/2

PS Position

LIN05 Product/Service ID X AN 1/48

Position Number of this item in the ASN.

The ASN Position Number is defined simply as, the first item in the ASN is position #1, the second item in the ASN is position #2, etc.

LIN06 Product/Service ID Qualifier X ID 2/2

PL Purchaser's Order Line Number

LIN07 Product/Service ID X AN 1/48

Purchase Order Line Item Number

The value of the LIN07 element above must correspond with the Buyerassigned Purchase Order Line Item Number provided in the PO101 element of the Purchase Order (or the POC01 element of the Purchase Order Change).

SN1 Item Detail (Shipment)

Level: Detail – Item Level

Position: 030 Loop: HL

Status: Required by Boeing

Purpose: To specify line-item detail relative to shipment.

For this 856 implementation, the SN1 segment is required.

SN102 Number of Units Shipped

M R 1/10

Quantity to be shipped.

SN102 Quantity Shipped may be updated on a replacement ASN.

SN103 Unit or Basis for Measurement Code M ID 2/2

Shipment Quantity Unit of Measure.

PRF Purchase Order Reference

Level: Detail – Item Level

Position: 050 Loop: HL

Status: Required by Boeing

Purpose: To provide reference to a specific purchase order.

For this 856 implementation, the PRF segment is required.

PRF01 Purchase Order Number

M AN 1/22

Buyer's Purchase Order Number

The value of the PRF01 element above must correspond with the Buyer's PO Number provided in the BEG03 element in the Purchase Order (or the BCH03 element in the Purchase Order Change).

Certain Buyers have specific format requirements for the PO Number as noted below:

1. Boeing Commercial Airplanes (BCA)

12-characters. The first three characters are the ERP Company Number. The remaining nine-characters are the order number (filled with leading zeroes, if necessary).

In the ASN transaction, the Supplier should only reference the 9-character order number in the <u>PRF01 element</u>.

TD1 Carrier Details (Quantity and Weight)

Level: Detail – Item Level

Position: 110 Loop: HL

Status: Required by Boeing

Purpose: To specify the transportation details relative to commodity, weight, and

quantity.

TD101 Packaging Code O AN 3/5

CNT Container

TD102 Lading Quantity X N0 1/7

Number of boxes/items in shipment.

REF Reference Identification

Level: Detail – Item Level

Position: 150 Loop: HL Status: Optional

Purpose: To specify identifying information.

This occurrence of the REF segment is designed to support a business scenario in which the trading partner receiving the shipment of goods (Consuming Partner) is not also the purchaser of the goods. To facilitate receipt of goods in this scenario, the Consuming Partner may provide a Receiver Reference Number to the trading partner shipping the goods (Providing Partner) and require that the Providing Partner return the number in this REF segment on the 856. Though this Receiver Reference Number may represent the Consuming Partner's "internal PO number", it will typically differ from the purchaser's PO Number returned in PRF01 on the 856 and is communicated to the Providing Partner in FST09 of the 830 Planning Schedule.

REF01 Reference Identification Qualifier M ID 2/3
7U Related Transaction Reference Number

REF02 Reference Identification M AN 1/30

Receiver Reference Number from FST09 of the 830 Planning Schedule. Consuming Partner's "internal PO number" or other reference number established by the Consuming Partner to facilitate receipt of goods.

REF02 Receiver Reference Number may be updated on a replacement ASN.

CTT Transaction Totals

Level: Summary
Position: 010
Loop: N/A

Status: Required by Boeing

Purpose: To transmit a hash total for a specific element in the transaction set.

For this 856 implementation, the CTT segment is required.

CTT01 Number of Line Items

M N0 1/6

Total number of HL segments.

SE Transaction Set Trailer

Level: Summary
Position: 020
Loop: N/A

Status: Mandatory.

Purpose: To indicate the end of the transaction set and provide the count of the

transmitted segments (including the beginning (ST) and ending (SE)

segments).

SE01 Number of Included Segments M N0 1/10

Total number of segments from ST to SE inclusive.

SE02 Transaction Set Control Number M AN 4/9

Same value as the **ST02 element**.

GE Functional Group Trailer

Level: N/A
Position: N/A
Loop: N/A

Status: Mandatory.

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

information.

GE01 Number of Transaction Sets Included M N0 1/6

Total number of ASN (856) transactions in this functional group.

GE02 Group Control Number M N0 1/9

Same value as the **GS06 element**.

IEA Interchange Control Trailer

Level: N/A
Position: N/A
Loop: N/A

Status: Mandatory.

Purpose: To define the end of an interchange of one or more functional groups

and interchange-related control segments.

IEA01 Number of Included Functional Groups M N0 1/5

Total number of functional groups in this interchange.

IEA02 Interchange Control Number M N0 9/9

Same value as the **ISA13 element**.

Sample 856 Transaction

- With 24 Character Bar Code

```
~ZZ~SUPPLIER ID ~ZZ~EXOSTAR ID
160601~0900~U~00401~00000001~0~P~^|
GS~SH~SUPPLIER ID~EXOSTAR ID~20160601~0900~00001~X~004010|
ST~856~0001|
BSN~00~ASNNBR1234~20160601~090000|
DTM~011~20160602~040000|
DTM~035~20160604~163000|
HL~1~~S~1|
REF~TN~ORIGINATING COMPANY IDENTIFIER|
REF~LS~UN123456789ASNNBR1234003|
REF~BM~BOL OR TRACKING NUMBER |
REF~PK~PACKING SLIP NUMBER|
N1~SU~~92~SUPPLIER CODE |
N1~ST~~54~WAREHOUSE CODE|
HL~2~1~I~0|
LIN~~BP~ITEM NUMBER~PS~1~PL~0001|
SN1~~10~EA|
PRF~123456789|
TD1~CNT~1|
REF~7U~RECEIVER REF|
HL~3~1~I~0|
LIN~~BP~ITEM NUMBER~PS~2~PL~0001|
SN1~~6~EA|
PRF~0123456781
TD1~CNT~2|
CTT~31
SE~24~0001|
GE~1~00001
IEA~1~00000001|
```

Example of an updated ASN with a new envelope and an updated warehouse code. In this example, all other data remained the same.

```
ISA~00~ ~00~
                           ~ZZ~SUPPLIER ID ~ZZ~EXOSTAR ID ~
160602~0900~U~00401~000000002~0~P~^|
GS~SH~SUPPLIER ID~EXOSTAR ID~20160602~0900~00001~X~004010|
ST~856~0001|
BSN~00~ASNNBR1234~20160601~090000|
DTM~011~20160602~040000|
DTM~035~20160604~163000|
HL~1~~S~1|
REF~TN~ORIGINATING COMPANY IDENTIFIER
REF~LS~UN123456789ASNNBR1234003|
REF~BM~BOL OR TRACKING NUMBER|
REF~PK~PACKING SLIP NUMBER|
N1~SU~~92~SUPPLIER CODE|
N1~ST~~54~NEWWHSE
HL~2~1~I~0|
```

```
LIN~~BP~ITEM NUMBER~PS~1~PL~0001|
SN1~~10~EA|
PRF~123456789|
TD1~CNT~1|
REF~7U~RECEIVER REF|
HL~3~1~I~0|
LIN~~BP~ITEM NUMBER~PS~2~PL~0001|
SN1~~6~EA|
PRF~012345678|
TD1~CNT~2|
CTT~3|
SE~24~0001|
GE~1~00001|
IEA~1~000000002|
```