EXOSTAR®

PURCHASE ORDER –
BCA EDI IMPLEMENTATION GUIDE
X12 version 4010 – 850 transaction
Boeing SCMP

Document Status

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Description	An Implementation Guide for Aerospace-industry Suppliers who want to receive Purchase Orders in EDI format via Exostar.

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	Final version. Added PO108-09 elements and a N903 element (where N901=CT).
3.0	June 22, 2006	L. Durham	Added Appendix A reference for Purchase Order Number.
4.0	July 24, 2006	L. Durham	Corrected TD5 segment – element TD503 incorrectly referenced as the TD505 element.
5.0	August 30, 2006	L. Durham	In the sample 850 transaction (page 59), revised the data in the N1~BY loop to better represent actual production data. N9~TX segment (page 40) – revised usage examples for the N902 element.
6.0	Nov. 8, 2006	L. Durham	1. Added the third paragraph and revised the fourth paragraph in the Introduction section (page 1). 2. Revised values for Purchase Order Type (page 14). 3. Added value of Static Text for N902 element (page 15). 4. Revised usage notes for the header-level Ship-To N2 segment (page 25). 5. Added value of QA Text for N902 element (page 43). 6. Revised usage notes for the detail-level Ship-To N2 segment (page 48).
6.0	January 9, 2009	Ann Lamica	Removed Contact Information only
6.0	October 22, 2012	Ann Lamica	Updated the Exostar address and added BCA to the cover page
6.1	October 31, 2012	Ann Lamica	Incorporated the following BP20 changes: 1. Updated the ITD segment to include the ITD03, ITD05 and ITD07. 2. Updated the values in the TD503 to remove "Freight" 3. Added the TD504 Transport Method/Type Code 4. Added a note to the N4 segment in the ST loops re handling of international postal codes 5. Replaced the example

Version #	Date	Author's Name	Revisions Made
6.2	May 4, 2015	Ann Lamica	Updated some codes, formats and descriptions solely as updates to the current documentation: 1. list of Order Types with details; 2. changed Header Text, Line Text and Tax Exempt Cert Text to uppercase and removed QA Text and Static Text as no longer used; 3. added No-NotTaxExempt to documentation as a possible value in N9 TX and the TXI segment
6.2.1	Feb 17, 2016	Ann Lamica	Added Boeing/Exostar ISA & GS IDs and updated the description for Purchase Order Type: Reverse Logistics PO to indicate that the order type is used primarily by Logistics Company 628.
6.2.2	July 17, 2019	Ann Lamica	1. Updated the Exostar address on the cover page. 2. Added the preferred EDI delimiters to the ISA notes 3. Added a note to the SCH segment

Table of Contents

Introduction

This Guide is designed for Suppliers who want to receive Purchase Orders in EDI X12 format. These Purchase Orders are initiated by Buyers in the aerospace industry; the EDI data is generated and delivered by Exostar.
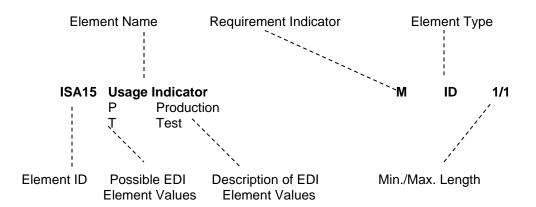
The EDI formats defined in this Guide adhere to the Accredited Standards Committee (ASC) X12 standards for EDI, version 4010. The overall structure of the EDI Purchase Order (850 transaction set) is defined on pages 2-4. Within the 850 transaction set, several loops are used for multiple purposes. An example is the header level N1 loop – there can be up to four iterations of this loop – for Supplier Name/Address, Ship From location, Ship To location, and Buying Party Name/Address. Where a specific loop has possible multiple iterations, each potential iteration is provided in this Guide.

For these loops that are used for multiple purposes, a Supplier should understand that the key to distinguishing the purpose of each loop is to utilize the unique qualifier(s) that is present in each loop. Using the example of the header level N1 loop, the qualifier in the N102 element is used to determine whether this is Supplier Name/Address (N102=SU), a Ship From location (N102=SF), Ship To location (N102=ST), or a Buying Party Name/Address (N102=BY). A Supplier should not try to distinguish the purpose of a specific loop based on the sequential order of these loops as presented in this Guide.

The subsequent pages define the usage for each individual EDI segment. Please note that many of the EDI segments listed in this Guide are optional, and may not be utilized for certain EDI Purchase Order transactions.

For each specific segment, the Guide lists only the elements that may appear in these Purchase Orders. 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 Purchase Order, the Guide defines the element type and possible usage. The following diagram depicts an example of this:

Element Name	Requirement Indicator		Element Type

ISA15	**Usage Indicator**		**M**	**ID**	**1/1**
	P	Production			
	T	Test			

Element ID	Possible EDI Element Values	Description of EDI Element Values	Min./Max. Length

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 850 transaction set.

A **sample** EDI Purchase Order transaction is provided at the end of this Guide.

850 Transaction Set Structure

850 Purchase Order

	TAG	NAME	STATUS	REPEAT	LOOP REPEAT
	ISA	Interchange Control Header	M	1	
	GS	Functional Group Header	M	1	

Header

POS.	TAG	NAME	STATUS	REPEAT	LOOP REPEAT
010	ST	Transaction Set Header	M	1	
020	BEG	Beginning Segment for Purchase Order	M	1	
060	PER	Administrative Communications Contact	O	3	
080	FOB	F.O.B. Related Instructions	O	>1	
130	ITD	Terms of Sale/Deferred Terms of Sale	O	>1	

LOOP ID – N9 (Purchase Order Type)			O		1000
295	N9	Reference Identification	M	1	
300	MSG	Message Text	O	1000	

LOOP ID – N9 (HEADER TEXT)			O		1000
295	N9	Reference Identification	M	1	
300	MSG	Message Text	O	1000	

LOOP ID – N9 (Originating Company ID)			O		1000
295	N9	Reference Identification	M	1	

LOOP ID – N1 (Supplier)			O		200
310	N1	Name	M	1	
320	N2	Additional Name Information	O	2	

LOOP ID – N1 (Ship From)			O		200
310	N1	Name	M	1	
330	N3	Address Information	O	2	
340	N4	Geographic Location	O	1	

LOOP ID – N1 (Ship To)			O		200
310	N1	Name	M	1	
320	N2	Additional Name Information	O	2	
330	N3	Address Information	O	2	
340	N4	Geographic Location	O	1	

	LOOP ID – N1	**(Buying Party)**	**O**		**200**
310	N1	Name	M	1	
330	N3	Address Information	O	2	
340	N4	Geographic Location	O	1	

Detail

POS.	TAG	NAME	STATUS	REPEAT	LOOP REPEAT
	LOOP ID – PO1		**M**		**>1**
010	PO1	Baseline Item Data	M	1	
	LOOP ID – CTP		**O**		**>1**
040	CTP	Pricing Information	**M**	1	
	LOOP ID – PID		**O**		**1000**
050	PID	Product/Item Description	M	1	
250	TD5	Carrier Details (Routing Sequence/ Transit Time)	O	12	
291	TXI	Tax Information	O	>1	
	LOOP ID – SCH		**O**		**200**
295	SCH	Line Item Schedule	M	1	
	LOOP ID – N9	**(Item Sequence Number)**	**O**		**1000**
330	N9	Reference Identification	M	1	
	LOOP ID – N9	**(Tax Exempt Status Text)**	**O**		**1000**
330	N9	Reference Identification	M	1	
	LOOP ID – N9	**(Contract Number)**	**O**		**1000**
330	N9	Reference Identification	M	1	
	LOOP ID – N9	**(Contract Line Item Number)**	**O**		**1000**
330	N9	Reference Identification	M	1	
	LOOP ID – N9	**(Line Item Text)**	**O**		**1000**
330	N9	Reference Identification	M	1	
340	MSG	Message Text	O	1000	

		LOOP ID – N1 (Line Item Ship To)	O		200
350	N1	Name	M	1	
360	N2	Additional Name Information	O	2	
370	N3	Address Information	O	2	
380	N4	Geographic Location	O	1	

		LOOP ID – AMT	O		>1
600	AMT	Monetary Amount	M	1	

Summary

POS.	TAG	NAME	STATUS	REPEAT	LOOP REPEAT
		LOOP ID – CTT	O		1
010	CTT	Transaction Totals	M	1	
020	AMT	Monetary Amount	O	1	
030	SE	Transaction Set Trailer	M	1	
	GE	Functional Group Trailer	M	1	
	IEA	Interchange Control Trailer	M	1	

Segment/Element Data Content

This section of the EDI Implementation Guide details the specific usage of segments and data elements for the 850 Purchase Order transaction set. Within a specific segment, such as the BEG segment, specific values for the data elements are provided.

ISA   Interchange Control Header

Level: N/A
Position: N/A
Loop: N/A
Status: Mandatory
Purpose: To start and identify an interchange of one or more functional groups and interchange-related control segments.

ISA01 Authorization Information Qualifier   M   ID   2/2
00   No Authorization Information Present

ISA02 Authorization Information   M   AN   10/10
This element will be blank-filled.

ISA03 Security Information Qualifier   M   ID   2/2
00   No Security Information Present

ISA04 Security Information   M   AN   10/10
This element will be blank-filled.

ISA05 Interchange ID Qualifier   M   ID   2/2
This value will be dependent upon the Buyer on whose behalf Exostar is sending this 850 transaction.   Common value is:

12   Telephone Number

ISA06 Interchange Sender ID   M   AN   15/15
This value will be dependent upon the Buyer on whose behalf Exostar is sending this 850 transaction.

ISA07 Interchange ID Qualifier   M   ID   2/2
This value to be provided by the Supplier. All valid X12 values for this attribute are supported.

ISA08 Interchange Receiver ID   M   AN   15/15
This value to be provided by the Supplier.

ISA09 Interchange Date   M   DT   6/6
Format is YYMMDD.

ISA10 Interchange Time   M   TM   4/4
Format is HHMM.

ISA11	**Interchange Control Standards Identifier**		**M**	**ID**	**1/1**
	U	U.S. EDI Community			
ISA12	**Interchange Control Version Number**		**M**	**ID**	**1/1**
	00401				
ISA13	**Interchange Control Number**		**M**	**N0**	**9/9**
	Unique interchange control number assigned by Exostar.				
ISA14	**Acknowledgement Requested**		**M**	**ID**	**1/1**
	0	No Interchange Acknowledgement Requested.			
ISA15	**Usage Indicator**		**M**	**ID**	**1/1**
	P	Production			
	T	Test			
ISA16	**Component Element Separator**		**M**		**1/1**
	Delimiter used to separate component elements within a composite data element.				

Boeing ISA Sender IDs and Qualifiers:

Usage	ISA Qualifier	ISA Sender ID	
Production	12	4252660502	
Test	12	4252660502	

Delimiters:

Suppliers are requested to use the following EDI delimiters:

Exostar Delimiters	Segment Terminator	Element Separator	Sub-Element/Component Separator
Production	| (pipe)	~	^
Test	| (pipe)	~	^

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.

GS01 Functional Identifier Code   **M   ID   2/2**
PO   Purchase Order

GS02 Application Sender's Code   **M   AN   2/15**
This value will be dependent upon the Buyer
on whose behalf Exostar is sending this 850
transaction.

GS03 Application Receiver's Code   **M   AN   2/15**
This value to be provided by the Supplier.

GS04 Date   **M   DT   8/8**
Format is CCYYMMDD.

GS05 Time   **M   TM   4/8**
Format is HHMMSSdd.

GS06 Group Control Number   **M   N0   1/9**
Unique group control number assigned by Exostar.

GS07 Responsible Agency Code   **M   ID   1/2**
X   ASC X12

GS08 Version/Release   **M   AN   1/12**
004010

Boeing GS Sender 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	

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**
850   Purchase Order

ST02 **Transaction Set Control Number**   **M**   **AN**   **4/9**
Assigned by Exostar. Within a specific Functional
Group, this value will be unique.

BEG 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.

BEG01 Transaction Set Purpose Code   **M**   **ID**   **2/2**
00   Original

BEG02 Purchase Order Type Code   **M**   **ID**   **2/2**
NE   New Order

BEG03 Purchase Order Number   **M**   **AN**   **1/22**
Buyer-assigned purchase order number. Certain Buyers will have specific formats for their PO numbers. Please refer to **Appendix A** for a list of these buyer-specific formats.

BEG05 Date   **M**   **DT**   **8/8**
Date of original purchase order. Format is CCYYMMDD.

PER Administrative Communications Contact

Level: Header
Position: 060
Loop: N/A
Status: Optional.
Purpose: To identify a person or office to whom administrative communications should be
                directed.

    PER01 Contact Function Code   **M**   **ID**   **2/2**
    BD   Buyer Name or Department

    PER02 Name   **O**   **AN**   **1/60**
    Buyer's name.

    PER03 Communication Number Qualifier   **X**   **ID**   **2/2**
    TE   Telephone

    PER04 Communication Number   **X**   **AN**   **1/80**
    Buyer's telephone number

FOB F.O.B. Related Instructions

Level:	Header
Position:	080
Loop:	N/A
Status:	Optional.
Purpose:	To specify transportation instructions relating to shipment.

FOB01 Shipment Method of Payment   **M**   **ID**   **2/2**
   DF   Defined by Buyer and Seller

FOB02 Location Qualifier   **X**   **ID**   **1/2**
   DE   Destination (Shipping)
   OR   Origin (Shipping Point)
   ZZ   Mutually Defined

FOB03 Description   **O**   **AN**   **1/80**
   Text instructions, as per the FOB02 qualifier.

ITD Terms of Sale/Deferred Terms of Sale

Level: Header
Position: 130
Loop: N/A
Status: Optional.
Purpose: To specify terms of sale.

ITD03 Terms Discount Percent   **O**   **R**   **1/6**
Terms discount percentage, expressed as a percent, available to the purchaser if an invoice is paid on or before the Terms Discount Due Date.

ITD05 Terms Discount Days Due   **O**   **N0**   **1/3**
Number of days in the terms discount period by which payment is due if terms discount is earned.

ITD07 Terms Net Days   **O**   **N0**   **1/3**
Number of days until total invoice amount is due (discount not applicable)

ITD12 Description   **O**   **AN**   **1/80**
Description of terms of payment.

The ITD03, ITD05 and ITD07 may be present when applicable to the transaction.
The ITD12 will continue to contain the text description of the terms of payment.

MSG Message Text

Level: Header
Position: 300
Loop: N9
Status: Optional.
Purpose: To provide a free-form format that allows the transmission of text information.

MSG01 Free-Form Message Text   M   AN   1/264
This element will contain one of the following text values:

BCA ERPLN Order Types:

Purchase Order Type in MSG01	BCA ERPLN Description of Purchase Order Type
Discrete Purchase Order	Used for orders with a specific quantity and schedule. This order can have positive or negative lines.
Direct Ship Purchase Order	The items on these PO's can only be delivered to airlines, not to a Boeing facility or another Boeing external supplier.
Non-Conformance Debit PO	This order type is also known as "SND" or "Supplier Nonconformance Debiting". This order type is used for cost items (COST-080, Supplier Expense Repair/Rework) when the supplier/Business Partner is being charged for the nonconformance. These purchase orders create negative quantities/dollars.
Blanket Purchase Order	Used for simplified ordering. An agreed to quantity for a specific time period has been contracted with the supplier. The supplier ships items against the PO position until the quantity or planned delivery date has been reached.
Reverse Logistics PO	Used for Return To Supplier (RTS) partner-managed inventory (PMI) items by Logistic Company 628 primarily.
Purch Consign Replacement Ord	Used only for ordering inventory that is owned by the supplier but stored at Boeing.
Purchase Order Exception	Used for: 1) Rejected Parts after Receiving Inspection, at Boeing Expense and disposition is RTS 2) Ship Short (means an Assembly or a Kit that is missing some of its components) 3) Supplier Banked Material (SBM) that is being moved from the SBM Warehouse to Boeing
Purchase Return Rejects	This order type is to support negative line(s) returns of parts that were rejected during the receiving inspection process. These purchase orders create negative quantities/dollars only.

N9 Reference Identification

Level:	Header
Position:	295
Loop:	N9
Status:	The N9 loop is optional, but if utilized, the N9 segment is mandatory.
Purpose:	To transmit identifying information as specified by the Reference Identification Qualifier.

This iteration of the N9 loop is used to provide text information that pertains to the entire Purchase Order. In this case the N902 value will be HEADER TEXT. Documentation only updated May 2015 to reflect upper case format and removal of Static Text.

N901 **Reference Identification Qualifier**   **M**   **ID**   **2/3**
L1   Letters or Notes

N902 **Reference Identification**   **X**   **AN**   **1/30**
This element will contain one of the following text values:

HEADER TEXT

MSG Message Text

Level: Header
Position: 300
Loop: N9
Status: Optional.
Purpose: To provide a free-form format that allows the transmission of text information.

> There can be multiple iterations of the MSG segment within this specific N9 loop.
> Each iteration will contain a line of text information that applies to the entire Purchase Order.

MSG01 Free-Form Message Text   **M   AN   1/264**
          Text information that pertains to the entire Purchase Order.

N9   Reference Identification

Level: Header
Position: 295
Loop: N9
Status: The N9 loop is optional, but if utilized, the N9 segment is mandatory.
Purpose: To transmit identifying information as specified by the Reference Identification
              Qualifier.

Three iterations of this N9 loop are possible within this 850 transaction set. This
iteration of the N9 loop is used to provide the originating company identifier.

N901 **Reference Identification Qualifier** **M** **ID** **2/3**
8M   Originating Company Identifier

N902 **Reference Identification** **X** **AN** **1/30**
Number identifying the company initiating this
Purchase Order.

N1 Name

Level: Header
Position: 310
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.

Four iterations of this N1 loop are possible within this 850 transaction set. This iteration of the N1 loop is used to provide information identifying the Supplier.

N101	**Entity Identifier Code**	**M**	**ID**	**2/3**
	SU Supplier/Manufacturer			
N102	**Name**	**X**	**AN**	**1/60**
	Name of Supplier.			
N103	**Identification Code Qualifier**	**X**	**ID**	**1/2**
	92 Assigned by Buyer			
N104	**Identification Code**	**X**	**AN**	**2/80**
	Buyer-assigned code for this Supplier.			

N2 Additional Name Information

Level:	Header
Position:	320
Loop:	N1
Status:	Optional.
Purpose:	To specify additional name information.

This segment will only be utilized if the Buyer has provided additional Supplier name or reference information.

N201 **Name**   **M**   **AN**   **1/60**
First instance of additional Supplier name or
reference information.

N202 **Name**   **O**   **AN**   **1/60**
Second instance of additional Supplier name or
reference information.

N1 Name

Level: Header
Position: 310
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.

Four iterations of this N1 loop are possible within this 850 transaction set. This iteration of the N1 loop is used to provide information regarding the Ship From entity.

N101	**Entity Identifier Code**		**M**	**ID**	**2/3**
	SF Ship From				
N102	**Name**		**X**	**AN**	**1/60**
	Name of Ship From entity.				

N3 Address Information

Level:	Header
Position:	330
Loop:	N1
Status:	Optional.
Purpose:	To specify the location of the named party.

Within this N1 loop, there is one mandatory iteration and one optional iteration of this N3 segment. The first mandatory iteration is used to provide one-two lines of Ship From address information.

N301	**Address Information**	**M**	**AN**	**1/55**
	First line of Ship From address.			
N302	**Address Information**	**O**	**AN**	**1/55**
	If applicable, second line of Ship From address.			

N3 Address Information

Level: Header
Position: 330
Loop: N1
Status: Optional.
Purpose: To specify the location of the named party.

> Within this N1 loop, there is one mandatory iteration and one optional iteration of this N3 segment. The second optional iteration is only utilized if there are three lines of Ship From address information.

N301	**Address Information**		**M**	**AN**	**1/55**
	Third line of Ship From address.				

N4 Geographic Location

Level:	Header
Position:	340
Loop:	N1
Status:	Optional.
Purpose:	To specify the geographic place of the named party.

N401 **City Name** O AN **2/30**
City name for Ship From address.

N402 **State or Province Code** O ID **2/2**
State or province code for Ship From address.

N403 **Postal Code** O ID **3/15**
Postal code for Ship From address.

N404 **Country Code** O ID **2/3**
Country code for Ship From address.

N1 Name

Level: Header
Position: 310
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.

Four iterations of this N1 loop are possible within this 850 transaction set. This iteration of the N1 loop is used to provide information identifying the Ship To location.

N101	**Entity Identifier Code** ST Ship To	**M**	**ID**	**2/3**
N102	**Name** Ship To location name.	**X**	**AN**	**1/60**
N103	**Identification Code Qualifier** 92 Assigned by Buyer	**X**	**ID**	**1/2**
N104	**Identification Code** Buyer-assigned warehouse code for this Ship To location.	**X**	**AN**	**2/80**

N2 Additional Name Information

Level: Header
Position: 320
Loop: N1
Status: Optional.
Purpose: To specify additional name information.

This segment will only be utilized if the Buyer has provided additional Ship-To name or reference information.

N201	**Name**	**M**	**AN**	**1/60**

Additional Ship To name or reference information.

N3 Address Information

Level: Header
Position: 330
Loop: N1
Status: Optional.
Purpose: To specify the location of the named party.

Within this N1 loop, there is one mandatory iteration and one optional iteration of this N3 segment. The first mandatory iteration is used to provide one-two lines of Ship To address information.

N301	**Address Information** First line of Ship To address.	M	AN	1/55
N302	**Address Information** If applicable, second line of Ship To address.	O	AN	1/55

N3 Address Information

Level: Header
Position: 330
Loop: N1
Status: Optional.
Purpose: To specify the location of the named party.

Within this N1 loop, there is one mandatory iteration and one optional iteration of this N3 segment. The second optional iteration is only utilized if there are three lines of Ship To address information.

N301	**Address Information**	M	AN	1/55

Third line of Ship To address.

N4 Geographic Location

Level: Header
Position: 340
Loop: N1
Status: Optional.
Purpose: To specify the geographic place of the named party.

N401	**City Name**	**O**	**AN**	**2/30**	
	City name for Ship To address.				
N402	**State or Province Code**	**O**	**ID**	**2/2**	
	State or province code for Ship To address.				
N403	**Postal Code**	**O**	**ID**	**3/15**	
	Postal code for Ship To address.*				
N404	**Country Code**	**O**	**ID**	**2/3**	
	Country code for Ship To address.				

*A few international addresses may have a one or two character postal code. To meet the minimum EDI standard of three characters, a period "." will be used to extend those postal codes to three characters. Examples: 17. or 1..

Example of the N4 segment:

N4~Belfast~~17.~IE|

N1 Name

Level:	Header
Position:	310
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.

Four iterations of this N1 loop are possible within this 850 transaction set. This iteration of the N1 loop is used to provide information identifying the Buying Party.

N101	**Entity Identifier Code**		**M**	**ID**	**2/3**
	BY Buying Party				
N102	**Name**		**X**	**AN**	**1/60**
	Buying Party name.				

N3 Address Information

Level: Header
Position: 330
Loop: N1
Status: Optional.
Purpose: To specify the location of the named party.

> Within this N1 loop, there is one mandatory iteration and one optional iteration of this N3 segment. The first mandatory iteration is used to provide one-two lines of Buying Party address information.

N301	**Address Information**	**M**	**AN**	**1/55**
	First line of Buying Party address.			
N302	**Address Information**	**O**	**AN**	**1/55**
	If applicable, second line of Buying Party address.			

N3 Address Information

Level: Header
Position: 330
Loop: N1
Status: Optional.
Purpose: To specify the location of the named party.

Within this N1 loop, there is one mandatory iteration and one optional iteration of this N3 segment. The second optional iteration is only utilized if there are three lines of Buying Party address information.

N301   Address Information   M   AN   1/55
Third line of Buying Party address.

N4 Geographic Location

Level: Header
Position: 340
Loop: N1
Status: Optional.
Purpose: To specify the geographic place of the named party.

N401	**City Name**	O	AN	**2/30**
	City name for Buying Party address.			
N402	**State or Province Code**	O	ID	**2/2**
	State or province code for Buying Party address.			
N403	**Postal Code**	O	ID	**3/15**
	Postal code for Buying Party address.			
N404	**Country Code**	O	ID	**2/3**
	Country code for Buying Party address.			

PO1   Baseline Item Data

Level: Detail
Position: 010
Loop: PO1
Status: Mandatory.
Purpose: To specify basic item identification data.

There can be multiple iterations of the PO1 loop within this 850 transaction set; one iteration per line item of the purchase order.

PO101 Assigned Identification Buyer-assigned line item number.	O	AN	1/20
PO102 Quantity Ordered Line item order quantity.	X	R	1/15
PO103 Unit or Basis for Measurement Code Unit of measure for line item order quantity.	O	ID	2/2
PO106 Product/Service ID Qualifier PN Company Part Number	X	ID	2/2
PO107 Product/Service ID Buyer's item number.	X	AN	1/48
PO108 Product/Service ID Qualifier PD Part Number Description	X	ID	2/2
PO109 Product/Service ID Buyer's description of item.	X	AN	1/48

To support "legacy" implementations of this transaction set, the Buyer's Item Description is provided in two locations – the PO108/09 elements above, and in a Detail level **PID segment**.

CTP   Pricing Information

Level:	Detail
Position:	040
Loop:	CTP
Status:	The CTP loop is optional, but if utilized, the CTP segment is mandatory.
Purpose:	To specify pricing information.

CTP03 Unit Price   **X**   **R**   **1/17**
Line item unit price.

CTP04 Quantity   **X**   **R**   **1/15**
Line item price quantity.

CTP05 Composite Unit of Measure   **X**   **Composite**

CTP501 Unit or Basis for Measurement Code   **M**   **ID**   **2/2**
Unit of measure for line item price quantity.

PID Product/Item Description

Level: Detail
Position: 050
Loop: PID
Status: The PID loop is optional, but if utilized, the PID segment is mandatory.
Purpose: To describe a product in coded or free-form format.

> To support "legacy" implementations of this transaction set, Buyer's Item Description
> is provided in two locations, the PID05 element below, and in the **PO109 element**.

PID01	**Item Description Type**	M	ID	1/1
	F Free-form format			

PID05	**Description**	X	AN	1/80
	Buyer's Item Description. Provides a description of the item identified in the **PO107 element**.			

TD5 Carrier Details (Routing Sequence/Transit Time)

Level: Detail
Position: 250
Loop: PO1
Status: Optional.
Purpose: To provide a description of the type of carrier.

TD502 Identification Code Qualifier   **X**   **ID**   **1/2**
GA   Primary Agent Identification

TD503 Identification Code   **X**   **AN**   **2/80**
Text description of carrier type.

Air
Rail
Road
Sea

TD504 Transportation Method/Type Code   **X**   **ID**   **1/2**
Code specifying the method or type of transportation for the shipment.

A   Air
R   Rail
M   Road
S   Ocean

Two changes have been made to the TD5 segment:
1. The word "Freight" has been removed from the TD503 values
2. The TD504 element has been added

TXI Tax Information

Level: Detail
Position: 291
Loop: PO1
Status: Optional.
Purpose: To specify tax information.

> The Tax Exempt Code is provided in both the TXI05 and TXI06 elements. The reason for this redundancy is that "legacy" implementations of the 850 transaction set have differed as to the element utilized for this code. "2" added to codes shown as a documentation update only in May 2015.
>
> A Supplier can choose which data element of the two they prefer to map the Tax Exempt Code from.

TXI01	**Tax Type Code**		M	ID	2/2
	LS State or Local Tax				
TXI03	**Percent**		X	R	1/10
	100				
TXI04	**Tax Jurisdiction Code Qualifier**		X	ID	2/2
	CD Customer Defined				
TXI05	**Tax Jurisdiction Code**		X	AN	1/10
	0 Exempt (For Export)				
	1 Yes (Tax Exempt)				
	2 No (Not Tax Exempt)				
	3 Exempt (For Resale)				
	C Not Taxable				
TXI06	**Tax Exempt Code**		X	ID	1/1
	0 Exempt (For Export)				
	1 Yes (Tax Exempt)				
	2 No (Not Tax Exempt)				
	3 Exempt (For Resale)				
	C Not Taxable				
TXI09	**Tax Identification Number**		O	AN	1/20
	Tax Exempt Certificate number.				

SCH Line Item Schedule

Level: Detail
Position: 295
Loop: SCH
Status: The SCH loop is optional, but if utilized, the SCH segment is mandatory.
Purpose: To specify the data for scheduling a specific line item.

SCH01 Quantity   **M   R   1/15**
Line item order quantity

SCH02 Unit or Basis for Measurement Code   **M   ID   2/2**
Unit of measure for line item order quantity

SCH05 Date/Time Qualifier   **M   ID   3/3**
002   Delivery Requested

SCH06 Date   **M   DT   8/8**
Planned Delivery date. Format is CCYYMMDD.

Note: BCA recently added a Ship Date on the orders sent to the Exostar 787 SCMP UI. It is not currently available via the integration.

N9   Reference Identification

Level: Detail
Position: 330
Loop: N9
Status: The N9 loop is optional, but if utilized, the N9 segment is mandatory.
Purpose: To transmit identifying information as specified by the Reference Identification
                Qualifier.

Six iterations of this N9 loop are possible within this 850 transaction set. This iteration
of the N9 loop is used to provide the Line Item Sequence Number.

N901   **Reference Identification Qualifier**   **M**   **ID**   **2/3**
           55   Sequence Number

N902   **Reference Identification**   **X**   **AN**   **1/30**
           Line Item Sequence number.

N9   Reference Identification

Level: Detail
Position: 330
Loop: N9
Status: The N9 loop is optional, but if utilized, the N9 segment is mandatory.
Purpose: To transmit identifying information as specified by the Reference Identification
              Qualifier.

Six iterations of this N9 loop are possible within this 850 transaction set. This iteration
of the N9 loop is used to provide text information that further describes the Tax
Exempt Status Code provided in the **TXI05** or **TXI06** element. No (Not Tax Exempt)
added in May 2015 as a documentation update only.

N901	**Reference Identification Qualifier**	**M**	**ID**	**2/3**
	TX Tax Exempt			
N902	**Reference Identification**	**X**	**AN**	**1/30**
	Text information related to the Tax Exempt Status code.			

Usage examples for the N902 element:

Exempt-ForExport
Yes-TaxExempt
No (Not Tax Exempt)
Exempt-ForResale
NotTaxable

N9   Reference Identification

Level: Detail
Position: 330
Loop: N9
Status: The N9 loop is optional, but if utilized, the N9 segment is mandatory.
Purpose: To transmit identifying information as specified by the Reference Identification
                Qualifier.

Six iterations of this N9 loop are possible within this 850 transaction set. This iteration
of the N9 loop is used to provide the Contract Number/Contract Line Item
Position Number.

N901	**Reference Identification Qualifier**	**M**	**ID**	**2/3**
	CT Contract Number			
N902	**Reference Identification**	**X**	**AN**	**1/30**
	Contract Number that applies to this line item.			
N903	**Free-form Description**	**X**	**AN**	**1/45**
	Contract Line Item Position Number.			

To support "legacy" implementations of this transaction set, Contract Line
Item Number appears in two Detail-level N9 segments – as the N903
element above, and as the N902 element in the N9~C7 segment (refer
following page).

N9   Reference Identification

Level: Detail
Position: 330
Loop: N9
Status: The N9 loop is optional, but if utilized, the N9 segment is mandatory.
Purpose: To transmit identifying information as specified by the Reference Identification
             Qualifier.

Six iterations of this N9 loop are possible within this 850 transaction set. This iteration
of the N9 loop is used to provide the Contract Line Item Position Number.

N901	**Reference Identification Qualifier**		**M**	**ID**	**2/3**
	C7	Contract Line Item Number			

N902	**Reference Identification**		**X**	**AN**	**1/30**
	Contract Line Item Position Number that applies to this line item.				

To support "legacy" implementations of this transaction set, Contract Line
Item Position Number appears in two Detail-level N9 segments – as the
N902 element above, and as the N903 element in the N9~CT segment
(refer previous page).

N9   Reference Identification

Level: Detail
Position: 330
Loop: N9
Status: The N9 loop is optional, but if utilized, the N9 segment is mandatory.
Purpose: To transmit identifying information as specified by the Reference Identification
                Qualifier.

Six iterations of this N9 loop are possible within this 850 transaction set. This iteration
of the N9 loop is used to provide text notes that pertain to this line item.
Documentation only updated in May 2015 to reflect use of upper case format and
removal of QA Text.

N901	**Reference Identification Qualifier**		**M**	**ID**	**2/3**
	L1 Letters or Notes				

N902	**Reference Identification**		**X**	**AN**	**1/30**
	This element will contain one of the following text values:				

LINE TEXT

MSG Message Text

Level: Detail
Position: 340
Loop: N9
Status: Optional.
Purpose: To provide a free-form format that allows the transmission of text information.

> There can be multiple iterations of the MSG segment within this specific N9 loop.
> Each iteration will contain a line of text notes that apply to this specific line item.

MSG01 Free-Form Message Text   **M   AN   1/264**
Text note that pertains to this line item.

N9   Reference Identification

Level: Detail
Position: 330
Loop: N9
Status: The N9 loop is optional, but if utilized, the N9 segment is mandatory.
Purpose: To transmit identifying information as specified by the Reference Identification Qualifier.

Six iterations of this N9 loop are possible within this 850 transaction set. The sixth iteration of this loop is used to provide text information notes that further qualify the Tax Exempt Certificate identified in the **TXI09 element**. Documentation only updated in May 2015 to reflect upper case format currently sent to supplier.

N901	**Reference Identification Qualifier**	**M**	**ID**	**2/3**
	L1 Letters or Notes			

N902	**Reference Identification**	**X**	**AN**	**1/30**
	This element will contain the following text values:			

TAX EXEMPT CERT TEXT

MSG Message Text

Level: Detail
Position: 340
Loop: N9
Status: Optional.
Purpose: To provide a free-form format that allows the transmission of text information.

MSG01 Free-Form Message Text   **M   AN   1/264**
Text information related to the Tax Exempt Certificate.

N1 Name

Level: Detail
Position: 350
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.

One iteration of this N1 loop is possible within this 850 transaction set. This iteration is used to provide information identifying the Ship To location for this specific line item.

N101	**Entity Identifier Code**	**M**	**ID**	**2/3**
	ST Ship To			
N102	**Name**	**X**	**AN**	**1/60**
	Ship To location name.			
N103	**Identification Code Qualifier**	**X**	**ID**	**1/2**
	92 Assigned by Buyer			
N104	**Identification Code**	**X**	**AN**	**2/80**
	Buyer-assigned warehouse code for this Ship To location.			

N2 Additional Name Information

Level: Detail
Position: 360
Loop: N1
Status: Optional.
Purpose: To specify additional name information.

This segment will only be utilized if the Buyer has provided additional Ship To name or reference information.

| **N201** | **Name** | **M** | **AN** | **1/60** |

Additional Ship To name or reference information.

N3 Address Information

Level: Detail
Position: 370
Loop: N1
Status: Optional.
Purpose: To specify the location of the named party.

Within this N1 loop, there is one mandatory iteration and one optional iteration of this N3 segment. The first mandatory iteration is used to provide one-two lines of Ship To address information.

N301	**Address Information** First line of Ship To address.	**M**	**AN**	**1/55**
N302	**Address Information** If applicable, second line of Ship To address.	**O**	**AN**	**1/55**

N3 Address Information

Level: Detail
Position: 370
Loop: N1
Status: Optional.
Purpose: To specify the location of the named party.

> Within this N1 loop, there is one mandatory iteration and one optional iteration of this N3 segment. The second optional iteration is only utilized if there are three lines of Ship To address information.

N301	**Address Information**	**M**	**AN**	**1/55**

Third line of Ship To address.

N4 Geographic Location

Level: Detail
Position: 380
Loop: N1
Status: Optional.
Purpose: To specify the geographic place of the named party.

N401	**City Name** City name for Ship To address.	O	AN	2/30
N402	**State or Province Code** State or province code for Ship To address.	O	ID	2/2
N403	**Postal Code** Postal code for Ship To address.*	O	ID	3/15
N404	**Country Code** Country code for Ship To address.	O	ID	2/3

*A few international addresses may have a one or two character postal code. To meet the minimum EDI standard of three characters, a period "." will be used to extend those postal codes to three characters. Examples: 17. or 1..

Example of the N4 segment:

N4~Belfast~~17.~IE|

AMT Monetary Amount

Level: Detail
Position: 600
Loop: AMT
Status: The AMT loop is optional, but if utilized, the AMT segment is mandatory.
Purpose: To indicate the total monetary amount.

AMT01 Amount Qualifier Code   **M**   **ID**   **1/3**
    1   Line Item Total

AMT02 Monetary Amount   **M**   **R**   **1/18**
    Total value for this line item.

CTT Transaction Totals

Level: Summary
Position: 010
Loop: CTT
Status: The CTT loop is optional, but if utilized, the CTT segment is mandatory.
Purpose: To transmit a hash total for a specific element in the transaction set.

CTT01 Number of Line Items   M   N0   **1/6**
Total number of line items (**PO1 segments**).

CTT02 Hash Total   O   R   **1/10**
Total quantity of items ordered (sum of **PO102 elements**).

AMT Monetary Amount

Level: Summary
Position: 020
Loop: CTT
Status: Optional.
Purpose: To indicate the total monetary amount.

AMT01 Amount Qualifier Code   **M**   **ID**   **1/3**
TT   Total Transaction Amount

AMT02 Monetary Amount   **M**   **R**   **1/18**
Total value for the entire Purchase Order. Determined
by multiplying Order Quantity x Unit Price for each line
item, and then summing each line item calculation.

SE Transaction Set Trailer

Level: Summary
Position: 030
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 Purchase Order (850) 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**.

Appendix A

A. List of Buyer-specific formats for Purchase Order Number:

    1. <u>Boeing Commercial Airplanes (BCA)</u>

        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).

        Note that the ERP Company Number is the same three-character value that is provided as the Originating Company Identifier (Header-level **N902 element**, where N901 = 8M).

Sample 850 PO Transaction

```
ISA~00~      ~00~       ~12~4252660502    ~ZZ~SUPPLIERID    ~121029~0214~U~00401~000003187~0~P^|
GS~PO~4252660502~SUPPLIERID~20121029~0214~000003187~X~004010|
ST~850~000003187|
BEG~00~NE~628L00555555~~20121018|
PER~BD~Buyer Contact Name~TE~799-555-1212|
FOB~DF~ZZ~Special Terms, See Notes|
ITD~~~0.38~~10~~30~~~~~3/8% 10 Days, Net 30|
N9~L1~Purchase Order Type|
MSG~Discrete Purchase Order|
N9~L1~HEADER TEXT|
MSG~10/18/2012 Purchase Order released to Supplier to support|
MSG~requirements for 2013(supporting XXXXX). Buyer Contact|
MSG~799-555-1212|
N9~8M~628|
N1~SU~Supplier Name~92~SUPPLIERCODE|
N2~Supplier Contact Name~2013 XXXX REQ|
N1~SF~Supplier Name|
N3~Supplier Street1~Supplier Street2|
N3~Supplier Street3|
N4~Herndon~VA~89898-0080~US|
N1~ST~NEW BREED/BCA 787 PROGRAM WH Z1901~92~1110WZ|
N2~Z1901NB|
N3~2600 94th Street SW SUITE 175~Street Address2|
N3~BUILDING 45-70 DOOR S-26A|
N4~EVERETT~WA~98204~US|
N1~BY~BOEING COMMERCIAL AIRPLANES|
N3~PO BOX 3707|
N4~SEATTLE~WA~98124~US|
PO1~0001~1~EA~~~PN~PartX-4~PD~Part description of PartX-4|
CTP~~~5850~1~EA|
PID~F~~~~Part description of PartX-4|
TD5~~GA~Road~M|
TXI~LS~~100~CD~3~3~~~A00 0760 13|
SCH~1~EA~~~002~20130530|
N9~55~1|
N9~CT~000999031~20|
N9~C7~20|
N9~TX~Exempt-ForResale|
N9~L1~TAX EXEMPT CERT TEXT|
MSG~Streamlined Sales and Use Tax Agreement Certificate of Exemption|
MSG~This is a multi-state form. Not all states allow all exemptions listed on this|
MSG~form. Purchasers are responsible for knowing if they qualify to claim exemption|
MSG~from tax in the state that would otherwise be due tax on this sale. The seller|
MSG~may be required to provide this exemption certificate (or the data elements|
MSG~required on the form) to a state that would otherwise be due tax on this sale.|
MSG~The purchaser will be held liable for any tax and interest, and possibly civil|
MSG~and criminal penalties imposed by the member state, if the purchaser is not|
MSG~eligible to claim this exemption. A seller may not accept a certificate of|
```

MSG~exemption for an entity based exemption on a sale made at a location operated|
MSG~by the seller within the designated state if the state does not allow such an|
MSG~entity based exemption.|
MSG~1. WA|
MSG~2. Single Purchase Certificate|
MSG~3. Purchasers Tax ID: A00 0760 13|
MSG~4. Type of business: Our principal business or activity is manufacturing|
MSG~aircraft and aerospace products.|
MSG~5. Reason for exemption: Resale|
MSG~6. I declare that the information on this certificate is correct and complete|
MSG~to the best of my knowledge and belief. (Please see contract for signature)|
AMT~1~5850|
PO1~0002~1~EA~~~PN~PartX-4~PD~Part description of PartX-4|
CTP~~~5850~1~EA|
PID~F~~~~Part description of PartX-4|
TD5~~GA~Air~A|
TXI~LS~~100~CD~3~3~~~A00 0760 13|
SCH~1~EA~~~002~20130625|
N9~55~1|
N9~CT~000999031~20|
N9~C7~20|
N9~TX~Exempt-ForResale|
N9~L1~LINE TEXT|
MSG~Line Item Notes1|
MSG~Line Item Notes2|
N9~L1~TAX EXEMPT CERT TEXT|
MSG~Streamlined Sales and Use Tax Agreement Certificate of Exemption|
MSG~This is a multi-state form. Not all states allow all exemptions listed on this|
MSG~form. Purchasers are responsible for knowing if they qualify to claim exemption|
MSG~from tax in the state that would otherwise be due tax on this sale. The seller|
MSG~may be required to provide this exemption certificate (or the data elements|
MSG~required on the form) to a state that would otherwise be due tax on this sale.|
MSG~The purchaser will be held liable for any tax and interest, and possibly civil|
MSG~and criminal penalties imposed by the member state, if the purchaser is not|
MSG~eligible to claim this exemption. A seller may not accept a certificate of|
MSG~exemption for an entity based exemption on a sale made at a location operated|
MSG~by the seller within the designated state if the state does not allow such an|
MSG~entity based exemption.|
MSG~1. WA|
MSG~2. Single Purchase Certificate|
MSG~3. Purchasers Tax ID: A00 0760 13|
MSG~4. Type of business: Our principal business or activity is manufacturing|
MSG~aircraft and aerospace products.|
MSG~5. Reason for exemption: Resale|
MSG~6. I declare that the information on this certificate is correct and complete|
MSG~to the best of my knowledge and belief. (Please see contract for signature)|
AMT~1~5850|
CTT~2~2|
AMT~TT~11700|
SE~96~000003187|
GE~1~000003187|
IEA~1~000003187|