

10 Industry Conventions

10.1 Introduction

The ASC X12 Standard defines multiple transaction sets. These structured transaction sets are designed to be interpreted by computer programs. A transaction set is made up of particular data segments. Data segments are comprised of one to many data elements. The following pages illustrate the structure and definitions that apply to the ASC X12 transaction sets implemented by OBF EDI Committee.

10.1.1 Data Segment Sequence Diagram

Following is a Data Segment Sequence Diagram of a section of the 820 transaction set listing. The definitions for column headings are listed below.

Heading:							
a	b	c	d	e	f	g	h
<u>Page No.</u>	<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Req. Des.</u>	<u>Max Use</u>	<u>Loop Repeat</u>	<u>Notes and Comments</u>
6	0100	ST	Transaction Set Header	M	1		
7	0200	BPR	Beginning Segment for Payment Order/Remittance Advice	M	1		
Not Used	0300	NTE	Note/Special Instruction	O	>1		
9	0350	TRN	Trace	O	1		c1
10	0400	CUR	Currency	O	1		c2
12	0500	REF	Reference Identification	O	>1		
13	0600	DTM	Date/Time Reference	O	>1		
		i	LOOP ID - N1			>1	
14	0700	N1	Name	O	1		c3
15	0800	N2	Additional Name Information	O	>1		
16	0900	N3	Address Information	O	>1		
17	1000	N4	Geographic Location	O	1		
Not Used	1100	REF	Reference Identification	O	>1		
18	1200	PER	Administrative Communications Contact	O	>1		
19	1300	RDM	Remittance Delivery Method	O	1		
21	1400	DTM	Date/Time Reference	O	1		

- a** **Page No.** Page Number/Use Indicator
“Not Used” in this column indicates that the segment is currently not in use by OBF EDI Committee. Else, the page number of the segment layout is shown.
- b** **Pos. No.** Position Number
The sequence of the data segment as it appears in the transaction set.
- c** **Seg. ID** Segment Identifier
The ASC X12 segment identifier abbreviation for the data segment. Each data segment has a unique identifier composed of a combination of two or three uppercase letters and/or numerical digits. The first character must be an alpha character.

The segment identifier serves as a name for the segment and occupies the first character positions of the segment. The segment identifier is not a data element.

d **Name**

Name
The descriptive name of the data segment.

e **Req. Des.**

Requirement Designator
An ASC X12 designation code is used to designate whether the appearance of the data segments in the transaction set are mandatory, optional or floating. The first segment in a loop is always mandatory, if the loop is used. The requirement designator used on the first data segment in the loop indicates whether the loop is mandatory or optional.

The following three segment requirement designators define its need to appear within the transaction set:

<u>Req. Des.</u>	<u>Interpretation</u>
M	Mandatory The data segment must be included in the transaction set.
O	Optional The data segment's appearance in the transaction set is based on agreement of trading partners.

f **Max Use**

Maximum Consecutive Use
The maximum number of consecutive times the data segment can be included in a transaction set at this location.

g **Loop Repeat**

The maximum number of times a data loop can be repeated within a transaction set. Loop repeats are ASC X12 standard.

h **Notes and Comments**

References to Transaction Notes or Transaction Comments which will be found following the Segment Sequence Chart. The value "c1" refers to Transaction Comment 1; the value "n1" refers to Transaction Note 1.

i **Loop ID**

Loop Identifier
The OBF EDI Committee assigned loop identifier.

10.1.2 Data Segment Summary

Following is a Data Segment Summary for a Heading N1/REF with definitions for each label in the summary below.

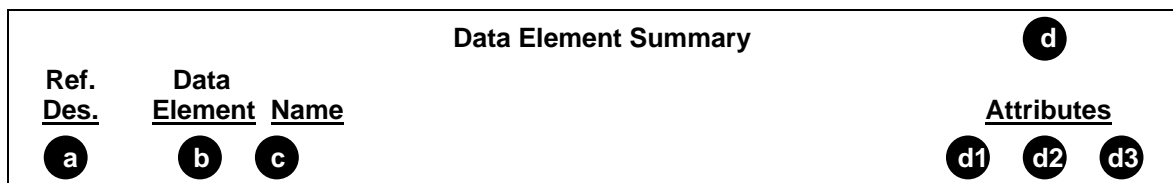
Segment:	REF Reference Identification
Position:	3500
Loop:	N1 Optional
Level:	Heading
Usage:	Optional
Max Use:	12
Purpose:	To specify identifying information
Syntax Notes:	1 At least one of REF02 or REF03 is required.
Semantic Notes:	1 REF04 contains data relating to the value cited in REF02.
Comments:	
Notes:	OBF EDI Committee will use REF03 to list "phrase codes" for the specific Ordering & Billing Forum (OBF) data field in REF02 as identified by the code in REF01. A list of the REF01 codes and the associated REF03 "phrase codes" can be found in section 10.4 in data element 128.

Segment:	The segment ID is made up of two or three characters; the name follows.
Position:	The position of this segment in the transaction set within the level indicated.
Loop:	The name of the loop of which the segment is a part. Also the usage for the loop (Optional, Mandatory).
Level:	The level within the transaction set: Heading (Table 1), Detail (Table 2), Summary (Table 3).
Usage:	Whether the segment is Mandatory or Optional in the transaction set or loop.
Max Use:	The maximum number of consecutive occurrences that this segment may appear at this level and position.
Purpose:	A statement of the generally intended use for the segment.
Syntax Notes:	The ASC X12 rules for the relationships between the data elements that make up the segment.
Semantic Notes:	The ASC X12 notes indicating the semantic use of the data elements within the segment. For instance, if there are two occurrences of the same data element in the segment there will be a semantic note explaining what each occurrence is to be used for.
Comments:	The ASC X12 comments about the use of the segment or data elements within the segment. Frequently, these comments provide semantic or syntax rules based on specific values of one or more data elements.
Notes:	Notes explaining OBF EDI Committee conventions for this segment or one or more of the data elements in the segment.

A Data Element Summary follows this information. The Data Element Summary lists all the data elements, in order, that are included in the data segment.

10.1.3 Data Element Summary

Following are a Data Element Summary diagram and definitions for the data elements included in the diagram:



- a**
Ref. Des Reference Designator
 The position of the data element within the data segment.
- b**
Data Element Data Element
 The data element number, which is assigned by ASC X12. When a new data element is created, X12 assigns the next available number to uniquely identify it.
- c**
Name Name
 The descriptive name assigned to the data element by ASC X12.

- d**
Attributes Attributes
 Characteristics of the data element. The three attributes of each data element are:

- d1**
Condition Designator
 A code used to determine whether according to ASC X12 the appearance of the data element in the segment is mandatory, optional or conditional. The following three element condition designators define its need to appear within the data segment:

<u>Cond. Des.</u>	<u>Interpretation</u>
M	Mandatory The data element must be included in the data segment if the data segment is provided in the transaction set.
O	Optional The use of the data element in the data segment is either at the option of the sending party or is based on mutual agreement between trading partners.
X	Conditional The use of the data element is dependent on the value or appearance of some other data element in the same data segment.

- d2**
Data Element Type
 Specifies the type of data permitted in the data element.

Following are the valid data element types:

<u>Type</u>	<u>Description</u>
AN	Alphanumeric Upper-case letters, digits, spaces and punctuation marks may be used. Trading partners may elect to include lower-case letters and other special characters. An alphanumeric string is left justified, and the field is space-filled, if necessary, to meet the minimum length.
DT	Date A date data element is used to express the ISO standard date in CCYYMMDD format, in which CC is the century, YY is the year in the century (00 to 99), MM is the month (01 to 12), and DD is the day in the month (01 to 31). (Example: January 9, 1998 would be 19980109) This is a change within the ASC X12 Version 004010 EDI Standards.
TM	Time A time data element is used to express the ISO standard time in HHMMSSDD format in which H = hours for a 24 hour clock (00 to 23), M = minutes (00 to 59), S = integer seconds (00 to 59), and DD = decimal seconds; decimal seconds are expressed as follows: D = tenths (0-9) and DD = hundredths (00-99). (Example: 2:40 P.M. would be 1440)
ID	Identifier Allowable values for identifier data elements are taken from predefined lists maintained by ASC X12 committee or other sanctioned groups.
Nn	Numeric The "N" indicates numeric and the "n" indicates the decimal places to the right of a fixed implied decimal point e.g., N represents numeric with no decimal places. The decimal point is fixed and not entered as part of the value. Optional leading signs (+ or -) are allowed but not included in the data element length. The absence of a sign indicates a positive value. The value is right justified in the field, and the field is zero filled, if necessary, to meet the minimum length. For additional information see the X12.6 Application Control Structure section of any ASC X12 Standards Version/Release documentation.

<u>Type</u>	<u>Description</u>
R	<p>Real Decimal Number The decimal point (.) is optional in the representation of integers under the real decimal data type, but is required for fractional values. Optional leading signs (+ or -) are allowed but not included in the data element length. The absence of a sign indicates a positive value. The value is right justified within the data element length. Optional signs and the decimal point are not included in the data element length. The maximum number of decimal places should be agreed upon by trading partners.</p>



Minimum/Maximum Length
The minimum and maximum number of characters allowed for inclusion in the data element.

10.1.4 General Information

Both valid ASC X12 data segments and data elements may be described in this guideline as not used by OBF EDI Committee. This indicates that it has been determined by OBF EDI Committee that there is not a valid business reason within the Telecommunications Industry for the inclusion of the particular data segment or data element in an electronic document. Data segments not used by OBF EDI Committee are identified in the Data Segment Sequence Chart preceding each transaction set. In order to obtain the specifications of data segments not used by OBF EDI Committee, the applicable ASC X12 documentation should be consulted.

The use of a valid ASC X12 data segment or data element in an electronic document should not result in the rejection of the segment and/or document, in spite of the fact that the segment or element is not used by OBF EDI Committee. The use of data segments or data elements not used by OBF EDI Committee should be an issue resolved by the trading partners.

All valid ASC X12 codes can be found in the applicable Version/Release of the ASC X12 Standards and subsets of these code lists are recommended and provided in the transaction sets. OBF EDI Committee Code lists will be included in the body of the document only if they are a subset of the OBF EDI Committee recommended codes and are specific to the transaction set and data element or are necessary to clarify the use of a specific data element among transaction sets in related business areas. As a general rule of thumb, a subset of the ASC X12 code list should be included in the text if it consists of 15 or fewer codes.

Section 10.3 (when available) contains ASC X12 code lists used in this guideline as of the date of publication. Codes used by OBF EDI Committee in transaction sets of this guideline are shaded in the code lists.

Section 10.4 contains code values for OBF EDI Committee maintained codes as of the date of publication. If Section 10.4 should be referenced, the codes values or a note "See Section 10.4" will be provided. It also provides addresses for obtaining code lists maintained by organizations other than OBF EDI Committee.

It is important to note, shaded text throughout this document indicates either an OBF EDI Committee convention or OBF EDI Committee terminology. Comments and notes included in a shaded area provide non-ASC X12 information.

10.1.5 Conventions for Representing Telephone Numbers

When formatting telephone numbers, OBF EDI Committee recommends that the number always include the area code and be strung together without any special characters, such as dashes or parentheses. If an extension number is used, it should follow the telephone number and be preceded with an "X". The format for an international telephone number includes the international access code, country code, city code and local number. Following are examples of properly formatted telephone numbers:

Example 1

Telephone Number of (201) 123-4567 would be 2011234567

Example 2

Telephone Number of (201) 123-4500 extension 1234 would be 2011234500X1234

Example 3

International Telephone Number of 011 46 8 12 34 56 would be 011468123456

When formatting a range or group of telephone numbers, OBF EDI Committee recommends that the range of numbers be separated by a dash (see DE #1000 code of T9) and for a group of numbers the separator(s) should be a comma (,) or forward slash (/). However, before sending either a range or group of telephone numbers, it is advised that you discuss this with your trading partner and include the agreed upon formats in your trading partner agreement.

Example 1

Telephone Number Range from (203) 522-1200 to (203) 522-1259 would be 2035221200-1259

Example 2

Telephone Number Group of (201) 123-1200, (201) 123-1205, (201) 123-1210, (201) 123-1211, (201) 123-1212 would be 2011231200,1205,1210,1211,1212 or 2011231200/1205/1210/1211/1212. If only the terminal number is needed, such as the terminal numbers of a hunting group the format would be 1200,1205,1210,1211,1212 or 1200/1205/1210/1211/1212.

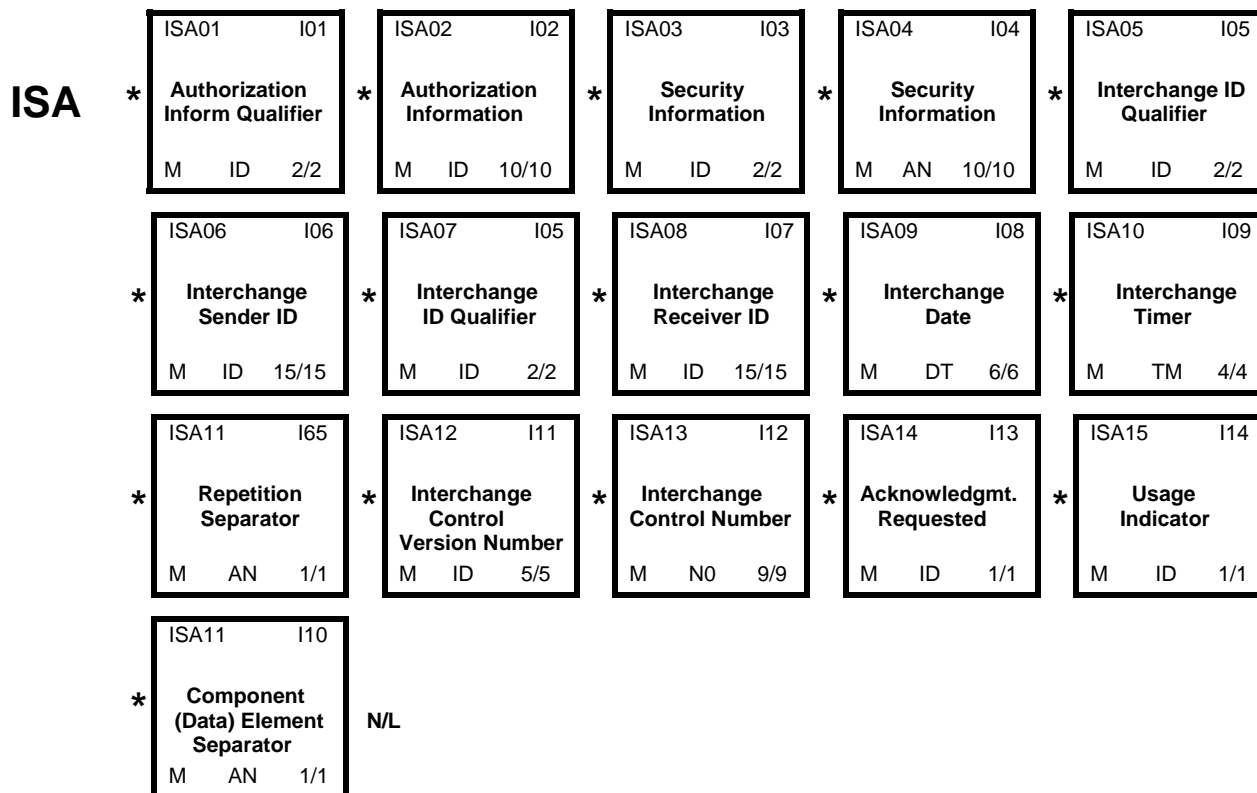
10.2 Control Segments

Segment: **ISA** Interchange Control Header
Position: Interchange envelope
Loop:
Level: Interchange Control Structure
Usage: Mandatory
Max Use: 1
Purpose: To start and identify an interchange of zero or more functional groups and interchange-related control segments

Syntax Notes:
Semantic Notes:
Comments:
Notes:

The Data Element separator is a special character used to separate data elements within a segment. The first occurrence of the Data Element Separator (the fourth character in the ISA header segment) defines the value of the Data Element Separator for the entire interchange. It must be used consistently in all the segments between the ISA header and corresponding IEA trailer. It **CANNOT** be used as data within a data element. An asterisk (*) represents the Data Element Separator in this document.

The Data Segment Terminator is a special character used to terminate every segment within an interchange. The first occurrence of the Data Segment Terminator (the special character immediately following the Sub element Separator ISA16) defines the value of the Data Segment Terminator for the entire interchange. It must be used consistently to end all data segments that are between each ISA header and corresponding IEA trailer. It **CANNOT** be used as data within a data element or as a data element separator. The New Line character (hexadecimal 15) is the special character used for the Segment Terminator in this document.



Data Element Summary

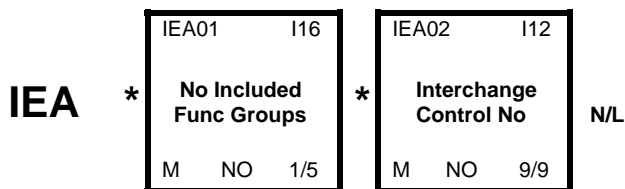
Ref. Des.	Data Element	Name	Attributes
ISA01	I01	Authorization Information Qualifier	M ID 2/2
		Code identifying the type of information in the Authorization Information	
		The preferred OBF EDI Committee code for this data element is:	
		00 No Authorization Information Present (No Meaningful Information in I02)	
ISA02	I02	Authorization Information	M AN 10/10
		Information used for additional identification or authorization of the interchange sender or the data in the interchange; the type of information is set by the Authorization Information Qualifier (I01)	
		The preferred OBF EDI Committee value for this data element is 10 blanks.	
ISA03	I03	Security Information Qualifier	M ID 2/2
		Code identifying the type of information in the Security Information	
		The preferred OBF EDI Committee code for this data element is:	
		00 No Security Information Present (No Meaningful Information in I04)	
ISA04	I04	Security Information	M AN 10/10
		This is used for identifying the security information about the interchange sender or the data in the interchange; the type of information is set by the Security Information Qualifier (I03)	
		The preferred OBF EDI Committee value for this data element is 10 blanks.	
ISA05	I05	Interchange ID Qualifier	M ID 2/2
		Code indicating the system/method of code structure used to designate the sender or receiver ID element being qualified	
		The preferred OBF EDI Committee codes for this data element are:	
		01 Duns (Dun & Bradstreet)	
		08 UCC EDI Communications ID (Comm ID)	
		12 Phone (Telephone Companies)	
		14 Duns Plus Suffix	
		16 Duns Number With 4-Character Suffix	
		ZZ Mutually Defined	
ISA06	I06	Interchange Sender ID	M AN 15/15
		Identification code published by the sender for other parties to use as the receiver ID to route data to them; the sender always codes this value in the sender ID element	
		It is recommended that this Identifier is mutually agreed upon by the trading partners in advance of the transmission.	
ISA07	I05	Interchange ID Qualifier	M ID 2/2
		Code indicating the system/method of code structure used to designate the sender or receiver ID element being qualified	
		See values shown under ISA05	
ISA08	I07	Interchange Receiver ID	M AN 15/15

Data Element Summary

<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
		Identification code published by the receiver of the data; When sending, it is used by the sender as their sending ID, thus other parties sending to them will use this as a receiving ID to route data to them It is recommended that this Identifier is mutually agreed upon by the trading partners in advance of the transmission.	
ISA09	I08	Interchange Date Date of the interchange	M DT 6/6
ISA10	I09	Interchange Time Time of the interchange	M TM 4/4
ISA11	I65	Repetition Separator Type is not applicable; the repetition separator is a delimiter and not a data element; this field provides the delimiter used to separate repeated occurrences of a simple data element or a composite data structure; this value must be different than the data element separator, component element separator, and the segment terminator	M AN 1/1
ISA12	I11	Interchange Control Version Number Code specifying the version number of the interchange control segments Positions 1-3 specify the major version number and positions 4-5 specify the release level of the version number. 00401 Draft Standards for Trial Use Approved for Publication by ASC X12 Procedures Review Board through October 1997 (Used by ETB Committee) 00405 Draft Standards for Trial Use Approved for Publication by ASC X12 Procedures Review Board through October 2001 (Used by UOM-LSR)	M ID 5/5
ISA13	I12	Interchange Control Number A control number assigned by the interchange sender The value of this data element must match the value in the same element (IEA02) in the Interchange Control Trailer.	M NO 9/9
ISA14	I13	Acknowledgment Requested Code indicating sender's request for an interchange acknowledgment 0 No Acknowledgment Requested 1 Interchange Acknowledgment Requested	M ID 1/1
ISA15	I14	Usage Indicator Code indicating whether data enclosed by this interchange envelope is test, production or information P Production Data T Test Data	M ID 1/1
ISA16	I15	Component Element Separator Type is not applicable; the component element separator is a delimiter and not a data element; this field provides the delimiter used to separate component data elements within a composite data structure; this value must be different than the data element separator and the segment terminator	M AN 1/1

Segment: **IEA** Interchange Control Trailer
Position: Interchange envelope
Loop:
Level: Interchange Control Structure
Usage: Mandatory
Max Use: 1
Purpose: To define the end of an interchange of zero or more functional groups and interchange-related control segments

Syntax Notes:
Semantic Notes:
Comments:



Data Element Summary

<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
IEA01	I16	Number of Included Functional Groups	M NO 1/5
A count of the number of functional groups included in an interchange			
IEA02	I12	Interchange Control Number	M NO 9/9
A control number assigned by the interchange sender			
The value of this data element must match the value of the same data element (ISA13) in the Interchange Control Header.			

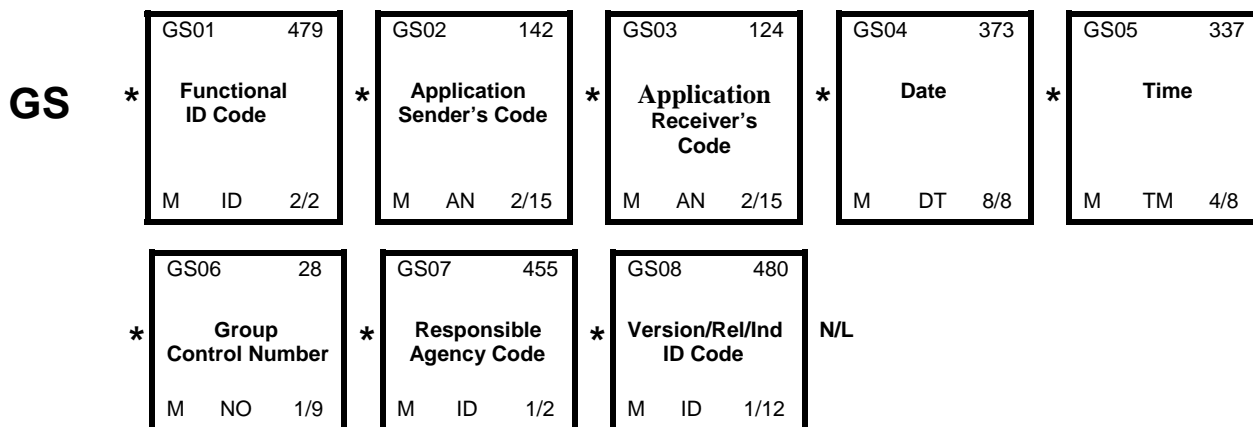
Segment: **GS** Functional Group Header
Position: Functional Group envelope
Loop:
Level: Interchange Control Structure
Usage: Optional
Max Use: 1
Purpose: To indicate the beginning of a functional group and to provide control information
Syntax Notes:
Semantic Notes:

- 1 GS04 is the group date.
- 2 GS05 is the group time.
- 3 The data interchange control number GS06 in this header must be identical to the same data element in the associated functional group trailer, GE02.

Comments:

- 1 A functional group of related transaction sets, within the scope of X12 standards, consists of a collection of similar transaction sets enclosed by a functional group header and a functional group trailer.

Notes: The value in the Application Receiver's Code (GS03) is assigned by the receiver of the transaction set. This data element can be used to route incoming transaction sets to the appropriate internal application. This data element becomes very important for a company when receiving the same transaction set for different internal applications. In a similar manner the sender of the transaction set will assign a value to the application sender's code (GS02). The values in GS02 and GS03 are exchanged by trading partners prior to transmission of transaction sets.



Data Element Summary

<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
GS01	479	Functional Identifier Code	M ID 2/2

Code identifying a group of application related transaction sets

The preferred OBF EDI Committee codes for this data element are:

AG	Application Advice (824)
CA	Purchase Order Change
CI	Acknowledgment/Request - Seller Initiated (865)
CI	Consolidated Service Invoice / Statement (811)
FA	Functional Acknowledgment (997)
PC	Purchase Order Change Request - Buyer Initiated (860)

Data Element Summary

<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
		PO	Purchase Order (850)
		PR	Purchase Order Acknowledgment (855)
		RA	Payment Order / Remittance Advice (820)
		RQ	Request for Quotation (840) and Procurement Notices (836)
		TX	Text Message (864)
GS02	142	Application Sender's Code	M AN 2/15
		Code identifying party sending transmission; codes agreed to by trading partners	
GS03	124	Application Receiver's Code	M AN 2/15
		Code identifying party receiving transmission; codes agreed to by trading partners	
GS04	373	Date	M DT 8/8
		Date expressed as CCYYMMDD	
GS05	337	Time	M TM 4/8
		Time expressed in 24-hour clock time as follows: HHMM, or HHMMSS, or HHMMSSD, or HHMMSSDD, where H = hours (00-23), M = minutes (00-59), S = integer seconds (00-59) and DD = decimal seconds; decimal seconds are expressed as follows: D = tenths (0-9) and DD = hundredths (00-99)	
GS06	28	Group Control Number	M NO 1/9
		Assigned number originated and maintained by the sender	
		The value of this data element in GS06 must match the value of this same data element in GE02.	
GS07	455	Responsible Agency Code	M ID 1/2
		Code identifying the issuer of the standard; this code is used in conjunction with Data Element 480	
		X	Accredited Standards Committee X12
GS08	480	Version / Release / Industry Identifier Code	M AN 1/12
		Code indicating the version, release, sub-release, and industry identifier of the EDI standard being used, including the GS and GE segments; if code in DE455 in GS segment is X, then in DE 480 positions 1-3 are the version number; positions 4-6 are the release and sub-release, level of the version; and positions 7-12 are the industry or trade association identifiers (optionally assigned by user); if code in DE455 in GS segment is T, then other formats are allowed.	
		The OBF EDI Committee information for positions 7-12 of this data element are:	
		Positions 7-10 are identifiers for the related Issue of the guidelines.	
		Positions 11-12 are identifiers for the related release of the guidelines or preliminary guidelines.	
		The OBF EDI Committee values for this data element are:	

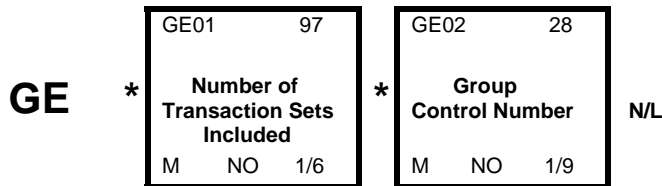
Data Element Summary

<u>Ref. Des.</u>	<u>Data Element Name</u>	<u>Attributes</u>
	004010	Draft Standards Approved for Publication by ASC X12 Procedures Review Board through October 1997 EDI Telecommunications Billing Committee (ETB)
	004050ELMS14	Draft Standards Approved for Publication by ASC X12 Procedures Review Board through October 2001 OBF Guidelines, EDI LSOG MECHANIZATION SPECIFICATION 14 published January 2007 by the UOM LSR Committee

Segment: **GE** Functional Group Trailer
Position: Functional Group envelope
Loop:
Level: Interchange Control Structure
Usage: Optional
Max Use: 1
Purpose: To indicate the end of a functional group and to provide control information

Syntax Notes:
Semantic Notes: 1 The data interchange control number GE02 in this trailer must be identical to the same data element in the associated functional group header, GS06.

Comments: 1 The use of identical data interchange control numbers in the associated functional group header and trailer is designed to maximize functional group integrity. The control number is the same as that used in the corresponding header.



Data Element Summary

<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
GE01	97	Number of Transaction Sets Included Total number of transaction sets included in the functional group or interchange (transmission) group terminated by the trailer containing this data element	M NO 1/6
GE02	28	Group Control Number Assigned number originated and maintained by the sender The value of this data element in GE02 must match the value of the same data element in GS06.	M NO 1/9

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