

HL STANDARD 997 4010 FOR ACKNOWLEDGEMENT

EDI Message Implementation Guide

Version: 1.0

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Created: May 21, 2026

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Functional Definition

Change History

Date	Version	User	Change
07.11.2017	1.0	C. Bahr	MIG Created

Status Indicators

Status Indicators (M, O and X) form part of the ANSI ASC X12 standard and indicate a minimum requirement to fulfil the needs of the message structure.

The Status Indicators are:

Indicator	Value	Description
M	Mandatory	This entity must appear in all messages. Shown as usage indicator "M" in Implementation Guidelines.
O	Optional	This entity is used by agreement between the parties to the transaction.
X	Relational	This entity depends upon a well-defined condition or set of conditions. These conditions must be clearly specified in the relevant implementation guideline.

A Status Indicator may be represented by a supporting Usage Indicator which is either M, O, D or X.

Usage Indicators

Throughout this document reference is made to indicators (M, D, O and X) which are shown adjacent to data items and which dictate for the particular message or set thereof the agreed usage of the data items or entities.

Set out below are the indicators and their respective uses:

Indicator	Value	Description
M	Mandatory	Indicates that this entity is mandatory and must be sent in this implementation.
O	Optional	Indicates that this entity is at the need or discretion of the sender of the message.
D	Dependent	Indicates that the use of the entity depends upon a well-defined condition or set of conditions. These conditions must be clearly specified in the relevant implementation guideline.
X	Not Used	Indicates that the entity is not to be used in this message implementation.

Please be aware that each usage indicator describes the usage of an entity within it's parent entity. For example, a segment that is marked to be (M)andatory within an optional segment group must only be sent when the segment group is used.

Message Structure

Tag	Name	Status	Max. Use	Usage
ISA	Interchange Control Header	M	1	M
GS	Functional Group Header	O	1	O
ST	Transaction Set Header	M	1	M
AK1	Functional Group Response Header	M	1	M
LoopAK2				
AK2	Transaction Set Response Header	O	1	O
LoopAK3				
AK3	Data Segment Note	O	1	O
AK4	Data Element Note	O	99	O
AK5	Transaction Set Response Trailer	M	1	M
AK9	Functional Group Response Trailer	M	1	M
SE	Transaction Set Trailer	M	1	X
GE	Functional Group Trailer	O	1	X
IEA	Interchange Control Trailer	M	1	X

Description of used Message Segments

ISA Interchange Control Header

Status: M	Usage: M	Min/Max: 1/1
Group: N/A		

up

Description:

To start and identify an interchange of zero or more functional groups and interchange-related control segments

Example:

```
ISA*00 *00 *ZZ*SENDERID *02*RECIEVERID *171103*0929*^*00401*000000025*0*P*>~
```

Tag	Element Name	Status	Type	Usage
I01	AUTHORIZATION INFORMATION QUALIFIER	M	id2	X
	Description: Code identifying the type of information in the Authorization Information			
I02	AUTHORIZATION INFORMATION	M	an10	X
	Description: 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)			
I03	SECURITY INFORMATION QUALIFIER	M	id2	X
	Description: Code identifying the type of information in the Security Information			
I04	SECURITY INFORMATION	M	an10	X
	Description: 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)			
I05	INTERCHANGE ID QUALIFIER	M	id2	X
	Description: Code indicating the system/method of code structure used to designate the sender or receiver ID element being qualified Note: ZZ Mutually defined 01 Duns (Dun & Bradstreet) 02 SCAC (Standard Carrier Alpha Code)			
I06	INTERCHANGE SENDER ID	M	an15	M
	Description: 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			
I05	INTERCHANGE ID QUALIFIER	M	id2	X
	Description: Code indicating the system/method of code structure used to designate the sender or receiver ID element being qualified Note: ZZ Mutually defined 01 Duns (Dun & Bradstreet) 02 SCAC (Standard Carrier Alpha Code)			
I07	INTERCHANGE RECEIVER ID	M	an15	M

Description: 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				
I08	INTERCHANGE DATE	M	dt6	M
Description: Date of the interchange Note: Format: YYMMDD				
I09	INTERCHANGE TIME	M	tm4	M
Description: Time of the interchange Note: Format: HHMM				
I10	INTERCHANGE CONTROL STANDARDS IDENTIFIER	M	id1	X
I11	INTERCHANGE CONTROL VERSION NUMBER	M	id5	X
Description: Code specifying the version number of the interchange control segments				
I12	INTERCHANGE CONTROL NUMBER	M	n09	M
Description: A control number assigned by the interchange sender				
I13	ACKNOWLEDGMENT REQUESTED	M	id1	X
Description: Code indicating sender's request for an interchange acknowledgment				
I14	USAGE INDICATOR	M	id1	X
Description: Code indicating whether data enclosed by this interchange envelope is test, production or information Note: Accepted value(s): P Production Data T Test Data				
I15	COMPONENT ELEMENT SEPARATOR	M	an1	X
Description: 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				

GS Functional Group Header

Status: O	Usage: O	Min/Max: 0/1
Group: N/A		

up

Description:

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

Example:

```
GS*FA*SENDERID*RECEIVERID*20171103*0929*25*X*004010~
```

Tag	Element Name	Status	Type	Usage
479	FUNCTIONAL IDENTIFIER CODE	M	id2	X
Description: Code identifying a group of application related transaction sets Note: Accepted value(s): FA Functional or Implementation Acknowledgment Transaction Sets				
142	APPLICATION SENDER'S CODE	M	an..15	X
Description: Code identifying party sending transmission; codes agreed to by trading partners				
124	APPLICATION RECEIVER'S CODE	M	an..15	X
Description: Code identifying party receiving transmission; codes agreed to by trading partners				
373	DATE	M	dt8	X
Description: Date expressed as CCYYMMDD where CC represents the first two digits of the calendar year				
337	TIME	M	tm..8	X
Description: 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)				
28	GROUP CONTROL NUMBER	M	n0..9	M
Description: Assigned number originated and maintained by the sender				
455	RESPONSIBLE AGENCY CODE	M	id..2	X
Description: Code identifying the issuer of the standard; this code is used in conjunction with Data Element 480 Note: Accepted value(s): X Accredited Standards Committee X12				
480	VERSION / RELEASE / INDUSTRY IDENTIFIER CODE	M	an..12	X
Description: Code indicating the version, release, subrelease, 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 subrelease, 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 Note: Accepted value(s): 4010 Standards Approved for Publication by ASC X12 Procedures Review Board through October 1997				

ST Transaction Set Header

Status: M	Usage: M	Min/Max: 1/1
Group: N/A		

up

Description:

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

Example:

ST*997*0008~

Tag	Element Name	Status	Type	Usage
143	TRANSACTION SET IDENTIFIER CODE	M	id3	X

Description:

Code uniquely identifying a Transaction Set

Note:

Accepted value(s):

997 Functional Acknowledgment

329	TRANSACTION SET CONTROL NUMBER	M	an..9	M
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Description:

Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set

AK1 Functional Group Response Header

Status: M	Usage: M	Min/Max: 1/1
Group: N/A		

up

Description:

To start acknowledgment of a functional group

Example:

AK1*I0*201~

Tag	Element Name	Status	Type	Usage
479	FUNCTIONAL IDENTIFIER CODE	M	id2	M
Description: Code identifying a group of application related transaction sets				
Note:				
Accepted value(s):				
I0 Ocean Shipment Billing Details				
28	GROUP CONTROL NUMBER	M	n0..9	M
Description: Assigned number originated and maintained by the sender				

AK2 Transaction Set Response Header

Status: O	Usage: O	Min/Max: 0/1
Group: LoopAK2		

up

Description:

To start acknowledgment of a single transaction set

Example:

AK2*310*513281133~

Tag	Element Name	Status	Type	Usage
143	TRANSACTION SET IDENTIFIER CODE	M	id3	M

Description:

Code uniquely identifying a Transaction Set

Note:**Accepted value(s):**

310 Freight Receipt and Invoice (Ocean)

329	TRANSACTION SET CONTROL NUMBER	M	an..9	M
-----	--------------------------------	---	-------	---

Description:

Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set

Note:

Value which is sent in the ANSI310 ST:329 tag

AK3 Data Segment Note

Status: O	Usage: O	Min/Max: 0/1
Group: LoopAK3		

up

Description:

To report errors in a data segment and identify the location of the data segment

Example:

AK3*L1*39~

Tag	Element Name	Status	Type	Usage
721	SEGMENT ID CODE	M	id..3	M
Description: Code defining the segment ID of the data segment in error (See Appendix A - Number 77)				
719	SEGMENT POSITION IN TRANSACTION SET	M	n0..6	M
Description: The numerical count position of this data segment from the start of the transaction set: the transaction set header is count position 1				
447	LOOP IDENTIFIER CODE	O	an..6	O
Description: The loop ID number given on the transaction set diagram is the value for this data element in segments LS and LE				
720	SEGMENT SYNTAX ERROR CODE	O	id..3	O
Description: Code indicating error found based on the syntax editing of a segment				
Note: Accepted value(s):				
1 Unrecognized segment ID				
2 Unexpected segment				
3 Mandatory segment missing				
4 Loop Occurs Over Max. Times				
5 Segment Exceeds Maximum Use				
6 Segment Not in Defined Transaction Set				
7 Segment Not in Proper Sequence				
8 Segment Has Data Element Errors				

AK4 Data Element Note

Status: O Usage: O Min/Max: 0/99
Group: LoopAK3

up

Description:

To report errors in a data element or composite data structure and identify the location of the data element

Example:

AK4*0*0*2*L1~

Tag	Element Name	Status	Type	Usage
C030	POSITION IN SEGMENT	M		M
	Description: Code indicating the relative position of the simple data element or composite data structure in error within a segment, count beginning with 1 for the position immediately following the segment ID; additionally indicating the relative position of a repeating structure in error, count beginning with 1 for the position immediately following the preceding element separator; additionally indicating the relative position of a component of a composite data structure in error, count beginning with 1 for the position following the preceding element or repetition separator			
722	Element Position in Segment	M	n0..2	M
	Description: This is used to indicate the relative position of a simple data element, or the relative position of a composite data structure with the relative position of the component within the composite data structure, in error; in the data segment the count starts with 1 for the simple data element or composite data structure immediately following the segment ID			
1528	Component Data Element Position in Composite	O	n0..2	X
	Description: To identify the component data element position within the composite that is in error			
725	DATA ELEMENT REFERENCE NUMBER	O	n0..4	O
	Description: Reference number used to locate the data element in the Data Element Dictionary			
723	DATA ELEMENT SYNTAX ERROR CODE	M	id..3	M
	Description: Code indicating the error found after syntax edits of a data element Note: Accepted value(s): 1 Mandatory data element missing 2 Conditional required data element missing 3 Too many data elements. More data elements existed than defined for the segment 4 Data element too short 5 Data element too long 6 Invalid character in data element 7 Invalid code value 8 Invalid Date 9 Invalid Time 10 Exclusion Condition Violated			
724	COPY OF BAD DATA ELEMENT	O	an..99	O
	Description: This is a copy of the data element in error			

AK5 Transaction Set Response Trailer

Status: M	Usage: M	Min/Max: 1/1
Group: LoopAK2		

up

Description:

To acknowledge acceptance or rejection and report errors in a transaction set

Example:

AK5*A~

Tag	Element Name	Status	Type	Usage
717	TRANSACTION SET ACKNOWLEDGMENT CODE	M	id1	M

Description:

Code indicating accept or reject condition based on the syntax editing of the transaction set

Note:

Accepted value(s):

A	Accepted
E	Accepted But Errors Were Noted
M	Rejected, Message Authentication Code (MAC) Failed
R	Rejected
W	Rejected, Assurance Failed Validity Tests
X	Rejected, Content After Decryption Could Not Be Analyzed

718	TRANSACTION SET SYNTAX ERROR CODE [0..5]	O	id..3	O
-----	--	---	-------	---

Description:

Code indicating error found based on the syntax editing of a transaction set

Note:

Accepted value(s):

1	Transaction Set Not Supported
2	Transaction Set Trailer Missing
3	Transaction Set Control Number in Header and Trailer Do Not Match
4	Number of Included Segments Does Not Match Actual Count
5	One or More Segments in Error
6	Missing or Invalid Transaction Set Identifier
7	Missing or Invalid Transaction Set Control Number
8	Authentication Key Name Unknown
9	Encryption Key Name Unknown
10	Requested Service (Authentication or Encrypted) Not Available
11	Unknown Security Recipient
12	Incorrect Message Length (Encryption Only)
13	Message Authentication Code Failed
15	Unknown Security Originator
16	Syntax Error in Decrypted Text
17	Security Not Supported
18	Transaction Set not in Functional Group
19	Invalid Transaction Set Implementation Convention Reference
23	Transaction Set Control Number Not Unique within the Functional Group

AK9 Functional Group Response Trailer

Status: M	Usage: M	Min/Max: 1/1
Group: N/A		

up

Description:

To acknowledge acceptance or rejection of a functional group and report the number of included transaction sets from the original trailer, the accepted sets, and the received sets in this functional group

Example:

```
AK9*A*1*1*1~
```

Tag	Element Name	Status	Type	Usage
715	FUNCTIONAL GROUP ACKNOWLEDGE CODE	M	id1	M
Description: Code indicating accept or reject condition based on the syntax editing of the functional group Note: Accepted value(s): A Accepted E Accepted, But Errors Were Noted M Rejected, Message Authentication Code Failed P Part. Accepted, At Least 1 Transaction Set Rejected R Rejected W Rejected, Assurance Failed Validity Tests X Rejected, Content After Decryption Couldn't Be Analyzed				
97	NUMBER OF TRANSACTION SETS INCLUDED	M	n0..6	M
Description: Total number of transaction sets included in the functional group or interchange (transmission) group terminated by the trailer containing this data element				
123	NUMBER OF RECEIVED TRANSACTION SETS	M	n0..6	M
Description: Number of Transaction Sets received				
2	NUMBER OF ACCEPTED TRANSACTION SETS	M	n0..6	M
Description: Number of accepted Transaction Sets in a Functional Group				
716	FUNCTIONAL GROUP SYNTAX ERROR CODE [0..5]	O	id..3	X
Description: Code indicating error found based on the syntax editing of the functional group header and/or trailer				

Examples

Example:

```
ISA*00* 00* 01*SENDERID *01*RECEIVERID *171107*0440*U*00401*011434300*0*P*>~
GS*FA*SENDERID*RECEIVERID*20171107*044024*343000001*X*004010~
ST*997*0001~
AK1*IO*1~
AK2*310*513281133~
AK5*A~
AK9*A*1*1*1~
SE*6*0001~
GE*1*343000001~
IEA*1*011434300~
```

Where to find value for AK2:329 tag in corresponding ANSI310:

```
ISA*00* 00* 01*HLCU *01*CASSOCEANFRT *171107*1032*U*00401*000003759*1*P*>~
GS*IO*HLCU*CASS124000*20171107*103230*1*X*004010~
ST*310*513281133~
B3*B*2115278773*DE1170925300*CC**20171107*288000**20171121*139*HLCU***ZZ~
B2A*00*BL~
Y6*CA*HLAG*20171107~
N9*SI*80156275~
N9*BN*80156275~
N9*OC*UACU8583447~
V1*9409209*CMA CGM MAUPASSANT*GB*7142****L~
M0*2115278773*20171107~
C3*USD*1.000*USD~
Y2*1**PH*42G0****/FC~
N1*SH*M/S. INTERNATIONAL LINK*ZZ*01109227~
N3*VILLAGE MAOU*HARTHALA INDUSTRIAL ESTATE~
N4*MORADABAD**244001*IN~
N1*CN*RH US LLC*ZZ*02262417~
N3*15 KOCH ROAD~
N4*CORTE MADERA*CA*94925*US~
N1*BT*RESTORATION HARDWARE*ZZ*00553759~
N3*15 KOCH ROAD, SUITE J~
N4*CORTE MADERA*CA*94925*US~
R4*R*UN*INMOR*MORADABAD*IN~
DTM*369*20170928*000000~
R4*L*UN*INMUN*MUNDRA*IN~
DTM*369*20171026*055800~
R4*D*UN*USNYC*NEW YORK, NY*US***NY~
DTM*371*20171114*130000~
R4*E*UN*USWJM*WEST JEFFERSON, OH 43162*US***OH~
DTM*371*20171121*000000~
LX*1~
N7*UACU*8583447*****4B~
L3*2830.5*G***288000*****K~
L1*1*2655*PA*265500**00**COF***E*FREIGHT~
C3*USD~
L1*2*225*PA*22500**00**IFP***E*FUEL PARTI. FACTOR~
C3*USD~
SE*36*513281133~
GE*1*1~
IEA*1*000003759~
```