

# Automated Commercial Environment

ACE Truck ANSI X12 997

February 14, 2005



U.S. Customs and  
Border Protection



# 997 Functional Acknowledgment

FUNCTIONAL GROUP ID = **FA**

This X12 Transaction Subset contains the format and establishes the data contents of the Functional Acknowledgment Transaction Set (997) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to define the control structures for a set of acknowledgments to indicate the results of the syntactical analysis of the electronically encoded documents. The encoded documents are the transaction sets, which are grouped in functional groups, used in defining transactions for business data interchange. This standard does not cover the semantic meaning of the information encoded in the transaction sets.

**It is strongly recommended that error codes in the AK5 and AK9 be included for rejections.**

**Table 1**

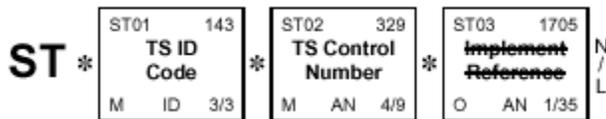
PAGE #	POS. #	SEG. ID	NAME	REQ. DES.	MAX USE	LOOP REPEAT
2	010	ST	Transaction Set Header	M	1	
3	020	AK1	Functional Group Response Header	M	1	
			LOOP ID - AK2 >			1
4	030	AK2	Transaction Set Response Header	O	1	
			LOOP ID - AK2/AK3 >			1
5	040	AK3	Data Segment Note	O	1	
6	050	AK4	Data Element Note	O	99	
7	060	AK5	Transaction Set Response Trailer	M	1	
8	070	AK9	Functional Group Response Trailer	M	1	
10	080	SE	Transaction Set Trailer	M	1	

**Segment:** **ST** Transaction Set Header  
**Loop:** \_\_\_\_\_  
**Usage:** Mandatory  
**Max Use:** 1  
**Max Length:** 53  
**Purpose:** To indicate the start of a transaction set and to assign a control number  
**Trans. Set**  
**Notes:**

1. These acknowledgments shall not be acknowledged, thereby preventing an endless cycle of acknowledgments of acknowledgments.
2. The Functional Group Header Segment (GS) is used to start the envelope for the Functional Acknowledgment Transaction Sets. In preparing the functional group of acknowledgments, the application sender's code and the application receiver's code, taken from the functional group being acknowledged, are exchanged; therefore, one acknowledgment functional group responds to only those functional groups from one application receiver's code to one application sender's code.
3. There is only one Functional Acknowledgment Transaction Set per acknowledged functional group.

**Semantic:**

- 1 The transaction set identifier (ST01) used by the translation routines of the interchange partners to select the appropriate transaction set definition (e.g., 810 selects the invoice transaction set).
- 2 The implementation convention reference (ST03) is used by the translation routines of the interchange partners to select the appropriate implementation convention to match the transaction set definition. When used, this implementation convention reference takes precedence over the implementation reference specified in the GS08.



**Data Element Summary**

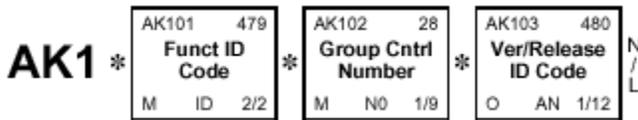
REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
ST01	143	<b>Transaction Set Identifier Code</b> Code uniquely identifying a Transaction Set.	<b>M ID 3/3</b>
		<b>997</b> Functional Acknowledgment	
ST02	329	<b>Transaction Set Control Number</b> Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	<b>M AN 4/9</b>

**Segment:** **AK1** Functional Group Response Header  
**Loop:** \_\_\_\_\_  
**Usage:** Mandatory  
**Max Use:** 1  
**Max Length:** 30  
**Purpose:** To start acknowledgment of a functional group.  
**Trans. Set**  
**Notes:**

1. AK1 is used to respond to the functional group header and to start the acknowledgement for a functional group. There shall be one AK1 segment for the functional group that is being acknowledged.

**Semantic:**

- 1 AK101 is the functional ID found in the GS segment (GS01) in the functional group being acknowledged.
- 2 AK102 is the functional group control number found in the GS segment in the functional group being acknowledged.
- 3 AK103 is the version release industry identifier code in the GS segment (GS08) in the functional group being acknowledged.



**Data Element Summary**

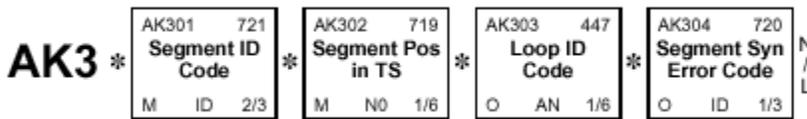
REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
AK101	479	<b>Functional Identifier Code</b> Code identifying a group of application related Transaction Sets.	M ID 2/2
AK102	28	<b>Group Control Number</b> Assigned number originated and maintained by the sender.	M NO 1/9
AK103	480	<b>Version / Release / Industry Identifier Code</b> 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.	O AN 1/12



**Segment:** **AK3** Data Segment Note  
**Loop:** AK2/AK3 **Repeat:** 0  
**Usage:** Optional  
**Max Use:** 1  
**Max Length:** 26  
**Purpose:** To report errors in a data segment and to identify the location of the data segment.

**Trans. Set**

**Notes:** 1. The data segments of this standard are used to report the results of the syntactical analysis of the functional groups of transaction sets; they report the extent to which the syntax complies with the standards for transaction sets and functional groups. They do not report on the semantic meaning of the transaction sets (for example, on the ability of the receiver to comply with the request of the sender).



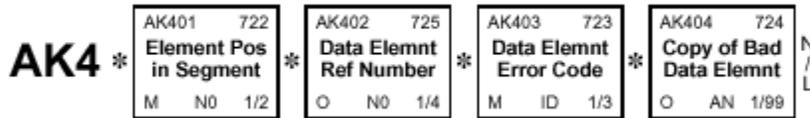
**Data Element Summary**

REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
AK301	721	<b>Segment ID Code</b> Code defining the segment ID of the data segment in error. See Appendix A – Number 77.	<b>M ID 2/3</b>
AK302	719	<b>Segment Position in Transaction Set</b> The numerical count position of this data segment from the start of the transaction set: the transaction set header is count position 1.	<b>M NO 1/6</b>
AK303	447	<b>Loop Identifier Code</b> Code identifying a loop within the transaction set which is bounded by the related LS and LE segments (corresponding LS and LE segments must have the same value for loop identifier). (Note: The loop ID number given on the transaction set diagram is recommended as the value for this data element in segments LS and LE.)	<b>O AN 1/6</b>
AK304	720	<b>Segment Syntax Error Code</b> Code indicating error found based on the syntax editing of a segment	<b>O ID 1/3</b>
		<b>CODE</b>	<b>DEFINITION</b>
		1	Unrecognized segment ID
		2	Unexpected segment
		3	Mandatory segment missing
		4	Loop Occurs Over Maximum Times
		5	Segment Exceeds Maximum Use
		6	Segment Not in Defined Transaction Set
		7	Segment Not in Proper Sequence

**Segment:** **AK4** Data Element Note  
**Loop:** AK2/AK3  
**Usage:** Optional  
**Max Use:** 99  
**Max Length:** 116  
**Purpose:** To report errors in a data element or composite data structure and to identify the Location of the data element.  
**Semantic:** 1 AK401 is a composite data element, C030, which contains three simple data elements. The Rail Industry only uses the first component of the composite, data element 722. This implementation guideline reflects that decision by substituting data element 722 for C030, which is syntactically correct.

C030 03 is data element 1686 which relates to the position of the repeating data element which the Rail Industry also does not use.

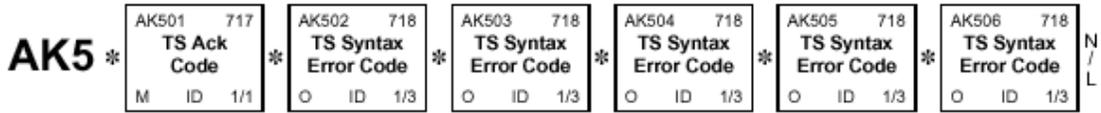
2 In no case shall a value be used for AK404 that would generate a syntax error, e.g., an invalid character.



**Data Element Summary**

REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES																						
AK401	722	<b>Element Position in Segment</b> This is used to indicate the relative position of the data element in error in this data segment. The count starts with 1 for the data element immediately following the segment ID. This value is 0 for an error in the segment ID. Note that this data element has been replaced with a composite data element C030 which is not depicted here. The first position of the new composite data element remains DE 722. It is possible to just use the simple data element 722 in place of C030.	M N0 1/2																						
AK402	725	<b>Data Element Reference Number</b> Reference number used to locate the Data Element Dictionary.	O N0 1/4																						
AK403	723	<b>Data Element Syntax Error Code</b> Code indicating the error found after syntax edits of a data element.	M ID 1/3																						
		<table border="1"> <thead> <tr> <th>CODE</th> <th>DEFINITION</th> </tr> </thead> <tbody> <tr><td>1</td><td>Mandatory data element missing</td></tr> <tr><td>10</td><td>Exclusion Condition Violated</td></tr> <tr><td>2</td><td>Conditional required data element missing.</td></tr> <tr><td>3</td><td>Too many data elements.</td></tr> <tr><td>4</td><td>Data element too short.</td></tr> <tr><td>5</td><td>Data element too long.</td></tr> <tr><td>6</td><td>Invalid character in data element.</td></tr> <tr><td>7</td><td>Invalid code value.</td></tr> <tr><td>8</td><td>Invalid Date</td></tr> <tr><td>9</td><td>Invalid Time</td></tr> </tbody> </table>	CODE	DEFINITION	1	Mandatory data element missing	10	Exclusion Condition Violated	2	Conditional required data element missing.	3	Too many data elements.	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	
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6	Invalid character in data element.																								
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AK404	724	<b>Copy of Bad Data Element</b> This is a copy of the data element in error.	O AN 1/99																						

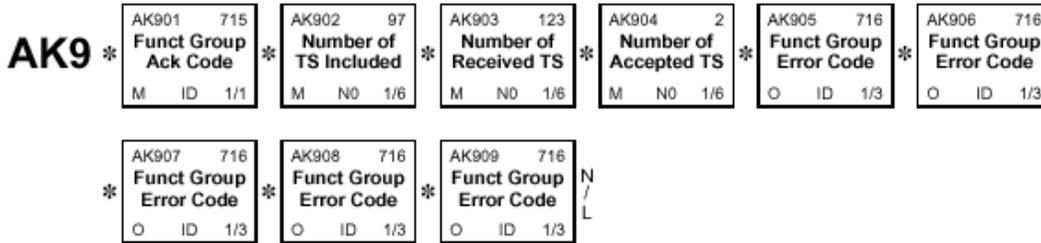
**Segment:** **AK5** Transaction Set Response Trailer  
**Loop:** AK2  
**Usage:** Mandatory  
**Max Use:** 1  
**Max Length:** 26  
**Purpose:** To acknowledge acceptance or rejection and to report errors in a transaction set.



**Data Element Summary**

REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
AK501	717	<b>Transaction Set Acknowledgment Code</b>	<b>M ID 1/1</b>
		Code indicating accept or reject condition based on the syntax editing of the transaction set.	
		<b>CODE</b> <b>DEFINITION</b>	
		A              Accepted	
		E              Accepted But Errors Were Noted	
		R              Rejected	
AK502	718	<b>Transaction Set Syntax Error Code</b>	<b>O ID 1/3</b>
		Code indicating error found based on the syntax editing of a transaction set.	
		<b>CODE</b> <b>DEFINITION</b>	
		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	
AK503	718	<b>Transaction Set Syntax Error Code</b>	<b>O ID 1/3</b>
		Code indicating error found based on the syntax editing of a transaction set.	
		<b>See code list above</b>	
AK504	718	<b>Transaction Set Syntax Error Code</b>	<b>O ID 1/3</b>
		Code indicating error found based on the syntax editing of a transaction set.	
		<b>See code list above</b>	
AK505	718	<b>Transaction Set Syntax Error Code</b>	<b>O ID 1/3</b>
		Code indicating error found based on the syntax editing of a transaction set.	
		<b>See code list above</b>	
AK506	718	<b>Transaction Set Syntax Error Code</b>	<b>O ID 1/3</b>
		Code indicating error found based on the syntax editing of a transaction set.	
		<b>See code list above</b>	

**Segment:** **AK9** Functional Group Response Trailer  
**Loop:** \_\_\_\_\_  
**Usage:** **Mandatory**  
**Max Use:** **1**  
**Max Length:** **47**  
**Purpose:** 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.  
**Comments:** **A** If AK901 contains the value 'A' or 'E', then the transmitted **Functional group is accepted**



**Data Element Summary**

REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES														
AK901	715	<b>Functional Group Acknowledge Code</b> Code indicating accept or reject condition based on the syntax editing of the Functional group.	<b>M ID 1/1</b>														
		<table border="1"> <thead> <tr> <th>CODE</th> <th>DEFINITION</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Accepted</td> </tr> <tr> <td>E</td> <td>Accepted, But Errors Were Noted.</td> </tr> <tr> <td>P</td> <td>Partially Accepted, At Least One Transaction Set Was Rejected</td> </tr> <tr> <td>R</td> <td>Rejected</td> </tr> </tbody> </table>	CODE	DEFINITION	A	Accepted	E	Accepted, But Errors Were Noted.	P	Partially Accepted, At Least One Transaction Set Was Rejected	R	Rejected					
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AK902	97	<b>Number of Transaction Sets Included M NO 1/6</b> Total number of transaction sets included in the functional group or interchange (transmission) group terminated by the trailer containing this data element.															
AK903	123	<b>Number of Received Transaction Sets M NO 1/6</b> Number of Transaction Sets received.															
AK904	2	<b>Number of Accepted Transaction Sets M NO 1/6</b> Number of accepted Transaction Sets in a Functional Group.															
AK905	716	<b>Functional Group Syntax Error Code O ID 1/3</b> Code indicating error found based on the syntax editing of the functional group header and/or trailer.															
		<table border="1"> <thead> <tr> <th>CODE</th> <th>DEFINITION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Functional Group Not Supported</td> </tr> <tr> <td>2</td> <td>Functional Group Version Not Supported</td> </tr> <tr> <td>3</td> <td>Functional Group Trailer Missing</td> </tr> <tr> <td>4</td> <td>Group Control Number in the Functional Group Header and Trailer Do Not Agree</td> </tr> <tr> <td>5</td> <td>Number of Included Transaction Sets Does Not Match Actual Count</td> </tr> <tr> <td>6</td> <td>Group Control Number Violates Syntax</td> </tr> </tbody> </table>	CODE	DEFINITION	1	Functional Group Not Supported	2	Functional Group Version Not Supported	3	Functional Group Trailer Missing	4	Group Control Number in the Functional Group Header and Trailer Do Not Agree	5	Number of Included Transaction Sets Does Not Match Actual Count	6	Group Control Number Violates Syntax	
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AK906	716	<b>Functional Group Syntax Error Code</b> Code indicating error found based on the syntax editing of the functional group header and/or trailer. <b>See code list above</b>	<b>O ID 1/3</b>														
AK907	716	<b>Functional Group Syntax Error Code</b> Code indicating error found based on the syntax editing of the functional group header and/or trailer. <b>See code list above</b>	<b>O ID 1/3</b>														
AK908	716	<b>Functional Group Syntax Error Code</b>	<b>O ID 1/3</b>														

Code indicating error found based on the syntax editing of the functional group header and/or trailer.

**See code list above**

**AK909 716**

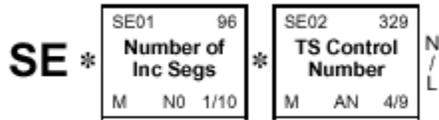
**Functional Group Syntax Error Code**

**O ID 1/3**

Code indicating error found based on the syntax editing of the functional group header and/or trailer.

**See code list above**

**Segment:** **SE** Transaction Set Trailer  
**Loop:** \_\_\_\_\_  
**Usage:** Mandatory  
**Max Use:** 1  
**Max Length:** 24  
**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).  
**Comments:** A SE is the last segment of each transaction set.



**Data Element Summary**

REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
SE01	96	<b>Number of Included Segments</b> Total number of segments included in a transaction set including ST and SE segments.	<b>M NO 1/10</b>
SE02	329	<b>Transaction Set Control Number</b> Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	<b>M AN 4/9</b>

