# 997 Functional Acknowledgment

**Functional Group ID=FA**

**Introduction:**

This Draft Standard for Trial Use 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.

**Notes:**

|  |
| --- |
| This transaction will be used as a functional acknowledgement for all transactions. |

**Pos. Seg. Req. Loop Notes and**

**No. ID Name Des. Max.Use Repeat Comments**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| M | 010 | ST | Transaction Set Header | M | 1 |  | n1 |  |  |  |  |  |  |
| M | 020 | AK1 | Functional Group Response Header | M | 1 |  | n2 |  |  |  |  |  |  |
|  |  |  | LOOP ID - AK2 |  |  | 999999 |  |  |  |  |  |  |  |
|  | 030 | AK2 | Transaction Set Response Header | O | 1 |  | n3 |  |  |  |  |  |  |
|  |  |  | LOOP ID - AK3 |  |  | 999999 |  |  |  |  |  |  |  |
|  | 040 | AK3 | Data Segment Note | O | 1 |  | c1 |  |  |  |  |  |  |
|  | 050 | AK4 | Data Element Note | O | 99 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M | 060 | AK5 | Transaction Set Response Trailer | M | 1 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M | 070 | AK9 | Functional Group Response Trailer | M | 1 |  |  |  |  |  |  |  |  |
| M | 080 | SE | Transaction Set Trailer | M | 1 |  |  |  |  |  |  |  |  |

**Transaction Set Notes**

**1.** These acknowledgments shall not be acknowledged, thereby preventing an endless cycle of acknowledgments of acknowledgments. Nor shall a Functional Acknowledgment be sent to report errors in a previous Functional Acknowledgment.

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.

There is only one Functional Acknowledgment Transaction Set per acknowledged functional group.

**2.** 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.

**3.** AK2 is used to start the acknowledgement of a transaction set within the received functional group. The AK2 segments shall appear in the same order as the transaction sets in the functional group that has been received and is being acknowledged.

**Transaction Set Comments**

**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).

The Functional Acknowledgement (997) transaction set from the receiver of the originating transaction to the sender of the originating transaction, is used to acknowledge the receipt of the originating transaction and indicate whether the transaction passed ANSI X12 validation. This acknowledgement does not imply that the originating transaction passed Texas SET validation. “CR, TDSP, or ERCOT shall respond with a 997 within 24 hours of receipt of an inbound transaction.”

**Segment: ST Transaction Set Header**

**Position:** 010

**Loop:**

**Level:**

**Usage:** Mandatory

**Max Use:** 1

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

**Syntax Notes:**

**Semantic Notes:** **1** The transaction set identifier (ST01) is used by the translation routines of the interchange partners to select the appropriate transaction set definition (e.g., 810 selects the Invoice Transaction Set).

**Comments:**

**Data Element Summary**

**Ref. Data**

**Des. Element Name Attributes**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Must Use** | **ST01** | **143** | **Transaction Set Identifier Code** | | | | **M** |  | **ID 3/3** | |
|  | | | Code uniquely identifying a Transaction Set | | | | | | |
|  | | | | 997 |  | Functional Acknowledgment | | | |
| **Must Use** | **ST02** | **329** | **Transaction Set Control Number** | | | | **M** |  | **AN 4/9** | |
|  | | | Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |

**Segment: AK1 Functional Group Response Header**

**Position:** 020

**Loop:**

**Level:**

**Usage:** Mandatory

**Max Use:** 1

**Purpose:** To start acknowledgment of a functional group

**Syntax Notes:**

**Semantic Notes:** **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.

**Comments:**

**Data Element Summary**

**Ref. Data**

**Des. Element Name Attributes**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Must Use** | **AK101** | **479** | **Functional Identifier Code** | | | | **M** |  | **ID 2/2** | |
|  | | | Code identifying a group of application related transaction sets | | | | | | |
|  | | | | AG |  | Application Advice (824) | | | |
|  | | | | D5 |  | Contract Payment Management Report (568) | | | |
|  | | | | GE |  | General Request, Response or Confirmation (814) | | | |
|  | | | | IN |  | Invoice Information (810,819) | | | |
|  | | | | MO |  | Maintenance Service Order (650) | | | |
|  | | | | PT |  | Product Transfer and Resale Report (867) | | | |
|  | | | | RA |  | Payment Order/Remittance Advice (820) | | | |
|  | | | | SU |  | Account Assignment/Inquiry and Service/Status (248) | | | |
| **Must Use** | **AK102** | **28** | **Group Control Number** | | | | **M** |  | **N0 1/9** | |
|  | | | Assigned number originated and maintained by the sender | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |

**Segment: AK2 Transaction Set Response Header**

**Position:** 030

**Loop:** AK2 Optional

**Level:**

**Usage:** Optional

**Max Use:** 1

**Purpose:** To start acknowledgment of a single transaction set

**Syntax Notes:**

**Semantic Notes:** **1** AK201 is the transaction set ID found in the ST segment (ST01) in the transaction set being acknowledged.

**2** AK202 is the transaction set control number found in the ST segment in the transaction set being acknowledged.

**Comments:**

**Data Element Summary**

**Ref. Data**

**Des. Element Name Attributes**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Must Use** | **AK201** | **143** | **Transaction Set Identifier Code** | | | | **M** |  | **ID 3/3** | |
|  | | | Code uniquely identifying a Transaction Set | | | | | | |
|  | | | | 650 |  | Maintenance Service Order | | | |
|  | | | | 810 |  | Invoice | | | |
|  | | | | 814 |  | General Request, Response or Confirmation | | | |
|  | | | | 820 |  | Payment Order/Remittance Advice | | | |
|  | | | | 824 |  | Application Advice | | | |
|  | | | | 867 |  | Product Transfer and Resale Report | | | |
| **Must Use** | **AK202** | **329** | **Transaction Set Control Number** | | | | **M** |  | **AN 4/9** | |
|  | | | Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |

**Segment: AK3 Data Segment Note**

**Position:** 040

**Loop:** AK3 Optional

**Level:**

**Usage:** Optional

**Max Use:** 1

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

**Syntax Notes:**

**Semantic Notes:**

**Comments:**

**Data Element Summary**

**Ref. Data**

**Des. Element Name Attributes**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Must Use** | **AK301** | **721** | **Segment ID Code** | | | | **M** |  | **ID 2/3** | |
|  | | | Code defining the segment ID of the data segment in error (See Appendix A - Number 77) | | | | | | |
| **Must Use** | **AK302** | **719** | **Segment Position in Transaction Set** | | | | **M** |  | **N0 1/6** | |
|  | | | The numerical count position of this data segment from the start of the transaction set: the transaction set header is count position 1 | | | | | | |
|  | **AK303** | **447** | **Loop Identifier Code** | | | | **O** |  | **AN 1/6** | |
|  | | | The loop ID number given on the transaction set diagram is the value for this data element in segments LS and LE | | | | | | |
|  | **AK304** | **720** | **Segment Syntax Error Code** | | | | **O** |  | **ID 1/3** | |
|  | | | Code indicating error found based on the syntax editing of a segment | | | | | | |
|  | | | | 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 | | | |
|  | | | | 8 |  | Segment Has Data Element Errors | | | |
|  |  |  |  |  |  |  |  |  |  |  |

**Segment: AK4 Data Element Note**

**Position:** 050

**Loop:** AK3 Optional

**Level:**

**Usage:** Optional

**Max Use:** 99

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

**Syntax Notes:**

**Semantic Notes:** **1** In no case shall a value be used for AK404 that would generate a syntax error, e.g., an invalid character.

**Comments:**

**Data Element Summary**

**Ref. Data**

**Des. Element Name Attributes**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Must Use** | **AK401** | **C030** | **Position in Segment** | | | | **M** |  |  | |
|  | | | Code indicating the relative position of a simple data element, or the relative position of a composite data structure combined with the relative position of the component data element within the composite data structure, in error; the count starts with 1 for the simple data element or composite data structure immediately following the segment ID | | | | | | |
| **Must Use** | **C03001** | **722** | **Element Position in Segment** | | | | **M** |  | **N0 1/2** | |
|  | | | 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 | | | | | | |
|  | **C03002** | **1528** | **Component Data Element Position in Composite** | | | | **O** |  | **N0 1/2** | |
|  | | | To identify the component data element position within the composite that is in error | | | | | | |
|  | **AK402** | **725** | **Data Element Reference Number** | | | | **O** |  | **N0 1/4** | |
|  | | | Reference number used to locate the data element in the Data Element Dictionary | | | | | | |
| **Must Use** | **AK403** | **723** | **Data Element Syntax Error Code** | | | | **M** |  | **ID 1/3** | |
|  | | | Code indicating the error found after syntax edits of a data element | | | | | | |
|  | | | | 1 |  | Mandatory data element missing | | | |
|  | | | | 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 | | | |
|  | | | | 10 |  | Exclusion Condition Violated | | | |
|  | **AK404** | **724** | **Copy of Bad Data Element** | | | | **O** |  | **AN 1/99** | |
|  | | | This is a copy of the data element in error | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |

**Segment: AK5 Transaction Set Response Trailer**

**Position:** 060

**Loop:** AK2 Optional

**Level:**

**Usage:** Mandatory

**Max Use:** 1

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

**Syntax Notes:**

**Semantic Notes:**

**Comments:**

**Data Element Summary**

**Ref. Data**

**Des. Element Name Attributes**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Must Use** | **AK501** | **717** | **Transaction Set Acknowledgment Code** | | | | **M** |  | **ID 1/1** | |
|  | | | Code indicating accept or reject condition based on the syntax editing of the transaction set | | | | | | |
|  | | | | 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 | | | |
|  | **AK502** | **718** | **Transaction Set Syntax Error Code** | | | | **O** |  | **ID 1/3** | |
|  | | | Code indicating error found based on the syntax editing of a transaction set | | | | | | |
|  | | | | 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 | | | |
|  | | | | 19 |  | S1E Security End Segment Missing for S1S Security Start Segment | | | |
|  | | | | 20 |  | S1S Security Start Segment Missing for S1E Security End Segment | | | |
|  | | | | 21 |  | S2E Security End Segment Missing for S2S Security Start Segment | | | |
|  | | | | 22 |  | S2S Security Start Segment Missing for S2E Security End Segment | | | |
|  | | | | 23 |  | Transaction Set Control Number Not Unique within the Functional Group | | | |
|  | | | | 24 |  | S3E Security End Segment Missing for S3S Security Start Segment | | | |
|  | | | | 25 |  | S3S Security Start Segment Missing for S3E Security End Segment | | | |
|  | | | | 26 |  | S4E Security End Segment Missing for S4S Security Start Segment | | | |
|  | | | | 27 |  | S4S Security Start Segment Missing for S4E Security End Segment | | | |
|  | **AK503** | **718** | **Transaction Set Syntax Error Code** | | | | **O** |  | **ID 1/3** | |
|  | | | Code indicating error found based on the syntax editing of a transaction set | | | | | | |
|  | | | | 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 | | | |
|  | | | | 19 |  | S1E Security End Segment Missing for S1S Security Start Segment | | | |
|  | | | | 20 |  | S1S Security Start Segment Missing for S1E Security End Segment | | | |
|  | | | | 21 |  | S2E Security End Segment Missing for S2S Security Start Segment | | | |
|  | | | | 22 |  | S2S Security Start Segment Missing for S2E Security End Segment | | | |
|  | | | | 23 |  | Transaction Set Control Number Not Unique within the Functional Group | | | |
|  | | | | 24 |  | S3E Security End Segment Missing for S3S Security Start Segment | | | |
|  | | | | 25 |  | S3S Security Start Segment Missing for S3E Security End Segment | | | |
|  | | | | 26 |  | S4E Security End Segment Missing for S4S Security Start Segment | | | |
|  | | | | 27 |  | S4S Security Start Segment Missing for S4E Security End Segment | | | |
|  | **AK504** | **718** | **Transaction Set Syntax Error Code** | | | | **O** |  | **ID 1/3** | |
|  | | | Code indicating error found based on the syntax editing of a transaction set | | | | | | |
|  | | | | 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 | | | |
|  | | | | 19 |  | S1E Security End Segment Missing for S1S Security Start Segment | | | |
|  | | | | 20 |  | S1S Security Start Segment Missing for S1E Security End Segment | | | |
|  | | | | 21 |  | S2E Security End Segment Missing for S2S Security Start Segment | | | |
|  | | | | 22 |  | S2S Security Start Segment Missing for S2E Security End Segment | | | |
|  | | | | 23 |  | Transaction Set Control Number Not Unique within the Functional Group | | | |
|  | | | | 24 |  | S3E Security End Segment Missing for S3S Security Start Segment | | | |
|  | | | | 25 |  | S3S Security Start Segment Missing for S3E Security End Segment | | | |
|  | | | | 26 |  | S4E Security End Segment Missing for S4S Security Start Segment | | | |
|  | | | | 27 |  | S4S Security Start Segment Missing for S4E Security End Segment | | | |
|  | **AK505** | **718** | **Transaction Set Syntax Error Code** | | | | **O** |  | **ID 1/3** | |
|  | | | Code indicating error found based on the syntax editing of a transaction set | | | | | | |
|  | | | | 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 | | | |
|  | | | | 19 |  | S1E Security End Segment Missing for S1S Security Start Segment | | | |
|  | | | | 20 |  | S1S Security Start Segment Missing for S1E Security End Segment | | | |
|  | | | | 21 |  | S2E Security End Segment Missing for S2S Security Start Segment | | | |
|  | | | | 22 |  | S2S Security Start Segment Missing for S2E Security End Segment | | | |
|  | | | | 23 |  | Transaction Set Control Number Not Unique within the Functional Group | | | |
|  | | | | 24 |  | S3E Security End Segment Missing for S3S Security Start Segment | | | |
|  | | | | 25 |  | S3S Security Start Segment Missing for S3E Security End Segment | | | |
|  | | | | 26 |  | S4E Security End Segment Missing for S4S Security Start Segment | | | |
|  | | | | 27 |  | S4S Security Start Segment Missing for S4E Security End Segment | | | |
|  | **AK506** | **718** | **Transaction Set Syntax Error Code** | | | | **O** |  | **ID 1/3** | |
|  | | | Code indicating error found based on the syntax editing of a transaction set | | | | | | |
|  | | | | 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 | | | |
|  | | | | 19 |  | S1E Security End Segment Missing for S1S Security Start Segment | | | |
|  | | | | 20 |  | S1S Security Start Segment Missing for S1E Security End Segment | | | |
|  | | | | 21 |  | S2E Security End Segment Missing for S2S Security Start Segment | | | |
|  | | | | 22 |  | S2S Security Start Segment Missing for S2E Security End Segment | | | |
|  | | | | 23 |  | Transaction Set Control Number Not Unique within the Functional Group | | | |
|  | | | | 24 |  | S3E Security End Segment Missing for S3S Security Start Segment | | | |
|  | | | | 25 |  | S3S Security Start Segment Missing for S3E Security End Segment | | | |
|  | | | | 26 |  | S4E Security End Segment Missing for S4S Security Start Segment | | | |
|  | | | | 27 |  | S4S Security Start Segment Missing for S4E Security End Segment | | | |
|  |  |  |  |  |  |  |  |  |  |  |

**Segment: AK9 Functional Group Response Trailer**

**Position:** 070

**Loop:**

**Level:**

**Usage:** Mandatory

**Max Use:** 1

**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

**Syntax Notes:**

**Semantic Notes:**

**Comments:** **1** If AK901 contains the value "A" or "E", then the transmitted functional group is accepted.

**Data Element Summary**

**Ref. Data**

**Des. Element Name Attributes**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Must Use** | **AK901** | **715** | **Functional Group Acknowledge Code** | | | | **M** |  | **ID 1/1** | |
|  | | | Code indicating accept or reject condition based on the syntax editing of the functional group | | | | | | |
|  | | | | A |  | Accepted | | | |
|  | | | | E |  | Accepted, But Errors Were Noted. | | | |
|  | | | | M |  | Rejected, Message Authentication Code (MAC) Failed | | | |
|  | | | | P |  | Partially Accepted, At Least One Transaction Set Was Rejected | | | |
|  | | | | R |  | Rejected | | | |
|  | | | | W |  | Rejected, Assurance Failed Validity Tests | | | |
|  | | | | X |  | Rejected, Content After Decryption Could Not Be Analyzed | | | |
| **Must Use** | **AK902** | **97** | **Number of Transaction Sets Included** | | | | **M** |  | **N0 1/6** | |
|  | | | Total number of transaction sets included in the functional group or interchange (transmission) group terminated by the trailer containing this data element | | | | | | |
| **Must Use** | **AK903** | **123** | **Number of Received Transaction Sets** | | | | **M** |  | **N0 1/6** | |
|  | | | Number of Transaction Sets received | | | | | | |
| **Must Use** | **AK904** | **2** | **Number of Accepted Transaction Sets** | | | | **M** |  | **N0 1/6** | |
|  | | | Number of accepted Transaction Sets in a Functional Group | | | | | | |
|  | **AK905** | **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 | | | | | | |
|  | | | | 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 | | | |
|  | | | | 10 |  | Authentication Key Name Unknown | | | |
|  | | | | 11 |  | Encryption Key Name Unknown | | | |
|  | | | | 12 |  | Requested Service (Authentication or Encryption) Not Available | | | |
|  | | | | 13 |  | Unknown Security Recipient | | | |
|  | | | | 14 |  | Unknown Security Originator | | | |
|  | | | | 15 |  | Syntax Error in Decrypted Text | | | |
|  | | | | 16 |  | Security Not Supported | | | |
|  | | | | 17 |  | Incorrect Message Length (Encryption Only) | | | |
|  | | | | 18 |  | Message Authentication Code Failed | | | |
|  | | | | 19 |  | S1E Security End Segment Missing for S1S Security Start Segment | | | |
|  | | | | 20 |  | S1S Security Start Segment Missing for S1E End Segment | | | |
|  | | | | 21 |  | S2E Security End Segment Missing for S2S Security Start Segment | | | |
|  | | | | 22 |  | S2S Security Start Segment Missing for S2E Security End Segment | | | |
|  | | | | 23 |  | S3E Security End Segment Missing for S3S Security Start Segment | | | |
|  | | | | 24 |  | S3S Security Start Segment Missing for S3E End Segment | | | |
|  | | | | 25 |  | S4E Security End Segment Missing for S4S Security Start Segment | | | |
|  | | | | 26 |  | S4S Security Start Segment Missing for S4E Security End Segment | | | |
|  | **AK906** | **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 | | | | | | |
|  | | | | 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 | | | |
|  | | | | 10 |  | Authentication Key Name Unknown | | | |
|  | | | | 11 |  | Encryption Key Name Unknown | | | |
|  | | | | 12 |  | Requested Service (Authentication or Encryption) Not Available | | | |
|  | | | | 13 |  | Unknown Security Recipient | | | |
|  | | | | 14 |  | Unknown Security Originator | | | |
|  | | | | 15 |  | Syntax Error in Decrypted Text | | | |
|  | | | | 16 |  | Security Not Supported | | | |
|  | | | | 17 |  | Incorrect Message Length (Encryption Only) | | | |
|  | | | | 18 |  | Message Authentication Code Failed | | | |
|  | | | | 19 |  | S1E Security End Segment Missing for S1S Security Start Segment | | | |
|  | | | | 20 |  | S1S Security Start Segment Missing for S1E End Segment | | | |
|  | | | | 21 |  | S2E Security End Segment Missing for S2S Security Start Segment | | | |
|  | | | | 22 |  | S2S Security Start Segment Missing for S2E Security End Segment | | | |
|  | | | | 23 |  | S3E Security End Segment Missing for S3S Security Start Segment | | | |
|  | | | | 24 |  | S3S Security Start Segment Missing for S3E End Segment | | | |
|  | | | | 25 |  | S4E Security End Segment Missing for S4S Security Start Segment | | | |
|  | | | | 26 |  | S4S Security Start Segment Missing for S4E Security End Segment | | | |
|  | **AK907** | **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 | | | | | | |
|  | | | | 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 | | | |
|  | | | | 10 |  | Authentication Key Name Unknown | | | |
|  | | | | 11 |  | Encryption Key Name Unknown | | | |
|  | | | | 12 |  | Requested Service (Authentication or Encryption) Not Available | | | |
|  | | | | 13 |  | Unknown Security Recipient | | | |
|  | | | | 14 |  | Unknown Security Originator | | | |
|  | | | | 15 |  | Syntax Error in Decrypted Text | | | |
|  | | | | 16 |  | Security Not Supported | | | |
|  | | | | 17 |  | Incorrect Message Length (Encryption Only) | | | |
|  | | | | 18 |  | Message Authentication Code Failed | | | |
|  | | | | 19 |  | S1E Security End Segment Missing for S1S Security Start Segment | | | |
|  | | | | 20 |  | S1S Security Start Segment Missing for S1E End Segment | | | |
|  | | | | 21 |  | S2E Security End Segment Missing for S2S Security Start Segment | | | |
|  | | | | 22 |  | S2S Security Start Segment Missing for S2E Security End Segment | | | |
|  | | | | 23 |  | S3E Security End Segment Missing for S3S Security Start Segment | | | |
|  | | | | 24 |  | S3S Security Start Segment Missing for S3E End Segment | | | |
|  | | | | 25 |  | S4E Security End Segment Missing for S4S Security Start Segment | | | |
|  | | | | 26 |  | S4S Security Start Segment Missing for S4E Security End Segment | | | |
|  | **AK908** | **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 | | | | | | |
|  | | | | 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 | | | |
|  | | | | 10 |  | Authentication Key Name Unknown | | | |
|  | | | | 11 |  | Encryption Key Name Unknown | | | |
|  | | | | 12 |  | Requested Service (Authentication or Encryption) Not Available | | | |
|  | | | | 13 |  | Unknown Security Recipient | | | |
|  | | | | 14 |  | Unknown Security Originator | | | |
|  | | | | 15 |  | Syntax Error in Decrypted Text | | | |
|  | | | | 16 |  | Security Not Supported | | | |
|  | | | | 17 |  | Incorrect Message Length (Encryption Only) | | | |
|  | | | | 18 |  | Message Authentication Code Failed | | | |
|  | | | | 19 |  | S1E Security End Segment Missing for S1S Security Start Segment | | | |
|  | | | | 20 |  | S1S Security Start Segment Missing for S1E End Segment | | | |
|  | | | | 21 |  | S2E Security End Segment Missing for S2S Security Start Segment | | | |
|  | | | | 22 |  | S2S Security Start Segment Missing for S2E Security End Segment | | | |
|  | | | | 23 |  | S3E Security End Segment Missing for S3S Security Start Segment | | | |
|  | | | | 24 |  | S3S Security Start Segment Missing for S3E End Segment | | | |
|  | | | | 25 |  | S4E Security End Segment Missing for S4S Security Start Segment | | | |
|  | | | | 26 |  | S4S Security Start Segment Missing for S4E Security End Segment | | | |
|  | **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 | | | | | | |
|  | | | | 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 | | | |
|  | | | | 10 |  | Authentication Key Name Unknown | | | |
|  | | | | 11 |  | Encryption Key Name Unknown | | | |
|  | | | | 12 |  | Requested Service (Authentication or Encryption) Not Available | | | |
|  | | | | 13 |  | Unknown Security Recipient | | | |
|  | | | | 14 |  | Unknown Security Originator | | | |
|  | | | | 15 |  | Syntax Error in Decrypted Text | | | |
|  | | | | 16 |  | Security Not Supported | | | |
|  | | | | 17 |  | Incorrect Message Length (Encryption Only) | | | |
|  | | | | 18 |  | Message Authentication Code Failed | | | |
|  | | | | 19 |  | S1E Security End Segment Missing for S1S Security Start Segment | | | |
|  | | | | 20 |  | S1S Security Start Segment Missing for S1E End Segment | | | |
|  | | | | 21 |  | S2E Security End Segment Missing for S2S Security Start Segment | | | |
|  | | | | 22 |  | S2S Security Start Segment Missing for S2E Security End Segment | | | |
|  | | | | 23 |  | S3E Security End Segment Missing for S3S Security Start Segment | | | |
|  | | | | 24 |  | S3S Security Start Segment Missing for S3E End Segment | | | |
|  | | | | 25 |  | S4E Security End Segment Missing for S4S Security Start Segment | | | |
|  | | | | 26 |  | S4S Security Start Segment Missing for S4E Security End Segment | | | |
|  |  |  |  |  |  |  |  |  |  |  |

**Segment: SE Transaction Set Trailer**

**Position:** 080

**Loop:**

**Level:**

**Usage:** Mandatory

**Max Use:** 1

**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)

**Syntax Notes:**

**Semantic Notes:**

**Comments:** **1** SE is the last segment of each transaction set.

**Data Element Summary**

**Ref. Data**

**Des. Element Name Attributes**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Must Use** | **SE01** | **96** | **Number of Included Segments** | **M** |  | **N0 1/10** | |
|  | | | Total number of segments included in a transaction set including ST and SE segments | | | |
| **Must Use** | **SE02** | **329** | **Transaction Set Control Number** | **M** |  | **AN 4/9** | |
|  | | | Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set | | | |
|  |  |  |  |  |  |  |  |