Department
of
Defense

# DoD Transportation Electronic Business (DTEB) Convention

ASC X12 Transaction Set 998 Rail Bill of Lading Cancellation (Version 004010)

FINAL DRAFT

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# Section 1.0

# INTRODUCTION

This implementation convention (IC) describes the standard or convention Department of Defense (DoD) will use to process the Rail Bill of Lading Cancellation (ASC ANSI 988).

For further information about the Defense Transportation community's Electronic Business (DTEB) program, contact the following:

United States Transportation Command
TCJ6-AD
508 Scott Drive
Scott Air Force Base, IL  62225-7001

To obtain DoD conventions or *ASC* X12 guidance or to recommend DoD conventions or *ASC* X12 maintenance, contact the following:

Defense Logistics Management Standards Office
Attn: DLMSO
8725 John J. Kingman Road
Ft. Belvoir VA  22060-6217

For the most recent publication, go to the World-Wide Web at
https://dteb.lmi.org/dod/dteb.nsf/(DocLevel2)?OpenView&cat1=IC&cat2=4010

[Instructions: At the web location, sign on as 'Guest'. Select the desired Implementation Convention document. That document is available in PDF format and may be downloaded or printed.]

## Who Needs to Use This Document

Computer programmers use this document to identify the data requirements for populating an EDI transaction.

## Why Use a Convention

Trading partners can populate EDI transaction sets in several ways. A convention defines the rules for filling in or "populating" an EDI transaction. Following a convention ensures that trading partners will encounter fewer data quality problems during development and maintenance of EDI systems.

# Contents

Additional sections are included in this document.

- Section 2.0, Control Segments, identifies the specific data requirements for formatting the EDI interchange control segments that envelop all EDI transactions.

- Section 3.0, Standard Implementation Convention, lists the layout of the target transaction set by segment and data element. Identified along side each transaction set data element is the IC Element Matrix index number from Section 4.0.

- Section 4.0, IC Element Matrix, identifies the application data elements trading partners need to exchange. This section can be used to map an existing application database into the transaction set.

- Section 5.0 , when present, contains an example of the EDI transactions.

- Section 6.0, Application Code Lists, when present, identifies the DoD codes that trading partners need to exchange. This section augments the matrix presented in Section 4.0.

- Other sections contain examples of hard copy documents, examples of EDI transaction sets, segment looping logic tables, and other items that serve as references for software developers.

# Section 2.0

# CONTROL SEGMENTS

## Overview

This section describes the EDI control segments (interchange control and functional group segments). The control segment information was derived from the *ASC* X12 Standards Version 4 Release 1 (004010).

## Purpose

This section identifies the specific data requirements for formatting the EDI control segments when transmitting and receiving EDI transactions. The format and data content of the control segments are usually managed by EDI translation software. The data requirements described herein should be used to set control segment formats when installing or initializing translation software for transmission and reception of EDI transactions.

## Contents

The complete 004010 version/release control segments includes an Interchange Control Segment Hierarchy on page 2.3, which identifies the control segments in their order of occurrence in an EDI communications interchange.

Beginning on page 2.5 are Department of Defense (DoD) Convention *ASC* X12 Control Segments, which present a detailed description of DoD data conventions for formatting Interchange Control and Functional Group segments for use among Defense Transportation Electronic Business (DTEB) trading partners.

## Special Instructions

Any unique eight-bit (byte) character may serve as data element separator, segment terminator, or component element separator, provided each character is disjoint from all data elements within an interchange and that these values do not conflict with telecommunications protocols necessary to the transmission of the interchange. The following recommended values conform to information published in Electronic Data Interchange, X12 Standards, Interchange Control Structures, Section 4.3, Delimiter Specifications.

## DATA ELEMENT SEPARATOR

While the data element separator is graphically displayed as an asterisk (*) or a tilde (~) in *ASC* X12 documentation, it is the value employed in the fourth byte of an interchange envelope that actually assigns the separator that the translators will use throughout an interchange. Any unique eight-bit (byte) character may serve as data element separator, segment terminator, or component element separator, provided each character is disjoint from all data elements within an interchange and that these do not conflict with telecommunications protocols necessary to the transmission of the interchange.

*ASC* X12 recommends the ASCII character with hexadecimal value "1D" for use as the data element separator (gs). These values conform to information published in Electronic Data Interchange, X12 Standards, Interchange Control Structures, Section 4.3, Delimiter Specifications.

## SEGMENT TERMINATOR

Likewise, the control envelope establishes the byte value used for segment termination within an interchange. *ASC* X12 documentation usually portrays this as a new line (n/l character, but the actual segment terminator for an interchange will be the byte value occurring immediately following the ISA16 segment. *ASC* X12 recommends the ASCII character with hexadecimal value "1C" for use as the segment (fs) terminator.

## COMPONENT ELEMENT SEPARATOR

The ISA segment provides a discrete element (ISA16) for defining the component element separator within an interchange. The component element separator is a delimiter used to separate component data elements within a composite data structure. It must be different than the data element separator and the segment terminator. *ASC* X12 recommends the ASCII character with hexadecimal value "1F" for use as the component element separation (us) character.

## GS01 CODE VALUE

Use the appropriate code value from data element 479 in GS01 of the control envelope for indicating the transaction set being transmitted. For example, to exchange an implementation convention for Transaction Set 858, the correct code value for GS01 is 'SI' denoting Shipment Information (858).

## X12 PUBLICATION

See *ASC* X12 Electronic Data Interchange X12 Draft Version 4 Release 1 Standards, Document Number: *ASC X12S/97-372*, for complete 004010 version/release control segment specifications.

# Interchange Control Envelope Control Segments

| Usage | Seg ID | Name | Req Des | Max Use |
|---|---|---|---|---|
| Must Use | ISA | Interchange Control Header | M | 1 |
| Must Use | GS | Functional Group Header | M | 1 |
| Must Use | ● ST - SE | Grouped Transactions | | |
| Must Use | ● ST - SE | Grouped Transactions | | |
| Must Use | ● ST - SE | Grouped Transactions | | |
| Must Use | GE | Functional Group Trailer | M | 1 |
| Must Use | GS | Functional Group Header | M | 1 |
| Must Use | ● ST - SE | Grouped Transactions | | |
| Must Use | ● ST - SE | Grouped Transactions | | |
| Must Use | ● ST - SE | Grouped Transactions | | |
| Must Use | GE | Functional Group Trailer | M | 1 |
| Must Use | IEA | Interchange Control Trailer | M | 1 |

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

## DATA ELEMENT SUMMARY

| | Ref Des | Data Element | Name | | Attributes |
|---|---|---|---|---|---|
| M | ISA01 | I01 | **Authorization Information Qualifier** | M ID 2/2 | |
| | | | Code to identify the type of information in the Authorized Information | | |

| Code | Definition |
|---|---|
| 00 | No Authorization Information Present (No Meaningful Information in I02) |

| | Ref Des | Data Element | Name | Attributes |
|---|---|---|---|---|
| M | ISA02 | I02 | **Authorization Information** | M AN 10/10 |

Information used for additional clarification or authorization of the interchange sender or the data in the interchange; the type of information is set by the Authorization Information Qualifier (I01)

For code value '00' in ISA01, fill with zeros.

| | Ref Des | Data Element | Name | Attributes |
|---|---|---|---|---|
| M | ISA03 | I03 | **Security Information Qualifier** | M ID 2/2 |

Code to identify the type of information in the Security Information

| Code | Definition |
|---|---|
| 00 | No Security Information Present (No Meaningful Information in I04) |

| | Ref Des | Data Element | Name | Attributes |
|---|---|---|---|---|
| M | 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).

For code value '00' in ISA03, fill with zeros.

| M | ISA05 | I05 | **Interchange ID Qualifier** | M ID 2/2 |
|---|---|---|---|---|

Qualifier to designate the system/method of code structure used to designate the sender or receiver ID element being qualified

Select appropriate code value for sender from 4010 X12 code list for data element I05. For Department of Defense Agency Address Code (DoDAAC) use code value '10'.

| M | 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.

DoD activities use DoDAAC or other code coordinated with trading partners. Non-DoD activities use identification code qualified by ISA05 and coordinated with network value added network (VAN) Administrator.

| M | ISA07 | I05 | **Interchange ID Qualifier** | M ID 2/2 |
|---|---|---|---|---|

Qualifier to designate the system/method of code structure used to designate the sender or receiver ID element being qualified

Select appropriate code value for receiver from 4010 X12 code list for data element I05. For DoDAAC use code value '10'.

| M | ISA08 | I07 | **Interchange Receiver ID** | M AN 15/15 |
|---|---|---|---|---|

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.

DoD activities use DoDAAC or other code coordinated with trading partners. Non-DoD activities use identification code qualified by ISA05 and coordinated with VAN Administrator.

| M | ISA09 | I08 | **Interchange Date** | M | DT | 6/6 |

Date of the interchange

Date in MMDDYY format assigned by translation software

| M | ISA10 | I09 | **Interchange Time** | M | DT | 4/4 |

Time of the interchange

Time in HHMM format assigned by translation software

| M | ISA11 | I10 | **Interchange Control Standards** | M | ID | 1/1 |

Code to identify the agency responsible for the control standard used by the message that is enclosed by the interchange header and trailer

| Code | Definition |
|------|------------|
| U | U.S. EDI Community of ASC X12, TDCC, and UCS |

| M | ISA12 | I11 | **Interchange Control Version Number** | M | ID | 5/5 |

This version number covers the interchange Control segments.

| Code | Definition |
|------|------------|
| 00401 | Draft Standards for Trial Use Approved for Publication by ASC 12 Procedures Review Board through October 1997 |

Version/release of control segment, as agreed upon by the trading partners

| M | ISA13 | I12 | **Interchange Control Number** | M | N0 | 9/9 |

A control number assigned by the interchange sender

Number assigned by translation software. The sender, receiver, and all third parties should be able to maintain an audit trail of interchanges using this number.

| M | ISA14 | I13 | **Acknowledgment Requested** | M | ID | 1/1 |

Code sent by the sender to request an interchange acknowledgment (TA1)

| Code | Definition |
|------|------------|
| 0 | No Acknowledgment Requested |
| 1 | Interchange Acknowledgment Requested |

Send code agreed upon by trading partners.

| M | ISA15 | I14 | **Usage Indicator** | | M | ID | 1/1 |

Code to indicate whether data enclosed by this interchange envelope is test, production, or information

| Code | Definition |
|------|------------|
| I | Information |
| P | Production Data |
| T | Test Data |

Use code value as agreed upon by trading partners.

| M | ISA16 | I15 | **Component Element Separator** | | | AN | 1/1 |

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.

ASC X12 recommends the use of ASCII character whose hexagonal value is '1F' as the component element separation character

Segment:                **GS Functional Group Header**

Usage:                  Mandatory

Max Use:                1

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

DATA ELEMENT SUMMARY

| | Ref Des | Data Element | Name | | Attributes |
|---|---|---|---|---|---|
| M | GS01 | 479 | **Functional Identifier Code** | | M ID 2/2 |

Code identifying a group of application related transaction sets

Use the appropriate code value from data element 479 in GS01 of the
control envelope for indicating the transaction set being transmitted. For
example, to exchange an implementation convention for Transaction Set
858, the correct code value for GS01 is 'SI' denoting Shipment
Information (858).

| | | | | | |
|---|---|---|---|---|---|
| M | GS02 | 142 | **Application Sender's Code** | | M AN 2/15 |

Code identifying party sending transmission; codes agreed to by trading
partners

Typically, a sender will use different codes here to uniquely identify each
implementation convention (IC) for a particular transaction set. DoD
activities use DoDAAC or other code coordinated with trading partners.
Non-DoD activities use identification code assigned by DoD, which for
increased security should differ from that used in ISA06.

| | | | | | |
|---|---|---|---|---|---|
| M | GS03 | 124 | **Application Receiver's Code** | | M AN 2/15 |

Code to identify the type of information in the Security Information

DoD activities use DoDAAC or other code coordinated with trading
partners. Non-DoD activities use identification code assigned by DoD,
which for increased security should differ from that used in ISA08

| M | GS04 | 373 | **Date** | M | DT | 8/8 |

Date expressed as CCYYMMDD.
Information about the interchange sender or the data in the interchange; the type of information is set by the Security Information Qualifier (I03)

Date assigned by translation software

| M | 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 D = decimal seconds; decimal seconds are expressed as follows: D = tenths (0-9) and DD = hundredths (00-99)

Time expressed in HHMM format assigned by translation software

| M | GS06 | 28 | **Group Control Number** | M | N0 | 1/9 |

Assigned number originated and maintained by the sender

Number assigned by translation software. The sender, receiver, and all third parties should be able to maintain an audit trail of interchanges using this number.

| M | GS07 | 455 | **Responsible Agency Code** | M | ID | 1/1 |

Code used in conjunction with Data Element 480 to identify the issuer of the standard.

| **Code** | **Definition** |
|---|---|
| X | Accredited Standards Committee X12 |

| M | GS08 | 480 | **Version / Release / Industry Identified Code** | M | AN | 6/6 |

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 the user), if code in DE455 in GS segment is T, then other formats are allowed.

| **Code** | **Definition** |
|---|---|
| 004010 | Draft Standard Approved for Publication by ASC X12 Procedures Review Board through October 1997 |

This is the version/release for all transactions within a functional group. See X12 4010 Dictionary for source code list. Note: optional positions 7-12 are not used by the DTEB community.

Segment:        **GE Functional Group Trailer**

Usage:          Mandatory

Max Use:       1

Purpose:        To indicate the end of a functional group and to provide control information

## DATA ELEMENT SUMMARY

| | Ref Des | Data Element | Name | Attributes |
|---|---|---|---|---|
| M | GE01 | 97 | **Number of Transaction Sets Included** | M N0 1/6 |
| | | | Total number of segments included in a transaction set including ST and SE segments | |
| | | | Number assigned by translation software | |
| M | GE02 | 28 | **Group Control Number** | M N0 1/9 |
| | | | Assigned number originated and maintained by the sender | |
| | | | Number assigned by the translation software. This control number matches the control number that occurs in GS06. | |

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

## DATA ELEMENT SUMMARY

| | Ref Des | Data Element | Name | Attributes |
|---|---|---|---|---|
| M | IEA01 | I16 | **Number of Included Functional Groups** | M N0 1/6 |

A count of the number of functional groups included in an interchange

Number calculated by translation software

| | | | | |
|---|---|---|---|---|
| M | IEA02 | I12 | **Interchange Control Number** | M N0 9/9 |

A control number assigned by the interchange sender

Number assigned by translation software. This number must match that occurring in ISA13.

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# Section 3.0

# STANDARD IMPLEMENTATION CONVENTION

This section presents the DoD's convention for generating Rail Bill of Lading Cancellation using the *ASC* Transaction Set 998 Version 004010.

Symbols that appear in the Data Element Summary to the left of each segment reference designator (Ref. Des.) define implementation convention usage for the DoD. These designations may differ from *ASC* X12 convention attributes appearing in the right-hand column of the Data Element Summary and should be interpreted as follows:

> [*blank*] - Segment or data element may be used optionally
>
> M        - X12 standards designate mandatory use of segment or data element
>
> >>        - Segment or data element is mandatory for DTEB use
>
> X        - Segment or data element is not used.

NOTE: Whenever a segment occurs more than once, DoD's actual usage requirement may differ among the instances of segment usage. In all cases, the Data Element Summary will indicate the highest order DoD requirement. In other words, if one or several particular instances for a segment are OPTIONAL but another is MANDATORY, the Data Element Summary will indicate a MANDATORY requirement. A review of the IC layout in Section 4.0 will distinguish among the multiple instances and clarify the usage requirement for each instance.

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# 998 Set Cancellation

**Functional Group ID=AL**

## Introduction:

This Draft Standard for Trial Use contains the format and establishes the data contents of the Set Cancellation Transaction Set (998) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to request the deletion of a previously transmitted transaction set and will indicate the reason for this action, such as diversion or cancelled bill.

| | Pos. No. | Seg. ID | Name | Req. Des. | Max.Use | Loop Repeat | Notes and Comments |
|---|---|---|---|---|---|---|---|
| M | 010 | ST | Transaction Set Header | M | 1 | | |
| M | 020 | ZD | Transaction Set Deletion - ID, Reason, and Source | M | 1 | | |
| M | 030 | SE | Transaction Set Trailer | M | 1 | | |

| | | | | |
|---|---|---|---|---|
| **Segment:** | **ST** Transaction Set Header | | | |

**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:** | |
| **Notes:** | [001] Transaction Set Identifier Code |

### Data Element Summary

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| M | ST01 | 143 | **Transaction Set Identifier Code** | M  ID 3/3 |
| | | | Code uniquely identifying a Transaction Set | |
| | | | [002] Transaction Set Control Number | |
| | | 998 | Set Cancellation | |
| | | | [002] Set Cancellation | |
| M | 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 | |

[003] Transaction Set Control Number
Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set. The application and structure of the control number must be agreed upon between trading partners. (For example, some applications use all nine digits where the first five might indicate a group control number and the last four represent the sequence of the transaction set within the functional group. Also, the entire nine digit field may simply represent the sequence of the transaction set generated by a trading partner.)

| | Ref. Des. | Data Element | Name | | Attributes |
|---|---|---|---|---|---|

**Segment:** **ZD** Transaction Set Deletion - ID, Reason, and Source

**Position:** 020

**Loop:**

**Level:**

**Usage:** Mandatory

**Max Use:** 1

**Purpose:** This segment is used to specify the transaction set to be canceled

**Syntax Notes:**

**Semantic Notes:**

**Comments:**

**Notes:** [004] ZD SEGMENT - Set Deletion ID, Reason, and Source

### Data Element Summary

| | Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|---|
| M | ZD01 | 143 | **Transaction Set Identifier Code** | M | ID 3/3 |

Code uniquely identifying a Transaction Set

[005] Transaction Set Identifier Code

| | | 404 | Rail Carrier Shipment Information | | |

[005] Rail Carrier Shipment Information

| M | ZD03 | 206 | **Equipment Initial** | M | AN 1/4 |

Prefix or alphabetic part of an equipment unit's identifying number

[006] Initials
Enter original car initials.

| M | ZD04 | 207 | **Equipment Number** | M | AN 1/10 |

Sequencing or serial part of an equipment unit's identifying number (pure numeric form for equipment number is preferred)

[007] Numbers
Enter original car number.

| >> | ZD05 | 244 | **Transaction Reference Number** | O | AN 1/15 |

Sender's assigned number for referenced transaction set

[008] Original Bill of Lading Number

| >> | ZD06 | 243 | **Transaction Reference Date** | O | DT 8/8 |

Date of referenced transaction set expressed in format CCYYMMDD

[009] Original Date Prepared

| M | ZD07 | 202 | **Correction Indicator** | M | ID 2/2 |

Code used to indicate that the transaction set contains information which corrects previous information

[010] Cancelled Bill

| | | CA | Cancelled Bill | | |

[010] Cancelled Bill

| >> | ZD08 | 140 | **Standard Carrier Alpha Code** | O | ID 2/4 |

Standard Carrier Alpha Code

[011] Standard Carrier Alpha Code

**Segment:** # SE Transaction Set Trailer

| | |
|---|---|
| **Position:** | 030 |
| **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. |
| **Notes:** | [012] SE SEGMENT - Set Cancellation Trailer |

### Data Element Summary

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| M | SE01 | 96 | **Number of Included Segments** | **M   N0 1/10** |

Total number of segments included in a transaction set including ST and SE segments

[013] Number of Included Segments
Total segments in this transaction set including the ST and SE segments.

| | | | | |
|---|---|---|---|---|
| M | 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

[014] Transaction Set Control Number
This data element ends the transaction set and should match the number that appears in the ST02 that begins the transaction set.

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# Section 4.0

# IC ELEMENT MATRIX

## OVERVIEW

In order to implement an EDI transaction set, trading partners need to identify the application data elements they plan to exchange, identify where they plan to carry the data within the structure of the EDI transaction (a task commonly called mapping), identify any additional X12 data such as qualifier codes, and publish that information in an implementation convention (IC). This section contains an IC element matrix that lists that information.

## PURPOSE

Using the IC element matrix will expedite mapping of an application database into a commercial EDI translation package. The application notes section below describes the application specific to this IC element matrix.

## HOW TO READ THE IC ELEMENT MATRIX

To read the matrix, trading partners need to understand matrix record types, two categories of matrix information, the matrix layout, and the sort order of the matrix.

### Record Types

The matrix contains two types of records: segment header records and element records.

- Segment header records begin the description of a segment. Each segment header record starts the description of a discrete occurrence of an X12 segment. The element records (see below) that follow a segment header record cannot be co-mingled with elements from other segments, including those segments with matching IDs.

- Element records identify an individual data element that occurs within a segment. Each element satisfies either an application requirement or X12 standard syntax. If one element in a segment is passed, all elements in the segment need to be passed in accordance with the IC requirement designator.

### Two Categories of Record Information

The matrix contains two categories of information: IC application information and *ASC* X12 information.

- IC application information describes attributes outside the structure and syntax of the *ASC* X12 standard.

- *ASC* X12 information is attached to each IC element. That information is extracted directly from the X12 standard dictionary and enables programmers to map the IC element into the standards.

*Matrix Layout*

The IC element matrix lists information in sixteen columns.

- IC Index Number (Index) enables designers and programmers to quickly cite a record in the matrix.

- IC Data Group Number (DG) is a number assigned by the IC developers. That number identifies an IC element with a group of elements that form a database table within the application data model. In order to quickly reference a table, Defense transportation developers label database tables with a Data Group number. For example, a "Bill To Address" may belong to the "PURCHASE ORDER" parent table with GRP = 10. A "Stop-off Delivery Address" may belong to the "ITEM DELIVERY" child table with GRP = 60.

- IC Data Element Name (Data Name) is a label for each data element using terminology common to the business environment. The IC element matrix identifies an element as a "Carrier Shipment ID". This is more concise than using the generic X12 label of "Shipment Identification Number." A segment header record identifies the segment ID in this field.

- IC Notes & Codes (DoD Information Notes and Codes) can contain application notes about various segment and element conditions or requirements. This column may also list both X12 standard codes and DoD unique codes. If the list is larger than 20 codes, it may appear in the section that contains Code Lists.

- IC Attributes (Attributes). When part of a segment header record, this column indicates the usage of the segment. When part of an element record, this column indicates the usage of the element within the segment, if the segment is used. Attributes may differ from those in the X12 standard. For example, if trading partners expect to exchange a purchase order number that has a specific length and structure, those attributes are decribed here. Attributes include requirement designator, data element type, minimum length and maximum length.

- X12 Transaction Set Table Number (Tabl).

- X12 Segment Position (Pos).

- X12 Requirement Designator (Req Des) . This column applies only to Segment Header type matrix records.

- X12 Maximum Usage (Max Use). This column applies only to Segment Header type matrix records.

- X12 Loop Repeat (Lp Rpt) indicates the number of times a loop may be used. This column applies only to Segment Header type matrix records.

- X12 Loop Level (Lp Lv). Loops may be nested within other loops. This column indicates the nesting level for each loop and applies only to Segment Header type matrix records.

- X12 Loop ID (Lp ID). This column applies only to Segment Header type matrix records.

- X12 Segment Reference Designator (Ref Des) . This column applies only to Element type matrix records.

- X12 Simple or Composite Data Element Number (DE#). This column applies only to Element type matrix records.

- X12 Simple Data Element Attributes (Attributes). Attributes listed include the data element requirement designator, data element type, minimum length and maximum length. This column applies only to Element type matrix records.

- X12 Composite Data Element Attributes ((Composite) Attributes) . Attributes listed include the simple data element number, requirement designator, data element type, minimum length and maximum length. This column applies only to Element type matrix records.

*Sort Order of the Matrix*

The matrix presents IC elements in an order that enables programmers to generate application-to-translator interface files (also known as user-defined files or UDFs) that are syntactically correct to *ASC* X12 standards. IC elements are grouped under segment header records. When exchanging an IC element, the programmer needs to generate the entire segment under which the element is listed. Likewise, when exchanging a segment, the programmer needs to generate the entire loop structure to which the segment belongs.

## APPLICATION NOTES

The IC element matrix in this section maps data requirements for the Rail Bill of Lading Cancellation. DoD derived the IC elements from the following sources:

- Analysis of existing carrier 998 Implementation Guides

- Comments submitted by transportation activities involved in the DoD electronic data interchange effort.

| | | DoD INFORMATION | | DoD Recommended Attributes | X12 SEGMENT INFORMATION | | | | | | | X12 ELEMENT INFORMATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Index | DG | Data Name | Notes and Codes | | Tabl | Pos | Req Des | Max Use | Lp Rpt | Lp Lv | Lp ID | Ref Des | DE # | (Simple) Attributes | (Composite) Attributes |
| 1 | | | | M | 1 | 10 | M | 1 | | | | | | | |
| 2 | | Transaction Set Control Number | 998 - Set Cancellation | M  ID  3/3 | 1 | 10 | | 1 | | | | ST01 | 143 | M  ID  3/3 | |
| 3 | | Transaction Set Control Number | Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set. The application and structure of the control number must be agreed upon between trading partners. (For example, some applications use all nine digits where the first five might indicate a group control number and the last four represent the sequence of the transaction set within the functional group. Also, the entire nine digit field may simply represent the sequence of the transaction set generated by a trading partner.) | M  AN 4/9 | 1 | 10 | | 1 | | | | ST02 | 329 | M  AN 4/9 | |
| 4 | | **ZD SEGMENT - Set Deletion ID, Reason, and Source** | | M | 1 | 20 | M | 1 | | | | | | | |
| 5 | | Transaction Set Identifier Code | 404 - Rail Carrier Shipment Information | M  ID  3/3 | 1 | 20 | | 1 | | | | ZD01 | 143 | M  ID  3/3 | |
| 6 | | Initials | Enter original car initials. | M  AN 1/4 | 1 | 20 | | 1 | | | | ZD03 | 206 | M  AN  1/4 | |
| 7 | | Numbers | Enter original car number. | M  AN 1/10 | 1 | 20 | | 1 | | | | ZD04 | 207 | M  AN 1/10 | |
| 8 | | Original Bill of Lading Number | | M  AN 1/15 | 1 | 20 | | 1 | | | | ZD05 | 244 | O  AN 1/15 | |
| 9 | | Original Date Prepared | | M  DT  8/8 | 1 | 20 | | 1 | | | | ZD06 | 243 | O  DT  8/8 | |
| 10 | | Cancelled Bill | CA - Cancelled Bill | M  ID  2/2 | 1 | 20 | | 1 | | | | ZD07 | 202 | M  ID  2/2 | |

| | | DoD INFORMATION | | DoD Recommended Attributes | X12 SEGMENT INFORMATION | | | | | | | X12 ELEMENT INFORMATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Index | DG | Data Name | Notes and Codes | | Tabl | Pos | Req Des | Max Use | Lp Rpt | Lp Lv | Lp ID | Ref Des | DE # | (Simple) Attributes | (Composite) Attributes |
| 11 | | Standard Carrier Alpha Code | | M  ID  2/4 | 1 | 20 | | 1 | | | | ZD08 | 140 | O  ID  2/4 | |
| 12 | | **SE SEGMENT - Set Cancellation Trailer** | | M | 1 | 30 | M | 1 | | | | | | | |
| 13 | | Number of Included Segments | Total segments in this transaction set including the ST and SE segments. | M  N0  1/10 | 1 | 30 | | 1 | | | | SE01 | 96 | M  N0  1/10 | |
| 14 | | Transaction Set Control Number | This data element ends the transaction set and should match the number that appears in the ST02 that begins the transaction set. | M  AN 4/9 | 1 | 30 | | 1 | | | | SE02 | 329 | M  AN  4/9 | |

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# Section 5.0

# IC ELEMENTS IN EDI FORMAT

## Contents

This section contains one example of the 998 transaction set as used to cancel three rail bills of lading.

## How to Read the Example

The example approximates a complete *ASC* X12 transaction. It begins with a transaction header segment (ST) and ends with a transaction trailer segment (SE) and represents a complete transaction unless otherwise noted. Data element separators are delimited with a tilde ("~"). Sub-element separators are delimited with a colon (":"). The new line ("n/l") character delimits end of segment. Notes in **bold text** explain key segments in transaction.

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# Example 1 – Bill of Lading Cancellation

| | |
|---|---|
| ST~998~0001 n/l | **Transaction set header** |
| ZD~404~~USAX~29378~M2776769~20000313~CA~UP n/l | **Cancel bill of lading #29378** |
| SE~3~0001 n/l | **Transaction set trailer** |

| | |
|---|---|
| ST~998~0002 n/l | **Transaction set header** |
| ZD~404~~USAX~29387~M2776769~20000313~CA~UP n/l | **Cancel bill of lading #29387** |
| SE~3~0002 n/l | **Transaction set traile r** |

| | |
|---|---|
| ST~998~0003 n/l | **Transaction set header** |
| ZD~404~~USAX~29386~M2776769~20000313~CA~UP n/l | **Cancel bill of lading #29386** |
| SE~3~0003 n/l | **Transaction set trailer** |

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# Section 9.0

# ADDITIONAL INFORMATION FOR THE DEVELOPER

This section provides additional programming information.

## Development History

The Management Reform Memorandum (MRM) #15 Rail Working Group met over the months of February to May 2000 to discuss the generation of an Implementation Convention for the Rail 404. During these discussions, the Working Group determined that a 998 Implementation Convention was necessary. This section describes the various issues and problems that arose during these meetings and their proposed resolution.

## Business Practices

### GBL TO RAIL BILL TO SHIP STATUS

Figure 9.1 describes the process information takes from a commercial bill of lading to shipment status. A multi-car bill of lading turns into 404s for each car, which becomes 417s and 214 for each single car.
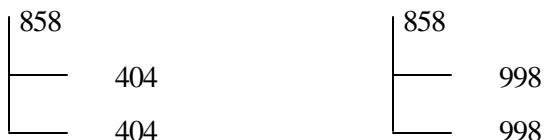
*Figure 9.1 404 Process Flow Diagram*
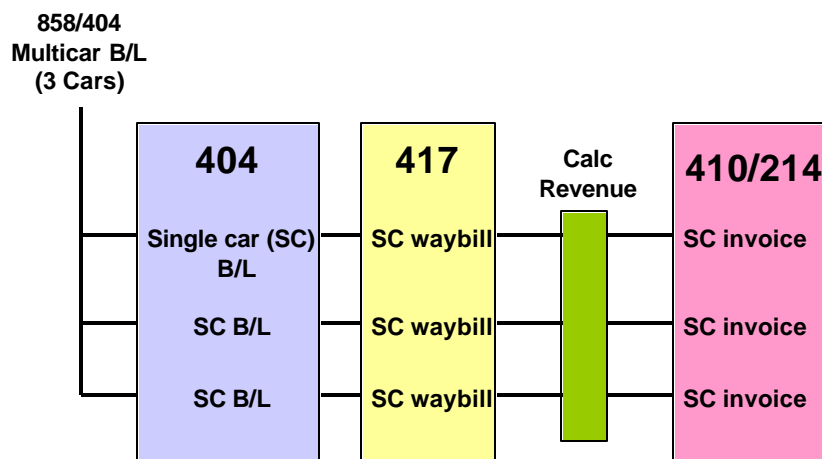
## CANCELLATION/CORRECTIONS

Military Surface Deployment and Distribution Command (MSDDC) will cancel or correct existing 404s in the following manner. Each 404 will be cancelled/changed with a 998. MSDDC will send new 404s to the rail carriers. See the Implementation Convention for the 998 for information regarding the structure of the 998. Figure 9.2 shows an example of this procedure.

*Figure 9.2 Cancellations/corrections transmissions*

```
 858                        858
   |                          |
   |──── 404                  |──── 998
   |                          |
   └──── 404                  └──── 998
```

MSDDC will always retransmit a new 404 after a cancellation is sent. Figure 9.3 shows this in more detail.

*Figure 9.3 Retransmission of 404's*