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#### **Using Electronic Data Interchange (EDI)**

#### How MACI's EDI Works

- **1.** Michigan Automotive Compressor, Inc. (MACI) sends and receives EDI transactions via the G-International Services Value Added Network.
- **2.** The supplier receives the Weekly Release (ANSI 830) via EDI. The Weekly Release is used as a firm and/or forecast document that provides information by part number. It contains requirements formatted into daily, weekly, or monthly buckets. The supplier uses the information from the Weekly Release to print Trading Partner Labels (TPL). These labels are affixed to the part containers in accordance with MACI's Packaging Guidelines. The production requirements are also to be used as shipment authorization. The length of the forecast may be shortened by the request of the supplier. Using information from the Weekly Release, the supplier prints the Container, Master and Mixed Labels.
- **3.** The supplier sends the Functional Acknowledgments (ANSI 997) via EDI. The Functional Acknowledgment is a standard communications "handshake" verification. It is used to confirm that successful communication has occurred between the EDI translators of each pair of trading partners. MACI requires a Functional Acknowledgment in response to all outbound transmissions and provides it in response to all incoming transmissions.
- **4.** As the trailer is being loaded (or staged), the supplier scans the bar code labels to generate the data required to create the Advance Ship Notice (ASN-ANSI 856) and Master Packing List (MPL). This step also verifies the scannability of each label.
- **5.** Using the data collected by scanning, the supplier reconciles their shipment information to the Planned Load. This comparison identifies any order versus delivery discrepancies so they can be corrected prior to shipment.
- **6.** Using the data collected by scanning, the supplier prints a Master Packing List conforming to MACI's standards. The Master Packing List is attached to the shipping papers for the load and accompanies the truck.

#### **Using Electronic Data Interchange (EDI)**

#### **How MACI's EDI Works**

The 856 ASN number and the Master Packing List number are the same number identified as the ASN/SID number on the Master Packing List.

- **7.** Using the data collected by scanning, the supplier sends an ASN (ANSI 856), via EDI, to MACI in conformance with MACI's standards. MACI transmits a Functional Acknowledgment (ANSI 997) and Application Advice (ANSI 824) in response to ASNs (ANSI 856) that are processed by our application system.
- **8.** As the truck is unloaded, the barcodes are scanned for verification against the ASN. If discrepancies are found or if an ASN was not sent, the shipment will be received manually and MACI will require the supplier to implement counter measures to correct the problem.

# **Using Electronic Data Interchange (EDI)**

#### **Key Contacts**

To obtain answers to questions regarding MACI's EDI procedures please use the following guidelines:

Situation	Contact
- need an account	G-International Services *
- info on hardware/software options	USA: 1-800-655-8865
- assistance with MACI testing procedure	Canada: 1-800-426-2255
	Monday – Friday
	8:30 am till 5:15 pm (Eastern time)
Customer Assistance	G-International Services *
- current transmission problems	USA: 1-877-326-6426
- failure to receive a functional	Canada: 1-800-426-2255
acknowledgement	24 hours a day/7 days a week
- IBM Global Services password problem	Account Support
- account information, after setup	G-International Services *
- need additional user IDs	USA: 1-800-649-2729
- access to new services	Canada: 1-800-426-2255
	Monday - Friday
	8:00 am till 8:00 pm (Eastern time)
	_

	Additional maintenance windows Are scheduled as needed, primarily during early Sunday morning hours to provide minimum impact
Software startup and function questions	Your software provider
ASN structure questions/Bar Code Label requirements questions/New supplier or trading partner startup	Your software provider
	Note MACI Supplier EDI technical contact Jim Hagey – hageyj@michauto.com  Non-technical support – please contact your purchasing agent

#### **Using Electronic Data Interchange (EDI)**

## **Implementation Steps**

**Overview** To implement EDI with MACI, follow these steps:

- **1.** Contact G-International Services for general assistance and to establish mailbox.
- **2.** Choose software path.
- **3.** Complete the MACI supplier testing process.
- **4.** Call your MACI contact to go live, communicating with MACI using EDI.

#### **G-International Services Network**

G-International Services is MACI's exclusive Value Added Network. **G-International Services' Customer Enabling Center (CES)** may be reached at **(US) 1-800-655-8865 or (CAN) 1-416-773-7671** between the hours 8:30 - 5:15 Eastern Time, Monday through Friday, for new suppliers needing assistance or a solution to a problem with any of the following:

- General EDI Information
- Network account set up
- Network connectivity
- · Customer support.

## **Implementation Steps**

#### **MACI Trading Partner File Information**

**MACI -- EDI Set-up** Before transmitting EDI data, MACI must create a trading partner within MACI's systems. MACI Purchasing representatives will work with MACI Suppliers to perform this set-up. During set-up, a MACI IS EDI analyst will contact you to clarify the following information. This information may be obtained from your software provider.

		ASCII	EBCDIC
Example: Information	Character	Hex	Hex
1) Element Delimiter	*	2A	5C
2) Sub-element Delimiter	^	5E	5F
3) Segment Terminator	~	7E	A1

<sup>4)</sup> If you are not familiar with your company's 9-digit Duns number, please contact your accounting department for this information or contact Dun & Bradstreet directly at:

MACI transmits the data according to the above parameters.

#### Non-compliance

In the event that a supplier is not able to comply with these requirements, the supplier should contact MACI Production Control for an alternative.

<sup>1-800-999-3867 (</sup>US)

<sup>1-800-463-6362 (</sup>Canada)

<sup>5)</sup> MACI's Duns number: 606360444

Standard Covered Interchange Control Structures, abbreviated "ICS".

#### **Application Standards and Conventions**

Interchange Control Structures are based upon ANSI ASC X12 Interchange Control Version Number 00400.

**Mapping** A list of the Interchange Control Structures business data elements and how they will be transmitted via EDI Standards is provided in the Standard Specifications section.

#### **Exceptions / Clarifications**

There are no exceptions to ANSI Standards in this Standard Description.

Schedule N/A

**Specifications** N/A

**Back-Up Procedure N/A** 

## **Business Purpose**

The Interchange Control Structures are designed to satisfy the basic requirements for enveloping and routing of electronic business data.

FREQUENCY: N/A

TRANSMITTED FROM: N/A

TRANSMITTED TO: N/A

#### **Standard Specification Information**

The following Standard Specifications consist of two sections:

**1.** The first section is an overview of the standard. It includes segment information as well as a visual depiction of the looping functionality.

#### Note

The Req. Des. for the first segment in a loop is also used for that corresponding loop.

- **2.** The second section is the detailed specifications of the standard. The attributes columns within this second section are explained as follows:
- The first column: M = Mandatory, X = Conditional, O = Optional
- The second column:

ID = Identifier (a unique value from a predefined list from ANSI)

DT = Date

TM = Time

AN = Alphanumeric

R = Numeric with a variable decimal place

Nx = Numeric with "x" decimal places

• The third column: x/y, where

x =the minimum number of digits for this element and

y =the maximum number of digits for this element.

#### **Standard Specifications**

Segment: ISA Interchange Control Header

Loop: Level:

Must Use

Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes ISA01 I01 Authorization Information Qualifier M ID 2/2

Valid codes listed below:

00 No Authorization Information Present (No Meaningful Information in I02)

Must Use ISA02 IO2 Authorization Information MAN 10/10 MACI does not use this field. 10 empty spaces (or zeros) must be entered here as the ISA segment is space sensitive.

Must Use ISA03 I03 Security Information Qualifier M ID 2/2

Valid codes listed below:

00 No Security Information Present (No Meaningful Information in I04)

Must Use ISA04 I04 Security Information M AN 10/10 MACI does not use this field. 10 empty spaces (or zeros) must be entered here as the ISA segment is space sensitive.

Must Use ISA05 I05 Interchange ID Qualifier M ID 2/2

Valid codes listed below:

01 Duns (Dun & Bradstreet)

- To be used in conjunction with interconnects and IBM Global Services carbon copy procedure. MACI and IBM must give approval prior to use of this code.

ZZ Mutually Defined

- The standard qualifier for IBM Global Services mailboxes.

Must Use ISA06 I06 Interchange Sender ID M AN 15/15

- This is the senders account ID and should be formatted as follows:
- -If ISA05 = 01
- Senders DUNS Number.
- -If ISA05 = ZZ
- Senders Account ID, followed by 3 spaces, then senders User ID.
- MACI suppliers should obtain their Account and User ID's from IBM Global Services.
- MACI must approve data in this field that is not an IBM Global Services Account & User ID.

Must Use ISA07 I05 Interchange ID Qualifier M ID 2/2

Valid codes listed below:

01 Duns (Dun & Bradstreet)

- To be used in conjunction with interconnects and IBM Global Services carbon copy procedure. MACI and IBM must give approval prior to use of this code.

ZZ Mutually Defined

- The standard qualifier for IBM Global Services mailboxes.

Must Use ISA08 I07 Interchange Receiver ID M AN 15/15

- This is the receivers account ID and should be formatted as follows:
- -If ISA07 = 01
- Receivers DUNS Number.
- -If ISA07 = ZZ

#### **Standard Specifications**

- Receivers Account ID, followed by 3 spaces, then receivers User ID.
- MACI suppliers should obtain their Account and User ID's from IBM Global Services.
- MACI must approve data in this field that is not an IBM Global Services Account & User ID.

Ref. Data

Des. Element Name Attributes ISA09 I08 Interchange Date M DT 6/6

Date expressed as YYMMDD

**Must Use** 

Must Use ISA10 I09 Interchange Time M TM 4/4

Time expressed in 24-hour clock time as HHMM

Must Use ISA11 I10 Interchange Control Standards Identifier M ID 1/1

Valid codes listed below:

U U.S. EDI Community of ASC X12, TDCC, and UCS

Must Use ISA12 III Interchange Control Version Number M ID 5/5

Valid codes listed below:

00400 Standard Issued as ANSI X12.5-1997

Must Use ISA13 I12 Interchange Control Number M NO 9/9

A control number assigned by the interchange sender

Must Use ISA14 I13 Acknowledgment Requested M ID 1/1

Valid codes listed below:

0 No Acknowledgment Requested

Must Use ISA15 I14 Usage Indicator M ID 1/1

Valid codes listed below:

P Production Data

T Test Data

- Test data must be sent to the test mailbox. If test data is sent to the production mailbox the data will be rejected, resulting in an 824 (TR) being returned to the supplier.

Must Use ISA16 I15 Component Element Separator M AN 1/1

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.

Segment: **GS** Functional Group Header

Loop: Level:

Must Use

Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
GS01 479 Functional Identifier Code M ID 2/2

Valid codes listed below:

#### **Standard Specifications**

AG Application Advice (824)

FA Functional Acknowledgment (997)

PS Planning Schedule with Release Capability (830)

SH Ship Notice/Manifest (856)

Must Use

Ref. Data

Des. Element Name **Attributes** GS02 **Application Sender's Code M** AN 2/15 142 The senders' code should be the DUNS number of the senders company. MACI'S DUNS number is 606360444. If your company does not have a DUNS number, contact MACI.

Must Use **GS03 Application Receiver's Code** M AN 2/15 124 The receiver's code should be the DUNS number of the receiving company, MACI's DUNS number is 606360444. If your company does not have a DUNS number, contact MACI.

Must Use GS04 373 Date M DT 8/8

Date expressed as CCYYMMDD

GS05 337 Time M TM 4/4

Time expressed in 24-hour clock time as HHMM

**GS06 Group Control Number** M N0 1/9 Must Use 28

Assigned number originated and maintained by the sender

Must Use GS07 455 **Responsible Agency Code** M ID 1/2

Code used in conjunction with Data Element GS08 to identify the issuer of the standard. Valid codes listed below:

X Accredited Standards Committee X12

**GS08 Must Use** 480 Version / Release / Industry

**Identifier Code** M AN 1/12

This code indicates the version, release and sub release of the EDI standard being used, including the GS and GE segments. Positions 1-3 are the version number; positions 4-6 are the release and sub release, level of the version.

Valid codes listed below:

004010 Draft Standards Approved for Publication by ASC X12 Procedures Review Board through October 1997

Segment: **GE** Functional Group Trailer

Position: 030 Loop: Level:

Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Attributes Des. Element Name Must Use **Number of Transaction Sets Included** GE01 97 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

#### **Standard Specifications**

Ref. Data

Des. Element Name Attributes
GE02 28 Group Control Number M No 1/9

Assigned number originated and maintained by the sender

Segment: IEA Interchange Control Trailer

Loop: Level:

**Must Use** 

**Usage:** Mandatory **Max Use:** 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use IEA01 I16 Number of Included Functional Groups M N0 1/5

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

Must Use IEA02 I12 Interchange Control Number M NO 9/9

A control number assigned by the interchange sender

## **Operating Procedures**

In order for MACI to successfully receive data from a supplier the ICS must be correct. The supplier needs to ensure that their ISA and GS information is populated correctly when they are sending data to MACI.

#### **Transaction Description**

**Chapter Contents** This chapter contains information and procedures for using MACI's Application Advice. Transaction specifications are included for further clarification.

#### **Standards and Conventions**

The 824 set is based upon the ANSI ASC X12 Version Release 004010 document.

**Schedule** The 824 should be transmitted within 15 minutes of receipt of ASN containing errors into MACI's application system during production/operating hours.

Specifications In transmitting the Application Advice, a User Message Class (MSGUCLS) of "824" must be present to transmit the data to the seller's mailbox on the IBM Global Services Network. It is possible for MACI to transmit multiple Application Advices within one envelope. This means that there may be multiple transaction sets (ST-SE header/trailer segments) within one interchange envelope (ISA-IEA header/trailer segments).

**Back-Up Procedure** In the event of a failure of Electronic Data Interchange, it is the responsibility of the sending party to transmit the contents of any pending Transmission to the receiving party using a method of non-EDI transmission which is timely, reasonable, and appropriate under the circumstances.

#### **Business Purpose**

The MACI Application Advice (ANSI 824) will be used by MACI to improve the accuracy of incoming transactions by providing immediate feedback to our trading partners regarding the presence of any errors detected by our system. The 824 responds to EDI transactions sent to MACI.

**Example:** ASN (ANSI 856) An 824 will be transmitted in response to transactions containing errors sent to MACI that reach our application system. Each 824 transaction can be one of two possible responses:

- **1.** Transaction is accepted with errors present.
- **2.** Transaction is rejected due to errors. This result will require repair and retransmission of the original document.

FREQUENCY: Immediately following and in response to each incoming transaction received which contains errors.

TRANSMITTED FROM: MACI

TRANSMITTED TO: Supplier (originator)

#### **Transaction Specification Information**

The following Transaction Specifications consist of two sections:

**1.** The first section is an overview of the transaction. It includes segment information as well as a visual depiction of the looping functionality.

#### Note

The Req. Des. for the first segment in a loop is also used for that corresponding loop.

- **2.** The second section is the detailed specifications of the transaction. The attributes columns within this second section are explained as follows:
- The first column: M = Mandatory, X = Conditional, O = Optional
- The second column:

ID = Identifier (a unique value from a predefined list from ANSI)

DT = Date

TM = Time

AN = Alphanumeric

R = Numeric with a variable decimal place

Nx = Numeric with "x" decimal places

• The third column: x/y, where

x = the minimum number of characters for this element and

y =the maximum number of characters for this element.

# **Transaction Specifications**

# Functional Group ID = AG

TT	ъ.			
Hea	n	n	Œ	•
1100	u	ш	<	•

incading.	Seg.		Req.	Max	Loop
	ID	Name	Des.	Use	Repeat
Must Use	ST	Transaction Set Header	M	1	Кереаі
Must Use	BGN	Beginning Segment	M	1	
Must Ose	DON	Deginning Segment	1V1	1	
	Begin	Loop ID - N1			1
Must Use	N1	MACI Ordering Plant Location	M	1	
	End Lo	pop ID – N1			
	Begin	Loop ID – N1			1
Must Use	N1	Supplier Name	M	1	
Must Use	N3	Supplier Address	M	1	
Must Use	N4	Supplier Geographic Location	M	1	
Must Use	PER	Supplier Contact	M	1	
	End Lo	pop ID – N1			
		_			
	Begin 1	Loop ID – N1			1
	N1	Ship To Location	O	1	
	End Lo	oop ID – N1			
Detail:		*			
	Begin	Loop ID – OTI			>1
Must Use	OTI	Original Transaction Identification	M	1	
		_			
	Begin	Loop ID – TED			>1
Must Use	TED	Technical Description	M	1	
	NTE	Special Instruction	O	>1	
	End Lo	oop ID – TED			
		pop ID – OTI			
<b>Summary:</b>		-			
Must Use	SE	Transaction Set Trailer	M	1	
	~_			-	

#### **Transaction Specifications**

Segment: ST Transaction Set Header

Loop:

Level: Heading Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes

Must Use ST01 143 Transaction Set Identifier Code M ID 3/3

Valid codes are listed below 824 Application Advice

Must Use ST02 329 Transaction Set Control Number M AN 4/9

This number will be unique (within a transaction set) and ascending. It may be sequential.

Segment: BGN Beginning Segment

Loop:

Level: Heading Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use BGN01 353 Transaction Set Purpose Code M ID 2/2

Valid codes are listed below

00 Original

Must Use BGN02 127 Application Advice Number M AN 1/8

Application Advice Numbers are unique by transaction type code, OTI10. The

Application Advice Number will not repeat within a year.

Must Use BGN03 373 Create Date M DT 8/8

Date expressed as CCYYMMDD

Must Use BGN04 337 Create Time M TM 4/4

Time expressed in 24-hour clock time as HHMM

Segment: N1 MACI Ordering Plant Location

Loop: N1 Mandatory Level: Heading Usage: Mandatory Max Use: 1

**Data Element Summary** 

#### **Transaction Specifications**

Ref. Data

Des. Element Name Attributes N101 98 Entity Identifier Code M ID 2/2

**Attributes** 

Valid codes are listed below

16 Plant

**Must Use** 

Ref. Data

Des. Element Name

Must Use N103 66 Identification Code Qualifier M ID 1/2

Valid codes are listed below

6 Plant Code

Must Use N104 67 MACI Plant ID MAN 3/3

This is the MACI code number for our logistical company.

MAC = Dearing Road location

Segment: N1 Supplier Name

Loop: N1 Mandatory Level: Heading Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use N101 98 Entity Identifier Code M ID 2/2

Valid codes are listed below SU Supplier/Manufacturer

Must Use N102 93 Supplier Name M AN 1/35

Must Use N103 66 Supplier Number Qualifier M ID 1/2

Valid codes are listed below

92 Assigned by Buyer or Buyer's Agent

Must Use N104 67 Supplier Number M AN 8/8

An 8-digit code assigned by MACI to identify a specific supplier

Segment: N3 Supplier Address

Loop: N1 Mandatory Level: Heading Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des.ElementNameAttributesMust UseN301166Address Information - 1M AN 1/30

N302 166 Address Information - 2 O AN 1/30

#### **Transaction Specifications**

Segment: N4 Supplier Geographic Location

Loop: N1 Mandatory Level: Heading Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use N401 19 City Name M AN 2/30

Must Use N402 156 State or Province Code M ID 2/2

Must Use N403 116 Postal Code M ID 3/10

Segment: PER Supplier Contact

Loop: N1 Mandatory Level: Heading Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use PER01 366 Contact Function Code M ID 2/2

Valid codes are listed below

SU Supplier Contact

Must Use PER02 93 Supplier Contact Name M AN 1/30

Segment: N1 Ship To Location

Loop: N1 Optional Level: Heading Usage: Optional Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes N101 98 Entity Identifier Code M ID 2/2

Valid codes are listed below

ST Ship To

**Must Use** 

Must Use N102 93 Ship to Code MAN 2/8

This is the code assigned by MACI for the ship to location from the corresponding 856.

Segment: OTI Original Transaction Identification

Loop: OTI Mandatory

#### **Transaction Specifications**

Level: Detail Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des.ElementNameAttributesMust UseOTI01110Application Acknowledgment CodeM ID 1/2Only resend the transaction set when this element (OTI01) indicates a reject (TR). Valid codes are listed

below:

TE Transaction Set Accept with Error

TR Transaction Set Reject

Must Use OTI02 128 Original Document Number Qualifier M ID 2/3

Valid codes are listed below:

SI Shipper's Identifying Number for Shipment (SID)

- "SI" indicates this 824 is in response to an ASN (856)

TN Transaction Reference Number

Must Use OTI03 127 Original Document Number M AN 1/8

- For an ASN, this will be the ASN Number (BSN02) from the original document.

Must Use OTI06 373 Original Create Date M DT 8/8

- This date applies to the document that is in error. Date expressed as CCYYMMDD.

- If a MACI supplier sends an original and replacement ASN (both with the same ASN number), the date (OTI06) and time (OTI07) will allow the supplier to link the appropriate 824 and ASN.

Must Use OTI07 337 Original Create Time M TM 4/4 This time applies to the document that is in error. Time expressed in 24-hour clock time as HHMM.

Must Use OTI10 143 Transaction Set Identifier Code M ID 3/3

856 Ship Notice/Manifest

Segment: TED Technical Error Description

Loop: TED Mandatory

Level: Detail Usage: Mandatory Max Use: 1

**Must Use** 

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use TED01 647 Application Error Condition Code M ID 1/3

Valid codes are listed below ZZZ Mutually Defined

Ref. Data

Des. Element Name Attributes
TED02 3 Error Description M AN 1/60

- If there was an error, there will be an error message. For example, "unit of measure invalid".

#### **Transaction Specifications**

TED07 724 **Error Data** O AN 1/80

- This field will contain the actual data that was in error if available. For example: Error Data = BZ

Segment: NTE Special Instruction

Loop: TED Mandatory

Level: Detail Usage: Optional Max Use: 100

**Notes:** This segment will be provided only if data is available.

**Data Element Summary** 

Ref. Data

Des. **Element Attributes** Name M ID 3/3 NTE01 363 **Note Reference Code** 

Valid codes are listed below ADD Additional Information

Must Use NTE02 352 **Reference Data Description** M AN 1/80

This field may contain additional information to help identify the data in error

Examples:

**Must Use** 

Error Description (TED02) = unit of measure invalid

Error Data (TED03) = BZ

Reference Data (NTE02) = MC23456-1234 (MACI part number associated with 'invalid unit of measure')

Segment: SE Transaction Set Trailer

Loop:

Level: Detail **Usage:** Mandatory

Max Use: 1

**Data Element Summary** 

Ref. Data

Des. **Element** Name **Attributes Must Use Number of Included Segments** M N0 1/10 **SE01** 96

**Must Use SE02** 329 **Transaction Set Control Number** M AN 4/9

-Must be the same as value sent in ST02.

#### **Operating Procedures**

#### Replacement Logic:

MACI will not replace the 824 document. The purpose code is always 00, original.

#### **Retransmission:**

MACI can retransmit the 824 document. Retransmission will only occur when the supplier requests that MACI resend the EDI document. This is typically because the supplier had some problem in the translation processing.

• A retransmitted document can be overlaid based upon a match of Application Advice Number, BGN02.

#### **Transaction Description**

#### **Transaction Covered**

Planning Schedule with Shipping Schedule -- or Weekly Release (Transaction Set 830), abbreviated "PS".

#### **Application Standards and Conventions**

The 830 set is based upon the ANSI ASC X12 Version Release 004010 document.

**Mapping** A list of the Weekly Release business data elements and how they are transmitted via EDI Standards is provided in the Transaction Specifications section.

**Exceptions / Clarifications** There are no Exceptions to ANSI Standards in this Transaction Description.

**Schedule** Weekly Release is transmitted once every seven calendar days. The seller should notify the buyer no later than 12:00 noon of the following production day if the seller has not received the Weekly Release.

Specifications In transmitting the Weekly Release, a User Message Class (MSGUCLS) of "830" must be present to transmit the data to the seller's mailbox. It is possible for MACI to transmit multiple Weekly Releases within one envelope. This means that there may be multiple transaction sets (ST-SE header/trailer segments) within one interchange envelope (ISA-IEA header/trailer segments).

**Back-Up Procedure** In the event of a failure of Electronic Data Interchange, it is the responsibility of the sending party to transmit the contents of any pending transmission to the receiving party using a method of non-EDI transmission which is timely, reasonable, and appropriate under the circumstances.

#### **Business Purpose**

The MACI Weekly Release (ANSI 830) transaction set is used as a ship schedule and forecast document that provides information by part number.

- Forecast information and quantities are subject to change or cancellation by MACI.
- MACI will use the 830 as both weekly shipping requirements and weekly production forecast:

#### 1. Weekly shipping requirements

- Those weekly buckets having a value of 'C' in the FST02 segment should be used by the supplier as shipment authorization.
- Suppliers should ship to these quantities unless notified by MACI by other means.

#### 2. Production Forecast

- Those Weekly buckets having a value of 'D' in the FST02 segment should be viewed by the supplier as forecasts for planning purposes only.
- Will be used to provide anticipated production quantities. Suppliers should use this data for material, production and capacity planning.
- Provides information by part number for up to 26 weeks. Will usually be transmitted by noon on the first day of the business week

#### **Transaction Specification Information**

The following Transaction Specifications consist of two sections:

**1.** The first section is an overview of the transaction. It includes segment information as well as a visual depiction of the looping functionality.

#### **Note**

The Req. Des. for the first segment in a loop is also used for that corresponding loop.

- **2.** The second section is the detailed specifications of the transaction. The attributes columns within this second section are explained as follows:
- The first column: M = Mandatory, X = Conditional, O = Optional
- The second column:

ID = Identifier (a unique value from a predefined list from ANSI)

DT = Date

TM = Time

AN = Alphanumeric

R = Numeric with a variable decimal place

Nx = Numeric with "x" decimal places

• The third column: x/y, where

x = the minimum number of characters for this element and

y =the maximum number of characters for this element.

# Transaction Specifications Functional Group ID – PS

**Heading:** 

incaumg.	Seg. ID	Name	Req. Des.	Max Use	Loop Repeat
Must Use	ST	Transaction Set Header	M	1	Repeat
Must Use	BFR	Beginning Segment	M	1	
Must Use	DTM	Create Date	M	1	
		Begin Loop ID – N1			1
Must Use	N1	MACI Ordering Location	M	1	
Must Use	N2	MACI Corporate Name	M	1	
Must Use	PER	MACI Contact	M	1	
		End Loop ID – N1			
		Begin Loop ID – N1			1
Must Use	N1	Supplier Name	M	1	
	N3	Supplier Address	O	1	
	N4	Supplier Geographic Location	O	1	
	PER	Supplier Contact	O	1	
		End Loop ID – N1			
Detail:					
		Begin Loop ID – LIN			>1
Must Use	LIN	Item Identification	M	1	
Must Use	UIT	Unit Detail	M	1	
		Begin Loop ID – N1			1
Must Use	N1	Ship To Location	M	1	
Must Use	N3	Ship To Address	M	1	
Must Use	N4	Ship To Geographical Location	M	1	
		End Loop ID – N1			
		Begin Loop ID – FST			>1
Must Use	FST	Forecast Schedule	M	1	
		End Loop ID – FST			
		End Loop ID – LIN			
<b>Summary:</b>					
Must Use	CTT	Transaction Totals	M	1	
Must Use	SE	Transaction Set Trailer	M	1	

#### **Transaction Specifications**

Segment: ST Transaction Set Header

Loop:

Must Use

Level: Heading **Usage:** Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name **Attributes ST01** M ID 3/3 **Transaction Set Identifier Code** 143

Valid codes are listed below

830 Planning Schedule with Shipping Schedule

ST02 329 **Transaction Set Control Number** M AN 4/9 Must Use

This number will be unique (within a transaction set) and ascending. It may be sequential.

Segment: **BFR** Beginning Segment for Planning Schedule

Loop:

Level: Heading Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. **Element** Name **Attributes** M ID 2/2 **Must Use** BFR01 353 **Transaction Set Purpose Code** 

Valid codes listed below

05 Replace – MACI will always send 830s as replacement documents.

**Must Use** BFR02 127 **Reference Identification** M AN 1/14

This number links all line items (LIN loops) on this 830 together.

Must Use BFR04 675 **Schedule Type Qualifier** M ID 2/2

Valid codes listed below

SH – Schedule is requested ship date based DL – schedule is required delivery date based

The qualifier will be used for all 830's.

**Must Use** BFR05 676 **Schedule Quantity Qualifier** M ID 1/1

Valid codes listed below A – Actual delivery quantities

BFR06 373 **Forecast Start Date** Must Use M DT 8/8

Date expressed as CCYYMMDD

**Must Use** BFR08 373 **Date Generated M DT 8/8** 

Date expressed as CCYYMMDD

#### **Transaction Specifications**

Segment: DTM Create Date

Loop:

Must Use

Level: Heading Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
DTM01 374 Date/Time Qualifier-Create M ID 3/3

Valid codes listed below

167 Most Recent Revision (or Initial Version)

Must Use DTM02 373 Create Date M DT 8/8

This is the date this document was created. Date expressed as CCYYMMDD.

Must Use DTM03 337 Create Time M TM 4/4

This is the time this document was created. Time expressed in 24-hour clock time as HHMM.

Segment: N1 MACI Ordering Plant Location

Loop: N1 Mandatory Level: Heading Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
N101 98 Plant Name Qualifier M ID 2/2

Valid codes listed below

16 Plant

Must Use

Ref. Data

Des. Element Name Attributes
Must Use N102 93 Plant Name M AN 1/35

Must Use N103 66 MACI Plant ID Qualifier M ID 1/2

Valid codes listed below 98 Purchasing Office

Must Use N104 67 MACI Plant ID M AN 3/3

This is the MACI code number for the logistical company.

For example: (May not be an all-inclusive list.)

MAC = MACI Dearing Rd. location

Segment: PER MACI Contact

Loop: N1 Mandatory Level: Heading Usage: Mandatory

#### **Transaction Specifications**

Max Use: 1

Must Use

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
PER01 366 Contact Code M ID 2/2

Valid codes listed below

BD Buyer Name or Department

Must Use PER02 93 MACI Planner Name M AN 1/35

Segment: N1 Supplier Name

Loop: N1 Mandatory Level: Heading Usage: Mandatory Max Use: 1

**Must Use** 

**Must Use** 

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
N101 98 Supplier Identifier Code M ID 2/2

Valid codes listed below SU Supplier/Manufacturer

Must Use N102 93 Supplier Name M AN 1/35

Must Use N103 66 Supplier Identification Code Qualifier M ID 1/2

Valid codes listed below

92 Assigned by Buyer or Buyer's Agent

Ref. Data

Des.ElementNameAttributesN10467Supplier NumberM AN 3/8

A 3 to 9-character code supplied by MACI to identify a specific supplier.

Segment: N3 Supplier Address

Loop: N1 Mandatory Level: Heading Usage: Optional Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes N301 166 Supplier Address - 1 M AN 1/30

Supplier street address - 1

N302 166 Supplier Address - 2 O AN 1/30

Supplier street address - 2

#### **Transaction Specifications**

Segment: N4 Supplier Geographic Location

Loop: N1 Mandatory Level: Heading Usage: Optional Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes N401 19 City Name MAN 2/30

Supplier's city name

N402 156 State or Province Code M ID 2/2

Supplier state or province name

N403 116 Postal Code M ID 3/10

Supplier zip or postal code

N404 26 Country Code M ID 2/3

Supplier Country Code

Segment: PER Supplier Contact

Loop: N1 Mandatory Level: Heading Usage: Optional Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
PER01 366 Supplier Contact Code M ID 2/2

Must Use PER01 Valid codes listed below SU Supplier Contact

PER02 93 Supplier Contact Name M AN 1/30

Segment: LIN Item Identification

Loop: LIN Mandatory

Level: Detail Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use LIN02 235 Mfg Base Part Number Qualifier M ID 2/2

Valid codes listed below BP Buyer's Part Number

Must Use LIN03 234 Mfg Base Part Number M AN 1/29

#### **Transaction Specifications**

Must Use LIN06 235 Part Description Qualifier M ID 2/2

Valid codes listed below PD Part Number Description

Must Use LIN07 234 Part Description M AN 1/30

Must Use LIN08 235 Purchase Order Qualifier M ID 2/2

Valid codes listed below PO Purchase Order

Must Use LIN09 234 Purchase Order M AN 1/10

This is the purchase order under which the parts are to be shipped.

Segment: UIT Unit Detail

Loop: LIN Mandatory

Level: Detail Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes

Must Use UIT01 C001 Composite Unit of Measure M

Must Use C00101 355 Unit or Basis for Measurement Code M ID 2/2

Refer to ANSI guidelines for a list of valid codes

Segment: N1 Ship To Location

Loop: N1 Mandatory Level: Detail Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use N101 98 Entity Identifier Code M ID 2/2

Valid codes are listed below

ST Ship To

Must Use N102 93 Ship To Name MAN 1/35

Must Use N103 66 Ship To Code Qualifier M ID 1/2

Valid Code Listed Below

92 Assigned by Buyer or Buyer's Agent

Must Use N104 67 Ship To Code MAN 2/8

This is the code assigned by MACI for this ship to location

#### **Transaction Specifications**

Segment: N3 Ship To Address

Loop: N1 Mandatory Level: Detail **Usage:** Mandatory

Max Use: 1

**Data Element Summary** 

Ref. Data

**Element Attributes** Des. Name **Must Use** N301 166 Ship To Address 1 M AN 1/30

> N302 Ship To Address 2 O AN 1/30 166

Segment: N4 Ship To Geographic Location

Loop: N1 Mandatory Level: Detail Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data Des. **Element Attributes** Name **Must Use** N401 19 **Ship To City** M AN 2/30 **Must Use** N402 156 **Ship To State or Province Code** M ID 2/2 **Must Use** N403 116 **Ship To Postal Code** M ID 3/10 **Must Use** N404 **Ship To Country Code** M ID 2/3 **26** 

Segment: FST Forecast Schedule

Loop: FST Mandatory Level: Detail

**Usage:** Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

**Element Attributes** Des. Name **Must Use** FST01 380 Quantity M R 1/15

Must Use FST02 680 M ID 1/1 **Forecast Qualifier** 

Valid codes are listed below. Only one Forecast Qualifier can be used per time bucket.

C Firm

- Supplier should use these as shipping schedules

D Planning

- This will be a forecast of projected future demand.

Ref. Data

Name **Attributes** Des. Element **Must Use** FST03 681 **Forecast Timing Qualifier** M ID 1/1

Valid codes are listed below:

## Weekly Release (830)

## **Transaction Specifications**

C Daily

W Weekly Bucket (Monday through Sunday)

Must Use FST04 373 Date-Period Start M DT 8/8

- This is the forecast start date.

- Beginning date of period

- Weekly periods are calculated sequentially always starting on a Monday.

- Date expressed as CCYYMMDD.

FST08 235 Release Number Qualifier O ID 2/2

Valid codes listed below RE Release Number

FST09 234 Release Number O AN 1/10

This is the release number under which the parts are to be shipped.

Segment: CTT Transaction Totals

Loop:

Level: Summary Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use CTT01 354 Number of Line Items M N0 1/6

The accumulation of the number of LIN segments.

Must Use CTT02 347 Hash Total M R 1/10

Sum of the values of the quantities (FST01) for each segment.

Segment:  ${\bf SE}$  Transaction Set Trailer

Loop:

Level: Summary Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use SE01 96 Number of Included Segments M N0 1/10

Must Use SE02 329 Transaction Set Control Number M AN 4/9

## Weekly Release (830)

## **Operating Procedures**

#### **Replacement Logic:**

MACI sends the 830 as a replacement document. The 830 purpose code transmitted in the BFR01 element is always 05, replace. A document may be replaced for various reasons, including replacing an error in a previous document or issuing a new weekly release that replaces the previous weekly release. Supplier systems should have the capability to compare successive incoming Weekly Releases and replace items that are identical for change points listed below. Replacement of items from the new 830 should be based upon a match of:

- MACI Plant ID, N104
- Manufacturing Base Part Number, LIN03
- Ship To Code, N104

Usually an 830 consists of a full range of supplier's parts, but it could be a sub-set of supplier parts.

#### **Retransmission:**

MACI can retransmit the 830 document also. Retransmission will only occur when the supplier requests that MACI resend the EDI document. This is typically because the supplier had some problem in the translation processing.

• A retransmitted document can be overlaid based upon the same logic as the replacement logic above.

## **Transaction Description**

#### **Transaction Covered**

Advance Ship Notice/Manifest (Transaction Set 856), abbreviated "SH".

#### **Application Standards and Conventions**

The 856 set is based upon the ANSI ASC X12 Version Release 004010 document.

**Mapping** A list of the Advance Ship Notice business data elements and how they are transmitted via EDI Standards is provided in the "Transaction Specifications".

**Exceptions / Clarifications** There are no Exceptions to ANSI Standards in this Transaction Description.

**Schedule** The ASN shall be transmitted to the buyer within the specified time window. MACI will send Functional Acknowledgements (997) for all ASNs and Application Advices (824) for ASNs containing errors.

**Specifications** In transmitting the Advance Ship Notice, a User Message Class (MSGUCLS) of "856" must be present to transmit the data to the buyer's/seller's mailbox.

**Back-Up Procedure** In the event of a failure of Electronic Data Interchange, it is the responsibility of the sending party to transmit the contents of any pending transmission to the receiving party using a method of non-EDI transmission which is timely, reasonable, and appropriate under the circumstances.

## **Business Purpose**

The MACI Advance Ship Notice (ANSI 856) transaction set provides detailed information about the contents of a specific shipment. It is usually created with the assistance of automatic identification devices. The Advance Ship Notice (ASN) plays an important role in the receiving and payment process.

#### **Inbound to MACI**

FREQUENCY: Immediately following the departure of each shipment.

TRANSMITTED FROM: Parts Suppliers,

Raw Material Suppliers,

TRANSMITTED TO: MACI

#### **Outbound from MACI**

Outbound copies are only sent under the following conditions:

1. Supplier has requested a copy of ASNs to support MACI business requirements.

FREQUENCY: Upon recognition of a valid ASN and request from supplier.

TRANSMITTED FROM: MACI

TRANSMITTED TO: Suppliers

## **Transaction Specification Information**

The following Transaction Specifications consist of two sections:

**1.** The first section is an overview of the transaction. It includes segment information as well as a visual depiction of the looping functionality.

#### Note

The Req. Des. for the first segment in a loop is also used for that corresponding loop.

- **2.** The second section is the detailed specifications of the transaction. The attributes columns within this second section are explained as follows:
- The first column: M = Mandatory, X = Conditional, O = Optional
- The second column:

ID = Identifier (a unique value from a predefined list from ANSI)

DT = Date

TM = Time

AN = Alphanumeric

R = Numeric with a variable decimal place

Nx = Numeric with "x" decimal places

• The third column: x/y, where

x =the minimum number of characters for this element and

y =the maximum number of characters for this element.

## **Transaction Specifications**

Seg.

ID

Name

# Functional Group ID=SH

Must Use	Seg. ID ST	Name Transaction Set Header	Req. Des.	Max.Use M 1	Loop Repeat	
Must Use Must Use <b>Detail:</b>	BSN DTM	Beginning Segment for Ship Notice Shipment Date	M M	1 1		
20000	Seg.		Req.		Loop	
	ID	Name	Des.	Max.Use	Repeat	
	Begin	Begin Loop ID – HL1				
Must Use	HL	Shipment Hierarchical Level	M	1		
Must Use	TD1	Carrier Details				
		(Quantity and Weight)	M	1		
Must Use	TD5	Carrier Details (SCAC)	M	1		
Must Use	TD3	Carrier Details (Equipment)	M	1		
Must Use	REF	BOL Number	M	1		
Must Use	N1	MACI Ordering Plant Location	M	1		
Must Use	N1	Ship To Location	M	1		
Must Use	N1	Ship From Supplier Location	M	1		
	Begin Loop ID – HL2				>1	
Must Use	HL	Tare/Pallet Hierarchical Level	M	1		
Must Use	LIN	Tare/Pallet Identification	M	1		
Must Use	REF	Master/Mixed Label S/N	M	1		
	Begin	Loop ID – HL3			>1	
Must Use	HL	Item Hierarchical Level	M	1		
Must Use	LIN	Item Identification	M	1		
Must Use	SN1	Item Detail (Shipment)	M	1		
Must Use	REF	Container Label S/N	M	1		
1,10,50 0 50	End Loop ID – HL3					
	End Loop ID – HL2					
	End Loop ID – HL1					
<b>Summary:</b>						
	a		T)		-	

Must UseCTTTransaction TotalsM1Must UseSETransaction Set TrailerM1

Req.

Des.

Max.Use

Loop

Repeat

## **Transaction Specifications**

Segment: ST Transaction Set Header

Loop:

**Level:** Heading **Usage:** Mandatory

Max Use: 1

Must Use

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes ST01 143 Transaction Set Identifier Code M ID 3/3

856 Ship Notice/Manifest

Must Use ST02 329 Transaction Set Control Number M AN 4/9 This number must be unique for this transaction set. It may not be repeated within a calendar

year. A duplicate number will cause the transaction to be rejected.

Segment: BSN Beginning Segment for Ship Notice

Loop:

Level: Heading Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
BSN01 353 Transaction Set Purpose Code M ID 2/2

Valid codes listed below

00 Original01 Cancellation05 Replace

Must Use

Must Use BSN02 396 ASN Number M AN 6/30

- The MACI supplier creates this number. For an original ASN (BSN01=00), the ASN Number cannot be repeated within a year.
- This number must consist of characters from the ranges 0 thru 9, A thru Z, or a thru z.

Must Use BSN03 373 Create Date M DT 8/8

This is the date the ASN was created. Date expressed as CCYYMMDD.

Must Use BSN04 337 Create Time M TM 4/4

This is the time the ASN was created. Time expressed in 24-hour clock time as HHMM.

## **Transaction Specifications**

Segment: **DTM** Shipment Date

Loop:

**Level:** Heading **Usage:** Mandatory

Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
DTM01 374 Date/Time Qualifier M ID 3/3

Valid codes are listed below

011 Shipped

Must Use

Must Use DTM02 373 Ship Date M DT 8/8

This is the actual ship date. Date expressed as CCYYMMDD.

Must Use DTM03 337 Ship Time M TM 4/4

This is the actual ship time. Time expressed in 24-hour clock time as HHMM.

Segment: **HL** Shipment Hierarchical Level

Loop: HL Mandatory

Level: Detail Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes

Must Use HL01 628 Hierarchical ID Number

Shipment Level M AN 1/12

"1" Shipment Level

Must Use HL03 735 Hierarchical Level Code

- Shipment level M ID 1/2

Valid codes listed below

S Shipment

Segment: TD1 Carrier Details (Quantity and Weight)

**Loop:** HL Mandatory

Level: Detail Usage: Mandatory

Max Use: 1

## **Transaction Specifications**

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
TD106 187 Weight Qualifier M ID 1/2

N Actual Net Weight

**Must Use** 

Must Use TD107 81 Weight

M R 1/10

This represents the total net weight for this ASN and should be rounded to the nearest whole unit. This value should include the product weight only. Any weight associated with packaging should not be included in this value.

Must Use TD108 355 Unit or Basis for Measurement Code M ID 2/2

Valid codes are listed below:

01 Actual Pounds 50 Actual Kilograms

Segment: TD5 Carrier Details (SCAC)

Loop: HL Mandatory

Level: Detail Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
TD502 66 SCAC Code Qualifier M ID 1/2

Valid Code listed below

Must Use

2 Standard Carrier Alpha Code (SCAC)

Must Use TD503 67 Identification Code - SCAC Code M AN 4/4

- Standard Carrier Alpha Code (SCAC) of carrier.

Segment: TD3 Carrier Details (Equipment)

Loop: HL Mandatory

Level: Detail
Usage: Mandatory
Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use TD301 40 Equipment Description Code M ID 2/2

Valid codes listed below

TL Trailer (not otherwise specified)

## **Transaction Specifications**

Ref. Data

Des. Element Name Attributes
TD303 207 Trailer Number M AN 1/10

- The number on the side of the trailer. This number must consist of characters from the ranges 0 thru 9, A thru Z, or a thru z.
- This data element is mandatory, therefore it must be completed for air shipments also.
- This number must match the trailer number on the Master Packing List.

Segment: **REF** BOL Number

Loop: HL Mandatory

Level: Detail
Usage: Mandatory

Max Use: 1

Must Use

Must Use

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
REF01 128 Bill of Lading Qualifier M ID 2/3

Valid codes are listed below BM - Bill of Lading Number

Must Use REF02 127 Bill of Lading Number M AN 1/12

Segment: N1 MACI Ordering Plant Location

Loop: Level: Detail Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
N101 98 Entity Identifier Code M ID 2/2

Valid codes are listed below

16 Plant

Must Use

Must Use N103 66 Identification Code Qualifier M ID 1/2

Valid codes are listed below

98 Purchasing Office

Must Use N104 67 MACI Plant ID MAN 3/3

This is the MACI code number for each logistical company.

For example: (May not be an all-inclusive list.)

MAC = MACI Dearing Road location

## **Advance Ship Notice (856)**

## **Transaction Specifications**

Segment: N1 Ship To Location

Loop:

Level: Detail Usage: Mandatory

Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes

Must Use N101 98 Entity Identifier Code M ID 2/2

Valid codes are listed below

ST Ship To

Must Use N103 66 Identification Code Qualifier M ID 1/2

Valid codes are listed below

92 Assigned by Buyer or Buyer's Agent

Must Use N104 67 Ship-To Code M AN 2/8

This is the code assigned by MACI for this ship to location.

## Segment: N1 Ship From Supplier Location

Loop: Level: Detail Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes

Must Use N101 98 Entity Identifier Code M ID 2/2

Valid codes are listed below SU Supplier/Manufacturer

Must Use N103 66 Identification Code Qualifier M ID 1/2

Valid codes are listed below

92 Assigned by Buyer or Buyer's Agent

Must Use N104 67 Ship From Supplier Number M AN 3/6

A 3 to 6-character code assigned by MACI to identify a specific supplier and location.

<sup>-</sup> The ship-to code on the ASN must be the same as the corresponding ordering document.

## **Transaction Specifications**

Segment: **HL** Tare/Pallet Hierarchical Level

Loop: HL Mandatory

Level: Detail

Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use HL01 628 Hierarchical ID Number M AN 1/12

Must Use HL02 734 Hierarchical Parent ID Number M AN 1/12

Must Use HL03 735 Hierarchical Level Code M ID 1/2

Valid codes are listed below

T Shipping Tare

Segment: LIN Tare/Pallet Identification

Loop: HL Mandatory

Level: Detail Usage: Mandatory Max Use: 1

**Notes:** MACI defines a pallet as anything that takes up floor space on a truck.

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use LIN02 235 Tare/Pallet Packaging ID Qualifier M ID 2/2

Valid codes are listed below: PG Packaging Specification Number

Must Use LIN03 234 Tare/Pallet Packaging Type M AN 1/10

- This will be a 1 to 10 digit code corresponding to the MACI returnable type.
- If the packaging type is not a MACI returnable, input "XX".
- Suppliers are encouraged to use Bingo cards for valid packaging types.

LIN04 235 Returnable Pallet Serial ID Qualifier X ID 2/2

Valid codes are listed below: RC Returnable Container Number

LIN05 234 Returnable Pallet Serial Number X AN 1/16

- LIN04 & 05 should not be sent if the packaging type is a non-returnable.
- LIN04 & 05 are optional for a returnable packaging type.

## **Transaction Specifications**

- This value is the scanned returnable ID tag (also called a fixed asset tag).

Segment: REF Master/Mixed Label S/N

Loop: HL Mandatory

Level: Detail
Usage: Mandatory

Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use REF01 128 Master/Mixed Label Qualifier M ID 2/3

Valid codes are listed below LS Bar-Coded Serial Number

Must Use REF02 127 Master/Mixed Label Serial Number M AN 12/18

- Scanned serial number from the Master or Mixed load label.

- This number is created by the MACI supplier.

- Format: first three to nine characters should be the supplier code, the last nine characters should be assigned such that the number is unique within a three year period.

## Segment: HL Item Hierarchical Level

Loop: HL Mandatory

Level: Detail Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use HL01 628 Hierarchical ID Number M AN 1/12

Must Use HL02 734 Hierarchical Parent ID Number M AN 1/12

Must Use HL03 735 Hierarchical Level Code M ID 1/2

Valid codes are listed below

I Item

Segment: LIN Item Identification

Loop: HL Mandatory

Level: Detail Usage: Mandatory

Max Use: 1

# **Transaction Specifications**

Valid codes are listed below: RC Returnable Container Number

Must Use Valid codes are BP Buyer's Par	Ref. Data Des. Element LIN02 235 e listed below	Name Mfg Base Part Number Qualifier	Attributes M ID 2/2
Must Use	LIN03 234	Mfg Base Part Number	M AN 1/15
Must use Valid codes are PO Purchase O		Purchase Order Qualifier	M ID 2/2
Must use	LIN109	Purchase Order Number	M AN 1/7
Must use Valid codes are RL Release Nu		Release Qualifier	M ID 2/2
Must use	LIN11 234	Release Number	M AN 1/4
Must use Valid codes are SL Seller's Lot		Suppliers Mfg Lot Qualifier	M ID 2/2
Must Use This is the supp	LIN13 234 plier's manufacturing lo	Suppliers Mfg Lot Number number.	M AN 6/10
	LIN24 235	Returnable Container	

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Serial ID Qualifier

X ID 2/2

## **Transaction Specifications**

Ref. Data

**Element Attributes** Des. Name

**Returnable Container** LIN25 234

> **Serial Number** X AN 1/16

- LIN24 & 25 should not be sent if the packaging type is a non-returnable.
- LIN24 & 25 are optional for a returnable packaging type.
- Scanned returnable ID tag (also called a fixed asset tag).

LIN26 235 Must Use **Container Packaging ID Qualifier** M ID 2/2

Valid codes are listed below

PG Packaging Specification Number

**Must Use** LIN27 234 **Container Packaging Type** M AN 1/10

- The packaging type should match the corresponding MACI outbound 830 TD105.
- This will be a 1 to 10 digit code corresponding to the MACI returnable type.
- If the packaging type is not a MACI returnable, input "XX".
- Suppliers are encouraged to use Bingo cards for valid packaging types.

Segment: SN1 Item Detail (Shipment)

Loop: HL Mandatory

Level: Detail **Usage:** Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. **Element** Name Attributes

SN102 382 Quantity MR 1/7 Must Use

The quantity in the container listed in the previous LIN.

Must Use SN103 355 Unit or Basis for Measurement Code M ID 2/2

Refer to ANSI guidelines for a list of valid codes

Segment: REF Container Label S/N

Loop: HL Mandatory

Level: Detail **Usage:** Mandatory

Max Use: 1

**Data Element Summary** 

Ref. Data

**Attributes** Des. **Element** Name

**Must Use REF01 128** Container (Part ID) Label Qualifier M ID 2/3

Valid codes are listed below LS Bar-Coded Serial Number

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## **Transaction Specifications**

Ref. Data

Des. Element Name Attributes

Must Use REF02 127 Container (Part ID)

Label Serial Number M AN 12/18

- Scanned serial number from parts identification label on each container.
- This number is created by the MACI supplier.
- Format: first three to nine characters should be the supplier and location code, the last nine characters should be assigned such that the number is unique within a three year period.

Segment: CTT Transaction Totals

Loop:

**Level:** Summary **Usage:** Mandatory

Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use CTT01 354 Number of HL Segments M N0 1/6

The accumulation of the number of HL segments.

Must Use CTT02 347 Hash Total M R 1/10

The sum of the value of units shipped (SN102) for each SN1 segment.

Segment: SE Transaction Set Trailer

Loop:

Level: Summary Usage: Mandatory

Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use SE01 96 Number of Included Segments M N0 1/10

Must Use SE02 329 Transaction Set Control Number M AN 4/9

- Must be the same as Transaction Set Control Number in ST02

## **Operating Procedures**

#### Replacement Logic Inbound to MACI

Replacement logic for ASNs sent from a **supplier to MACI** is based on the Transaction Set Purpose Code and the ASN number. To cancel or replace an ASN, the supplier must re-send the ASN in question with the following adjustments.

- **1.** The purpose code should be: 01 Cancellation or 05 Replace, (located in BSN01 in the ASN)
- **2.** Any changes identified (for a replacement)

#### Note

The ASN number in the replacement or cancellation must match the original document. (The ASN number is located in BSN02.) MACI will cancel or replace the ASN based upon the purpose code and a match to an existing supplier number and ASN.

#### Note

The ASN to be canceled or replaced must be received prior to shipment arrival. (It will not be processed if it arrives after trailer arrival.)

#### Note

The Transaction Set Control Number (ST02) must be unique within a calendar year, even for a replacement or cancellation.

## **Operating Procedures**

#### **Reconciliation Requirements**

MACI requires reconciliation (a systematic comparison) of the ordering document (830) to the Advanced Ship Notice (ASN) (856). The purpose is to ensure that suppliers are shipping what MACI has ordered. By capturing discrepancies prior to truck departure and ASN generation, potential miss-shipments can be corrected, avoiding costly corrective countermeasures. There are two distinct steps to the reconciliation process.

- **1.** Reconciling the ordering document (830) to the planned load(s). Planned load is a MACI term describing a MACI order within the suppliers system. It is a group or subgroup of parts and quantities from a MACI ordering document which share a common MACI ordering plant ID, ship to code and ship (or deliver) date.
- A planned load may take the form of a pick list.
- A planned load will relate one to one to the ASN and Master Packing List.
- The supplier's software must have the capability to create multiple planned loads when a MACI ordering document spans multiple trailers. For orders which span multiple trailers, the multiple planned loads should reconcile to the single ordering document.
- **2.** Reconciling the planned load to the ASN. For both steps, discrepancies can be identified online or hard copy. Following are the items to be reconciled and the action requested:

#### Item to reconcile with action to be taken

#### **Invalid Part Number (Manufacturing Base Part Number-MBPN)**

The system must **alert** the user of a part number mismatch between the ordering document and ASN. Verify and correct the information as required.

#### **Invalid Ship to Code**

The system must **not allow** a ship-to code mismatch between the ordering document and ASN. Correct the discrepancy. MACI **will not accept** an ASN with a ship to code that does not match the ordering document. This will result in a rejected ASN.

Mis-shipments may result in a Domestic Supplier Corrective Action Report (SCAR).

#### **Unscheduled Requirements**

MACI may occasionally place an order by phone, instead of using the normal 830 transaction. An ASN **must** be used in response to these orders. Approved software must have this capability.

There are various methods to create an ASN in this circumstance, including:

**1.** Using a future or past ordering document (with the correct ordering plant, ship to code, and part number) to ship the requirements against. This will result in a valid Purchase Order Number being used.

## **Operating Procedures**

#### Note

The ordering document must be less than 30 days old.

- **2.** Adding the item to an existing planned order (with the correct ordering plant and ship to code), verifying that the part number/ship schedule number relationship existed within the prior 30 days.
- **3.** Creating a planned order, using a valid Purchase Order Number.
- **4.** Creating a planned order using a valid Purchase Order Number given to the supplier from MACI.

#### **Over/Under Shipment**

The system must **alert** the user of an over shipment of parts on the ASN (versus the ordering document). The shipper should confirm the quantity scanned versus the quantity required. The system must allow the user to take either of the following steps: 1) over/under ship or 2) re-scan to ship the required amount.

#### Order quantity linked to an Order Number Release Number combination.

The system must alert the user of an over or under shipment of a particular order when creating an ASN (versus the ordering document). The shipper should confirm the quantity scanned versus the order quantity. The system must allow the supplier to take either of the following steps: 1) over or under ship or 2) re-scan to ship the required amount.

**Data Integrity** The software must maintain the linkage of the following fields from 830 receipt through shipment/ASN creation:

- Part Number
- Purchase Order Number
- Release Number

## **Operating Procedures**

#### Responses to an Advanced Ship Notice (ASN/856)

- 1) The supplier sends MACI an Advanced Ship Notice (ASN or 856).
- 2) MACI sends a Functional Acknowledgement (997) in response to ASNs that are received into our translator. The 997 is a standard communications "handshake" verification. It confirms successful communication has occurred between the EDI translators of each pair of trading partners. Receiving a 997 does not imply acceptance or suitability of data from MACI's application systems.

FREQUENCY: A 997 will be sent as soon as possible upon the inbound documents receipt at MACI.

3) MACI will send an Application Advice (824) in response to ASNs containing errors that are received into our application system. The 824 provides feedback to the MACI supplier regarding the presence of any errors detected by MACI's application system.

FREQUENCY: This will be transmitted approximately fifteen (15) minutes after receipt of the inbound document found to contain errors.

## Functional Acknowledgment (997) Transaction Description

#### **Transaction Covered**

Functional Acknowledgement (Transaction Set 997), abbreviated "SH".

#### **Application Standards and Conventions**

The 997 set is based upon the ANSI ASC X12 Version Release 004010 document.

**Mapping** A list of the Functional Acknowledgement business data elements and how they are transmitted via EDI Standards is provided in the "Transaction Specifications".

**Exceptions / Clarifications** There are no Exceptions to ANSI Standards in this Transaction Description.

**Schedule** The Functional Acknowledgement shall be transmitted immediately upon receipt of any EDI document. MACI will send Functional Acknowledgements (997) for all ASNs.

#### **Specifications** In transmitting the Advance Ship

Notice, a User Message Class (MSGUCLS) of "856" must be present to transmit the data to the buyer's/seller's mailbox.

**Back-Up Procedure** In the event of a failure of Electronic Data Interchange, it is the responsibility of the sending party to transmit the contents of any pending transmission to the receiving party using a method of non-EDI transmission which is timely, reasonable, and appropriate under the circumstances.

## **Functional Acknowledgment (997)**

## **Transaction Specifications**

Segment:  $\mathbf{A}\mathbf{K}\mathbf{1}$  Functional Group Response Header

Loop: Level:

Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes

Must Use AK101 479 Transaction Group Type

Being Acknowledged M ID 2/2

For example:

"AG" = Application Advice (824)
"PS" = Weekly Release (830)
"SH"= Advance Ship Notice (856)

Must Use AK102 28 Group Control Number M No 1/9

From GS06 of the corresponding transaction.

Segment: AK2 Transaction Set Response Header

Loop: AK2 Mandatory

Level:

Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes

Must Use AK201 143 Transaction Set Type

Being Acknowledged M ID 3/3

For example: 830, 856, 862

Must Use AK202 329 Transaction Set Control Number M AN 4/9

From ST02 of the corresponding transaction.

Segment: AK5 Transaction Set Response Trailer

Position: 060

Loop: AK2 Mandatory

Level:

Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use AK501 717 Transaction Set Acknowledgment Code M ID 1/1

Valid codes are listed below

A Accepted

## **Functional Acknowledgment (997)**

## **Transaction Specifications**

Segment: AK9 Functional Group Response Trailer

Position: 070 Loop: Level:

Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use AK901 715 Functional Group Acknowledge Code M ID 1/1

Valid codes are listed below

A Accepted

Must Use AK902 97 Number of Transaction Sets Included M NO 1/6

Must Use AK903 123 Number of Received Transaction Sets M No 1/6

Segment: **SE** Transaction Set Trailer

Position: 080 Loop: Level:

Usage: Mandatory Max Use: 1

**Data Element Summary** 

Ref. Data

Des. Element Name Attributes
Must Use SE01 96 Number of Included Segments,

Including ST and SE M N0 1/10

Must Use SE02 329 Transaction Set Control Number M AN 4/9

# Appendix A Sample Material Release (830)

This sample material release authorizes the following shipments of part MC123456-7890: 300 pieces to be delivered to MACI on 2/05/2004 and 360 pieces to be delivered on 2/11/2004. The remainder of the forecast is for planning purposes only.

```
*ZZ*EB439 EB439S1 *ZZ*XYZ XYZ *040203*1130*U*00400*0000003 62*0*P*¬~
ISA*00*
GS*PS*606360444*123456789*20040203*1130*362*X*004010~
ST*830*0024939~
BFR*05*0024939**DL*R*20040203**20040202~
DTM*167*20040203*1120~
TD5**2*CUOT~
N1*16*MICHIGAN AUTOMOTIVE COMPRESSOR *98*MAC~
PER*BD*MACI Planner Name~
N1*SU*XYZ SUPPLIER CO*92*S123~
N3*1234 DRIVE DRIVE*P.O. BOX 123~
N4*SOMECITY*ST*12345*US~
PER*SU*Your Salesperson~
LIN**BP*MC123456-7891***PD*SOME PART*PO*P055555~
UIT*EA~
N1*ST*MACI*92*999~
N3*MACI*2400 N. Dearing Rd~
N4*Parma*MI*49269*US~
FST*300*C*C*20040205****RE*001~
FST*360*C*C*20040211****RE*002~
FST*420*D*W*20040216~
FST*300*D*W*20040223~
FST*360*D*W*20040301~
FST*360*D*W*20040308~
FST*480*D*W*20040315~
FST*120*D*W*20040322~
FST*360*D*W*20040329~
FST*420*D*W*20040405~
FST*360*D*W*20040412~
FST*300*D*W*20040419~
FST*0*D*W*20040426~
FST*360*D*W*20040503~
FST*300*D*W*20040510~
FST*300*D*W*20040517~
FST*360*D*W*20040524~
FST*240*D*W*20040531~
FST*300*D*W*20040607~
FST*300*D*W*20040614~
FST*360*D*W*20040621~
FST*0*D*W*20040628~
FST*300*D*W*20040705~
CTT*1*8040~
SE*44*OC0024939~
GE*1*362~
IEA*1*000000362~
```

# **Appendix B Sample Advance Ship Notice (856)**

This ASN represents a shipment of two non-returnable pallets each holding two non-returnable containers of 60 units each.

```
ISA*00*
                  *ZZ*SUPP01 SUPP01 *ZZ*MACI MACI
*040219*0223*U*00400*000003143*0*P*¬~
GS*SH*606360444*092162643*20040219*0223*3143*X*004010~
ST*856*31430001~
BSN*00*00006163*20040219*0223~
DTM*011*20040219*0700~
HL*1**S~
TD1*****N*2040*01~
TD5**2*CUOT~
TD3*TL**01103~
REF*BM*0219435~
N1*16**98*MAC~
N1*ST**92*999~
N1*SU**92*A1B2C3~
HL*2*1*T~
LIN**PG*XX**~
REF*LS*A1B2C3000000007~
HL*3*2*I~
LIN**BP*MC12345-6789*****PO*P055555*RL*001*SL*20040213*********PG*XX~
SN1**60*EA~
REF*LS*A1B2C3000000008~
HL*4*2*I~
LIN**BP*MC12345-6789*****PO*P055555*RL*001*SL*20040213*********PG*XX~
SN1**60*EA~
REF*LS*A1B2C3000000009~
HL*5*1*T~
LIN**PG*XX**~
REF*LS*A1B2C3000000010~
SN1**60*EA~
REF*LS*A1B2C3000000011~
HL*7*5*I~
LIN**BP*MC12345-6789*****PO*P055555*RL*001*SL*20040213*********PG*XX~
SN1**60*EA~
REF*LS*A1B2C3000000012~
CTT*7*240~
SE*35*31430001~
GE*1*3143~
IEA*1*000003143~
```

# **Appendix C Sample Application Advice (824)**

The following Application Advice demonstrates an Advance Ship Notice which has been rejected with error:

GE\*1\*660~

IEA\*1\*000000660~

# Appendix D Sample Functional Acknowledgement (997)

The following Functional Acknowledgement demonstrates an Advance Ship Notice received:

ISA\*00\* \*00\* \*ZZ\*EB439 EB439S1 \*01\*004154415 \*050614\*132 3\*U\*00401\*000002571\*0\*P\*>~
GS\*FA\*606360444\*004154415\*20050614\*1323\*000000075\*X\*004010~
ST\*997\*000002571~
AK1\*SH\*00000074~
AK2\*856\*0078~
AK5\*A~
AK9\*A\*000001\*000001~
SE\*000006\*00002571~
GE\*000001\*00000075~
IEA\*00001\*0000002571~

## **Summary of changes**

## 856 - ASN

### **BSN** segment

Must Use BSN02 396 ASN Number M AN 8/30

- The MACI supplier creates this number. For an original ASN (BSN01=00), the ASN Number cannot be repeated within a year.
- This number must consist of characters from the ranges 0 thru 9, A thru Z, or a thru z.

## N1 segment - ship from

Must Use N104 67 Ship From Supplier Number M AN 3/6 A 3 to 6-character code assigned by MACI to identify a specific supplier and location.

### LIN segment at Item level

Must Use	LIN03 234	Mfg Base Part Number	M AN 1/15			
Must use	LIN109	Purchase Order Number	X AN 1/7			
Must use	LIN11 234	Release Number	X AN 1/4			
Must Use	LIN13 234	Suppliers Mfg Lot Number	X AN 1/10			
This is the supplier's manufacturing lot number.						

## Added Appendix D Example Functional Acknowledgement (997)