Mercedes-Benz U. S. International, Inc.

EDI SUPPLIER IMPLEMENTATION GUIDE
MERCEDES-BENZ U.S. INTERNATIONAL, INC.

8 Feb 2006

See Page 6 for a list of revisions.

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Mercedes-Benz U. S. International, Inc.

Revisions Made Since Earlier Versions

Revision Issue Date	Summary of Change(s) Made

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11 JUN 03 Updated example 830 transaction (report and data) to reflect output generated from new SAP system

26 JUN 03 Increased maximum length of the Linefeed location (MAN segment) in 830 Transaction

22 SEP 03 Corrected example of TD5 record in the 856 transaction, p. 12
Added clarification of Release #, p. 12
Added requirement for ZGS (engineering change level) to be included in the LIN segment in 856 (indicates ZGS level of the part that will be shipped), P. 51
Changed "Ship To" N104 from Route Code (e.g., V10) to Plant Code (i.e., 8010), p. 15
Added "Ship To" N4*ST line including Storage Location and final delivery point, p. 15
Added clarification of Plant Code, p. 15
Added clarification of Dock#, p. 18
Added clarification of how ZGS is coordinated, p.20
Added LOOP ID-PER (*note: see next revision*) – this is a new loop starting after the BFR segment and before the PER. Each loop conveys the schedule for a part-number/plant combination. If a part number is used in both plants, it will appear in two loop iterations, pp. 11 & 25
Corrected example on HL, p. 38
Clarified Release Number on BFR, p. 10
Clarification of handling hierarchical shipments, p. 56
Corrected example of shipment & ASN, pp 54-55

14 OCT 03 Corrected MEA02 field designation to 738, p. 38
Removed LOOP ID-PER, pp. 11, 25. It was unnecessary since a separate release is created for each Plant number - Part number combination.
Swapped fields N405 and N406 to enable conformance with ANSI standards for N405's length, p. 15.

16 OCT 03 Corrected examples to reflect the swap of N405 and N406, as above.

17 OCT 03 Added "EC" Product/Service ID to the LIN segment for conformance to ANSI standard, p. 51, and fixed related example

29 OCT 03 Changed N405 to "DE" to conform to ANSI standard, p. 15; also related examples.

17 MAR 04 Updated Specification to include information on EDI format for Service Parts orders
p. 16 – Added plant code for Service Parts orders
pp. 18 and 22 – added format for Service Parts orders
pp. 23 through 27 – added "Not used for Service Parts orders" as applicable
Bill of Lading number made mandatory, p. 45 (SAP requirement)
Added LIN segment specific to Service Parts, p. 53
Added option to use MBUS002S as Application ID for Service Parts orders, p. 82

23 JUN 04 Made the Release Number conditional (not used on Service Parts orders), p. 11
Added detailed examples of ISA and GS segments, pp. 84-85

17 AUG 04 Removed "Not used in Service Parts" related to C*D, C*Z, and D*D, pp. 23, 24, 25, 26
Added clarification that part quantities in open POs for Service duplicate those in new, p. 24
Updated example of Service Parts release to be more complete, p. 35

25 AUG 04 Clarified meaning of the PO# when used in LIN segment with Service Parts, p. 18

26 MAY 05 Added section on EDI820 Prepayment Advice , pp. 36-52
Note: <mark>Highlighted section pp. 49-50</mark> contains information that is revised since the last publication of the EDI 820 specification, which was Oct. 19, 2005. The new segments contain reference data related to DMT/returned material, to aid in tracking causes of rejected material.
Clarified how to use the RAN#, p. 104.

27 JUN 05 Corrected maximum length of segment N104, p. 42

08 FEB 06 Defined "MULTI", p 14
Clarifications of state and country code contents, p. 16
LIN05 denoted as optional, p. 19   (continued)

08 FEB 06   (continued)
                   Increased max. length of REF02; defined meaning of "CALL", p. 21
                   Noted that dollar values are always positive, p. 40
                   SLN10 denoted as optional, p. 50
                   Noted that there are no RAN numbers for debit memos any more, p. 52
                   Noted that "LT" is not valid as Equipment Description, p. 63
                   Noted that returnable packaging tracking is not currently implemented, p. 70
                   Explained difference in representing color codes in production vs Service part number, p. 72
                   Reduced max. length of SN101; clarified requirement for SN103, p. 73

INTRODUCTION

This implementation guide documents the Electronic Data Interchange (EDI) requirements for Mercedes-Benz U.S. International (MBUSI).

MBUSI is using the Automotive Industry Action Group (AIAG) version 3050 sub-set of the American National Standard Institute (ANSI) Accredited Standard Committee (ASC) X12 Electronic Data Interchange (EDI) Standards. The formats for those business documents are defined herein.

MBUSI will be using networking services provided by IBM Information Exchange (the Value Added Network formerly known as Advantis). The Information Exchange software application provides store and retrieval data file mailbox services. ISA/GS information in found in Appendix B.

Material Release(830)

(830) Planning Schedule with Release Capability

The Material Release at MBUSI is used for three purposes:

- To provide suppliers and carriers with short and long terms demand plans for MBUSI
- To provide suppliers and carriers with Release Authorization Numbers (RANs) for items to ship
- To update suppliers on RANs not yet received by MBUSI

The Material Release is issued using the AIAG subset of Transaction Set 830 of the ANSI X12 Standard, Version 003050. Depending on volume, supplier releases are issued weekly or daily. The 830 should be acknowledged by a Functional Acknowledgment Document (997) within 24 hours. The 997 is an acknowledgment of receipt and translation. If, for any reason, the supplier will not be able to meet the order, MBUSI should be contacted immediately. A separate material release is issued for each part number.

The segments and elements used from the 830 Transaction set are described below by segment. Each segment is described as Mandatory, and will always be sent by MBUSI, or optional, and will only be sent as needed. The minimum and maximum number of occurrences within the transaction is listed. If the segment is part of a loop, there is a Loop ID shown.

For each segment, the elements of the segment are described. The element position shows the relative position in the segment (the segment identifier is not shown or counted). The element number is the ANSI X12 element references. The description shows the description of the element, and under the description are the possible values of the element. A code within parentheses is the MBUSI database reference, and for MBUSI internal use only. An M in the option shows that the element will always be included and an O that it will be included only as needed. The type and size are of the format Type Min/Max, where Type is AN for alphanumeric, N for integer, R for Real, and ID for a defined code. Min and Max are the minimum and maximum number of characters in the field. One or more examples are shown for each segment.

For the inexperienced user, Appendix A has a full description of the syntax rules of ANSI X12.

ST   Transactions Set Header

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

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
ST01	143	Transaction Set Identifier Code 830 - Material Release	M	ID 3/3
ST02	329	Transaction Set Control Number *(000000001-999999999)*	M	AN 9/9

Example:

ST*830*000001234

BFR   Beginning Segment for Planning Schedule

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
BFR01	353	Transaction Set Purpose Code 00 - Original	M	ID 2/2
BFR03	328	Release Number *(Material Release Number)* *[not used for Service Parts orders]*	X	AN **6/7**
BFR04	675	Schedule Type Qualifier DL - Delivery Based	M	ID 2/2
BFR05	676	Schedule Quantity Qualifier A - Actual Discrete Quantities	M	ID 1/1
BFR06	373	Date *(YYMMDD - Forecast Start Date)*	M	DT 6/6
BFR08	373	Date *(YYMMDD - Forecast Generation Date)*	M	DT 6/6

Example:

BFR*00**0307-2*DL*A*040406**040401

Notes about the Release Number:

1. The Release Number is of the form YYMM-RR (where R has no leading zero), indicating the year and month of the release followed by a number that is incremented with each release during that month.

2. The Release Number is not used for Service Parts orders. For these, forecast information is associated with a part number, and actual orders are associated with a Purchase Order number (in the RAN field).

PER   Administrative Communications Contact

Name and phone number of MBUSI Expediter and Order Department

Mandatory, 2 Occurrences

Element Position	Element Number	Description Content	Option	Type Size
PER01	366	Contact Function Code EX - Expediter OD - Order Department	M	ID 2/2
PER02	93	Name *(MBUSI Contact Name)*	M	AN 1/35
PER03	365	Communications Number Qualifier IT - International Telephone	M	ID 2/2
PER04	364	Communications Number *(MBUSI contact telephone number including country code)*	M	AN 14/14

Examples:

PER*EX*D GAMMONS*IT*1-205-507-3483

PER*OD*J PAGE*IT*1-205-507-3578

TD5 Carrier Detail (Routing Sequence/Transit Time)

Mode of Transport for Shipment

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
TD504	91	Transportation Method/Type Code	M	ID 1/2
		A - Air		
		H - Customer Pickup		
		J - Motor		
		R - Rail		
		S - Ocean		

Example:

TD5****J

MAN Marks and Numbers

Storage Area and Lineside Location for Parts Label

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
MAN01	88	Marks and Number Qualifier	M	ID 2/2
		DZ - Receiver Assigned Storage Location		
MAN02	87	Marks and Numbers *(Staging Area/Bin)*	M	AN 3/9
MAN03	87	Marks and Numbers *(Lineside Location / Linefeed Location)*	M	AN 5/9

Examples:

MAN*DZ*STB4*A2-C1-01L

Notes:
- The Linefeed location is of the form PlantAbbreviation-Line-Station.
- "MULTI" indicates multiple linefeed locations.

N1   Name(Seller)

Seller Name Information

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
N101	98	Entity Identifier Code SE - Selling Party	M	ID 2/2
N102	93	Name *(Seller Name)*	M	AN 1/35
N103	66	Identification Code Qualifier 92 or 93 - Assigned by Buyer or Buyer's Agent	M	ID 2/2
N104	67	Identification Code *(MBUSI Vendor Code)*	M	AN 6/10

Example:

N1*SE*SOUTH CHARLESTON STAMPING & MANUFAC*92*0016001010

N3   Address Information (of Seller)

Seller Street Address

Optional, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
N301	166	Address Information *(Vendor ship-from address)*	M	AN 1/35
N302	166	Address Information *(Additional vendor ship-from address)*	O	AN 1/35

Example:

N3*3100 MACCORKLE AVENUE

N4   *Geographic Location (of Seller)*

Seller City

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
N401	19	City Name *(Vendor ship-from city)*	M	AN 2/30
N402	156	State or Province Code *(Vendor ship-from state)* **NOTE: Usually only included for vendors in USA or Canada. Mexican 3-character state abbreviations will be truncated to 2 characters if present.**	M	ID 2/2
N403	116	Postal Code *(Vendor ship-from postal code)*	M	ID 3/9
N404	26	Country Code *(Vendor ship-from ISO country code)* **NOTE: Not included for US vendors, but may indicate country of supplier's headquarters.**	O	ID 2/2

Examples:

N4*SOUTH CHARLSTON*WV*25303

N4*MONTREAL*PQ*K41 5KY*CA

N4*BERLIN**10001*DE

N1   Name (of Ship To)

Ship To Information

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
N101	98	Entity Identifier Code ST - Ship To	M	ID 2/2
N102	93	Name *(Ship To Description)*	M	AN 1/35
N103	66	Identification Code Qualifier 92 or 93 - Assigned by Buyer or Buyer's Agent	M	ID 2/2
N104	67	Identification Code *(Plant Code)*	M	AN 4/10

Examples:

N1*ST*MBUSI VANCE*92*8010

Note: 8010 specifies Business Unit as the Vance, AL complex. If and when MBUSI orders materials for other major business units in the future, a different code may appear here. In SAP parlance, 8010 is the Plant Code.

N1*ST*MBUSI*92*70599-000

Note: This plant code indicates a Service Parts order, to be delivered to MBUSI Bessemer Consolidation Center. Only suppliers who are certified for EDI for Service Parts orders should ever receive this.

N4   Geographic Location (of Ship To)

Ship To Information

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
N405	309	Location Qualifier DE - Destination	M	ID 1/2
N406	310	Location Identity *(Storage Location/"SLOC")*	M	AN 4/35

Example:

N4*****DE*PLT2

LOOP ID-LIN   **1**

This loop describes each part number. In the MBUSI implementation, there
is only one part per ID.

Mandatory, 1 Occurrence

LIN   Line Identification

MBUSI part number information

Element Position	Element Number	Description Content	Option	Type Size
LIN02	235	Product/Service ID Qualifier BP - Buyer Part Number	M	ID 2/2
LIN03	234	Product/Service ID *(MBUSI Part Number)*	M	AN **1/24**
LIN04	235	Product/Service ID Qualifier PO - Purchase Order	M	ID 2/2
LIN05	234	Product/Service ID *(MBUSI Contract Number)*	M	AN 1/10

Examples:

Orders for production parts will look like this:

LIN**BP*A1646260133   9122*PO*5500000020

Orders for Service parts will look like this:

LIN**BP*A1634200334*PO*4500000020
LIN**BP*A1646260133   9122*PO*4500000020

Note: even though a PO# is included, you must use great care as to how
you use it when dealing with Service Parts orders. Each spot PO (FST
line) will have its own PO#; the PO# in the LIN segment will correspond
only to the first one.

LOOP ID-LIN   **1**

UIT   Unit Detail

Unit of measure for quantities ordered

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
UIT01	355	Unit or Basis for Measurement Code *(Any valid code may be used)*	M	ID 2/2

Example:

UIT*EA

PID   Product/Item Description

Part Description

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
PID01	349	Item Description Type F - Free Form	M	ID 1/1
PID05	352	Description *(MBUSI part description)*	M	AN 1/40

Example:

PID*F****BATTERY SUPPORT CLAMP

REF   Reference Number

Dock Number

Optional, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
REF01	128	Reference Number Qualifier DK - Dock	M	ID 2/2
REF02	127	Reference Number *(Dock Number)*	M	AN 2/8

Example:

REF*DK*A20

Process Notes:
Even though dock numbers are planned to be unique, a complete determination of delivery destination must include the Plant (which indicates which major plant area is to be delivered to), the Storage Location (which indicates which building), and the dock. That information is also used on the barcode label.

If REF02 contains "CALL" it means that the delivery dock had not been determined at the time the order was generated. You should call your Logistics contact at MBUSI to find out what dock to deliver to.

ATH   Resource Authorization (FAB)

Optional, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
ATH01	672	Resource Authorization Code FI - Finished(Labor, Material, and Overhead/Burden)	M	ID 2/2
ATH02	373	Date *(YYMMDD - FAB Start Date)*	M	DT 6/6
ATH03	380	Quantity *(FAB Quantity)*	M	R 1/15
ATH05	373	Date *(YYMMDD - FAB End Date)*	M	DT 6/6

Example:
ATH*FI*960201*1000**960229

ATH   Resource Authorization(RAW)

Optional, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
ATH01	672	Resource Authorization Code MT - Material	M	ID 2/2
ATH02	373	Date *(YYMMDD - RAW Start Date)*	M	DT 6/6
ATH03	*380*	*Quantity* *(RAW Quantity)*	*M*	*R 1/15*
ATH05	373	Date *(YYMMDD - RAW End Date)*	M	DT 6/6

Example:

ATH*MT*960201*500**960229

LOOP ID-FST

FST   *Forecast Schedule (Newly issued RAN)*

Mandatory, Unlimited occurrences for newly issued RAN. See Appendix D for
a table showing how RANs are derived.

Original RAN Quantity

Element Position	Element Number	Description Content	Option	Type Size
FST01	380	Quantity *(Release or forecast quantity)*	M	R 1/13
FST02	680	Forecast Qualifier H - First time reported firm	M	ID 1/1
FST03	681	Forecast Timing Qualifier D - Discrete	M	ID 1/1
FST04	373	Date *(YYMMDD - Date of delivery at MBUSI)*	M	DT 6/6
FST06	374	Date/Time Qualifier 002 - Delivery Requested	M	ID 3/3
FST07	337	Time *(HHMM - Delivery time at MBUSI)*	O	TM 4/4
FST08	128	Reference Number Qualifier DO - Delivery Order Number	M	ID 2/2
FST09	127	Reference Number *(Release Authorization Number (RAN) or Purchase Order # [Service Parts])*	M	AN 10/10

Examples:

FST*100*H*D*030519**002*0600*DO*C2E3000036

Note: notice that the part number and the RAN do not specify the
engineering change level (ZGS) of the part. That is dictated by the adopt
date, which is determined jointly with the supplier in a separate
business process. The supplier reports the ZGS level of parts being
shipped as part of the EDI856 (ASN).

FST*15*H*D*040329**002**DO*4500000027

Note: the above is a Service Parts order. Here, the delivery time is null
and the RAN field contains the Purchase Order number.

Loop ID-FST

FST   Forecast Schedule (Total new RANs)

Mandatory, 1 Occurrence

Total quantity of new RANs in material release

Element Position	Element Number	Description Content	Option	Type Size
FST01	380	Quantity *(Release or forecast quantity)*	M	R 1/13
FST02	680	Forecast Qualifier H - First time reported firm (new RAN)	M	ID 1/1
FST03	681	Forecast Timing Qualifier Z - Subtotal	M	ID 1/1

Example:

FST*1620*H*Z

```
Loop ID-FST
```

FST   Forecast Schedule (Outstanding/Open RANs)

Quantity of RANs on previous releases and not yet received(intransit or open) at MBUSI. This segment is only issued to North American suppliers, and only if there are outstanding RANs.

Optional, Unlimited Occurrences

Element Position	Element Number	Description Content	Option	Type Size
FST01	380	Quantity *Release or forecast quantity)*	M	R 1/13
FST02	680	Forecast Qualifier C - Firm	M	ID 1/1
FST03	681	Forecast Timing Qualifier D - Discrete	M	ID 1/1
FST04	373	Date *(YYMMDD - Date of delivery at MBUSI)*	M	DT 6/6
FST05	373	Date *(YYMMDD - Date MBUSI received ASN for specified RAN - Ran is in intransit or in yard status). Null if no ASN yet received.*	O	DT 6/6
FST06	374	Date/Time Qualifier 002 - Delivery Requested	M	ID 3/3
FST07	337	Time *(HHMM - Delivery time at MBUSI)*	M	TM 4/4
FST08	128	Reference Number Qualifier DO - Delivery Order Number	M	ID 2/2
FST09	127	Reference Number *(Release Authorization Number (RAN))*	M	AN 10/10

Example:

FST*100*C*D*030519*002*0600*DO*C2E3000036

Note: For Service Parts, this list includes all pending open purchase orders including ones listed as new. Use care to (a)avoid duplication and(b) replace your entire backlog of orders each time.

Loop ID-FST

FST   Forecast Schedule (Total outstanding RANs)

Total quantity of RANs on previous releases and not yet received (in transit or open) at MBUSI. This segment is only issued to North American suppliers, and only if there are outstanding RANs.

Optional 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
FST01	380	Quantity *(Release or forecast quantity)*	M	R 1/13
FST02	680	Forecast Qualifier C - Firm	M	ID 1/1
FST03	681	Forecast Timing Qualifier Z - Subtotal (for new and outstanding RANs)	M	ID 1/1

Example:

FST*1620*C*Z

Loop ID-FST

FST   Forecast Schedule (Daily Forecasts)

Optional, Unlimited Occurrences

Element Position	Element Number	Description Content	Option	Type Size
FST01	380	Quantity *(Release or forecast quantity)*	M	R 1/13
FST02	680	Forecast Qualifier D - Planning	M	ID 1/1
FST03	681	Forecast Timing Qualifier D - Discrete	M	ID 1/1
FST04	373	Date *(YYMMDD - Date of delivery at MBUSI)*	M	DT 6/6

Example:

FST*270*D*D*950424

Loop ID-FST

FST   Forecast Schedule(Monthly Forcast)

Optional 0-260 Occurrences

Element Position	Element Number	Description Content	Option	Type Size
FST01	380	Quantity *(Release or forecast quantity)*	M	R 1/13
FST02	680	Forecast Qualifier D - Planning	M	ID 1/1
FST03	681	Forecast Timing Qualifier F - Flexible Timing Period	M	ID 1/1
FST04	373	Date *(YYMMDD - First date of forecast period)*	M	DT 6/6
FST05	373	Date *(YYMMDD - Last date of forecast period)*	M	DT 6/6

Example:

FST*1350*D*F*960424*960430

Note: Not used for Service Parts orders.

End of Loop ID-FST   1

End of Loop ID-LIN   1

CTT   Transaction Totals

Total Number of Line Items

Element Position	Element Number	Description Content	Option	Type Size
CTT01	354	Number of Line Items 1 - Always one line item	M	N0 1/6

Example:

CTT*1

SE   Transaction Set Trailer

Element Position	Element Number	Description Content	Option	Type Size
SE01	96	Number of Included Segments	M	N0 1/10
SE02	329	Transaction Set Control Number	M	AN 4/9

Example:

SE*10*000001234

Example of Material Release (RAN Suppliers)

MERCEDES-BENZ U.S. INTERNATIONAL, INC.
VENDOR MATERIAL RELEASE(RAN)

ITEM#:	DESCRIPTION:	DOCK:	SCHEDULE#	TRANSACTION#	CONTRACT#
A2516100114	CROSSBEAM SUPPORT	E32	4500001010	0002	5500000003

UNIT OF MEASURE	MOT	STORAGE LOC.	LINEFEED LOC.	SUPPLIER#	TOTAL FIRM QUANTITY (RAN)
EA	Truck	A0125	A2-C-01L	15571995	1000

OPEN RELEASE AUTHORIZATIONS

RAN	C2E3000036	C2E3000038	C2E3000040	C2E3000042	C2E3000044	TOTAL
RECEIPT DATE/TIME	5/19/03 6:00	5/20/03 6:00	5/21/03 6:00	5/22/03 6:00	5/23/03 6:00	
QUANTITY	100	100	100	100	100	500

NEW RELEASE AUTHORIZATIONS

RAN	C2E3000046	C2E3000048	C2E3000099	C2E3000102	C2E3000105	TOTAL
RECEIPT DATE/TIME	5/26/03 6:00	5/27/03 6:00	5/28/03 6:00	5/29/03 6:00	5/30/03 6:00	
QUANTITY	100	100	100	100	100	500

DAILY FORECASTS

DATE	6/2/03	6/3/03	6/4/03	6/5/03	6/6/03
QUANTITY	120	120	120	120	120
DATE	6/9/03	6/10/03	6/11/03	6/12/03	6/13/03
QUANTITY	120	120	120	120	120
DATE	6/16/03	6/17/03	6/18/03	6/19/03	6/20/03
QUANTITY	120	120	120	120	120
DATE	6/23/03	6/24/03	6/25/03	6/26/03	6/27/03
QUANTITY	140	140	140	140	140
DATE	6/30/03				
QUANTITY	140				

MONTHLY FORECASTS

MONTH	Jul-03	Aug-03	Sep-03
QUANTITY	2660	2940	3080

Example of EDI Material Release(RAN Suppliers)

```
ISA*00*          *00*          *ZZ*MBUS   MBUS001 *ZZ*DPH
*030523*0921*U*00200*000000002*0*P*>
GS*PS*MBUS001*DPH*030523*0921*2*X*003050
ST*830*0002
BFR*00**0307-1*DL*A*030605**030523
PER*EX*Gammons*IT*205-506-3483
PER*OD*Miles*IT*205-507-3482
TD5****J
MAN*DZ*A0125*A2-C-01L
N1*ST*MBUSI VANCE*92*8010
N4*****DE*PLT2
N1*SE*JCI*92*0015571995
N3*123 MAIN ST.
N4*Cottondale*AL*35400
LIN**BP*A2516100114*PO*5500000003
UIT*EA
PID*F****CROSSBEAM SUPPORT
REF*DK*E32
FST*100*C*D*030519**002*0600*DO*C2E3000036
FST*100*C*D*030520**002*0600*DO*C2E3000038
FST*100*C*D*030521**002*0600*DO*C2E3000040
FST*100*C*D*030522**002*0600*DO*C2E3000042
FST*100*C*D*030523**002*0600*DO*C2E3000044
FST*500*C*Z*030519
FST*100*H*D*030526**002*0600*DO*C2E3000046
FST*100*H*D*030527**002*0600*DO*C2E3000048
FST*100*H*D*030528**002*1000*DO*C2E3000099
FST*100*H*D*030529**002*1000*DO*C2E3000102
FST*100*H*D*030530**002*1000*DO*C2E3000105
FST*500*H*Z*030526
FST*120*D*D*030602
FST*120*D*D*030603
FST*120*D*D*030604
FST*120*D*D*030605
FST*120*D*D*030606
FST*120*D*D*030609
FST*120*D*D*030610
FST*120*D*D*030611
FST*120*D*D*030612
FST*120*D*D*030613
FST*120*D*D*030616
FST*120*D*D*030617
FST*120*D*D*030618
FST*120*D*D*030619
FST*120*D*D*030620
FST*140*D*D*030623
FST*140*D*D*030624
FST*140*D*D*030625
FST*140*D*D*030626
FST*140*D*D*030627
FST*140*D*D*030630
FST*2660*D*F*030701*030731
FST*2940*D*F*030801*030831
FST*3080*D*F*030901*030930
CTT*1
SE*55*000001234
GE*1*1
```

IEA*1*000000001

Example of Material Release (MBCC)

MERCEDES-BENZ U.S. INTERNATIONAL, INC. **VENDOR MATERIAL RELEASE (MBCC)**					

ITEM#: A2516100114 **DESCRIPTION:** CROSSBEAM SUPPORT **DOCK:** E32 **SCHEDULE#** 4500001919 **TRANSACTION#** 0002 **CONTRACT#** 5500000003

UNIT OF MEASURE EA **MOT** Truck **STORAGE LOC.** A0125 **LINEFEED LOC.** A2-C-01L **SUPPLIER#** 15571995 **TOTAL FIRM QUANTITY (RAN)** 1000

NEW RELEASE AUTHORIZATIONS

RAN	C2E3000046	C2E3000048	C2E3000099	C2E3000102	C2E3000105	TOTAL
RECEIPT DATE/TIME	5/26/03 6:00	5/27/03 6:00	5/28/03 6:00	5/29/03 6:00	5/30/03 6:00	
QUANTITY	100	100	100	100	100	500

DAILY FORECASTS

DATE	6/2/03	6/3/03	6/4/03	6/5/03	6/6/03
QUANTITY	120	120	120	120	120
DATE	6/9/03	6/10/03	6/11/03	6/12/03	6/13/03
QUANTITY	120	120	120	120	120
DATE	6/16/03	6/17/03	6/18/03	6/19/03	6/20/03
QUANTITY	120	120	120	120	120
DATE	6/23/03	6/24/03	6/25/03	6/26/03	6/27/03
QUANTITY	140	140	140	140	140
DATE	6/30/03				
QUANTITY	140				

MONTHLY FORECASTS

MONTH	Jul-03	Aug-03	Sep-03
QUANTITY	2660	2940	3080

Example of EDI Material Release (MBCC)

```
ISA*00*          *00*          *ZZ*MBUS   MBUS001 *ZZ*DPH
*030523*0921*U*00200*000000002*0*P*>
GS*PS*MBUS001*DPH*030523*0921*2*X*003050
ST*830*0002
BFR*00**0307-1*DL*A*030605**030523
PER*EX*Gammons*IT*205-506-3483
PER*OD*Miles*IT*205-507-3482
TD5****J
MAN*DZ*A0125*A2-C-01L
N1*ST*MBUSI VANCE*92*8010
N4*****DE*PLT2
N1*SE*JCI*92*0015571995
N3*123 MAIN ST.
N4*Cottondale*AL*35400
LIN**BP*A2516100114*PO*5500000003
UIT*EA
PID*F****CROSSBEAM SUPPORT
REF*DK*E32
FST*100*H*D*030526**002*0600*DO*C2E3000046
FST*100*H*D*030527**002*0600*DO*C2E3000048
FST*100*H*D*030528**002*1000*DO*C2E3000099
FST*100*H*D*030529**002*1000*DO*C2E3000102
FST*100*H*D*030530**002*1000*DO*C2E3000105
FST*500*H*Z*030526
FST*120*D*D*030602
FST*120*D*D*030603
FST*120*D*D*030604
FST*120*D*D*030605
FST*120*D*D*030606
FST*120*D*D*030609
FST*120*D*D*030610
FST*120*D*D*030611
FST*120*D*D*030612
FST*120*D*D*030613
FST*120*D*D*030616
FST*120*D*D*030617
FST*120*D*D*030618
FST*120*D*D*030619
FST*120*D*D*030620
FST*140*D*D*030623
FST*140*D*D*030624
FST*140*D*D*030625
FST*140*D*D*030626
FST*140*D*D*030627
FST*140*D*D*030630
FST*2660*D*F*030701*030731
FST*2940*D*F*030801*030831
FST*3080*D*F*030901*030930
CTT*1
SE*55*000001234
GE*1*1
IEA*1*000000001
```

Example of Material Release (Broadcast Suppliers)

MERCEDES-BENZ U.S. INTERNATIONAL, INC.					
VENDOR MATERIAL RELEASE(Sequence)					

ITEM#:	DESCRIPTION:	DOCK:	SCHEDULE#	TRANSACTION#	CONTRACT#
A2516100114	CROSSBEAM SUPPORT	E32	0305-5	0002	5500000003

UNIT OF MEASURE	MOT	STORAGE LOC.	LINEFEED LOC.	SUPPLIER#	TOTAL FIRM QUANTITY (RAN)
EA	Truck	A0125	T101L	15571995	1000

DAILY FORECASTS

DATE	6/2/03	6/3/03	6/4/03	6/5/03	6/6/03
QUANTITY	120	120	120	120	120
DATE	6/9/03	6/10/03	6/11/03	6/12/03	6/13/03
QUANTITY	120	120	120	120	120
DATE	6/16/03	6/17/03	6/18/03	6/19/03	6/20/03
QUANTITY	120	120	120	120	120
DATE	6/23/03	6/24/03	6/25/03	6/26/03	6/27/03
QUANTITY	140	140	140	140	140
DATE	6/30/03				
QUANTITY	140				

MONTHLY FORECASTS

MONTH	Jul-03	Aug-03	Sep-03
QUANTITY	2660	2940	3080

Example of EDI Material Release (Broadcast Suppliers)

```
ISA*00*          *00*          *ZZ*MBUS   MBUS001 *ZZ*DPH
*030523*0921*U*00200*000000002*0*P*>
GS*PS*MBUS001*DPH*030523*0921*2*X*003050
ST*830*0002
BFR*00**0307-1*DL*A*030605**030523
PER*EX*Gammons*IT*205-506-3483
PER*OD*Miles*IT*205-507-3482
TD5****J
MAN*DZ*A0125*A2-C-01L
N1*ST*MBUSI VANCE*92*8010
N4*****DE*PLT2
N1*SE*JCI*92*0015571995
N3*123 MAIN ST.
N4*Cottondale*AL*35400
LIN**BP*A2516100114*PO*5500000003
UIT*EA
PID*F****CROSSBEAM SUPPORT
REF*DK*E32
FST*120*D*D*030602
FST*120*D*D*030603
FST*120*D*D*030604
FST*120*D*D*030605
FST*120*D*D*030606
FST*120*D*D*030609
FST*120*D*D*030610
FST*120*D*D*030611
FST*120*D*D*030612
FST*120*D*D*030613
FST*120*D*D*030616
FST*120*D*D*030617
FST*120*D*D*030618
FST*120*D*D*030619
FST*120*D*D*030620
FST*140*D*D*030623
FST*140*D*D*030624
FST*140*D*D*030625
FST*140*D*D*030626
FST*140*D*D*030627
FST*140*D*D*030630
FST*2660*D*F*030701*030731
FST*2940*D*F*030801*030831
FST*3080*D*F*030901*030930
CTT*1
SE*55*000001234
GE*1*1
IEA*1*000000001
```

Example of EDI Material Release (Service Parts)

```
ISA*00*          *00*          *ZZ*MBUS   MBUS002 *ZZ*ARAS   ARASSA1
*040316*1938*U*00200*000000002*0*T*>
GS*PS*MBUS002S*019574323A*040316*1938*2*X*003050
ST*830*0344
BFR*00**4500000203*DL*A*040810**040810
PER*OD*Dee Smith*IT*205-507-3773
TD5****J
MAN*DZ*NONE*NONE
N1*ST*MBUSI*92*70599-000
N4*****DE*MI01
N1*SE*ACME INCORPORATED*92*019515729B
N3*242 INDUSTRIAL DRIVE SW
N4*CULLMAN*AL*35055
LIN**BP*A1638801705
UIT*EA
PID*F****ESCUTCHEON
REF*DK*CALL
FST*100*C*D*040819****DO*4500000203
FST*100*C*D*040824****DO*9900102433
FST*200*C*D*040912****DO*9900103130
FST*100*C*D*041122****DO*9900103131
FST*500*C*Z*040810
FST*100*H*D*040819****DO*4500000203
FST*100*H*Z*040810
FST*1000*D*D*050502
CTT*1
SE*17*0002
GE*1*2
IEA*1*000000002
```

PrePayment Advice(820)

Payment Order/Remittance Advice

Target Audience

>   This section (dealing with the EDI 820, PrePayment advice) is
> only for those suppliers who elect to receive it. This is an
> optional transaction that is sent by request. You can use it in
> a *cash application* activity to reconcile your records of what
> you have shipped with the payment you receive by wire transfer.
> Generally, your bank will send you an EDI820 that contains
> payment information summarized by (MBUSI's internal)invoice#.
> This transaction gives complete detail on the part numbers,
> quantities, and pricing (by RAN# or production#)used to compute
> the payment.

Introduction

>   MBUSI will send the Payment Order/Remittance Advice using the
> ANSI X12 820 Transaction Set version 003050.
>
>   Only the Remittance Advice portion of the 820 will be used.
> This detail version is a pre-notification of part level
> components, and is the only payment information that suppliers
> will receive by EDI directly from MBUSI. This transaction will
> reflect MBUSI generated ERS(Evaluated Receipts Settlement)
> invoices. Non-productive ("indirect") materials, Service Parts,
> or parts bought with purchase orders or "spot buys," are not
> included in this process.
>
>   The final (monthly) payment made may include adjustments and
> miscellaneous supplier invoices. Suppliers must contact their
> own bank to get a summarized EDI file of the final payment
> made. This file is not available from MBUSI or MBUSI's bank.
>
>   For each segment, the elements of the segment are described.
> The element position shows the relative position in the segment
> (the segment identifier is not shown or counted). The element
> number is the ANSI X12 element references. The description
> shows the description of the element, and under the description
> are the possible values of the element. An M in the option
> shows that the element will always be included, an O that it
> will be included only as needed. The type and size are of the
> format Type Min/Max, where Type is AN for alphanumeric, N for
> integer, R for Real, and ID for a defined code. Min and Max
> are the minimum and maximum number of characters in the field.
> One or more examples are shown for each segment.

ST   Transactions Set Header

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

Section: Header

Loop:

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
ST01	143	Transaction Set Identified Code 820 - Payment Order/Remittance Advice	M	ID 3/3
ST02	329	Transaction Set Control Number *(000000001-999999999)*	M	AN 9/9

Example:

ST*820*000000001

BPR   Beginning Segment for Payment Order/Remittance Advice

Section: Header

Loop:

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
BPR01	305	Transaction Handling Code E - Debit/Credit Advice With Remittance Detail	M	ID 1/1
BPR02	782	Monetary Amount <total payment amount>	M	R 1/15

BPR03	478	Credit/Debit Flag Code
		C A credit to receiver/debit to originator
		D A debit to receiver/credit to originator
		     (D will be accompanied by information in
		     fields SLN11 through SLN26 for tracking
		     defective material)
			M	ID 1/1

BPR04	591	Payment Method Code NON Non-Payment Data	M	ID 3/3
BPR10	509	Originating Company Identifier *(Should match TRN03)*	O	AN 10/10
BPR11	510	Originating Company Supplemental Code *(Should match TRN04)*	O	AN 9/9

Example:

BPR*E*81984.00*C*NON******3824839872*MBUSI

Notes

The "D" (debit) may occur in situations such as returns of damaged (DMT) material or non-conforming parts. See also section on SLN segment.

Dollar values are always reported as positive numbers, even in debit memos.

TRN   Trace

Section: Header

Loop:

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
TRN01	481	Trace Type Code 1 Current Transaction Trace Numbers	M	ID 1/2
TRN02	127	Reference Number *(MBUSI Batch Number)*	M	AN 1/30
TRN03	509	Originating Company Identifier *(Should match BPR10)*	O	AN 10/10
TRN04	127	Reference Number *(Should match BPR11)*	O	AN 1/30

Example:

TRN*1*743-743*3824839872*MBUSI

DTM   Date/Time Reference

Section: Header

Loop:

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
DTM01	374	Date/Time Qualifier 097 Transaction Creation	M	ID 3/3
DTM02	373	Date *(Creation Date)*	M	DT 6/6
DTM05	624	Century	O	N0 2/2

Example:

DTM*097*050624***20

N1   *Name(Payee)*

Section: Header

Loop: N1

Mandatory, 2 Occurrence

Payee Name Information

Element Position	Element Number	Description Content	Option	Type Size
N101	98	Entity Identifier Code PE - Payee	M	ID 2/2
N102	93	Name *(Payee's Name)*	M	AN 1/35
N103	66	Identification Code Qualifier 92 - Assigned by Buyer or Buyer's Agent	M	ID 2/2
N104	67	Identification Code *(MBUSI Vendor Code)*	M	AN 2/10

Example:

N1*PE*AMERICAN WIDGET FACTORY*92*15548622

N1   Name(Payer)

Section: Header

Loop: N1

Mandatory, 2 Occurrence

Payer Name Information

Element Position	Element Number	Description Content	Option	Type Size
N101	98	Entity Identifier Code PR - Payer	M	ID 2/2
N102	93	Name *("MERCEDES-BENZ")*	M	AN 1/35
N103	66	Identification Code Qualifier 92 - Assigned by Buyer or Buyer's Agent	M	ID 2/2
N104	67	Identification Code "MBUSI"	M	AN 2/6

Example:

N1*PR*MERCEDES-BENZ*92*MBUSI

ENT   Entity

Section: Detail

Loop: ENT

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
ENT01	554	Assigned Number	M	N0 1/6

Example:

ENT*<#>

RMR *Remittance Advice Accounts Receivable open Item*

Section: Detail

Loop: ENT/RMR

Mandatory

Note: For the detail version of the 820 the RMR04 value is equal to
           the extended value(IT102 * IT105) of all IT1 segments below it.

           MBUSI Internal Invoice number is generated by MBUSI SAP system.

Element Position	Element Number	Description Content	Option	Type Size
RMR01	128	Reference Number Qualifier IK - (SAP)Invoice Number	M	ID 2/2
RMR02	127	Reference Number *(MBUSI Internal Invoice Number)*	M	AN 1/30
RMR05	777	Total Invoice or Credit/Debit Amount *(Total Invoice Amount in USD)*	M	R 1/15

Example:

RMR*IK*5150018356***1645.32

<u>Note</u>

The reference number given here acts as a "seller's invoice number." It
is internally generated by MBUSI's SAP system as a part of self-billing.
The supplier can refer to this number when communicating to MBUSI for
resolving discrepancies, as it will appear inside MBUSI's SAP system as a
vendor invoice number.

IT1   *Baseline Item Data*

Section: Detail

Loop: ENT/RMR/IT1

Mandatory

Element Position	Element Number	Description Content	Option	Type Size
IT101	350	Assigned Identification *(Line Item Number)*	M	AN 1/11
IT102	358	Quantity Invoiced *(Actual Quantity of Parts Used/Received)*	M	R 1/10
IT103	355	Unit or Basis for Measurement (Dynamic, based on value in SAP; for piece parts, contains "EA" - Each)	M	ID 2/2
IT104	212	Unit Price (US dollars)	M	R 1/17
IT105	639	Basis of Unit Price Code UM Price per Unit of Measure PN Price Per 10 HP Price Per 100 TP Price Per 1000	M	ID 2/2
IT106	235	Product/Service Qualifier BP Buyers Part Number	M	ID 2/2
IT107	234	Product/Service ID *(MBUSI Part Number)*	M	AN 1/40
IT108	235	Product/Service Qualifier PD Part Description	M	ID 2/2
IT109	234	Product/Service ID *(MBUSI Part Description)*	M	AN 1/40

Example:

IT1*000001*23*EA*80.00*PE*BP*A2512410234*PD*Ground Cable~

REF   Reference Numbers

Section: Detail

Loop: ENT/RMR/IT1/REF

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
REF01	128	Reference Number Qualifier "VV" Voucher Number	M	AN 1/11
REF02	127	Reference Number MBUSI (SAP) Internal Invoice No.	M	AN 1/30

DTM   Date/Time Reference

Section: Detail

Loop: ENT/RMR/IT1/DTM

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
DTM01	374	Date/Time Qualifier 050 Received	M	ID 3/3
DTM02	373	Date *(Receipt Date or Off-Line Date)*	M	DT 6/6
DTM05	624	Century "20"	O	N0 2/2

Example:

DTM*050*050409***20

SLN   Subline Item Detail

Section: Detail

Loop: ENT/RMR/IT1/SLN   Repeat: > 1

Mandatory

Element Position	Element Number	Description Content	Option	Type Size
SLN01	350	Assigned Identification Voucher Number	M	N 1/11
SLN02	350	Assigned Identification Part Number ID Number	O	AN 1/11
SLN03	661	Configuration Code "I" (included)	M	ID 1/1

SLN04	380	Quantity
		   (Quantity of parts received/consumed on
		      this RAN/Production No.)
			M	R 1/15

SLN05	355	Unit or Basis for Measurement Code Dynamic; "EA" for piece parts	M	ID 2/2

SLN09	235	Product/Service ID Qualifier
		   "PO" if this is a RAN part
		   "SI" if this is ASN data related to a RAN part
		   "PR" if this is a Sequence Part
			M	ID 2/2

SLN10	234	Product/Service ID
		   RAN Number (if SLN09="PO")
		   ASN Number (If SLN09="SI")
		   Production Number (if SLN09="PR")
			O	AN 1/30

The following 16 fields appear only in the case of Debit memos. Included in this area is information you need to contact the Supplier Quality Engineer to determine the reason for the Debit. The ID qualifiers used should pass filtering, but several have different meanings, as shown in parentheses.

SLN11	235	Product/Service ID Qualifier "F7" End-Item Description (Notification item text)	O	ID 2/2	
SLN12	234	Product/Service ID Notification Item Short Text	O	AN 1/40	
SLN13	235	Product/Service ID Qualifier "SN" Serial Number (Notification number)	O	ID 2/2	
SLN14	234	Product/Service ID Notification Number	O	AN 1/12	

SLN15	235	Product/Service ID Qualifier "RA" Return Code (Damage code description)	O	ID	2/2
SLN16	234	Product/Service ID Damage code description	O	AN	1/40
SLN17	235	Product/Service ID Qualifier "TC" ID (Badge holder's name)	O	ID	2/2
SLN18	234	Product/Service ID Badge Holder's Name	O	AN	1/30
SLN19	235	Product/Service ID Qualifier "BX" Bill Credit Code (Subject text)	O	ID	2/2
SLN20	234	Product/Service ID Subject Text	O	AN	1/40
SLN21	235	Product/Service ID Qualifier "LC" Condition Code (SQE name)	O	ID	2/2
SLN22	234	Product/Service ID SQE Name	O	AN	1/25
SLN23	235	Product/Service ID Qualifier "SB" Submission number (Telephone number)	O	ID	2/2
SLN24	234	Product/Service ID SQE Telephone Number	O	AN	1/16
SLN25	235	Product/Service ID Qualifier "ZZ" Mutually defined (SQE Fax number)	O	ID	2/2
SLN26	234	Product/Service ID SQE Fax number	O	AN	1/31

See next page for examples and notes.

Notes

For Sequence parts, SLN09 will contain a "PR", and there will be no ASN information. A single SLN line will convey the consumed quantity.

For RAN parts, SLN09 will contain a "PO", which is the RAN number; and, in that case, an additional SLN line (with SLN09="SI") containing the ASN Number will be provided. The supplier-reported quantity is included in that second SLN, allowing you to see if there is a variance between the ASN-claimed quantity and the quantity actually received at MBUSI. _**Exception:**_ **Debit Memos will not refer to a RAN#**, as Damaged Material (DMT) tracking does not identify parts by what RAN they came from.

Suppliers providing both sequence and RAN parts will receive both types of record. Suppliers providing only sequence or only RAN parts will receive only the appropriate record type.

In rare cases, there may be some parts supplied by RAN to one plant, and sequenced to another; in such cases, the supplier would receive both types of record for the same part number. These will, as in other cases, be identified with the appropriate RAN# and Production Number.

Examples of SLN Segments

For A Sequence Part:

SLN*5150044502*000001*I*1*EA****PR*0002175486~

       The production number is shown as a 10-digit number, but only the low-order (rightmost) 7 digits are meaningful. No check digit is used.

For A RAN Part:

SLN*5150011503*000002*I*2*EA****PO*C2K4000501~
SLN*5150011503*000002*I*2*EA****SI*042804-2~

       These two SLN lines go together: the first is the received quantity, and the second is what the supplier sent in their ASN.

For a Debit Memo:

SLN*5150075063**I*8*EA****PO**F7*shipping
damage*SN*000200003416*RA*FINISH / QUALITY*TC*Cindy Johnson*BX*shipping
damage*LC*Sulu*SB*867-5309*ZZ*867-5309

Example of EDI Payment Order/Remittance Advice

The following is an example of an EDI Payment Order/Remittance Advice.
The overall format is the same for RAN and Sequence Suppliers; for RAN
parts, a second SLN segment contains the additional information of ASN#
and ASN quantity.

Issued Daily

Under normal circumstances, this file will be produced daily, but it will
reflect the receipts that occurred one week earlier. (This is to allow
time for checking and corrections between the receipt date and
transmittal of the file).

```
ISA*00*          *00*          *ZZ*MBUS   MBUS002 *01*999999999
*971003*1550*U*00200*000000002*0*P*^~
GS*PS*MBUS002*999999999*971003*1550*2*X*003050~
ST*820*0136~
BPR*E*206.40*C*NON******5150044502*MBUSI~
TRN*1*0000008699999*5150044502*MBUSI~
DTM*097*050929***20~
N1*PE*ALPHA DELTA ELECTRIC*92*16546754A~
N1*PR*MERCEDES-BENZ*92*MBUSI~
ENT*1~
RMR*IK*5150044502***206.40~
IT1*000001*1*EA*104.90*PE*BP*A1645400508*PD*WIRING HARNESS FRONT DOOR~
REF*VV*5150044502~
DTM*050*050311***20~
SLN*5150044502*000001*I*1*EA****PR*0002000051~
IT1*000002*10*EA*10.15*PE*BP*A1645400530*PD*STARTER CABLE ~
REF*VV*5150044502~
DTM*050*050311***20~
SLN*5150044502*000002*I*10*EA****PO*C2K4034501~
SLN*5150044502*000002*I*10*EA****SI*3002527099~
SE*36*0136~
GE*1*2~
IEA*1*000000002~
```

For details on the header (ISA, GS, etc.) and trailer segments, refer to
Appendix B.

Ship Notice (ASN)(856)

(856) Ship Notice / Manifest (ASN)

MBUSI suppliers will be required to send MBUSI an ASN for all part orders using Release Authorization Number (RANs). This does not include sequenced parts ordered through broadcast messages.

The ASN should follow the attached specifications using the AIAG subset of Transaction Set 856 of the ANSI X12 standard, version 003050. The ASN should be sent within 15 minutes after the departure of the shipment, and in time to be received at MBUSI before the shipment arrives. MBUSI will acknowledge receipt with a Functional Acknowledgment(997), within one hour. The 997 is an acknowledgment of receipt and interpretation, and not an acceptance of delivery.

The segments and elements to be used from the 856 Transaction set are described below by segment. Each segment is described as mandatory, and will always be sent to MBUSI, or optional, and will only be sent as needed. The minimum and maximum number of occurrences within the transaction is listed. If the segment is part of a loop, there is a loop ID shown.

For each segment, the elements of the segment are described. The element position shows the relative position in the segment (the segment identifier is not shown or counted). The element number is the ANSI X12 element references. The description shows the description of the element, and under the description are the possible values of the element. A code within parentheses is the MBUSI database reference, and for MBUSI internal use only. An M in the option shows that the element should always be included, an O that it should be included only as needed. The type and size are of the format Type Min/Max, where Type is AN for alphanumeric, N for integer, R for Real, and ID for a defined code. Min and Max are the minimum and maximum number of characters in the field. One or more examples are shown for each segment.

For the inexperienced user, Appendix A has a full description of the syntax rules of ANSI X12.

ST   Transactions Set Header

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

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
ST01	143	Transaction Set Identifier Code 856 - Ship Notice/Manifest	M	ID 3/3
ST02	329	Transaction Set Control Number (000000000-999999999)	M	AN 4/9

Example:

ST*856*000056789

BSN   Beginning Segment for Ship Notice

Header information for the Ship Notice

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
BSN01	353	Transaction Set Purpose Code 00 - Original 05 - Replace	M	ID 2/2
BSN02	396	Shipment Identification *(Unique for each Shipment)*	M	AN 7/7
BSN03	373	Date *(YYMMDD - Ship Notice Creation Date)*	M	DT 6/6
BSN04	337	Time *(HHMM - Ship Notice Creation Time)*	M	TM 4/4

Example:

BSN*00*1000123*960420*1456

DTM   Date / Time Reference

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
DTM01	374	Date/Time Reference 011 - Time Shipped	M	ID 3/3
DTM02	373	Date *(YYMMDD - Shipment Date)* **NOTE: Date left dock for North American suppliers, date left port for ECC**	M	DT 6/6
DTM03	337	Time *(HHMM - Shipment time)*	M	TM 4/4

Example:

DTM*011*960420*1434

HL   Hierarchical Level(Shipment Loop)

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
HL01	628	Hierarchical ID Number 1-Always one for shipment Loop	M	AN 1
HL03	735	Hierarchical Level Code S-Shipment level	M	ID 1/1

Example:

HL*1**S

MEA   Measurement

Optional, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
MEA02	738	Measurement Reference ID Code G – Gross Weight	M	ID 1
MEA03	739	Measurement Value *(Gross weight of shipment in pounds or kilograms)*	M	R 1/10
MEA04	355	Unit or Basis for Measurement Code KG – Kilogram LB – Pound	M	ID 2/2

Example:

MEA**G*2345.5*LB

MEA   Measurement

Optional, 1 Occurrence

Required for Non-North American Suppliers

Element Position	Element Number	Description Content	Option	Type Size
MEA02	738	Measurement Qualifier N - Actual Net Weight	M	ID 1
MEA03	739	Measurement Value *(Net weight of shipment in pounds or kilograms)* **NOTE: Including inside packaging, but not container**	M	R 1/10
MEA04	355	Unit or Basis for Measurement Code KG - Kilogram LB - Pound	M	ID 2/2

Example:

MEA**N*99*KG

TD1   Carrier Details (Quantity and Weight)

Optional, 1 Occurrence

Used to identify number of pieces in shipment.

Element Position	Element Number	Description Content	Option	Type Size
TD101	103	Packaging Code *(PCS - Pieces)*	M	AN 5/5
TD102	80	Lading Quantity *(Number of pieces in shipment)*	M	N0 1/7

Example:

TD1*PCS*100

TD5 Carrier Detail (Routing Sequence/Transit Time)(SCAC)

Identification of originating carrier

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
TD502	66	Identification Code Qualifier 2 - Standard Carrier Alpha Code	M	ID 1/1
TD503	67	Identification Code *(Standard Carrier Alpha Code)*	M	AN 2/20
TD504	91	Transportation Method/Type Code A - Air J - Motor R - Rail S - Ocean H - Customer Pickup	M	ID 1/2

Example:

TD5**2*CN*R

TD5 Carrier Detail (Routing Sequence/Transit Time)(US Port of Unlading)

Optional, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
TD504	91	Transportation Method/Type Code A - Air J - Motor R - Rail S - Ocean H - Customer Pickup	M	ID 1/2
TD507	309	Location Qualifier PA - Port of Arrival	M	ID 2/2
TD508	310	Location Identifier *(US port of unlading)*	M	AN 1/30

Example:

TD5****S***PA*<US port of unlading>

TD5   Carrier Detail (Routing Sequence/Transit Time)(Foreign Port of Lading)

Optional, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
TD504	91	Transportation Method/Type Code A - Air J - Motor R - Rail S - Ocean H - Customer Pickup	M	ID 1/2
TD507	309	Location Qualifier KL - Port of Loading	M	ID 2/2
TD508	310	Location Identifier *(Foreign port of lading)*	M	AN 1/30

Example:

TD5****S***KL*<Foreign port of lading>

TD5   Carrier Detail (Routing Sequence/Transit Time)(Port of Arrival)

Optional, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
TD504	91	Transportation Method/Type Code A - Air J - Motor R - Rail S - Ocean H - Customer Pickup	M	ID 1/2
TD507	309	Location Qualifier PE - Port of Entry	M	ID 2/2
TD508	310	Location Identifier *(Port of arrival)*	M	AN 1/30

Example:

TD5****S***PE*<port of arrival>

TD3   Carrier Detail (Equipment)

Equipment identification. Required for any movement, truckload, carload, or container, including route pickup.

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
TD301	40	Equipment Description Code *(Any code except mutually defined)*	M	ID 2/2
TD302	206	SCAC Code *(Initial on container, trailer, or rail car)*	M	AN 1/4
TD303	207	Equipment Number *(Number on container, trailer or rail car)*	M	AN 1/10

Example:

TD3*TF*NSZ*552234

Tip: "LT" is not a valid value to use in TD301, even though it may be a common term in the trucking industry. You must use a valid ANSI code.

REF   Reference Number (Air Waybill)

Optional, 0-1 Occurrences, at least one REF segment must be included in the shipment loop

Only used for air shipments

Element Position	Element Number	Description Content	Option	Type Size
REF01	128	Reference Number Qualifier AW - Air Waybill	M	ID 2/2
REF02	127	Reference Number *(Air Waybill Number)*	M	AN 1/30

Example:

REF*AW*00123211232112

REF   Reference Number (Bill of Lading)

Mandatory, 1 Occurrence, at Least One REF Segment Must be Included in the Shipment Loop

Note: If no Bill of Lading exists, use another shipment identifier here, such as the packing slip number.

Element Position	Element Number	Description Content	Option	Type Size
REF01	128	Reference Number Qualifier BM - Bill of Lading	M	ID 2/2
REF02	127	Reference Number *(Bill of Lading Number)*	M	AN 1/30

Example:

REF*BM*1141231

REF   Reference Number (Carrier Reference - PRO/Invoice)

Optional, 0-1 Occurrences, at least one REF segment must be included in
the shipment loop. This segment is required if there is no equipment
identification

Used primarily with less than truckload shipments.

Element Position	Element Number	Description Content	Option	Type Size
REF01	128	Reference Number Qualifier CN - Carrier Reference	M	ID 2/2
REF02	127	Reference Number *(PRO Number)*	M	AN 1/30

Example:

REF*CN*4322233

REF   Reference Number (Freight Bill Number)

Optional, 0-1 Occurrences, at least One REF segment must be included in
the shipment loop

Used when freight bill exists

Element Position	Element Number	Description Content	Option	Type Size
REF01	128	Reference Number Qualifier FR - Freight Bill Number	M	ID 2/2
REF02	127	Reference Number *(Freight Bill Number)*	M	AN 1/30

Example:

REF*FR*432234A

REF   Reference Number (Master Bill of Lading)

Optional, 0-1 Occurrences, at least one REF segment must be included in
the shipment loop

Used when master bill of lading exists

Element Position	Element Number	Description Content	Option	Type Size
REF01	128	Reference Number Qualifier MB - master Bill of Lading	M	ID 2/2
REF02	127	Reference Number *(Master Bill of Lading Number)*	M	AN 1/30

Examples:

REF*MB*4342342

REF   Reference Number (Packing List Number)

Optional, 0-1 occurrences, at least one REF segment must be included in
the shipment loop

Used when numbered packing list exists

Element Position	Element Number	Description Content	Option	Type Size
REF01	128	Reference Number Qualifier PK - Packing Number	M	ID 2/2
REF02	127	Reference Number *(Packing List Number)*	M	AN 1/30

Examples:

REF*PK*55443333

REF   Reference Number (Seal Number)

Optional, 0-1 Occurrences, at least one REF segment must be included in the shipment loop

Used when trailer of container is sealed

Element Position	Element Number	Description Content	Option	Type Size
REF01	128	Reference Number Qualifier SN - Seal Number	M	ID 2/2
REF02	127	Reference Number *(Seal Number)*	M	AN 1/30

Examples:

REF*SN*55446

REF   Reference Number (Vessel Name)

Optional, 0-1 Occurrences, at least one REF segment must be included in the shipment loop

Used for ocean shipments

Element Position	Element Number	Description Content	Option	Type Size
REF01	128	Reference Number Qualifier VN - Vessel Name	M	ID 2/2
REF02	127	Reference Number *(Vessel Name)*	M	AN 1/30

Examples:

REF*VN*ENTERPRISE

FOB FOB Related Instructions

Optional, 0-1 Occurrences

Used when freight payment method is not as agreed between MBUSI and
shipper

Element Position	Element Number	Description Content	Option	Type Size
FOB01	146	Shipment Method of Payment	M	ID 2/2
		CC - Collect		
		PP - Prepaid		

Example:

FOB*PP

N1   Name (Supplier)

Mandatory, One Occurrence

Identifies the supplier sending the ASN

Element Position	Element Number	Description Content	Option	Type Size
N101	98	Entity Identifier Code SU - Supplier (fixed)	M	ID 2/2
N102	93	Name *(Supplier Name)*	M	AN 1/35
N103	66	Identification Code Qualifier 92 - Assigned by Buyer or Buyer's Agent	M	ID 2/2
N104	67	Identification Code *(MBUSI-assigned Vendor Code)*	M	AN 6/10

Example:

N1*SU*CHARLSTON STAMPING*92*100101

END OF SHIPMENT LOOP

HL   Hierarchical Level (Tare Loop)

Mandatory

One item loop for each unit load or modular container in the shipment.

Identifies the Loop as a unit load (Tare Loop).

Element Position	Element Number	Description Content	Option	Type Size
HL01	628	Hierarchical ID Number *(Sequence Number)*	M	AN 1/12
HL02	734	Hierarchical Parent ID Number 1 - Shipment Level	M	AN 1/12
HL03	735	Hierarchical Level Code T - Tare	M	ID 1/2

Example:

HL*45*1*T

REF   Reference Number (Returnable Container Serial Number)

Optional, 0-1 Occurrences

Required if Tare is a Modular Container

Element Position	Element Number	Description Content	Option	Type Size
REF01	128	Reference Number Qualifier RS - Returnable Container Serial Number	M	ID 2/2
REF02	127	Reference Number *(Returnable Container Serial Number)*	M	AN 1/30

Examples:

REF*RS*123442A

Note: MBUSI does not track returnable containers at this time; this segment included only for ANSI compliance. Its use is not encouraged.

HL   Hierarchical Level (Item Loop)

Mandatory

One Item Loop for Each RAN Packed on the Tare, Regardless of Number of Packs in RAN

Identifies the tare the item is shipped On

Element Position	Element Number	Description Content	Option	Type Size
HL01	628	Hierarchical ID Number *(Sequence Number)*	M	AN 1/12
HL02	734	Hierarchical Parent ID Number *(Tare Level ID if Shipped on Tare, 1 if not)*	M	AN 1/12
HL03	735	Hierarchical Level Code I - Item Level	M	ID 1/2

Example:

HL*50*45*I

LIN   Line Identification

Mandatory, One Occurrence

Identifies the MBUSI Part Number and Release Authorization Number (RAN)
of the Item Shipped

Element Position	Element Number	Description Content	Option	Type Size
LIN02	235	Product/Service ID Qualifier BP - Buyer Part Number	M	ID 2/2
LIN03	234	Product/Service ID *(MBUSI Part Number)*	M	AN 1/24
LIN04	235	Product/Service ID Qualifier ON - Customer Order Number	M	ID 2/2
LIN05	234	Product/Service ID *(Receipt Authorization Number (RAN))*	M	AN 10/10
LIN06	235	Product/Service ID Qualifier EC – Engineering Change Level *(Not used for Service Parts)*	M	ID 2/2
LIN07	234	Engineering Change Level *(MBUSI Part ZGS Level)* *(Not used for Service Parts)*	M	AN 3/3

EXAMPLE:

For **production orders:**

LIN**BP*A2518980196*ON*C2E3000046*EC*001

For **Service Parts orders**:

LIN**BP*A2518980196*ON*4500000027

Note: Only suppliers who are certified for EDI for Service Parts should
support or send this segment configuration. It is used only for advanced
shipping notices for Service Parts.

You should send the part number just like you received it in the order.
This means the format of **parts with color codes will differ** between
production and Service parts; for example, the part number
A2518980196   99F7 (production) would be A251898019699F7(Service).

SN1   Item Detail (Shipment)

Mandatory, One Occurrence

Identifies the Quantity of the Item Shipped by RAN from LIN.

Element Position	Element Number	Description Content	Option	Type Size
SN101	350	Assigned Identification *(A unique number for the shipment line)*	M	AN 1/6
SN102	382	Number of Units Shipped	M	R 1/13
SN103	355	Unit or Basis for Measurement Code *(Same as on 830 - see note below)*	M	ID 2/2

Examples:

SN1*42*550*EA
SN1*42*25.5*GL

End of Item Loop

End of Tare Loop

Note: You must send the same Unit of Measure in SN103 as MBUSI sent you in the corresponding RAN, or the ASN will be rejected. In particular, "PC" and "EA" are not interchangeable.

CTT   Transaction Totals

Total Number of Line Items

Element Position	Element Number	Description Content	Option	Type Size
CTT01	354	Number of Line Items	M	N0 1/6

Example:

CTT*245

SE   Transaction Set Trailer

Element Position	Element Number	Description Content	Option	Type Size
SE01	96	Number of Included Segments	M	N0 1/10
SE02	329	Transaction Set Control Number	M	AN 4/9

Example:

SE*45*1122112

Example 1 of Ship Notice / Manifest:

For this example, we assume a trailer shipment (trailer NSZ 552234) with one tare loaded with the same part numbers, and a quantity of liquid. It is to satisfy 2 different Release Authorizations, with two different part numbers:

NSZ 552234

RAN #
C2E3000076
953.4 gal
A164 234 23 45

RAN #
C2E3000048
A163 023 01 33
Qty 220

RAN #
C2E3000046
A163 023 0133
Qty 220

123442B
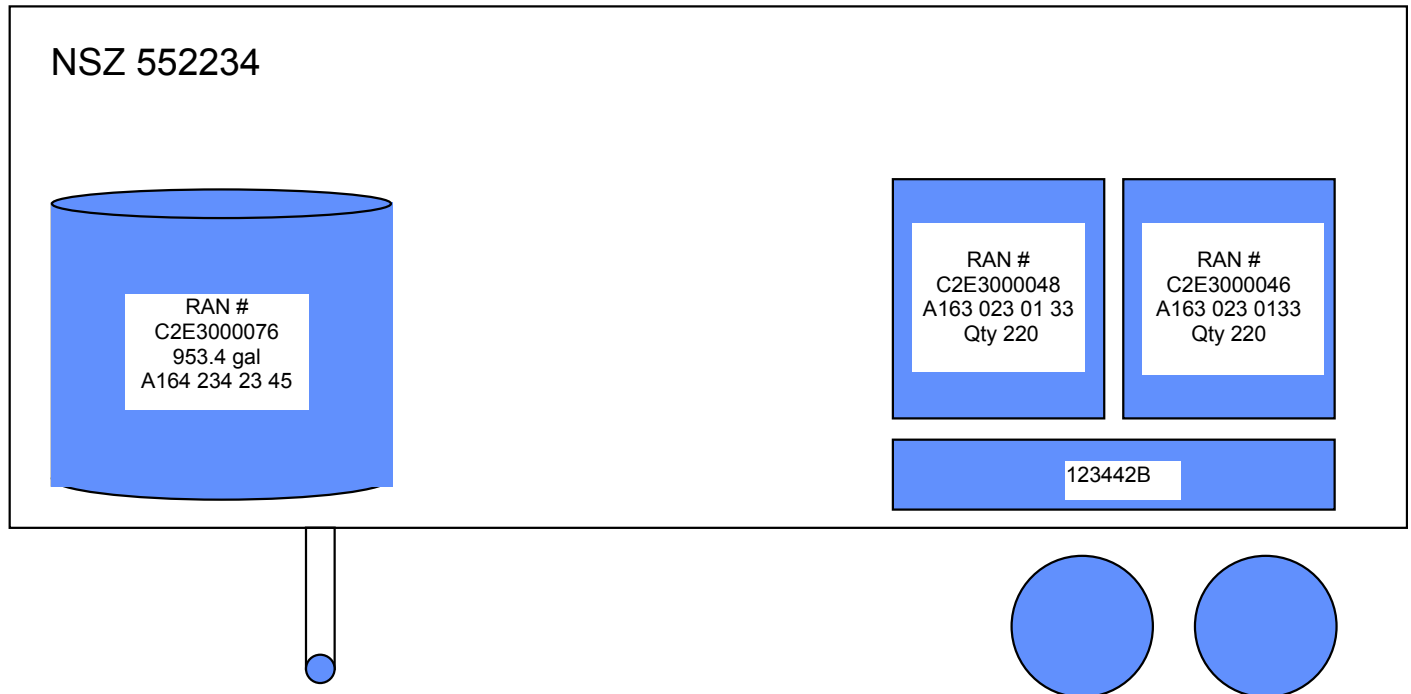
Example of EDI Ship Notice / Manifest:

The following is an example of an EDI Ship Notice/Manifest. Comments are in italics. For readability, segments are delimited with new lines, and elements with asterisks. MBUSI will accept any segment and element delimiter.

```
ISA*00*          *00*          *ZZ*MBUS   MBUS001 *ZZ*EDIS   EDIS50
*960307*1602*U*00200*000000001*0*T*:
GS*PO*MBUS001*EDIS50*960307*1602*1*X*003050
ST*856*000056789
BSN*00*1000123*960420*1456
DTM*011*960420*1434
HL*1*S
MEA**N*2545*KG
TD1*PCS*100
TD5*2*CN*R
TD3*TF*NSZ*552234
REF*BM*1141231
REF*PK*55443333
FOB*PP                          This shipment was prepaid, normal is collect
N1*SU*CHARLSTON STAMPING*92*100101
HL*2*1*T
REF*RS*123442B
HL*3*2*I
LIN**BP*A1630230133*ON*C2E3000046*EC*001
SN1*3*220*EA
HL*4*2*I
LIN**BP*A1630230133*ON*C2E3000048*EC*003
SN1*4*220*EA
HL*5*1*I                        Parts can be shipped without a tare.  The parent HL
                                segment is the shipment
LIN**BP*A1634234234*ON*C2E3000076*EC*001
SN1*5*953.4*GL
CTT*5
SE*33*000056789
GE*1*1
IEA*1*000000001
```

Handling Hierarchies of Shipped Material

A shipment may be composed of a number of pallets, each containing a number of boxes. The simplest case is one RAN to one box. If there are multiple boxes for one RAN, you must assign a serial number to each box so that the combination of RAN and serial number is a unique identification for that box. In either case, you use the hierarchical capability of the ASN (using the HL segment) to show the logical structure of the shipment.

```
                        ┌──────────┐
                        │ SHIPMENT │
                        └────┬─────┘
        ┌────────────────────┼───────────────────┐
   ┌────┴───┐          ┌────┴───┐          ┌────┴───┐      ┌───────┐
   │ PALLET │          │ PALLET │          │ PALLET │      │  RAN  │
   └───┬────┘          └───┬────┘          └───┬────┘      └───────┘
    ┌──┴──┐            ┌──┴──┐               │
 ┌──┴─┐ ┌─┴──┐      ┌─┴─┐ ┌─┴─┐           ┌─┴─┐
 │RAN │ │RAN │      │RAN│ │RAN│           │RAN│
 └─┬──┘ └────┘      └───┘ └───┘           └───┘
 ┌─┴──┐
 │    │
┌┴───┐┌┴───┐
│RAN-││RAN-│
│S/N ││S/N │
└────┘└────┘
```
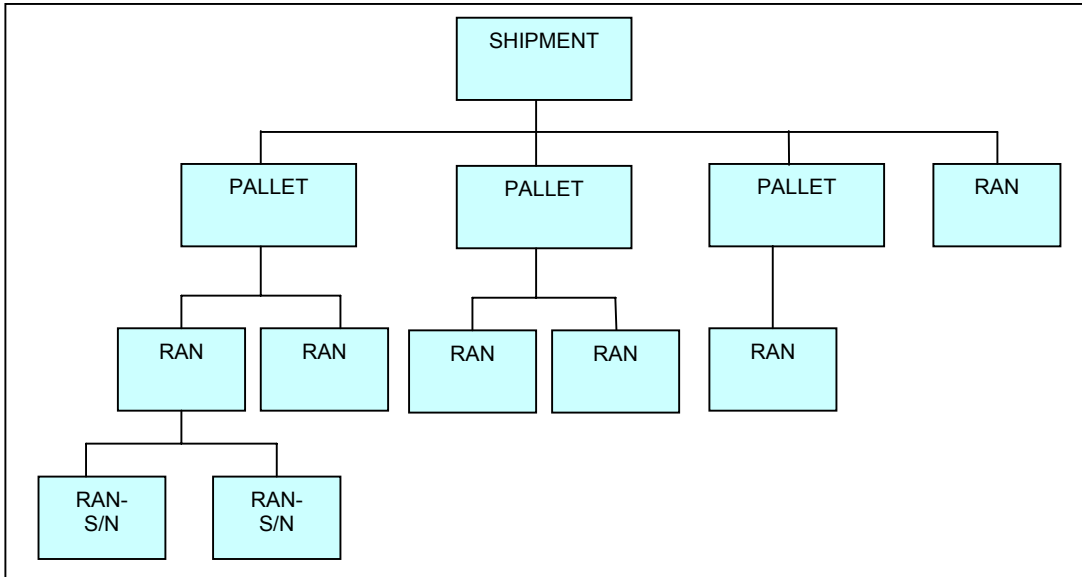
If your shipment contains RANs consisting of multiple boxes, there is no need to include the serial numbers of the boxes in the ASN. This information is to be embedded in the barcode on the label for each box. You must also print a Master Label (for pallets of all one part number) or Mixed Load Label (for pallets of multiple part numbers) for each pallet. Be careful to coordinate the information (Pallet #, etc.) between the ASN and the labels. Refer also to the document Parts Identification Label – Barcode Standards.

Functional Acknowledgment(997)

(997) Functional Acknowledgment

MBUSI will require Functional Acknowledgments for all transactions. It is the intent to use the lack of Functional Acknowledgments within expected maximum times of transmission to cause exception handling routines to be invoked.

MBUSI will send Functional Acknowledgments in response to all incoming messages (except incoming Functional Acknowledgments), and will expect trading partners to institute exception proceedings if they do not receive them within agreed times.

The Functional Acknowledgment is sent using the AIAG subset of Transaction Set 997 of the ANSI X12 standard, version 003050. Functional Acknowledgments are issued upon receipt of the transmission. The 997 acknowledges the receipt NOT the content of the message.

The segments and elements used from the 997 Transaction set are described below by segment. Each segment is described as Mandatory, and will always be sent by MBUSI, or optional, and will only be sent as needed. The minimum and maximum number of occurrences within the transaction is listed. If the segment is part of a loop, there is a loop ID shown.

For each segment, the elements of the segment are described. The element position shows the relative position in the segment (the segment identifier is not shown or counted). The element number is the ANSI X12 element references. The description shows the description of the element, and under the description are the possible values of the element. An M in the option shows that the element will always be included, an O that it will be included only as needed. The type and size are of the format Type Min/Max, where Type is AN for alphanumeric, N for integer, R for Real, and ID for a defined code. Min and Max are the minimum and maximum number of characters in the field. One or more examples are shown for each segment.

For the inexperienced user, Appendix A has a full description of the syntax rules of ANSI X12.

ST   Transactions Set Header

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

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
ST01	143	Transaction Set Identified Code 997 - Functional Acknowledgment	M	ID 3/3
ST02	329	Transaction Set Control Number *(000000001-999999999)*	M	AN 9/9

Example:

ST*997*000000001

AK1 *Functional Group Response Header*

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
AK101	479	Functional Identifier Code *(Specific value of the GS01 of the functional group being acknowledged)*	M	ID 2/2
AK102	28	Group Control Number *(Specific value of the GS06 of the functional group being acknowledged)*	M	N0 1/9

Example:

AK1*PO*1

LOOP ID-AK2   Transaction Set

AK2 *Transaction Set Response Header*

Optional, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
AK201	143	Transaction Set Identifier Code *(Any valid code)*	M	ID 3/3
AK202	329	Transaction Set Control Number *(Contains the value in the ST02 in the transaction set being acknowledged)*	M	AN 4/9

Example:

AK2*850*1234

LOOP ID-AK2/AK3   Data Segment

AK3   Data Segment Note

Optional, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
AK301	721	Segment ID Code *(Any valid code)*	M	ID 2/3
AK302	719	Segment Position in Transaction Set	M	N0 1/6
AK303	447	Loop Identifier Code	O	AN 1/4
AK304	720	Segment Syntax Error Code *(Any valid code)*	O	ID 1/3

Example:

AK3*DTM*4

AK4   Data Element Note

Optional, 0-99 Occurrences

Element Position	Element Number	Description Content	Option	Type Size
AK401	722	Element Position in Segment *(Element position)*	M	ID 1/1
AK402	725	Data Element Reference Number	O	N0 1/4
AK403	723	Data Element Syntax Error Code	M	ID 1/3
AK404	724	Copy of Bad Data Element *(Any valid code)*	O	AN 1/99

Example:

AK4*1*374*4*92

END OF DATA SEGMENT LOOP

AK5   Transaction Set Response Trailer

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
AK501	717	Transaction Set Acknowledgement Code *(Any valid code)*	M	ID 1/1
AK502	718	Transaction Set Syntax Error Code *(Any valid code)*	O	ID 1/3
AK503	718	Transaction Set Syntax Error Code *(Any valid code)*	O	ID 1/3
AK504	718	Transaction Set Syntax Error Code *(Any valid code)*	O	ID 1/3
AK505	718	Transaction Set Syntax Error Code *(Any valid code)*	O	ID 1/3
AK506	718	Transaction Set Syntax Error Code *(Any valid code)*	O	ID 1/3

Examples:

AK5*R*5

END OF TRANSACTION SET LOOP

AK9   Functional group Response Trailer

Mandatory, 1 Occurrence

Element Position	Element Number	Description Content	Option	Type Size
AK901	715	Functional group Acknowledge Code *(Any valid code)*	M	ID 1/1
AK902	97	Number of Transaction Sets Included *(Number of transaction sets(value of GE01 in the received functional group))*	M	N0 1/6
AK903	123	Number of Received Transaction Sets *(Receiver's count)*	M	N0 1/6
AK904	2	Number of Accepted Transaction Sets	M	N0 1/6
AK905	716	Functional Group Syntax Error Code *(Any valid code)*	O	ID 1/3
AK906	716	Functional Group Syntax Error Code *(Any valid code)*	O	ID 1/3
AK907	716	Functional Group Syntax Error Code *(Any valid code)*	O	ID 1/3
AK908	716	Functional Group Syntax Error Code *(Any valid code)*	O	ID 1/3
AK909	716	Functional Group Syntax Error Code *(Any valid code)*	O	ID 1/3

Examples:

AK9*E*1*1*0

SE   Transaction Set Trailer

Element Position	Element Number	Description Content	Option	Type Size
SE01	96	Number of Included Segments	M	N0 1/10
SE02	329	Transaction Set Control Number	M	AN 4/9

Example:

SE*45*000001234

Example of EDI Functional Acknowledgment

The following is an example of an EDI Functional Acknowledgment. For
readability, segments are delimited with new lines, and elements with
asterisks.

```
ISA*00*          *00*          *ZZ*MBUS   MBUS001 *ZZ*EDIS   EDIS50
*960307*1602*U*00200*000000001*0*T*:
GS*FA*MBUS001*EDIS50*960307*1602*1*X*003050
ST*997*000000001
AK1*PO*1
AK2*850*1234
AK3*DTM*4
AK4*1*374*4*92
AK5*R*5
AK9*E*1*1*0
SE*8*000000001
GE*1*1
IEA*1*000000001
```

Appendices

Appendix A: DATA MAPPING

The purpose of this section is to give trading partners the understanding
of MBUSI usage of the American National Standards Institute (ANSI)
Accredited Standards Committee (ASC) X12 EDI conventions. A transmission
has three components as shown in the figure below. Each component
represents an envelope. The outer most envelope, called the **ISA** has
information that indicates the enterprise from which the transmission
came from and information where the data is being routed. The second
level envelope, called the **GS** represents the department that the
transmissions came from and the department that the data is going. The
third level envelope, called the **ST**, represents the transaction set
(Material Release, Purchase Orders, etc.).

```
                Segment Hierarchy
    ISA
                        Transmission Envelope
      GS
       ST                   Functional
    Transaction Set 1       Group 1
       SE
       ST                   Functional
    Transaction Set 2       Group 1
       SE
      GE


    IEA
```
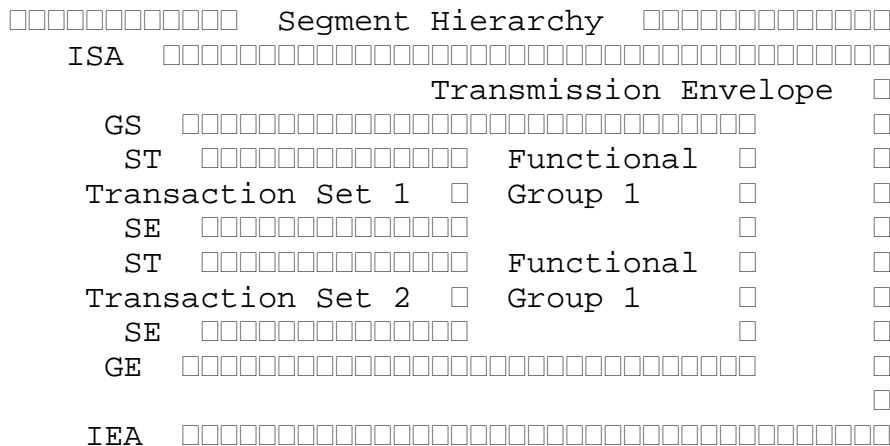
The ISA, GS, and ST are segments. A segment is made up of a segment
identifier and data elements. The ANSI ASC standard has rules regarding
the different types of data elements and the use of segments in each
transaction.

Following is an abstract picture of the relationship between elements and
segments in an EDI transmission.

```
 Segment ID*Element * Element *Element
 Segment ID*Element*Element *Element
 Segment ID*Element *   Element *   Element
```
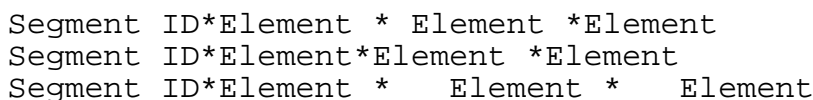
Segments are made up of elements. In computer terms elements are "fields"
and segments are "records". What makes an elements different from a
traditional "field", is that elements can vary in size with a minimum and
maximum ranges depending on how it is defined in the element dictionary.

There are 3 dictionaries found in the ANSI standards:

                    1. The Transaction set dictionary
                    2. The Segment dictionary
                    3. The Data Element dictionary

The segments in the segment dictionary are the building blocks for a set
of tables called the Transaction Set Tables, which make up the
traditional Purchase Order, Invoice transactions, as well as host of
other transactions.

Below in one of the segments to be found in the ANSI standards. The DTM
segment is for Date/Time information. There are hundreds of different
segments in the ANSI standards.

DTM   <u>**Date/Time Reference**</u>
Syntax Notes: 1. At least one DTM02 or DTM03
                     must be present

```
      DTM01 374   DTM02 373   DTM03 337   DTM04 623
                                                     N
DTM* Date/Time *   Date    *   Time    *   Time    /
     Qualifier                            Code    L

     M  ID 3/3   C DT  6/6   C TM  4/4   O ID  2/2
```

                    Figure 1.


```
      DTM01 374   DTM02 373<      8
                                     7
DTM* Date/Time *   Date              N/L<  9
     Qualifier ^
                                       6
     M  ID 3/3   C DT  6/6<      5
     ^    ^

  V           4
  1       3
     2
```
                    Figure 2.

Following is a detailed description of each component of a segment, the
numbers correspond to figure 2, which show two of the four data elements
that comprise the DTM segment.

1. Data Segment Identifier: The two or three characters assigned to
    identify the segment.

2. Data Element Requirements Designator:
   There are three designator.

   1. M = Mandatory – It must be supplied.
   2. C = Conditional – The element is present based on a
      condition that is explained in the syntax note(s).
   3. O = Optional – the element may or may
      not be used.

3. Data element type: There are seven types of data elements

   1. AN – Alphanumeric – includes digits, the space, and
         special characters.
   2. ID – A specific code. Maintained by the ANSI standards
         committee.
   3. Nn – Numeric data with an optional leading negative sign,
         no decimals. An N2 indicates an implied decimal of
         two positions(i.e. 101 = 1.10).
   4. DT – A date in the format of YYMMDD.
   5. TM – Time in HHMM (military) format.
   6. R – Real number – A string of numbers with an optional
         negative sign and decimal. The size does not include
         the decimal or the sign. A decimal should **not** appear
         if it in the last position, (i.e. "1234.").
   7. B – Binary – used to send Binary files.

4. The Data Element Separator: the characters that separate each
   element in an EDI transmission.

5. Data element length: Minimum and Maximum length. For this
   element the minimum and maximum length are both the same.

6. Data Element Title: The name of the data element.

7. Data Element Reference Designator: Identifies the position
   the element you are referring to is in the segment.

8. Data Dictionary Reference Number: The ANSI standard Data
   Element Dictionary reference number. Looking at the ANSI ASC
   standard Data Element Dictionary for 374 shows the following
   information.

   374 Date/Time Qualifier
       Type = ID Min = 3 Max = 3

   CODE   DEFINITION
    001   Cancel After
    002   Delivery Requested
    xxx... – Additional codes and definition

The meaning of a date or a time in the segment can be found in the Data
Element Dictionary. Because ANSI ASC X12 is accommodating all industries

the number of codes for a given element can be extensive. What MBUSI is
doing by this document is to take a subset of all the possible codes.
this will facilitate the implementation of EDI standards.

9. Data Segment Terminator: This is a computer readable character that
designates the end of a segment. It is identified in the ISA header.
With the structure of a segment being delineated, a more precise
definition of a transaction set can be presented. A transaction set is
composed of a specific group and order of data segments.

The Auto Industry Action Group (AIAG) has reformatted the three
dictionaries within the context of a single transaction set..

Interchange Control Structure

This ISA segment marks the beginning of each transmission and provides sender/receiver identification. Each GS marks the beginning of a functional group. There may be one or more than one functional groups within each transmission. The ST segment marks the beginning of each transaction set (Electronic Document). ***See Appendix B for examples.***

The Interchange control structure is common to all transaction sets.

Transaction Set: Interchange Control Structure

Version: 0305

Segment: ISA **- Interchange Control Header**

Level: Envelope

Usage: Mandatory

Purpose:
To start and identify an interchange of one or more functional groups and interchange related control segments. ***See Appendix B for examples.***

Comments:
1. The interchange control number value in this header must match the value in the same data element in the corresponding interchange control trailer.

2. The first byte after the ISA defines the actual value of the data element separator and is graphically displayed as an asterisk "*" in other ANSI X12 data segment documentation. The byte after the data terminator and is displayed as N\L (New Line)

Data Element Summary

Ref. Des.	Data Element	Name	Attributes
ISA01	I01	Authorization Information Qual.	M ID 2/2

 Qualifiers: 00-No Author, 01-UCS comm ID

ISA02	I02	Authorization Information Qual.	M AN 10/10

This is to be filled with spaces if
qualifier ISA01 is "00"

```
                              Information
ISA03               I03    Security   M                    ID 2/2
```

 Qualifiers: 00-No Security Info, 01-Password


```
ISA04               I04    Security   M                    AN 10/10
                           Information
```

 This is to be filled with spaces if
qualifier ISA04 is "00"


```
ISA05               I05    Interchange ID         M   ID 2/2
                           Qualifier
```

 Qualifiers: 01-Duns Number, 08-Phone Number
            ZZ-Mutually defined


```
ISA06               I06    Interchange            M   ID 15/15
                           Sender ID
```

 Definition: Sender identification number.
            See Appendix B.


```
ISA07               I05    Interchange ID         M   ID 2/2
                           Qualifier
```

 Qualifiers: 01-Duns Number, 12-Phone Number
            ZZ-Mutually defined


```
ISA08               I07    Interchange            M   ID 15/15
                           Receiver ID
```

 Definition: Receiver identication number.
            See Appendix B.


```
ISA09               I08    Interchange Date       M   DT 6/6
```

The date is in year month day (YYDDMM) format
- the date the ISA was created.

```
ISA10                   I09     Interchange Time             M   TM 4/4
```

The local time the ISA was create it is in
HHMM format the valid ranges are 0000 to
2359.

```
ISA11                   I10     Interchange                  M   ID 1/1
                                Standard ID
```

 Qualifier: U-U.S. EDI Community

```
ISA12                   I11     Interchange                  M   ID 5/5
                                Version ID
```

 Definition: 00305

```
ISA13                   I12     Interchange                  M   NO 9/9
                                Control Number
```

Each control number should match the control number in the IEA. It will
be incremented by one with each new transmission to a Partner. For
example the second transmission to a Partner should have control number
"000000002" the next transmission to that partner will have Interchange
Control Number "000000003"

```
ISA14                   I13     Acknowledgement              M   ID 1/1
                                Requested
```

 Qualifier: 0-No ACK Requested

MBUSI will not use TA1 acknowledgements, this is not to be confused with
the Functional Acknowledgement.

```
ISA15                   I14     Test Indicator               M   ID 1/1
```


 Definition: T-Test, P-Production

The test indication applies to the entire transmission. Used to indicate
a test or production transaction.

```
ISA16                   I15     Sub Element                  M   AN 1/1
                                Separator
```

Transaction Set: Interchange Control Structure

Version: 0305

Segment: IEA **- Interchange Control Trailer**

Level: Envelope

Usage: Mandatory

Purpose:
To define the end of an interchange of one or more functional groups and interchange related control segments.

Comments:
1. The interchange control number value in the same data element in the corresponding interchange control header.

2. The value of the data element separator represented by "*" and the data segment terminator represented by N/L are set by the interchange control header ISA for this interchange.

            Data Element Summary

Ref. Des.	Data Element	Name	Attributes
IEA01	I16	Number of Included Groups	M NO 1/5

The number of GS/GE Groups that are included in the transmission.

IEA02	I12	Interchange Control Number	M NO 9/9

Each control number should match the control number in the ISA.   It should be incremented by one with each new transmission to a partner.

Segment: GS **- Group Control Structure**

                         Level: Group

Usage: Mandatory

Purpose: To indicate the beginning of a functional group and to provide control information. *See Appendix B for examples.*

          Data Element Summary

Data Element	Ref. Num.	Description	Attributes
GS01	479	Functional Code	M ID 2/2

 Definition: IN-Invoice, PO-Purchase Order
           FA-Functional Acknowledgment

| GS02 | 142 | Application Sender Code | M AN 2/12 |

 Definition: A unique code to identify the
 the Sender. It could be a Duns Number,
 a phone number or mutually defined.
 Often the same as ISA06.

| GS03 | 124 | Application Receiver's Code | M AN 2/12 |

 Definition: A unique code to identify the
 the Receiver. It could be a Duns Number,
 a phone number or mutually defined.
 Often the same as ISA08. See Appendix B.

| GS04 | 29 | Group Date | M DT 6/6 |

The date is in year month day (YYDDMM) format
- the date the ISA was created.

| GS05 | 30 | Group Time | M TM 4/4 |

The local time the ISA was create it is in
HHMM format the valid ranges are 0000 to
2359.

| GS06 | 28 | Group Control # | M NO 1/9 |

```
The group control number that must be unique
within each trading partner.

GS07                    455     Responsible Agency       M   ID 1/2
                                Code

 Qualifier: X-X12 Committee


GS08                    480     Version Release          M   ID 1/12
                                Industry ID Code

 Qualifier: 003050
```

Segment: GE **- Group Control**

Level: Group

Usage: Mandatory

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

Comments:
1. The control number is the same as that used in the corresponding
header.

              Data Element Summary

Data Element	Ref. Num.	Description	Attributes
GE01	97	Number of Included Sets	M NO 1/6
GE02	28	Group Control # It must match the Group Control Number in the GS06 Segment.	M NO 1/9

Segment: ST **- Transaction Set Header**

Level: Header

Usage: Mandatory

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

Comments:
1. The transaction set identifier (ST01) is intended for use by the translation routines of the interchange partners to select the appropriate transaction set definition. (e.g., 830 selects the Materialrelease transaction).

Data Element Summary

Data Element	Ref. Num.	Description	Attributes
ST01	143	Transaction Set Type	M ID 3/3

 Definition: 810-Invoice, 850-Purchase Order
             997-Functional Acknowledgement

| ST02 | 329 | Control Number Assigned By Sender | M AN 4/9 |

 Definition: Control Number Sequential by
              Trading Partner

Segment: SE **- Transaction Set Trailer**

Level: Summary

Usage: Mandatory

Purpose:
To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and the ending (SE) segments).

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

              Data Element Summary

Data Element	Ref. Num.	Description	Attributes
SE01	96	Number of Included Segments	M NO 1/6
SE02	329	Transaction Set Control Number	M NO 4/9

  Definition: Must be the same as ST02.

APPENDIX B: MBUSI ISA/GS Information and Examples

<u>Trading Partner Specific Information</u>

```
Subelement Separator:               Not used; ">"

Element Separator:                  HEX "A1" - "~"

Segment Terminator:                 HEX "15" - Newline

      ID Qualifier:                 "ZZ"

      ID (Production):              "MBUS   MBUS002 "

Your ID Qualifier*:                 "__"

Your ID*:                           "_____"

 .Application Code(Production):   "MBUS002"
 .Application Code(Service Parts):"MBUS002S"

Your Application Code*:             "_____"

   .  ..........                    Advantis

Your Value Added Network**:         _____
```

```
   *      These codes can be assigned by your orginization.
          Please inform MBUSI of their values if they
          change from the specified values.

   **     Your value added network must be capable of
          exchanging EDI data with Advantis (formally called |
          the IBM Information Network)
```

```
Further explanation and examples follow.
```

EDI ISA/GS Segment Examples for Production Parts

The following are the specifications identified by MBUSI's SAP EDI team
for the successful sending and receiving of 830 and 856 transactions with
MBUSI's SAP system.
Mercedes OEM uses as its VAN Advantis
Mercedes EDI contact : Jill Natusch 877-280-0432

830 ISA/GS defined as follows:

ISA*00*   *00*   *ZZ*MBUS   MBUS002 ***ZZ*AAABBB***
*030430*1304*U*00200*000007156*0*P*>…
GS*PS*MBUS002***SUPPLIER***030430*1304*7156*X*003050…

Where:

- **ZZ AAABBB –** is your Interchange qualifier and ID
- **SUPPLIER -** is your supplier number as defined by MBUSI

856 ISA/GS defined as follows:

ISA*00*   *00*   ***ZZ*AAABBB***   *ZZ*MBUS   MBUS003
*030430*2203*U*00200*000006887*0*P*~…
GS*SH***SUPPLIER***MBUS003*030430*22034100*6887*X*003050…
ST*856*68870001…

Where:

- **ZZ AAABBB –** is your Interchange qualifier and ID
- **SUPPLIER -** is your supplier number as defined by MBUSI

EDI ISA/GS Segment Examples for Service Parts

The following are the specifications identified by MBUSI's SAP EDI team
for the successful sending and receiving of 830 and 856 transactions for
Service Parts with MBUSI's SAP system.
Mercedes OEM uses as its VAN Advantis
Mercedes EDI contact : Jill Natusch 877-280-0432

830 ISA/GS defined as follows:

ISA*00*   *00*   *ZZ*MBUS   MBUS002 *ZZ*AAABBB
*030430*1304*U*00200*000007156*0*P*>…
GS*PS*MBUS002S*SUPPLIER*030430*1304*7156*X*003050…

Where:

- **ZZ AAABBB –** is your Interchange qualifier and ID
- **SUPPLIER -** is your supplier number as defined by MBUSI

856 ISA/GS defined as follows:

ISA*00*   *00*   *ZZ*AAABBB   *ZZ*MBUS   MBUS003
*030430*2203*U*00200*000006887*0*P*~…
GS*SH*SUPPLIER*MBUS003S*030430*22034100*6887*X*003050…
ST*856*68870001…

Where:

- **ZZ AAABBB –** is your Interchange qualifier and ID
- **SUPPLIER -** is your supplier number as defined by MBUSI

APPENDIX C: EDI Publications

There are several organizations that provide information regarding EDI.
Since 1986, by approval of the American National Standards Institute
(ANSI), the American Standards Committee X12 Secretariat called "The Data
Interchange Standards Association" (DISA) has published a series of
releases. These documents (called "Release 2", "Release 3", etc.)
represent X12-approved revisions of those previously published American
National Standards. As such, releases are not American National
Standards, since their contents have not been subjected to the rigors of
the public review process required by ANSI for such considerations. In
the form provided in releases, all of the standards are considered to be
Draft Standards for Trial Use (DSTU). However a de-facto standard has
evolved to use the current or one release back of the DISA standard.

ASC X12's purpose in publishing these releases is to put current ASC X12
approved draft standards into the hands of users in a more frequent
basis. The ANSI standards process is lengthy. The Data Interchange
Standards Association (DISA) monitors the progress and oversees the
publication of the draft standards.

DISA can be contacted as the following address:

Data Interchange Standards Association (DISA)
Suite 355
1800 Diagonal Road
Alexandria, VA 22314-2852

Phone (703) 548-7005

The Auto Industry Action Group takes the standards established by DISA
and creates a subset of the EDI standard for the auto industry.   When
ever possible MBUSI will stay within the EDI conventions established by
the AIAG. This implementation guide is base on version 3050AIAG.

The AIAG can be contacted at the following address.

Automotive Industry Action Group
P.O. Box 98
Royal Oak, MI 48068-0098

Phone: (810) 358-3003
Fax : (810) 358-3253

APPENDIX D: RAN Format

The following table shows how the RAN is formed.

RAN Type	Ship-to Point	Month Code	Year	Sequential number
(1 char)	(1 digit)	(1 char)	(1 digit)	(6 digits)
'C': Calculated 'M': Manual 'E': Emergency 'T': Trial 'S': Sample 'P': PPS	1: Plant 1 2: Plant 2	A: January B: February C: March D: April E: May F: June G: July H: August J: September K: October L: November M: December	3: 2003 4: 2004 5: 2005 6: 2006 7: 2007 8: 2008 9: 2009 0: 2010 1: 2011 2: 2012 etc.	Starting with 000001 each time the month code changes per RAN type
Notes				
Process dependent	Should match other information in the header.	'I' has been eliminated. Indicates when RAN was calculated.	Archiving required within each decade (will repeat in 10 years)	e.g., *March 2003:* C2C3000001 M2C3000001

RANs are never reused (except if one should happen to be repeated after 10 years). They can be used as a unique key to identify an order (much like a Purchase Order Number).

When storing a RAN into a database, the RAN should be the only key. It is unique. It should not be concatenated with other fields (such as due date, part number, shipping location, etc.) as that is likely to cause duplication of demand.

Since a RAN# is a unique identifier of an order, it should be the only thing you use to identify the order. If, instead, you use the part number, shipping destination, storage location, due date, or combinations thereof, you will usually be causing overwriting of orders, loss of information, and general inventory inaccuracy.

END OF DOCUMENT