

830 Planning Schedule with Release Capability

PREFACE

This is the AIAG's recommended usage for the 830 - Planning Schedule with Release Capability for ASC X12 version release 004010. Prior to starting any activity to implement EDI, the trading partner should be contacted.

As part of the publication process for AIAG EDI implementation Guidelines for release 004010, the AIAG has developed supplemental documents, the *Supply Chain Recommended Business Practices for EDI Implementation*. They contain the AIAG recommended usage for companies implementing EDI in a **PUSH** (requirement-based) or **PULL** (consumption-based) manufacturing environment. These should be used for first time implementors or those making significant changes to their existing implementations.

USAGE CONVENTIONS

Note: This section is a compilation of previously established EDI usage conventions. If the *Supply Chain Recommended Business Practices (RBP) for EDI Implementation* is being used, disregard this section.

This transaction set (commonly called the Material Release) is used in a variety of ways by various industries and is very flexible by design. Therefore, this preface is included to explain the usage of this transaction set in the automotive industry.

The basic assumption is that there is a purchase order in place which describes the contractual arrangement, for a buyer's part. The purchase order type normally used is a blanket purchase order. The part is assigned a buyer's part number.

If the product description, size or any other characteristic of the part changes during the life of the contractual arrangement either a new part number is assigned or an engineering change number is assigned to the modified part description. Both the Buyer's part number and the engineering change number are included in the "LIN" segment in the transaction set.

EXAMPLE:

LIN**BP*1369481*EC*12N/L

By maintaining the integrity of the buyer's part number, the engineering change number and the associated part description, the amount of data transmitted in each release is minimized.

The minimum data included is the purchase order number, the buyer's part number and a series of forecast schedule (FST) segments describing the buyer's forecasts or schedule requirements for the part. Quantities shown in the FST segment may be either actual discrete or cumulative year to date quantities. The dates shown may be either shipment dates or delivery dates.

The above optional conditions are described in the Beginning Segment for the Planning Schedule Transaction Set (BFR). Also included in this segment is a release number or a reference number which is a unique identifier for the transaction set being sent from the buyer to the supplier.

The basic assumption in the automotive industry's usage of this transaction set is that the supplier is responsible for interpreting the data included and, in some cases, performing the necessary calculations to determine net shipping requirements to ship or deliver the material as required by the buyer.

The first data element in the BFR segment describes the transaction set purpose. The most common usage in the automotive industry is to use a code "05" which means "replace". Code 05 means the requirements for shipment or delivery shown in this transaction set supersede or replace those requirements shown in the previous

occurrence of the transaction set. The most common usage of the transaction set is to have the buyer's MRP system generate the release weekly.

Note: Some OEMs use code "00" original for the first release in a model year then code "05" for all other releases.

The supplier's system must perform several calculations upon receipt of each release in order to correctly interface with his production and/or shipping system as follows:

- 1 If the requirement quantities included are "actual discrete" quantities, the supplier's system must compare the current release with the previous release and determine "Net Change from Previous Release". This is a requirement because the supplier always has production orders in the system based on the most current release and must modify those each time requirements are modified. The supplier may need to reconcile release quantities by posted shipments and/or intransit quantities.
- 2 If the requirement quantities included in the release are "cumulative" (cum), the calculations required are increased.
 - The basis of the first cum requirement must be reconciled with shipments posted in the supplier's system to determine the net requirement to satisfy the first cum.
 - The net requirements must be determined for each cum requirement in the release.
 - Finally, the net requirements for each schedule date or date range (schedule bucket) must be compared to the previous release to determine the "net change from the previous release".

When these calculations are performed, production orders in the supplier's system must be adjusted for the modified requirements and new production orders must be entered for any new requirements. These calculations must consistently be done in the supplier's system to assure shipments or deliveries are in accordance with the buyer's requirements. The issuer's fundamental rules for the use of the 830 are as follows:

- Only one ATH segment should be used for each type of resource being authorized; that is, one and only one ATH for each different code used in ATH01. (The optional ATH segment may be used to communicate authorization for resources such as labor, material, finished product, etc. These authorizations must be based on financial negotiations previously agreed to by both buyer and seller.)
- For the duration of the contract for which releases are used for a buyer's part, the conditions described in the BFR segment should be consistent, i.e.,
 - Either reference number - BFR02 or Release Number - BFR03 should be used, but not both. They are interchangeable and uniquely identify the transaction set.
 - The Forecast Type Qualifier - BFR04 should never change during the life of the contract.
 - The Forecast Quantity Qualifier - BFR05 should never change during the life of the contract.
 - The Forecast Type Qualifier - BFR04 should never change during the life of the contract.
 - The pattern for Forecast Schedule (FST) segments must be agreed upon prior to the first release and must remain consistent throughout the contract life.

An example of a consistent pattern is 15 weekly requirements beginning with the current week.

830 Planning Schedule with Release Capability

FUNCTIONAL GROUP: PS

This Draft Standard for Trial Use contains the format and establishes the data contents of the Planning Schedule with Release Capability Transaction Set (830) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to provide for customary and established business practice relative to the transfer of forecasting/material release information between organizations.

The planning schedule transaction may be used in various ways or in a combination of ways, such as: (1) a simple forecast; (2) a forecast with the buyer's authorization for the seller to commit to resources, such as labor or material; (3) a forecast that is also used as an order release mechanism, containing such elements as resource authorizations, period-to-date cumulative quantities, and specific ship/delivery patterns for requirements that have been represented in "buckets," such as weekly, monthly, or quarterly. The order release forecast may also contain all data related to purchase orders, as required, because the order release capability eliminates the need for discrete generation of purchase orders.

Table 1

PAGE	POS.NO.	SEG.ID	NAME	REQ.DES.	MAX USE	LOOP REPEAT
7	010	ST	Transaction Set Header	M	1	
8	020	BFR	Beginning Segment for Planning Schedule	M	1	
N/U	025	XPO	Preassigned Purchase Order Numbers	O	>1	
N/U	040	CUR	Currency	O	1	
N/U	050	REF	Reference Identification	O	12	
N/U	060	PER	Administrative Communications Contact	O	3	
N/U	070	TAX	Tax Reference	O	3	
N/U	080	FOB	F.O.B. Related Instructions	O	1	
N/U	090	CTP	Pricing Information	O	25	
N/U	100	SAC	Service, Promotion, Allowance, or Charge Information	O	25	
N/U	110	CSH	Sales Requirements	O	1	
N/U	120	ITD	Terms of Sale/Deferred Terms of Sale	O	2	
N/U	130	DTM	Date/Time Reference	O	10	
N/U	140	PID	Product/Item Description	O	200	
N/U	150	MEA	Measurements	O	40	
N/U	160	PWK	Paperwork	O	25	
N/U	170	PKG	Marking, Packaging, Loading	O	25	
N/U	180	TD1	Carrier Details (Quantity and Weight)	O	2	
N/U	190	TD5	Carrier Details (Routing Sequence/Transit Time)	O	12	
N/U	200	TD3	Carrier Details (Equipment)	O	12	
N/U	210	TD4	Carrier Details (Special Handling, or Hazardous Materials, or Both)	O	5	
N/U	220	MAN	Marks and Numbers	O	10	
LOOP ID - N1						200
10	230	N1	Name	O	1	
N/U	240	N2	Additional Name Information	O	2	
N/U	250	N3	Address Information	O	2	
N/U	260	N4	Geographic Location	O	1	
11	270	REF	Reference Identification	O	12	
12	280	PER	Administrative Communications Contact	O	3	
N/U	290	FOB	F.O.B. Related Instructions	O	1	
LOOP ID - LM						>1
N/U	300	LM	Code Source Information	O	1	

N/U	310	LQ	Industry Code	M	100	
Table 2						
PAGE	POS.NO.	SEG.ID	NAME	REQ.DES.	MAX USE	LOOP REPEAT
LOOP ID - LIN						>1
13	010	LIN	Item Identification	M	1	
15	020	UIT	Unit Detail	O	1	
N/U	021	DTM	Date/Time Reference	O	10	
N/U	030	CUR	Currency	O	1	
N/U	060	PO3	Additional Item Detail	O	25	
N/U	070	CTP	Pricing Information	O	25	
N/U	080	PID	Product/Item Description	O	1000	
N/U	090	MEA	Measurements	O	40	
N/U	100	PWK	Paperwork	O	25	
N/U	110	PKG	Marking, Packaging, Loading	O	25	
N/U	120	PO4	Item Physical Details	O	1	
16	130	PRS	Part Release Status	O	1	
17	140	REF	Reference Identification	O	12	
18	150	PER	Administrative Communications Contact	O	3	
N/U	170	SAC	Service, Promotion, Allowance, or Charge Information	O	25	
N/U	180	ITD	Terms of Sale/Deferred Terms of Sale	O	2	
N/U	190	TAX	Tax Reference	O	3	
N/U	200	FOB	F.O.B. Related Instructions	O	1	
N/U	210	LDT	Lead Time	O	12	
N/U	220	QTY	Quantity	O	>1	
19	230	ATH	Resource Authorization	O	20	
N/U	240	TD1	Carrier Details (Quantity and Weight)	O	1	
N/U	250	TD5	Carrier Details (Routing Sequence/Transit Time)	O	12	
N/U	260	TD3	Carrier Details (Equipment)	O	12	
N/U	270	TD4	Carrier Details (Special Handling, or Hazardous Materials, or Both)	O	5	
N/U	280	MAN	Marks and Numbers	O	10	
N/U	290	DD	Demand Detail	O	10	
LOOP ID - LIN/SLN						100
N/U	300	SLN	Subline Item Detail	O	1	
N/U	310	PID	Product/Item Description	O	1000	
N/U	315	NM1	Individual or Organizational Name	O	10	
LOOP ID - LIN/N1						200
20	320	N1	Name	O	1	
21	330	N2	Additional Name Information	O	2	
22	340	N3	Address Information	O	2	
23	350	N4	Geographic Location	O	1	
24	360	REF	Reference Identification	O	12	
N/U	370	PER	Administrative Communications Contact	O	3	
N/U	380	FOB	F.O.B. Related Instructions	O	1	
LOOP ID - LIN/LM						>1
N/U	390	LM	Code Source Information	O	1	
N/U	400	LQ	Industry Code	M	100	
LOOP ID - LIN/FST						>1
25	410	FST	Forecast Schedule	O	1	
N/U	415	QTY	Quantity	O	>1	
N/U	420	SDQ	Destination Quantity	O	50	

		LOOP ID - LIN/FST/LM			>1
N/U	430	LM	Code Source Information	O	1
N/U	440	LQ	Industry Code	M	100
		LOOP ID - LIN/SDP			260
N/U	450	SDP	Ship/Delivery Pattern	O	1
N/U	460	FST	Forecast Schedule	O	260
		LOOP ID - LIN/SHP			25
27	470	SHP	Shipped/Received Information	O	1
29	480	REF	Reference Identification	O	5

Table 3

PAGE	POS.NO.	SEG.ID	NAME	REQ.DES.	MAX USE	LOOP REPEAT
30	010	CTT	Transaction Totals	O	1	
31	020	SE	Transaction Set Trailer	M	1	

Segment: **ST** Transaction Set Header

Level: Header

Loop: ____

Usage: Mandatory

Required

Max Use: 1

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

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

Notes: The Transaction Set Control Number (ST02) in this header must match the Transaction Set Control Number (SE02) in the Transaction Set Trailer (SE).

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES
ST01	143	Transaction Set Identifier Code	M ID 3/3
		Code uniquely identifying a Transaction Set	
		CODE DEFINITION	
		830 Planning Schedule with Release Capability	
ST02	329	Transaction Set Control Number	M AN 4/9
		Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	

Segment: BFR Beginning Segment for Planning Schedule

Level: Header

Loop: _____

Usage: Mandatory

Required

Max Use: 1

Purpose: To indicate the beginning of a planning schedule transaction set; whether a ship or delivery based forecast; and related forecast envelope dates

Syntax: 1 R0203 - At least one of BFR02 or BFR03 is required.

- Semantic:**
- 1 If BFR01 contains the value "04" (Change), BFR09 is required.
 - 2 BFR02 is the identifying number for a forecast assigned by the orderer/purchaser.
 - 3 BFR06 is the forecast horizon start date: The date when the forecast horizon (envelope) begins.
 - 4 BFR07 is the forecast horizon end date: The date when the forecast horizon (envelope) ends.
 - 5 BFR08 is the date forecast generated: The date the forecast data was generated.
 - 6 BFR09 is the date forecast updated: The date the forecast was updated with "change" data. (Used only when data element 353 in BFR01 contains the value "04", meaning change.)

Notes: The intent of this segment is to provide information for the entire transaction. Some of this information may be overridden by subsequent segments in the transaction.

Either BFR02 or BFR03 must be used, but not both.

If BFR01 contains the value 04, (Change), then the type of change is determined by the value in data element BFR05. AIAG only uses Actual Discrete quantities.

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES
BFR01	353	Transaction Set Purpose Code	M ID 2/2
		Code identifying purpose of transaction set	
		CODE DEFINITION	
		00 Original	
		04 Change	
		05 Replace	
BFR02	127	Reference Identification	X AN 1/30
		Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	
		This number must be unique within a contractual agreement, i.e., a model year.	
BFR03	328	Release Number	X AN 1/30
		Number identifying a release against a Purchase Order previously placed by the parties involved in the transaction	
		This number must be unique within a contractual agreement, i.e., a model year.	
BFR04	675	Schedule Type Qualifier	M ID 2/2
		Code identifying the type of dates used when defining a shipping or delivery time in a schedule or forecast	

Data Element Summary

REF. DES.	DATA ELE.	NAME		ATTRIBUTES		
		CODE	DEFINITION			
		DL	Delivery Based			
		KB	Kanban Signal			
		SH	Shipment Based			
BFR05	676	Schedule Quantity Qualifier		M	ID	1/1
		Code identifying the type of quantities used when defining a schedule or forecast				
		A	Actual Discrete Quantities			
BFR06	373	Date		M	DT	8/8
		Date expressed as CCYYMMDD				
BFR07	373	Date		O	DT	8/8
		Date expressed as CCYYMMDD				
BFR08	373	Date		M	DT	8/8
		Date expressed as CCYYMMDD				
BFR09	373	Date		O	DT	8/8
		Date expressed as CCYYMMDD				
BFR10	367	Contract Number		O	AN	1/30
		Contract number				
BFR11	324	Purchase Order Number		O	AN	1/22
		Identifying number for Purchase Order assigned by the orderer/purchaser				
		If there is only one purchase order number for the entire release, use PO Number, otherwise put the PO number in the LIN segment.				
BFR12	783	Planning Schedule Type Code		O	ID	2/2
		Code identifying type of planning schedule used				
BFR13	306	Action Code		O	ID	1/2
		Code indicating type of action				

Segment: N1 Name

Level: Header

Loop: N1 **Repeat:** 200

Usage: Optional

Max Use: 1

Purpose: To identify a party by type of organization, name, and code

Syntax: 1 R0203 - At least one of N102 or N103 is required.

2 P0304 - If either N103 or N104 is present, then the other is required.

Comments: A This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.

B N105 and N106 further define the type of entity in N101.

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES
N101	98	Entity Identifier Code Code identifying an organizational entity, a physical location, property or an individual	M ID 2/3
		CODE DEFINITION	
		MI Planning Schedule/Material Release Issuer	
		SF Ship From	
		ST Ship To	
		SU Supplier/Manufacturer	
N102	93	Name Free-form name	X AN 1/60
Required	N103	Identification Code Qualifier Code designating the system/method of code structure used for Identification Code (67)	X ID 1/2
		CODE DEFINITION	
		1 D-U-N-S Number, Dun & Bradstreet SEE CODE SOURCE 16 IN X12 STANDARDS	
Required	N104	Identification Code Code identifying a party or other code Suppress internal dashes and spaces.	X AN 2/80
Not Used	N105	Entity Relationship Code Code describing entity relationship	O ID 2/2
Not Used	N106	Entity Identifier Code Code identifying an organizational entity, a physical location, property or an individual	O ID 2/3

Segment: REF Reference Identification

Level: Header

Loop: N1

Usage: Optional

Max Use: 12

Purpose: To specify identifying information

Syntax: 1 R0203 - At least one of REF02 or REF03 is required.

Semantic: 1 REF04 contains data relating to the value cited in REF02.

Data Element Summary

	REF. DES.	DATA ELE.	NAME		ATTRIBUTES		
			CODE	DEFINITION			
	REF01	128	Reference Identification Qualifier		M	ID	2/3
			Code qualifying the Reference Identification				
			DK	Dock Number			
			LF	Assembly Line Feed Location			
			RL	Reserve Assembly Line Feed Location			
Required	REF02	127	Reference Identification		X	AN	1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier				
Not Used	REF03	352	Description		X	AN	1/80
			A free-form description to clarify the related data elements and their content				
Not Used	REF04	C040	Reference Identifier		O		
			To identify one or more reference numbers or identification numbers as specified by the Reference Qualifier				

Segment: PER Administrative Communications Contact

Level: Header

Loop: N1

Usage: Optional

Max Use: 3

Purpose: To identify a person or office to whom administrative communications should be directed

- Syntax:**
- 1 P0304 - If either PER03 or PER04 is present, then the other is required.
 - 2 P0506 - If either PER05 or PER06 is present, then the other is required.
 - 3 P0708 - If either PER07 or PER08 is present, then the other is required.

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES		
PER01	366	Contact Function Code Code identifying the major duty or responsibility of the person or group named	M	ID	2/2
		<u>CODE</u> <u>DEFINITION</u>			
		EX Expeditor			
		IC Information Contact			
		SC Schedule Contact			
PER02	93	Name Free-form name	O	AN	1/60
PER03	365	Communication Number Qualifier Code identifying the type of communication number	X	ID	2/2
		<u>CODE</u> <u>DEFINITION</u>			
		EM Electronic Mail			
		FX Facsimile			
		TE Telephone			
PER04	364	Communication Number Complete communications number including country or area code when applicable	X	AN	1/80
PER05	365	Communication Number Qualifier Code identifying the type of communication number	X	ID	2/2
PER06	364	Communication Number Complete communications number including country or area code when applicable	X	AN	1/80
PER07	365	Communication Number Qualifier Code identifying the type of communication number	X	ID	2/2
PER08	364	Communication Number Complete communications number including country or area code when applicable	X	AN	1/80
Not Used	PER09	443 Contact Inquiry Reference Additional reference number or description to clarify a contact number	O	AN	1/20

Segment: LIN Item Identification

Level: Detail

Loop: LIN **Repeat:** >1

Usage: Mandatory

Required

Max Use: 1

Purpose: To specify basic item identification data

- Syntax:**
- 1 P0405 - If either LIN04 or LIN05 is present, then the other is required.
 - 2 P0607 - If either LIN06 or LIN07 is present, then the other is required.
 - 3 P0809 - If either LIN08 or LIN09 is present, then the other is required.
 - 4 P1011 - If either LIN10 or LIN11 is present, then the other is required.
 - 5 P1213 - If either LIN12 or LIN13 is present, then the other is required.
 - 6 P1415 - If either LIN14 or LIN15 is present, then the other is required.
 - 7 P1617 - If either LIN16 or LIN17 is present, then the other is required.
 - 8 P1819 - If either LIN18 or LIN19 is present, then the other is required.
 - 9 P2021 - If either LIN20 or LIN21 is present, then the other is required.
 - 10 P2223 - If either LIN22 or LIN23 is present, then the other is required.
 - 11 P2425 - If either LIN24 or LIN25 is present, then the other is required.
 - 12 P2627 - If either LIN26 or LIN27 is present, then the other is required.
 - 13 P2829 - If either LIN28 or LIN29 is present, then the other is required.
 - 14 P3031 - If either LIN30 or LIN31 is present, then the other is required.

Semantic: 1 LIN01 is the line item identification

Comments: A See the Data Dictionary for a complete list of IDs.

B LIN02 through LIN31 provide for fifteen different product/service IDs for each item. For example: Case, Color, Drawing No., U.P.C. No., ISBN No., Model No., or SKU.

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES
LIN01	350	Assigned Identification	O AN 1/20
		Alphanumeric characters assigned for differentiation within a transaction set	
LIN02	235	Product/Service ID Qualifier	M ID 2/2
		Code identifying the type/source of the descriptive number used in Product/Service ID (234)	
		CODE	DEFINITION
		BP	Buyer's Part Number If a Buyer's Part Number (BP) is not available, then select a qualifier from the codes listed below under the LIN04 to identify the item.
LIN03	234	Product/Service ID	M AN 1/48
		Identifying number for a product or service	
LIN04	235	Product/Service ID Qualifier	X ID 2/2
		Code identifying the type/source of the descriptive number used in Product/Service ID (234)	
		CODE	DEFINITION
		CR	Contract Number
		DR	Drawing Revision Number
		EC	Engineering Change Level
		ON	Customer Order Number

Data Element Summary

REF. DES.	DATA ELE.	NAME		ATTRIBUTES
		CODE	DEFINITION	
		PL	Purchaser's Order Line Number	
		PO	Purchase Order Number	
		RN	Release Number	
		RY	Record Keeping or Model Year	
		VP	Vendor's (Seller's) Part Number	
LIN05	234	Product/Service ID		X AN 1/48
		Identifying number for a product or service		
		LIN06 through LIN31 provide for 13 additional pairs of data elements 235 and 234.		

Segment: UIT Unit Detail

Level: Detail

Loop: LIN

Usage: Optional

Max Use: 1

Purpose: To specify item unit data

Syntax: 1 C0302 - If UIT03 is present, then UIT02 is required.

Notes: This segment indicates the unit of measure for all quantities relating to the line item.

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES		
UIT01	355	Unit or Basis for Measurement Code	M	ID	2/2
		Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken			
		UIT01 is a composite data element, C001, which contains 15 simple data elements. AIAG only utilizes the first component of the composite, data element 355. This implementation guideline reflects that decision by substituting 355 for C001, which is syntactically correct. See chapter 3 entitled "Data Formatting" for further explanation of Composite Data Structures.			
		Any valid X12 code value except mutually defined; 'ZZ'			
Not Used	UIT02	212 Unit Price	X	R	1/17
		Price per unit of product, service, commodity, etc.			
Not Used	UIT03	639 Basis of Unit Price Code	O	ID	2/2
		Code identifying the type of unit price for an item			

Segment: **PRS** Part Release Status

Level: Detail

Loop: LIN

Usage: Optional

Max Use: 1

Purpose: To indicate the status of the part being ordered or forecast with respect to this material release or planning document

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES
PRS01	682	Part Release Status Code Code identifying the status of the specific part number being released or forecast or being used in an engineering change Any valid X12 code value	M ID 1/2
PRS02	352	Description A free-form description to clarify the related data elements and their content	O AN 1/80

Not Used

Segment: REF Reference Identification

Level: Detail

Loop: LIN

Usage: Optional

Max Use: 12

Purpose: To specify identifying information

Syntax: 1 R0203 - At least one of REF02 or REF03 is required.

Semantic: 1 REF04 contains data relating to the value cited in REF02.

Data Element Summary

	REF. DES.	DATA ELE.	NAME		ATTRIBUTES		
			CODE	DEFINITION			
	REF01	128	Reference Identification Qualifier		M	ID	2/3
			Code qualifying the Reference Identification				
			DK	Dock Number			
			HS	Harmonized Code System (Canada) SEE CODE SOURCE 78 IN X12 STANDARDS			
			LF	Assembly Line Feed Location			
			RL	Reserve Assembly Line Feed Location			
Required	REF02	127	Reference Identification		X	AN	1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier				
Not Used	REF03	352	Description		X	AN	1/80
			A free-form description to clarify the related data elements and their content				
Not Used	REF04	C040	Reference Identifier		O		
			To identify one or more reference numbers or identification numbers as specified by the Reference Qualifier				

Segment: PER Administrative Communications Contact

Level: Detail

Loop: LIN

Usage: Optional

Max Use: 3

Purpose: To identify a person or office to whom administrative communications should be directed

- Syntax:**
- 1 P0304 - If either PER03 or PER04 is present, then the other is required.
 - 2 P0506 - If either PER05 or PER06 is present, then the other is required.
 - 3 P0708 - If either PER07 or PER08 is present, then the other is required.

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES		
PER01	366	Contact Function Code Code identifying the major duty or responsibility of the person or group named	M	ID	2/2
		<u>CODE</u> <u>DEFINITION</u>			
		EX Expeditor			
		IC Information Contact			
		SC Schedule Contact			
PER02	93	Name Free-form name	O	AN	1/60
PER03	365	Communication Number Qualifier Code identifying the type of communication number	X	ID	2/2
		<u>CODE</u> <u>DEFINITION</u>			
		EM Electronic Mail			
		FX Facsimile			
		TE Telephone			
PER04	364	Communication Number Complete communications number including country or area code when applicable	X	AN	1/80
PER05	365	Communication Number Qualifier Code identifying the type of communication number	X	ID	2/2
PER06	364	Communication Number Complete communications number including country or area code when applicable	X	AN	1/80
PER07	365	Communication Number Qualifier Code identifying the type of communication number	X	ID	2/2
PER08	364	Communication Number Complete communications number including country or area code when applicable	X	AN	1/80
Not Used	PER09	443 Contact Inquiry Reference Additional reference number or description to clarify a contact number	O	AN	1/20

Segment: ATH Resource Authorization

Level: Detail

Loop: LIN

Usage: Optional

Max Use: 20

Purpose: To specify resource authorizations (i.e., finished labor, material, etc.) in the planning schedule

- Syntax:**
- 1 R0203 - At least one of ATH02 or ATH03 is required.
 - 2 C0305 - If ATH03 is present, then ATH05 is required.
 - 3 C0405 - If ATH04 is present, then ATH05 is required.

- Semantic:**
- 1 ATH02 is the resource authorization through date: The date through which the buyer authorizes the seller to commit the resource defined in element ATH01.
 - 2 ATH03 is the current cumulative requirements quantity: The cumulative quantity that has been authorized to date from the cumulative start date (ATH05) through the resource authorization through date (ATH02).
 - 3 ATH05 is the cumulative start date: The date where the cumulative quantity count starts. This date might be the start date of a contract period, a calendar or fiscal year, or other.
- Comments:**
- A** It is imperative that negotiations defining financial commitment have previously occurred and are agreed to by both buyer and seller.
- B** ATH04 is the maximum cumulative requirements quantity: The maximum cumulative quantity that has been authorized to date from the cumulative start date (ATH05) through the resource authorization through date (ATH02). This is a high water mark. If the forecast decreases, the current cumulative requirements quantity also decreases, but the maximum cumulative requirements quantity does not decrease.

Notes: The quantity fields in this segment are always cumulative quantities. Only one ATH segment should be used for each type of resource being authorized; that is, one and only one ATH for each different code used in ATH01.

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES		
ATH01	672	Resource Authorization Code	M	ID	2/2
		Code identifying the resource which the buyer is authorizing the seller to commit to			
		CODE	DEFINITION		
		FI	Finished (Labor, Material, and Overhead/Burden)		
		LM	Labor and Material		
		MT	Material		
		PQ	Cumulative Quantity Required Prior to First Schedule Period		
			"PQ" is only used for those using cumulative quantity based systems.		
ATH02	373	Date	X	DT	8/8
		Date expressed as CCYYMMDD			
ATH03	380	Quantity	X	R	1/15
		Numeric value of quantity			
ATH04	380	Quantity	O	R	1/15
		Numeric value of quantity			
ATH05	373	Date	X	DT	8/8
		Date expressed as CCYYMMDD			

Not Used

Segment: N1 Name

Level: Detail

Loop: LIN/N1 **Repeat:** 200

Usage: Optional

Max Use: 1

Purpose: To identify a party by type of organization, name, and code

Syntax: 1 R0203 - At least one of N102 or N103 is required.

2 P0304 - If either N103 or N104 is present, then the other is required.

Comments: A This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.

B N105 and N106 further define the type of entity in N101.

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES
N101	98	Entity Identifier Code Code identifying an organizational entity, a physical location, property or an individual	M ID 2/3
		CODE DEFINITION	
		MA Party for whom Item is Ultimately Intended	
		ST Ship To	
N102	93	Name Free-form name	X AN 1/60
Required	N103	Identification Code Qualifier Code designating the system/method of code structure used for Identification Code (67)	X ID 1/2
		CODE DEFINITION	
		1 D-U-N-S Number, Dun & Bradstreet SEE CODE SOURCE 16 IN X12 STANDARDS	
Required	N104	Identification Code Code identifying a party or other code Suppress internal dashes and spaces.	X AN 2/80
Not Used	N105	Entity Relationship Code Code describing entity relationship	O ID 2/2
Not Used	N106	Entity Identifier Code Code identifying an organizational entity, a physical location, property or an individual	O ID 2/3

Segment: N2 **Additional Name Information**

Level: Detail

Loop: LIN/N1

Usage: Optional

Max Use: 2

Purpose: To specify additional names or those longer than 35 characters in length

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES
N201	93	Name Free-form name	M AN 1/60
N202	93	Name Free-form name	O AN 1/60

Segment: N3 **Address Information**

Level: Detail

Loop: LIN/N1

Usage: Optional

Max Use: 2

Purpose: To specify the location of the named party

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES
N301	166	Address Information Address information	M AN 1/55
N302	166	Address Information Address information	O AN 1/55

Segment: N4 Geographic Location

Level: Detail

Loop: LIN/N1

Usage: Optional

Max Use: 1

Purpose: To specify the geographic place of the named party

Syntax: 1 C0605 - If N406 is present, then N405 is required.

Comments: A A combination of either N401 through N404, or N405 and N406 may be adequate to specify a location.

B N402 is required only if city name (N401) is in the U.S. or Canada.

Data Element Summary

	REF. DES.	DATA ELE.	NAME	ATTRIBUTES	
Required	N401	19	City Name Free-form text for city name	O	AN 2/30
Required	N402	156	State or Province Code Code (Standard State/Province) as defined by appropriate government agency	O	ID 2/2
	N403	116	Postal Code Code defining international postal zone code excluding punctuation and blanks (zip code for United States)	O	ID 3/15
	N404	26	Country Code Code identifying the country	O	ID 2/3
Not Used	N405	309	Location Qualifier Code identifying type of location	X	ID 1/2
Not Used	N406	310	Location Identifier Code which identifies a specific location	O	AN 1/30

Segment: REF Reference Identification

Level: Detail

Loop: LIN/N1

Usage: Optional

Max Use: 12

Purpose: To specify identifying information

Syntax: 1 R0203 - At least one of REF02 or REF03 is required.

Semantic: 1 REF04 contains data relating to the value cited in REF02.

Data Element Summary

	REF. DES.	DATA ELE.	NAME		ATTRIBUTES		
			CODE	DEFINITION			
	REF01	128	Reference Identification Qualifier		M	ID	2/3
			Code qualifying the Reference Identification				
			DK	Dock Number			
			LF	Assembly Line Feed Location			
			RL	Reserve Assembly Line Feed Location			
Required	REF02	127	Reference Identification		X	AN	1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier				
Not Used	REF03	352	Description		X	AN	1/80
			A free-form description to clarify the related data elements and their content				
Not Used	REF04	C040	Reference Identifier		O		
			To identify one or more reference numbers or identification numbers as specified by the Reference Qualifier				

Segment: FST Forecast Schedule

Level: Detail

Loop: LIN/FST **Repeat:** >1

Usage: Optional

Max Use: 1

Purpose: To specify the forecasted dates and quantities

Set Notes: 1 At least one occurrence of segment FST is required, either in the FST loop or within the SDP loop. These two loops are mutually exclusive.

Syntax: 1 P0607 - If either FST06 or FST07 is present, then the other is required.

2 P0809 - If either FST08 or FST09 is present, then the other is required.

Semantic: 1 If FST03 equals "F" (indicating flexible interval), then FST04 and FST05 are required. FST04 would be used for the start date of the flexible interval and FST05 would be used for the end date of the flexible interval.

Comments: A As qualified by FST02 and FST03, FST04 represents either a discrete forecast date, the first date of a forecasted bucket (weekly, monthly, quarterly, etc.) or the start date of a flexible interval.

B FST06 qualifies the time in FST07. The purpose of the FST07 element is to express the specific time of day in a 24-hour clock to satisfy "just-in-time" requirements. As an alternative, the ship/delivery pattern segment (SDP) may be used to define an approximate time, such as a.m. or p.m.

Notes: Although the FST segment allows for time to be specified in addition to date, locations using that level of scheduling should use the shipping schedule transaction set (862) to convey this information.

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES												
FST01	380	Quantity Numeric value of quantity	M	R	1/15										
FST02	680	Forecast Qualifier Code specifying the sender's confidence level of the forecast data or an action associated with a forecast	M	ID	1/1										
		<table><tr><th>CODE</th><th>DEFINITION</th></tr><tr><td>C</td><td>Firm</td></tr><tr><td>D</td><td>Planning</td></tr></table>	CODE	DEFINITION	C	Firm	D	Planning							
CODE	DEFINITION														
C	Firm														
D	Planning														
FST03	681	Forecast Timing Qualifier Code specifying interval grouping of the forecast	M	ID	1/1										
		<table><tr><th>CODE</th><th>DEFINITION</th></tr><tr><td>D</td><td>Discrete</td></tr><tr><td>F</td><td>Flexible Interval (from Date X through Date Y)</td></tr><tr><td>M</td><td>Monthly Bucket (Calendar Months)</td></tr><tr><td>W</td><td>Weekly Bucket (Monday through Sunday)</td></tr></table>	CODE	DEFINITION	D	Discrete	F	Flexible Interval (from Date X through Date Y)	M	Monthly Bucket (Calendar Months)	W	Weekly Bucket (Monday through Sunday)			
CODE	DEFINITION														
D	Discrete														
F	Flexible Interval (from Date X through Date Y)														
M	Monthly Bucket (Calendar Months)														
W	Weekly Bucket (Monday through Sunday)														
FST04	373	Date Date expressed as CCYYMMDD	M	DT	8/8										
FST05	373	Date Date expressed as CCYYMMDD	O	DT	8/8										

Data Element Summary

	REF. DES.	DATA ELE.	NAME	ATTRIBUTES		
Not Used	FST06	374	Date/Time Qualifier Code specifying type of date or time, or both date and time	X	ID	3/3
Not Used	FST07	337	Time Time expressed in 24-hour clock time as follows: HHMM, or HHMMSS, or HHMMSSD, or HHMMSSDD, where H = hours (00-23), M = minutes (00-59), S = integer seconds (00-59) and DD = decimal seconds; decimal seconds are expressed as follows: D = tenths (0-9) and DD = hundredths (00-99)	X	TM	4/8
Not Used	FST08	128	Reference Identification Qualifier Code qualifying the Reference Identification	X	ID	2/3
Not Used	FST09	127	Reference Identification Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	X	AN	1/30
Not Used	FST10	783	Planning Schedule Type Code Code identifying type of planning schedule used	O	ID	2/2

Segment: SHP Shipped/Received Information

Level: Detail

Loop: LIN/SHP **Repeat:** 25

Usage: Optional

Max Use: 1

Purpose: To specify shipment and/or receipt information

- Syntax:**
- 1 C0102 - If SHP01 is present, then SHP02 is required.
 - 2 L030405 - If SHP03 is present, then at least one of SHP04 or SHP05 is required.
 - 3 C0403 - If SHP04 is present, then SHP03 is required.
 - 4 C0503 - If SHP05 is present, then SHP03 is required.

- Semantic:**
- 1 SHP04 is the date shipped, delivered, received, or the cumulative quantity start date (as qualified by SHP03).
 - 2 SHP06 is the cumulative quantity end date.

- Comments:**
- A** The SHP segment is used to communicate shipment, delivery, or receipt information and may include discrete or cumulative quantities, dates, and times.
- B** If SHP01 equals "02", "07", "08", "09", or "10" (indicating cumulative quantities), then SHP04 and SHP06 are required to identify the start and end dates of the quantity count.

Notes: This segment is used to give information on the last shipment either received/shipped and/or the cumulative quantity received/shipped to date.

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES			
SHP01	673	Quantity Qualifier	O	ID	2/2	
Code specifying the type of quantity						
See table under SHP03 for use.						
		CODE	DEFINITION			
		01	Discrete Quantity			
		02	Cumulative Quantity			
Required	SHP02	380	Quantity	X	R	1/15
	Numeric value of quantity					
	SHP03	374	Date/Time Qualifier	X	ID	3/3
Code specifying type of date or time, or both date and time						
When SHP01 = 01						
		CODE	DEFINITION			
		011	Shipped			
		050	Received			
When SHP01 = 02						
		CODE	DEFINITION			
		011	Shipped			
		050	Received			
		051	Cumulative Quantity Start			
SHP04	373	Date	X	DT	8/8	
Date expressed as CCYYMMDD						

Data Element Summary

	REF.	DATA	NAME	ATTRIBUTES	
	DES.	ELE.			
	SHP05	337	Time Time expressed in 24-hour clock time as follows: HHMM, or HHMMSS, or HHMMSSD, or HHMMSSDD, where H = hours (00-23), M = minutes (00-59), S = integer seconds (00-59) and DD = decimal seconds; decimal seconds are expressed as follows: D = tenths (0-9) and DD = hundredths (00-99)	X	TM 4/8
Not Used	SHP06	373	Date Date expressed as CCYYMMDD	O	DT 8/8
Not Used	SHP07	337	Time Time expressed in 24-hour clock time as follows: HHMM, or HHMMSS, or HHMMSSD, or HHMMSSDD, where H = hours (00-23), M = minutes (00-59), S = integer seconds (00-59) and DD = decimal seconds; decimal seconds are expressed as follows: D = tenths (0-9) and DD = hundredths (00-99)	O	TM 4/8

Segment: **REF** Reference Identification

Level: Detail

Loop: LIN/SHP

Usage: Optional

Max Use: 5

Purpose: To specify identifying information

Syntax: 1 R0203 - At least one of REF02 or REF03 is required.

Semantic: 1 REF04 contains data relating to the value cited in REF02.

Notes: Used to identify the last receipt/shipment.

Data Element Summary

	REF. DES.	DATA ELE.	NAME		ATTRIBUTES		
			CODE	DEFINITION			
	REF01	128	Reference Identification Qualifier		M	ID	2/3
			Code qualifying the Reference Identification				
			SI	Shipper's Identifying Number for Shipment (SID)			
Required	REF02	127	Reference Identification		X	AN	1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier				
Not Used	REF03	352	Description		X	AN	1/80
			A free-form description to clarify the related data elements and their content				
Not Used	REF04	C040	Reference Identifier		O		
			To identify one or more reference numbers or identification numbers as specified by the Reference Qualifier				

Segment: CTT Transaction Totals

Level: Summary

Loop: ____

Usage: Optional

Max Use: 1

Purpose: To transmit a hash total for a specific element in the transaction set

Set Notes: 1 Number of line items (CTT01) is the accumulation of the number of LIN segments. If used, hash total (CTT02) is the sum of the values of the quantities (FST01) for each FST segment.

Syntax: 1 P0304 - If either CTT03 or CTT04 is present, then the other is required.

2 P0506 - If either CTT05 or CTT06 is present, then the other is required.

Comments: A This segment is intended to provide hash totals to validate transaction completeness and correctness.

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES
CTT01	354	Number of Line Items Total number of line items in the transaction set	M NO 1/6
		Total number of LIN segments	
CTT02	347	Hash Total Sum of values of the specified data element. All values in the data element will be summed without regard to decimal points (explicit or implicit) or signs. Truncation will occur on the left most digits if the sum is greater than the maximum size of the hash total of the data element. Example: -.0018 First occurrence of value being hashed. .18 Second occurrence of value being hashed. 1.8 Third occurrence of value being hashed. 18.01 Fourth occurrence of value being hashed. ----- 1855 Hash total prior to truncation. 855 Hash total after truncation to three-digit field.	O R 1/10
		Hash total of quantities release (FST01)	
Not Used	CTT03	81 Weight Numeric value of weight	X R 1/10
Not Used	CTT04	355 Unit or Basis for Measurement Code Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	X ID 2/2
Not Used	CTT05	183 Volume Value of volumetric measure	X R 1/8
Not Used	CTT06	355 Unit or Basis for Measurement Code Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	X ID 2/2
Not Used	CTT07	352 Description A free-form description to clarify the related data elements and their content	O AN 1/80

Segment: **SE** Transaction Set Trailer

Level: Summary

Loop: ____

Usage: Mandatory

Required

Max Use: 1

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

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

Notes: The Transaction Set Control Number value in this trailer must match the same element value in the Transaction Set Header (ST02).

Data Element Summary

REF. DES.	DATA ELE.	NAME	ATTRIBUTES
SE01	96	Number of Included Segments Total number of segments included in a transaction set including ST and SE segments	M NO 1/10
SE02	329	Transaction Set Control Number Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set Same as ST02	M AN 4/9

