

Table of Contents

ICS Interchange Control Structures.....	3
Segment: ISA Interchange Control Header.....	4
Segment: GS Functional Group Header.....	6
Segment: GE Functional Group Trailer.....	7
Segment: IEA Interchange Control Trailer.....	8
210 Motor Carrier Freight Details and Invoice.....	9
Segment: ST Transaction Set Header.....	10
Segment: B3 Beginning Segment for Carrier's Invoice.....	11
Segment: G62 Date/Time.....	13
Segment: C3 Currency.....	14
Segment: N9 Reference Identification.....	15
Segment: R3 Route Information - Motor.....	16
Segment: N1 Name.....	17
Segment: N3 Address Information.....	18
Segment: N4 Geographic Location.....	19
Segment: LX Assigned Number.....	20
Segment: L5 Description, Marks and Numbers.....	21
Segment: L0 Line Item - Quantity and Weight.....	22
Segment: L1 Rate and Charges.....	23
Segment: L7 Tariff Reference.....	24
Segment: SPO Shipment Purchase Order Detail.....	25
Segment: L3 Total Weight and Charges.....	26
Segment: SE Transaction.....	27
210 Example.....	28
Appendix A: Document Revision Log.....	29

ICS Interchange Control Structures

Introduction:

The purpose of this standard is to define the control structures for the electronic interchange of one or more encoded business transactions including the EDI (Electronic Data Interchange) encoded transactions of Accredited Standards Committee X12. This standard provides the interchange envelope of a header and trailer for the electronic interchange through a data transmission, and it provides a structure to acknowledge the receipt and processing of this envelope.

Notes:

- This standard specifies the control segments to be utilized when a trading partner sends an 'ISA' header.
- The information in this document was modified specifically for the MercuryGate implementation.
- Mandatory elements are marked with 'M' under the Attributes or Requirement Designator.

Pos. No.	Seg. ID	Name	Req Des	Max Use
010	ISA	Interchange Control Header	M	1
030	GS	Functional Group Header	M	1
040	GE	Functional Group Trailer	M	1
050	IEA	Interchange Control Trailer	M	1

NOTE: Please note that the DATE field on the ISA is a mandatory length of 6, but all other date fields are a mandatory length of 8.

Segment: ISA Interchange Control Header**Position:** 010**Loop:****Level:****Usage:** Mandatory**Max Use:** 1**Purpose:** To start and identify an interchange of zero or more functional groups and interchange-related control segments**Data Element Summary**

Ref.	Data	Element Name	Attributes		
Des.	Element	Name			
ISA01	I01	Authorization Information Qualifier Code to identify the type of information in the Authorization Information. 00 No Authorization Information Present (No Meaningful Information in I02)	M	ID	2/2
ISA02	I02	Authorization Information Information used for additional identification or authorization of the interchange sender or the data in the interchange; the type of information is set by the Authorization Information Qualifier.	M	AN	10/10
ISA03	I03	Security Information Qualifier Code to identify the type of information in the Security Information 00 No Security Information Present (No Meaningful Information in I04)	M	ID	2/2
ISA04	I04	Security Information Used for identifying the security information about the interchange sender or the data in the interchange; the type of information is set by the Security Information Qualifier.	M	AN	10/10
ISA05	I05	Interchange ID Qualifier Qualifier to designate the system/method of code structure used to designate the sender or receiver ID element being qualified. Codes agreed to by trading partners.	M	ID	2/2
ISA06	I06	Interchange Sender ID Identification code published by the sender for other parties to use as the receiver ID to route data to them; the sender always codes this value in the sender ID element. Codes agreed to by trading partners.	M	AN	15/15

ISA07	I05	Interchange ID Qualifier Qualifier to designate the system/method of code structure used to designate the sender or receiver ID element being qualified. Codes agreed to by trading partners.	M	ID	2/2
ISA08	I07	Interchange Receiver ID Identification code published by the receiver of the data; When sending, it is used by the sender as their sending ID, thus other parties sending to them will use this as a receiving ID to route data to them. Codes agreed to by trading partners.	M	AN	15/15
ISA09	I08	Interchange Date Date of the interchange.	M	DT	6/6
ISA10	I09	Interchange Time Time of the interchange	M	TM	4/4
ISA11	I10	Interchange Control Standards Identifier Code to identify the agency responsible for the control standard used by the message that is enclosed by the interchange header and trailer U U.S. EDI Community of ASC X12, TDCC, and UCS	M	ID	1/1
ISA12	I11	Interchange Control Version Number This version number covers the interchange control segments. 00401 ASC X12 Standards version 4010	M	ID	5/5
ISA13	I12	Interchange Control Number A control number assigned by the interchange sender	M	N0	9/9
ISA14	I13	Acknowledgment Requested Code sent by the sender to request an interchange acknowledgment (TA1) 0 No Acknowledgement Requested	M	ID	1/1
ISA15	I14	Test Indicator Code to indicate whether data enclosed by this interchange envelope is test or production. P Production Data T Test Data	M	ID	1/1
ISA16	I15	Component Element Separator Type is not applicable; the component element separator is a delimiter and not a data element; this field provides the delimiter used to separate component data elements within composite data structure; this value must be different than the data element separator and the segment terminator. Colon “:” is the default. Other values are configurable.	M		1/1

Segment: GS Functional Group Header**Position:** 030**Loop:****Level:****Usage:** Mandatory**Max Use:** 1**Purpose:** To indicate the beginning of a functional group and to provide control information**Data Element Summary**

Ref.	Data	Name	Attributes		
Des.	Element				
GS01	479	Functional Identifier Code Code identifying a group of application related transaction sets: IM Carrier Freight Details and Invoice (210)	M	ID	2/2
GS02	142	Application Sender's Code Code identifying party sending transmission. Codes agreed to by trading partners.	M	AN	2/15
GS03	124	Application Receiver's Code Code identifying party receiving transmission. Codes agreed to by trading partners.	M	AN	2/15
GS04	373	Date Date expressed as CCYYMMDD	M	DT	8/8
GS05	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)	M	TM	4/8
GS06	28	Group Control Number Assigned number originated and maintained by the sender	M	N0	1/9
GS07	455	Responsible Agency Code Code used in conjunction with Data Element 480 to identify the issuer of the standard X - Accredited Standards Committee X12	M	ID	1/2
GS08	480	Version / Release / Industry Identifier Code Code indicating the version, release, sub-release, and industry identifier of the EDI standard being used 004010 Draft Standards Approved for Publication by ASC X12	M	AN	1/12

Segment: GE Functional Group Trailer

Position: 040

Loop:

Level:

Usage: Mandatory

Max Use: 1

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

Data Element Summary

<u>Ref.</u>	<u>Data</u>	<u>Element Name</u>	<u>Attributes</u>		
GE01	97	Number of Transaction Sets Included Total number of transaction sets included in the functional group or interchange (transmission) group terminated by the trailer containing this data element	M	N0	1/6
GE02	28	Group Control Number Assigned number originated and maintained by the sender.	M	N0	1/9

Segment: IEA Interchange Control Trailer

Position: 050

Loop:

Level:

Usage: Mandatory

Max Use: 1

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

Data Element Summary

<u>Ref.</u>	<u>Data</u>	<u>Element Name</u>	<u>Attributes</u>		
IEA01	I16	Number of Included Functional Groups A count of the number of functional groups included in an interchange	M	N0	1/5
IEA02	I12	Interchange Control Number A control number assigned by the interchange sender.	M	N0	9/9

210 Motor Carrier Freight Details and Invoice**Functional Group ID=IM****Introduction:**

This Draft Standard for Trial Use contains the format and establishes the data contents of the Motor Carrier Freight Details and Invoice Transaction Set (210) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to provide detail information for charges for services rendered by a motor carrier. It is used both as a motor carrier invoice to request payment or as details pertaining to motor freight shipment(s) charges.

MG Usage	Pos. No.	Seg. ID	Name	Req. Des.	Max Use
M	010	ST	Transaction Set Header	M	1
M	020	B3	Beginning Segment for Carrier's Invoice	M	1
O	040	C3	Currency	O	1
O	060	N9	Reference Identification	O	300
O	070	G62	Date/Time	O	2
O	080	R3	Route Information - Motor	O	12
Loop ID - 0100					Repeat 10
O	110	N1	Name	O	1
O	130	N3	Address Information	O	2
O	140	N4	Geographic Location	O	1
Loop ID - 0400					Repeat 9999
M	120	LX	Assigned Number	O	1
	140	L5	Description, Marks and Numbers	O	30
O	170	L0	Line Item – Quantity and Weight	O	10
M	180	L1	Rate and Charges	O	10
O	200	L7	Tariff Reference	O	10
Loop ID – 0430					Repeat 999999
O	220	SPO	Shipment Purchase Order Detail	O	1
M	010	L3	Total Weight and Charges	O	1
M	020	SE	Transaction Set Trailer	M	1

Segment: ST Transaction Set Header

Position: 010

Loop:

Level: Heading

Usage: Mandatory

Max Use: 1

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

Syntax Notes:

Semantic Notes: **01** 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).

Data Element Summary

MG	Ref.	Data	Attributes
Usage	Des.	Element Name	
M	ST01	143 Transaction Set Identifier Code Code uniquely identifying a Transaction Set 210 Motor Carrier Freight Details and Invoice	M/Z ID 3/3
M	ST02	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	M AN 4/9

Segment: B3 Beginning Segment for Carrier's Invoice

Position: 020

Loop:

Level: Heading

Usage: Mandatory

Max Use: 1

Purpose: To transmit basic data relating to the carrier's invoice

Syntax Notes: 09 If either B309 or B310 is present, then the other is required.

Semantic Notes: 06 B306 is the billing date.
09 On collect freight bills the data in B309 will be the actual delivery date. For the shipments invoiced prior to delivery, the B309 will be the estimated date of delivery.

Data Element Summary

<u>MG Usage</u>	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>		
M	B302	76	Invoice Number Identifying number assigned by issuer	M	AN	1/22
O	B303	145	Shipment Identification Number Description: Identification number assigned to the shipment by the shipper that uniquely identifies the shipment from origin to ultimate destination and is not subject to modification; (Does not contain blanks or special characters)	O	AN	1/30
O	B304	140	Shipment Method of Payment Code identifying payment terms for transportation charges	M	ID	2/2
<i>Default Methods</i>						
CC Collect						
PP Prepaid (by Seller)						
TP Third Party						
CD Collect						
<i>Other Methods are configurable</i>						
O	B306	373	Date Date expressed as CCYYMMDD	M/Z	DT	8/8
O	B307	193	Net Amount Due Total charges to be paid by the receiver of this transaction set expressed in the standard monetary denomination for the currency specified	M	N2	1/12
X/Z	B309	32	Delivery Date Date for delivery of cargo to final consignee or to next mode expressed in format CCYYMMDD	X/Z	DT	8/8

MercuryGate EDI 210 Inbound Standard, V3.0

X	B310	374	Date/Time Qualifier Code specifying type of date or time, or both date and time	X	ID	3/3
M	B311	140	Standard Carrier Alpha Code Standard Carrier Alpha Code	M	ID	2/4
O	B312	373	Date Date expressed as CCYYMMDD	O	DT	8/8

Segment: G62 Date/Time

Position: 070

Loop:

Level: Heading

Usage: Optional

Max Use: 2

Purpose: To specify pertinent dates and times

Semantic Notes: 01 P0102 - If either G6201 or G6202 is present, then the other is required.

Data Element Summary

<u>MG Usage</u>	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>		
M	G6201	432	Date Qualifier Code specifying type of date	X	ID	2/2
			<i>Supported Date Qualifiers</i>			
			86 Actual Ship Date			
			35/67 Actual Delivery Date			
M	G6202	373	Date Date expressed as CCYYMMDD	X	DT	8/8

Segment: C3 Currency

Position: 040

Loop:

Level: Heading

Usage: Optional

Max Use: 1

Purpose: To specify the currency being used in the transaction set

Semantic Notes: 01 C301 is the billing currency

Comments: 00 Currency is implied by the code for the country in whose currency the monetary amounts are specified.

Data Element Summary

<u>MG Usage</u>	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
M	C301	100	Currency Code Code (Standard ISO) for country in whose currency the charges are specified	M/Z ID 3/3
			<i>Currency code can also be provided with the L120 element</i>	
			<i>Currency is defaulted to USD if neither C301 nor L120 are provided</i>	

Segment: N9 Reference Identification

Position: 060

Loop:

Level: Heading

Usage: Optional

Max Use: 300

Purpose: To transmit identifying information as specified by the Reference Identification Qualifier

Data Element Summary

<u>MG Usage</u>	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>		
M	N901	128	Reference Identification Qualifier <i>Reference Identification Qualifiers are configurable</i>	M	ID	2/3
M	N902	127	Reference Identification Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	X	AN	1/30

Segment: R3 Route Information - Motor**Position:** 080**Loop:****Level:** Heading**Usage:** Optional**Max Use:** 12**Purpose:** To specify carrier and routing sequences and details**Data Element Summary**

MG Usage	Ref. Des.	Data Element	Name	Attributes		
O	R301	140	Standard Carrier Alpha Code Standard Carrier Alpha Code	M	ID	2/4
O	R302	133	Routing Sequence Code Code describing the relationship of a carrier to a specific shipment movement	M	ID	1/2
M	R304	91	Transportation Method/Type Code Code specifying the method or type of transportation for the shipment	O	ID	1/2

Method/Type Codes are configurable

Segment: N1 Name**Position:** 110**Loop:** 0100**Level:** Heading**Usage:** Optional**Max Use:** 1**Purpose:** To identify a party by type of organization, name, and code

Semantic Notes: **02** R0203 - At least one of N102 or N103 is required.
03 P0304 - If either N103 or N104 is present, then the other is required.

Comments: **04** 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.

Data Element Summary

MG	Ref.	Data	Name	Attributes
Usage	Des.	Element		
M	N101	98	Entity Identifier Code Code identifying an organizational entity, a physical location, property or an individual	M ID 2/3
			<i>Identifier Code Supported</i>	
			SH Shipper Related to	
			SF Ship From Origin of shipment	
			CN Consignee Related to	
			ST Ship To Destination of Shipment	
			BT Bill-to-Party Related to	
			PF Party to Receive Billing	
M	N102	93	Name Free-form name	X AN 1/60
X	N103	66	Identification Code Qualifier Code designating the system/method of code structure used for Identification Code (67)	X ID 1/2
X	N104	67	Identification Code Code identifying a party or other code	X AN 2/80

Segment: N3 Address Information

Position: 130
Loop: 0100

Level: Heading
Usage: Optional

Max Use: 2

Purpose: To identify the location of the named party

Data Element Summary

MG Usage	Ref. Des.	Data Element	Name	Attributes		
M	N301	166	Address Information Address Information	M	AN	1/55
O	N302	166	Address Information Address Information	O	AN	1/55

Segment: N4 Geographic Location**Position:** 140**Loop:** 0100**Level:** Heading**Usage:** Optional**Max Use:** 1**Purpose:** To specify the geographic place of the named party

- Semantic Notes:**
- 01** A combination of N401 through N404 is used to specify a location.
 - 02** N402 is required only if city name (N401) is in the U.S. or Canada.

Data Element Summary

MG Usage	Ref. Des.	Data Element	Name	Attributes		
O	N401	19	City Name Free-form text for city name	O	AN	2/30
O	N402	156	State or Province Code Code (Standard State/Province) as defined by appropriate government agency	O	ID	2/2
O	N403	116	Postal Code Code defining international postal zone code excluding punctuation and blanks (zip code for United States)	O	ID	3/15
O	N404	26	Country Code Code identifying the country	O	ID	2/3

Segment: LX Assigned Number

Position: 120

Loop: 0400

Level: Detail

Usage: Mandatory

Max Use: 1

Purpose: To reference a line number in a transaction set

Data Element Summary

MG Usage	Ref. Des.	Data Element	Name	Attributes
M	LX01	554	Assigned Number Number assigned for differentiation within a transaction set.	M N0 1/6

Segment: L5 Description, Marks and Numbers

Position: 140

Loop: 0400

Level: Detail

Usage: Optional

Max Use: 30

Purpose: To specify the line item in terms of description, quantity, packaging, and marks and numbers

Data Element Summary

<u>MG</u>	<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>		
<u>Usage</u>	<u>Des.</u>	<u>Element</u>				
O	L501	213	Lading Line Item Number Sequential line number for a lading item	O	N0	1/3
M	L502	79	Lading Description Description of an item as required for rating and billing purposes	X	AN	1/50

Segment: L0 Line Item - Quantity and Weight**Position:** 170**Loop:** 0400**Level:** Detail**Usage:** Optional**Max Use:** 10**Purpose:** To specify quantity, weight, volume, and type of service for a line item including applicable "quantity/rate-as" data**Syntax Notes:** **04** P0405 - If either L004 or L005 is present, then the other is required.**08** P0809 - If either L008 or L009 is present, then the other is required.**Semantic Notes** **08** L008 is the number of handling units of the line item tendered to the carrier.**Data Element Summary**

MG	Ref.	Data	Name	Attributes		
Usage	Des.	Element				
O	L001	213	Lading Line Item Number Sequential line number for a lading item	O	N0	1/3
M	L004	81	Weight Numeric value of weight	X	R	1/10
M	L005	187	Weight Qualifier Code defining the type of weight	X	ID	1/2
M	L008	80	Lading Quantity Number of units (pieces) of the lading commodity	X/Z	No	1/7
M	L009	211	Packaging Form Code Code for packaging form of the lading quantity	X	ID	3/3

Segment: L1 Rate and Charges**Position:** 180**Loop:** 0400**Level:** Detail**Usage:** Mandatory**Max Use:** 10**Purpose:** To specify rate and charges detail relative to a line item including freight charges, advances, special charges, and entitlements

Syntax Notes 02 P0203 - If either L102 or L103 is present, then the other is required.
04 R040506 - At least one of L104, L105 or L106 is required.

Semantic Notes 02 L120, if used, indicates the currency for all monetary amounts in this L1 segment.

Data Element Summary

MG Usage	Ref. Des.	Data Element	Name	Attributes		
O	L101	213	Lading Line Item Number Sequential line number for a lading item	O	N0	1/3
X	L102	60	Freight Rate Rate that applies to the specific commodity	X	R	1/9
X	L103	122	Rate/Value Qualifier Code qualifying how to extend charges or interpret value	X	ID	2/2
M	L104	58	Charge For a line item: freight or special charge; for the total invoice: the total charges --expressed in the standard monetary denomination for the currency specified	X	N2	1/9
O	L108	150	Special Charge or Allowance Code Code identifying type of special charge or allowance <i>Special Charge or Allowance Codes are configurable</i>	O	ID	3/3
O	L120	100	Currency Code Code (Standard ISO) for country in whose currency the charges are specified.	O/Z	ID	3/3

Segment: L7 Tariff Reference

Position: 180

Loop: 0400

Level: Detail

Usage: Optional

Max Use: 10

Purpose: To reference details of the tariff used to arrive at applicable rates or charge

Data Element Summary

MG	Ref.	Data	Name	Attributes		
Usage	Des.	Element				
O	L701	213	Lading Line Item Number Sequential line number for a lading item	O	N0	1/3
M	L707	59	Freight Class Code Code indicating generalized classification that applies to one or more items in the shipment, i.e., class 70, 77.5, etc.	O	AN	2/5

**Segment: SPO Shipment Purchase Order
Detail**

Position: 220
Loop: 0430
Level: Detail
Usage: Optional
Max Use: 1
Purpose: To specify the purchase order details for a shipment

MG Usage *Create PO Number reference on the load*

Data Element Summary

<u>MG Usage</u>	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
M	SPO01	324	Purchase Order Number Free-form text identifying number for Purchase Order assigned by the orderer/purchaser	M AN 1/22

Segment: L3 Total Weight and Charges

Position: 010

Loop:

Level: Summary

Usage: Mandatory

Max Use: 1

Purpose: To specify the total shipment in terms of weight, volume, rates, charges, advances, and prepaid amounts applicable to one or more line items

Syntax Notes:

01 P0102 - If either L301 or L302 is present, then the other is required.

Semantic Notes 05 L305 is the total charges.

Data Element Summary

<u>MG Usage</u>	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>		
M	L301	81	Weight Numeric value of weight	X	R	1/10
M	L302	187	Weight Qualifier Code defining the type of weight	X	ID	1/2
M	L305	58	Charge For a line item: freight or special charge; for the total invoice: the total charges -- expressed in the standard monetary denomination for the currency specified	O/Z	N2	1/9

Segment: SE Transaction

Position: 090

Loop:

Level: Summary

Usage: Mandatory

Max Use: 1

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

Comments: 00 SE is the last segment of each transaction set

Data Element Summary

MG	Ref.	Data		Attributes		
<u>Usage</u>	<u>Des.</u>	<u>Element</u>	<u>Name</u>			
M	SE01	96	Number of Included Segments Total number of segments included in a transaction set including ST and SE segments	M	N0	1/10
M	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	M	AN	4/9

210 Example

ISA*00* *00* *02*PLLD *01*MGCUSTOMER
*150128*1310*U*00401*000000022*0*P*:~
GS*IM*PLLD*MGCUSTOMER*20150128*131026*22*X*004010~
ST*210*000220001~
B3**1520630*0017628170*PP**20141115*193101**20141031*035*PLLD~
C3*USD~
N9*DP*DP500S~
G62*86*20141015~
R3*PLLD*B**M~
N1*SH*MERCURYGATE - DRY~
N3*ATTN JOHN DOE~
N4*AURORA*IL*605061076*US~
N1*CN*MERCURYGATE FT WORTH- DRY~
N3*90 TRADE WIND DR E~
N4*FORTH WORTH*TX*76177*US~
LX*1~
L5*1*Total Line Haul~
L0*1*915*DM*37124*G*****L~
L1*1*1.76*PM*161040~
L7*1*****70~
LX*2~
L5*2*Fuel Surcharge~
L1*2***28365****405****FUEL SURCHARGE~
LX*3~
L1*3***3696****LOA****Loading~
SPO*PO06201302015~
L3*37124*G***193101~
SE*25*000220001~
GE*1*22~
IEA*1*000000022~

Appendix A: Document Revision Log

<u>Version</u>	<u>Date</u>	<u>Change description</u>
3.0	01/30/15	Revised V3.0 Document
2.1	10/07/14	Revised V2.1 Document