

**Implementation Guidelines: ANSI X12 Transaction Set 856  
Advance Ship Notice/Manifest**

**DOCUMENT NUMBER ICS 004010 856 R Consignment**

**Algoma Steel Inc.  
Information Technology**

**Author: Greg Masters**

**Effective Date: 2017-03-22**

**TABLE OF CONTENTS**

SECTION 1. REVISION STATUS..... 1.1

SECTION 2. PREFACE..... 2.1

SECTION 3. SUMMARY..... 3.1

SECTION 4. INTERCHANGE ENVELOPE..... 4.1

    ISA - Interchange Control Header..... 4.2

    4.1 Element separators and segment terminator..... 4.4

    4.2 IEA - Interchange Control Trailer..... 4.5

SECTION 5. FUNCTIONAL GROUP ENVELOPE..... 5.1

    GS - Functional Group Header..... 5.2

SECTION 6. 856 TRANSACTION SET..... 6.1

    Data Segment Sequence..... 6.2

    6.1 ST - Transaction Set Header..... 6.3

    6.2 BSN - Beginning Segment for Advance Ship Notice..... 6.4

    6.3 DTM - Date/Time Reference..... 6.5

    6.4 HL - Hierarchical Level - Shipment..... 6.6

    6.5 TD1 - Carrier Details (Quantity & Weight)..... 6.7

    6.6 TD5 - Carrier Details (Routing Seq/Transit Time)..... 6.8

    6.7 TD3 - Carrier Details (Equipment)..... 6.9

    6.8 TD4 - Carrier Details (Special Handling or Hazardous Materials).. 6.10

    6.9 REF - Reference Numbers..... 6.11

    6.10 FOB - F.O.B. Related Instructions..... 6.12

    6.11 N1 - Name..... 6.13

    6.12 HL - Hierarchical Level - Order..... 6.14

    6.13 LIN - Item Identification..... 6.15

    6.14 HL - Hierarchical Level - Item..... 6.16

    6.15 SN1 - Item Detail..... 6.17

    6.16 MEA - Measurements..... 6.18

    6.17 REF - Reference Numbers..... 6.19

    6.18 CTT - Transaction Totals..... 6.20

    6.19 SE - Transaction Set Trailer..... 6.21

SECTION 7. DATA ELEMENT DICTIONARY..... 7.1

SECTION 8. 856 SAMPLE TRANSACTION..... 8.1

**SECTION 1. REVISION STATUS**

REVISION NUMBER	DATE	PAGES	AUTHOR
R00/A	1994 09 01	original draft	G. Masters
R00	1995 12 12	original	G. Masters
R01	1995 12 22	fixed GS elements	G. Masters
R02	1996 01 31	revised TD5 TD3 N1	G. Masters
R03	1996 07 24	added transfers	G. Masters
R04	1998 03 18	added slit coils	G. Masters
R05	2000 03 07	clarified fields	G. Masters
R06	2000 03 20	converted to 4010	G. Masters
R07	2001 05 08	Fixed GS	G. Masters
R08	2008 06 23	Name change	G. Masters
R09	2011 03 21	e-mail changes	G. Masters
R10	2011 08 01	Modified for SAP	G. Masters
R10		project Phoenix	G. Masters
R11	2013 05 01	post Phoenix	G. Masters
R12	2013 10 01	LIN MO qualifier	G. Masters
R13	2017 03 22	Changed contacts	G. Masters

**SECTION 2. PREFACE**

This document is intended to provide the details on how to construct an electronic Advance Ship Notice (ASN) 856 transaction set to satisfy Algoma's requirements.

Algoma Steel Inc. is committed to supporting and using the Automotive Industry Action Group/American National Standards Institute (AIAG/ANSI) X12 national standards. However, the standards are broad in scope and flexible in methods of implementing. These are the Algoma specific requirements for the Advance Ship Notice/Manifest.

Any questions or concerns regarding the Algoma ASN or electronic data communication with Algoma may be directed to:

Algoma Steel Inc.  
IS & BPI  
105 West Street  
Sault Ste. Marie, ON  
P6A 7B4

Brian Dale	705 297-2947	Brian.Dale@algoma.com
EDI Support		EDISupport@algoma.com
Fax	705 945-2366	

**SECTION 3. SUMMARY**

In order for Algoma Steel Inc. to efficiently service its customers, Algoma has implemented the Advance Ship Notice/Manifest ANSI X12 856 transaction set. This transaction set will be used to receive shipping, carrier, order and piece specific information from all outside processors and storage facilities. ASNs will be sent to Algoma for all ownership transfers and shipments made on Algoma's behalf. There are three levels of hierarchy implemented: shipment, order and item.

The shipment level will contain the carrier details, bill of lading, shipment weight, freight charge type and ship-to/ship-from information for the shipment.

The order level will contain Algoma's sales order and sales item.

The item level will contain the physical details for the item such as weight, dimensions, heat number and Algoma's sale's/coil number.

Accuracy and timeliness of the ASN is vital to the operation of Algoma and Algoma's customers. The ASN must be sent to Algoma at the time of shipment.

The Application Advice (824) will be sent in response to the ASN. If the 824 identifies discrepancies in the ASN information, the supplier of the ASN must use this information to resolve the discrepancies and retransmit the entire corrected ASN immediately. These procedures are necessary to enable Algoma to provide its customers with an ASN prior to the shipment arriving at the customer's location.

Algoma will respond to each ASN with a Functional Acknowledgement (997). It is the responsibility of the ASN sender to notify Algoma of any unacknowledged ASNs.

Algoma Steel Inc. uses the GXS network for electronic data interchange. Algoma's qualifier is 01 and ID is 201495124.

**SECTION 4. INTERCHANGE ENVELOPE**

**ISA - Interchange Control Header**

Segment: ISA - Interchange Control Header  
 Level: n/a  
 Max Use/Loops: 1 per interchange/none  
 Purpose: To start and identify an interchange of one or more functional groups and interchange related control segments.

General Information: None

Example: ISA~00~ ~00~ ~01~201495124 ~  
 01~999999999 ~110401~1312~U~00401~000000001~1~  
 P~

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
ISA01	744	Authorization Information Qual	M ID 02/02	"00" (Zeros) No authorization information present
ISA02	745	Authorization Information	M AN 10/10	Use 10 spaces
ISA03	746	Security Information Qual	M ID 02/02	"00" (Zeros) No security information present
ISA04	747	Security Information	M AN 10/10	Use 10 spaces
ISA05	704	Interchange Sender ID Qualifier	M ID 02/02	"01" for DUNS number
ISA06	705	Interchange Sender ID	M ID 15/15	Use your company's DUNS number. Left justified.
ISA07	704	Interchange Receiver ID Qualifier	M ID 02/02	"01" for DUNS number
ISA08	706	Interchange Receiver ID	M ID 15/15	Use "201495124" left justified.
ISA09	373	Interchange Date	M DT 06/06	Date of Transmission (YYMMDD)

Segment:                   ISA - Interchange Control Header

Elem ID -----	Elem# -----	Name -----	Features -----	Comments -----
ISA10	337	Interchange Time	M TM 04/04	Time of Transmission (HHMM) 24 hour clock
ISA11	726	Interchange Standard ID	M ID 01/01	"U" for USA
ISA12	703	Interchange Version ID	M ID 05/05	"00401"
ISA13	709	Interchange Control ID	M N0 09/09	Sequential Number starting with 1 and incremented by 1 for each ISA sent.
ISA14	749	Acknowledgement ID	M ID 01/01	"0" for acknowledge- ment not required.
ISA15	748	Test Indicator	M ID 01/01	"P" for production "T" for test
ISA16	701	Sub Element Separator	M AN 01/01	Must be different then the element separator.

**4.1 Element separators and segment terminator**

Algoma uses the following characters:

- Segment terminator           ANSI   Hex "1C"
- Element separator           ANSI   Hex "7E"
- Sub element separator       ANSI   Hex "3A"

**4.2 IEA - Interchange Control Trailer**

Segment: IEA - Interchange Control Trailer  
Level: n/a  
Max Use/Loops: 1 per interchange/none  
Purpose: To define the end of an interchange of one or more functional groups and interchange related control segments.  
General Information: None  
Example: IEA~3~000000001□

Elem ID	Elem#	Name	Features	Comments
IEA01	405	Number of Included Groups	M N0 01/05	Number of GS segments included between ISA and this IEA
IEA02	709	Interchange Control Number	M N0 09/09	Must match ISA13

**SECTION 5. FUNCTIONAL GROUP ENVELOPE**

**GS - Functional Group Header**

Segment: GS - Functional Group Header  
 Level: n/a  
 Max Usage/Loops: 1/None  
 Purpose: The GS segment is used to indicate the beginning of a functional group and to provide control information  
 General Information: None  
 Example: GS~SH~999999999~201495124~20110401~1312~1~X~004010□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
GS01	479	Functional ID	M ID 02/02	"SH"
GS02	142	Application Sender Code	M ID 02/12	Use your company's DUNS number
GS03	124	Application Receiver Code	M ID 02/12	"201495124"
GS04	29	Data Interchange Date	M DT 08/08	Date created (CCYYMMDD)
GS05	30	Data Interchange Time	M TM 04/04	Time created (HHMM)
GS06	28	Data Interchange Control Number	M N0 01/09	Start with 1 and increment by 1 for each subsequent GS between interchanges
GS07	455	Responsibility Agency	M ID 01/02	Use "X" for ANSI X12 code formats
GS08	480	Version	M ID 01/12	"004010"

GE - Functional Group Trailer

Segment: GE - Functional Group Trailer

Level: n/a

Max Usage/Loops: 1 per functional group/none

Purpose: To define (specify) the end of a functional group of related transaction sets.

General Information: None

Example: GE~3~1□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
GE01	97	Number of Included Transaction Sets	M N0 01/06	Total count of transaction sets in functional group
GE02	28	Data Interchange Control Number	M N0 01/09	Same as GS06 in the associated group Header

**SECTION 6. 856 TRANSACTION SET**

**Data Segment Sequence**

ST	Transaction Set Header
BSN	Beginning Segment for Advance Ship Notice
DTM	Date/Time Reference
HL	Hierarchical Level - Shipment
TD1	Carrier Details (Quantity & Weight)
TD5	Carrier Details (Routing Seq/Transit Time)
TD3	Carrier Details (Equipment)
TD4	Carrier Details (Special Handling or Hazardous Materials)
REF	Reference Numbers
FOB	F.O.B. Related Instructions
N1	Name
HL	Hierarchical Level - Order
LIN	Item Identification
HL	Hierarchical Level - Item
SN1	Item Detail
MEA	Measurements
REF	Reference Numbers
CTT	Transaction Totals
SE	Transaction Set Trailer

**6.1 ST - Transaction Set Header**

Segment: ST - Transaction Set Header

Level: Heading

Max Usage/Loops: 1/None

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

General Information: This segment is required. The transaction set control number (ST02) in this header must match the transaction set control number (SE02) in the transaction set trailer (SE).

Example: ST~856~0001□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
ST01	143	Transaction Set ID Code	M ID 03/03	Use "856"
ST02	329	Transaction Set Control Number	M AN 04/09	A unique number assigned to each transaction set within a functional group.

**6.2 BSN - Beginning Segment for Advance Ship Notice**

Segment: BSN - Beginning Segment for Advance Ship Notice  
 Level: Heading  
 Max Usage/Loops: 1/None  
 Purpose: To transmit identifying numbers, dates and other basic data relating to the transaction set.

General Information: The date and time are the date and local time of the creation of the transaction.

Example: BSN~00~123456~20110401~1421□  
 BSN~47~123456~20110401~1421□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
BSN01	353	Transaction Set Purpose Code	M ID 02/02	"00" - original "47" - transfer of ownership (Algoma to customer).
BSN02	396	Shipment Identification	M AN 02/30	Unique supplier assigned number that is not repeated within a one year period (usually bill of lading number).
BSN03	373	Date	M DT 08/08	Creation date (CCYYMMDD)
BSN04	337	Time	M TM 04/08	Creation time (HHMM) 24 hour clock.
BSN05	1005	Hierarch Structure Code	O ID 04/04	Not used.
BSN06	640	Transaction Type Code	O ID 02/02	Not used.
BSN07	641	Status Reason Code	O ID 03/03	Not used.

**6.3 DTM - Date/Time Reference**

Segment: DTM - Date/Time Reference

Level: Heading

Max Usage/Loops: 10/None

Purpose: To specify pertinent dates and times.

General Information: One occurrence of the DTM segment is required. Use "011" in DTM01 for all shipments. Use "102" in DTM01 for transfers.

Example: DTM~011~20110401~1421☐  
 DTM~102~20110401~1421☐

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
DTM01	374	Date/Time Qualifier	M AN 03/03	"011" Date and time shipment leaves the supplier's premises. "102" for issue date time for transfers only.
DTM02	373	Date	M DT 08/08	Date (CCYYMMDD)
DTM03	337	Time	M TM 04/08	Time (HHMM) 24 hour clock.
DTM04	623	Time Code Format Qualifier	O ID 02/02	Not used.
DTM05	1250	Date Time Period Format Qualifier	C ID 02/03	Not Used.
DTM06	1251	Date Time Period	C AN 01/35	Not Used.

**6.4 HL - Hierarchical Level - Shipment**

Segment: HL - Hierarchical Level - Shipment

Level: Shipment hierarchical level

Max Usage/Loops: 200,000 per advance shipment notice/begins the detail loop.

Purpose: To identify dependencies among the content of hierarchically related groups of data segments.

General Information: At least one occurrence of the HL segment at the shipment level is mandatory for original ASNs.

Example: HL~1~~S□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
HL01	628	Hierarchical ID Number	M AN 01/12	"1" for the initial HL segment and incremented by 1 in each subsequent HL segment within the transaction.
HL02	734	Hierarchical Parent Number	O AN 01/12	Required except for the first occurrence of the HL segment.
HL03	735	Hierarchical Level Code	M ID 01/02	"S" for shipment level.
HL04	736	Hierarchical Child Code	O ID 01/01	Not used.

**6.5 TD1 - Carrier Details (Quantity & Weight)**

Segment: TD1 - Carrier Details (Quantity & Weight)

Level: Shipment hierarchical level

Max Usage/Loops: 20 per HL loop.

Purpose: To specify the transportation details relative to commodity, weight and quantity.

General Information: Required at the shipment level.

Example: TD1~COL52~2~~~~N~43200~LB□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
TD101	103	Packing Code	M AN 03/05	"COL52" for coil "BDL52" for bundle "LFT52" for lift
TD102	80	Lading Quantity	M N0 01/07	Number of units of the type specified in TD101
TD103	23	Commodity Code Qualifier	O ID 01/01	Not used.
TD104	22	Commodity Code	O AN 01/30	Not used.
TD105	79	Lading Description	O AN 01/50	Not used.
TD106	187	Weight Qualifier	M ID 01/02	"N" for net.
TD107	81	Weight	M N0 01/10	Shipment weight.
TD108	355	Unit of Measurement Code	M ID 02/02	"LB" for pounds.
TD109	183	Volume Code	C R 01/08	Not used.
TD110	355	Unit of Measurement Code	C ID 02/02	Not used.

**6.6 TD5 - Carrier Details (Routing Seq/Transit Time)**

Segment: TD5 - Carrier Details (Routing Sequence/Transit Time)

Level: Shipment hierarchical level

Max Usage/Loops: 12 per HL loop.

Purpose: To specify the carrier, sequence of routing and to provide transit time information.

General Information: Required at the shipment level for all shipments. Not required for transfers. If sent for transfers, ensure mandatory AIAG X.12 elements are present.

Example: TD5~B~2~ALGM~M~ALGOMA TRUCKING□  
 TD5~B~2~CP~M~CP RAIL~~19~A123456□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
TD501	133	Routing Sequence Code	M ID 01/02	"B" for origin.
TD502	66	ID Code Qualifier	M ID 01/02	"2" for SCAC ID.
TD503	67	ID Code	M AN 02/80	SCAC Code
TD504	91	Transportation	M ID 01/02	"H" customer pick-up "M" common carrier "P" private carrier
TD505	387	Routing	M AN 01/35	Carrier name
TD506	368	Shipment/Order Status Code	O ID 02/02	Not used.
TD507	309	Location Qualifier	O ID 01/02	"19" for route (rail only)
TD508	310	Location Identifier	O AN 01/30	routing code (rail only)
TD509	731	Transit Direction Code	O ID 02/02	Not used.
TD510	732	Transit Time Direction Qualifier	O ID 02/02	Not used.
TD511	733	Transit Time	O R 01/04	Not used.
TD512	284	Service Level Code	O ID 02/02	Not used.
TD513	284	Service Level Code	O ID 02/02	Not used.
TD514	284	Service Level Code	O ID 02/02	Not used.
TD515	26	Country Code	O ID 02/03	Not used.

**6.7 TD3 - Carrier Details (Equipment)**

Segment: TD3 - Carrier Details (Equipment)

Level: Shipment hierarchical level

Max Usage/Loops: 12 per HL loop.

Purpose: To specify transportation details relating to the equipment used by the carrier.

General Information: Required at the shipment level for all shipments. When entering numbers with alpha prefixes, place the alpha portion in TD302 and the numeric portion in TD303. For a rail shipment, place the railcar number in TD303 and the owner's prefix in TD302.

Not required for transfers. If sent for transfers, ensure mandatory AIAG X.12 elements are present.

Example: TD3~TL~AB~512~LC~65000~LB□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
TD301	40	Equipment Description Code	M ID 02/02	"TL" for trailer. "RR" for rail car.
TD302	206	Equipment Initial	O AN 01/04	Alphabetic portion of the equipment identification.
TD303	207	Equipment Number	M AN 01/10	Trailer number
TD304	187	Weight Qualifier	M ID 01/02	"LC" maximum lading Capacity (truck only).
TD305	81	Weight	M R 01/10	Load capacity of truck.
TD306	355	Unit of Measurement Code	O ID 02/02	Unit of measure.
TD307	102	Ownership Code	O ID 01/01	Not used.
TD308	407	Seal Status Code	O ID 02/02	Not used.
TD309	225	Seal Number	O AN 02/15	Not used.
TD310	24	Equipment Type	O ID 04/04	Not used.

**6.8 TD4 - Carrier Details (Special Handling or Hazardous Materials)**

Segment: TD4 - Carrier Details (Special Handling or Hazardous Materials)

Level: Shipment hierarchical level

Max Usage/Loops: 5 per HL loop.

Purpose: To specify transportation special handling or hazardous materials or both.

General Information: Only required for Drop Shipments. To be included at the shipment level.

**Drop Shipments:** Include the TD4 on all but 1 stop. This could be the first or last location, which ever is easier.

Do not include for other shipments.

Example: TD4~SOC□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
TD401	152	Special Handling Code	M ID 02/03	"SOC" for stop off.
TD402	208	Hazardous Material Code Qualifier	O ID 01/01	Not used.
TD403	209	Hazardous Material Class Code	O AN 01/10	Not used.
TD404	352	Description	O AN 01/80	Not used.
TD405	1073	Yes/No Condition or Response Code	O ID 01/01	Not used.

**6.9 REF - Reference Numbers**

Segment: REF - Reference Numbers  
Level: Shipment hierarchical level  
Max Usage/Loops: 200 per HL loop.  
Purpose: To transmit identifying numbers.  
General Information: Used to specify bill of lading number.  
Example: REF~BM~32418□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
REF01	128	Reference Number Qualifier	M AN 02/03	"BM" for bill of lading.
REF02	127	Reference Number	M AN 01/30	Bill of lading. Algoma requires a minimum of 5 characters (Algoma will accept up to 10 characters).
REF03	352	Description	O AN 01/80	Not used.

**6.10 FOB - F.O.B. Related Instructions**

Segment: FOB - F.O.B. Related Instructions

Level: Shipment hierarchical level

Max Usage/Loops: 1 per HL loop.

Purpose: To specify transportation instructions relating to a shipment.

General Information: Used at shipment level to specify arrangements for paying freight.

Not required for transfers. If sent for transfers, ensure mandatory AIAG X.12 elements are present.

Example: FOB~CC□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
FOB01	146	Shipment Method of Payment	M ID 02/02	"CC" for collect "PP" for prepaid
FOB02	309	Location Qualifier	O ID 01/02	Not used.
FOB03	352	Description	O AN 01/80	Not used.
FOB04	334	Transportation Terms Qualifier Code	O ID 02/02	Not used.
FOB05	335	Transportation Terms Code	O ID 03/03	Not used.
FOB06	309	Location Qualifier	O ID 01/02	Not used.
FOB07	352	Description	O AN 01/80	Not used.
FOB08	54	Risk of Loss Qualifier	O ID 02/02	Not used.
FOB09	352	Description	O AN 01/80	Not used.

**6.11 N1 - Name**

Segment: N1 - Name

Level: Shipment hierarchical level

Max Usage/Loops: 1 per N1 loop whose max usage is 200 per HL loop.

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

General Information: Ship-to and ship-from segments are mandatory. For transfers the ship-to name will be the transfer-to name. Ship-to DUNS number is optional. If the ship-to DUNS number is NOT sent, then N103 must be blank. The ship-from supplier code will be provided by Algoma.

Example: N1~SF~ACME~ZZ~32323□  
 N1~ST~ACCURIDE□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
N101	98	Entity Identifier Code	M ID 02/03	"ST" for ship-to. "SF" for ship-from.
N102	93	Name	M AN 01/60	Organization's name.
N103	66	ID Code Qualifier	O ID 01/02	"1" for DUNS number. "ZZ" for mutually defined.
N104	67	ID Code	C AN 02/80	DUNS number. Assigned supplier ID.
N105	706	Entity Relationship Code	C ID 02/02	Not used.
N106	98	Entity Identifier Code	C AN 02/03	Not used.

**6.12 HL - Hierarchical Level - Order**

Segment: HL - Hierarchical Level - Order

Level: Order hierarchical level

Max Usage/Loops: 200,000 per advance shipment notice/begins the detail loop.

Purpose: To identify dependencies among the content of hierarchically related groups of data segments.

General Information: At least one occurrence of the HL segment at the order level is mandatory for original ASNs.

Example: HL~2~1~0□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
HL01	628	Hierarchical ID Number	M AN 01/12	"1" for the initial HL segment and incremented by 1 in each subsequent HL segment within the transaction.
HL02	734	Hierarchical Parent Number	O AN 01/12	The ID of the parent HL segment.
HL03	735	Hierarchical Level Code	M ID 01/02	"0" for order level.
HL04	736	Hierarchical Child Code	O ID 01/01	Not used.

**6.13 LIN - Item Identification**

Segment: LIN - Item Identification

Level: Order hierarchical level

Max Usage/Loops: 1 per HL loop.

Purpose: To specify basic item identification.

General Information: Used to specify Algoma's sales order number and item.

Example: LIN~~VO~2074522~VN~000010~MO~T□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
LIN01	350	Assigned Identification	O AN 01/20	Not used.
LIN02	235	Product/Service ID Qualifier	M ID 02/02	"VO" for order number.
LIN03	234	Product/Service ID	M ID 01/48	Algoma's sales order number.
LIN04	235	Product/Service ID Qualifier	M ID 02/02	"VN" for item number.
LIN05	234	Product/Service ID	M ID 01/48	Algoma's sales item number.
LIN06	235	Product/service ID qualifier	M ID 02/02	"MO" Movement type code
LIN07	234	Product/service ID	M AN 01/48	"T" to indicate transload material. "S" to indicate storage material.
LIN08	235	Product/Service ID Qualifier	O ID 02/02	Not used.
.				
.				
.				
LIN31	234	Product/Service ID	O ID 01/48	Not used.

**6.14 HL - Hierarchical Level - Item**

Segment: HL - Hierarchical Level - Item

Level: Item hierarchical level

Max Usage/Loops: 200,000 per advance shipment notice/begins the detail loop.

Purpose: To identify dependencies among the content of hierarchically related groups of data segments.

General Information: At least one occurrence of the HL segment at the item level is mandatory for original ASNs. One HL loop is required for each item of an order.

Example: HL~3~2~I□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
HL01	628	Hierarchical ID Number	M AN 01/12	"1" for the initial HL segment and incremented by 1 in each subsequent HL segment within the transaction.
HL02	734	Hierarchical Parent Number	O AN 01/12	The ID of the parent HL segment.
HL03	735	Hierarchical Level Code	M ID 01/02	"I" for item level.
HL04	736	Hierarchical Child Code	O ID 01/01	Not used.

**6.15 SN1 - Item Detail**

Segment: SN1 - Item Detail

Level: Item hierarchical level

Max Usage/Loops: 1 per HL loop.

Purpose: To specify line item detail relative to shipment.

General Information: Used to specify the following item piece counts.

Example: SN1~~1~PC□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
SN101	350	Assigned Identification	O AN 01/20	Not used.
SN102	382	Number of units Shipped	M R 01/10	Number of pieces shipped for the piece ID on the following REF segments.
SN103	355	Unit of Measurement Code	M ID 02/02	"PC" for piece.
SN104	646	Quantity Shipped to Date	O R 01/15	Not used.
SN105	330	Quantity Ordered	O R 01/15	Not used.
SN106	355	Unit of Measurement	C ID 02/02	Not used.
SN107	728	Returnable Container Load Make-up Code	O ID 01/02	Not used.
SN108	668	Line Item Status Code	O ID 02/02	Not used.

**6.16 MEA - Measurements**

Segment: MEA - Measurements

Level: Item hierarchical level

Max Usage/Loops: 40 per HL loop.

Purpose: To specify physical measurements including dimensions, tolerances, weights and counts.

General Information: Used to specify the following:

1. Actual weight in pounds.
2. Gauge in inches.
3. Width in inches.
4. Length in inches (for cut to length product only).

Example: MEA~PD~WT~23115~LB□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
MEA01	737	Measurement Reference ID Code	M ID 02/02	"PD" for physical dimension.
MEA02	738	Measurement Qualifier	M ID 01/03	"WT" for weight "TH" for gauge "WD" for width "LN" for length
MEA03	739	Measurement Value	M R 01/18	Required.
MEA04	355	Unit of Measurement Code	M ID 02/02	"IN" for inch "LB" for pound
MEA05	740	Range Minimum	O R 01/18	Not used.
MEA06	741	Range Maximum	O R 01/18	Not used.
MEA07	935	Measurement Significance Code	O ID 02/02	Not used.
MEA08	936	Measurement Attribute Code	O ID 02/02	Not used.
MEA09	752	Surface/Layer/ Position Code	O ID 02/02	Not used.
MEA10	1373	Measurement Method Or Device	O ID 02/04	Not used.

**6.17 REF - Reference Numbers**

Segment: REF - Reference Numbers

Level: Item hierarchical level

Max Usage/Loops: 200 per HL loop.

Purpose: To transmit identifying numbers.

General Information: Used to specify heat number and mill/coil tag number.

Note: For coil (batch) ID, provide the most current Algoma ID generated from the last production process.

Example: REF~LS~ZZ12345678□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
REF01	128	Reference Number Qualifier	M AN 02/03	"HC" for heat number "LS" for Algoma's batch ID.
REF02	127	Reference Number	M AN 01/30	heat number or Batch ID
REF03	352	Description	O AN 01/80	Not used.

**6.18 CTT - Transaction Totals**

Segment: CTT - Transaction Totals  
Level: Summary  
Max Usage/Loops: 1/none.  
Purpose: To transmit hash totals for a specific element in the transaction set.  
General Information: CTT01 is required.  
Example: CTT~21□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
CTT01	354	Number of Line Items	M N0 01/06	Total number of HL segments.
CTT02	347	Hash Total	O R 01/10	Not used.
CTT03	81	Weight	O R 01/10	Not used.
CTT04	355	Unit of Measurement Code	O ID 02/02	Not used.
CTT05	183	Volume	O R 01/08	Not used.
CTT06	355	Unit of Measurement Code	O ID 02/02	Not used.
CTT07	352	Description	O AN 01/80	Not used.

**6.19 SE - Transaction Set Trailer**

Segment: SE - Transaction Set Trailer

Level: Summary

Max Usage/Loops: 1/none.

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

General Information:

Example: SE~23~0001□

Elem ID	Elem#	Name	Features	Comments
-----	-----	-----	-----	-----
SE01	96	Number of Included Segments	M N0 01/06	
SE02	329	Transaction Set Control Number	M AN 04/09	Same as ST02

**SECTION 7. DATA ELEMENT DICTIONARY**

40     Equipment Description Code  
      RR     Rail car  
      TL     Trailer

66     ID Code Qualifier  
      1     DUNS number  
      2     SCAC ID  
      ZZ     Mutually defined

91     Transportation Method/Type Code  
      H     Customer Pick-up  
      M     Common Carrier  
      P     Private Carrier

98     Entity Identifier Code  
      SF     Ship-from  
      ST     Ship-to

103    Packing Code  
      BDL52 Bundle  
      COL52 Coil  
      LFT52 Lift

128    Reference Number Qualifier  
      BM     Bill of lading  
      HC     heat number  
      LS     mill/tag number

133    Routing Sequence Code  
      B     Origin

146    Shipment Method of Payment  
      CC     Collect  
      PP     Prepaid

152    Special Handling Code  
      ED     Excessive dimensions  
      SOC    Stop off

187    Weight Qualifier  
      N     Net

235    Product/Service ID Qualifier  
      VN     Vendor's item number  
      VO     Vendor's order number

353    Transaction Set Purpose Code  
      00     original - standard shipment  
      47     transfer - transfer of ownership (Algoma to customer)

355    Unit of Measurement Code  
      IN     Inch  
      LB     Pound

374    Date/Time Qualifier  
      011    Date/time shipment leaves the supplier's premises  
      102    Issue date/time - for transfers only

735 Hierarchical Level Code  
I Item level  
O Order level  
S Shipment level

738 Measurement Qualifier  
LN Length  
TH Gauge  
WD Width  
WT Weight

**SECTION 8. 856 SAMPLE TRANSACTION**

Shipment one truck or one railcar to one location:

ISA~00~ ~00~ ~01~201495124 ~01~  
207663412 ~110401~1312~U~00401~000000001~1~P~ □  
GS~SH~207663412~201495124~20110401~1312~1~X~004010□  
ST~856~0001□  
BSN~00~123456~20110401~1421□  
DTM~011~20110401~1421□  
HL~1~~S□  
TD1~COL52~4~~~~N~93660~LB□  
TD5~B~2~ALGM~M~ALGOMA TRUCKING□  
TD3~TL~LM~512~LC~100000~LB□  
REF~BM~32418□  
FOB~CC□  
N1~SF~ACME~ZZ~HLL□  
N1~ST~ACCURIDE□  
HL~2~1~O□  
LIN~~VO~2000074522~VN~000110~MO~T□  
HL~3~2~I□  
SN1~~1~PC□  
MEA~PD~WT~23115~LB□  
MEA~PD~TH~0.113~IN□  
MEA~PD~WD~42.75~IN□  
REF~LS~ZZ12345678□  
REF~HC~3314J4 01□  
HL~4~2~I□  
SN1~~1~PC□  
MEA~PD~WT~22000~LB□  
MEA~PD~TH~0.113~IN□  
MEA~PD~WD~42.75~IN□  
REF~LS~ZZ12345679□  
REF~HC~3314J4 01□  
HL~5~2~I□  
SN1~~1~PC□  
MEA~PD~WT~27500~LB□  
MEA~PD~TH~0.113~IN□  
MEA~PD~WD~42.75~IN□  
REF~LS~ZZ123456790□  
REF~HC~3354K1 01□  
HL~6~1~O□  
LIN~~VO~2000068522~VN~000118~MO~T□  
HL~7~6~I□  
SN1~~2~PC□  
MEA~PD~WT~21005~LB□  
MEA~PD~TH~0.105~IN□  
MEA~PD~WD~20.25~IN□  
REF~LS~ZZ123456799□  
REF~HC~3314A3 04□  
CTT~7□  
SE~45~0001□  
GE~1~1□  
IEA~1~000000001□

Shipment one truck or one railcar to multiple locations (drop shipment):

ISA~00~ ~00~ ~01~201495124 ~01~  
207663412 ~110401~1312~U~00401~000000001~1~P~ □  
GS~SH~207663412~201495124~20110401~1312~1~X~004010□  
ST~856~0001□  
BSN~00~123456~20110401~1421□  
DTM~011~20110401~1421□  
HL~1~~S□  
TD1~COL52~2~~~~N~45115~LB□  
TD5~B~2~ALGM~M~ALGOMA TRUCKING□  
TD3~TL~LM~512~LC~100000~LB□  
TD4~SOC□  
REF~BM~32418□  
FOB~CC□  
N1~SF~ACME~ZZ~HLLL□  
N1~ST~ACCURIDE□  
HL~2~1~O□  
LIN~~VO~8074522~VN~000110~MO~S□  
HL~3~2~I□  
SN1~~1~PC□  
MEA~PD~WT~23115~LB□  
MEA~PD~TH~0.113~IN□  
MEA~PD~WD~42.75~IN□  
REF~LS~ZZ12345678□  
REF~HC~3314J4 01□  
HL~4~2~I□  
SN1~~1~PC□  
MEA~PD~WT~22000~LB□  
MEA~PD~TH~0.113~IN□  
MEA~PD~WD~42.75~IN□  
REF~LS~ZZ12345679□  
REF~HC~3314J4 01□  
HL~5~~S□  
TD1~COL52~1~~~~N~27500~LB□  
TD5~B~2~ALGM~M~ALGOMA TRUCKING□  
TD3~TL~LM~512~LC~100000~LB□  
TD4~SOC□  
REF~BM~32418□  
FOB~CC□  
N1~SF~ACME~ZZ~HLLL□  
N1~ST~CATERPILLAR□  
HL~6~5~O□  
LIN~~VO~2074521~VN~000110~MO~S□  
HL~7~6~I□  
SN1~~1~PC□  
MEA~PD~WT~27500~LB□  
MEA~PD~TH~0.113~IN□  
MEA~PD~WD~42.75~IN□  
REF~LS~ZZ123456790□  
REF~HC~3354K1 01□  
HL~8~~S□  
TD1~COL52~1~~~~N~21005~LB□  
TD5~B~2~ALGM~M~ALGOMA TRUCKING□  
TD3~TL~LM~512~LC~100000~LB□  
REF~BM~32418□  
FOB~CC□  
N1~SF~ACME~ZZ~HLLL□  
N1~ST~BIG STEEL□

HL~9~8~O□  
LIN~~VO~5068529~VN~000118~MO~S□  
HL~10~9~I□  
SN1~~2~PC□  
MEA~PD~WT~21005~LB□  
MEA~PD~TH~0.105~IN□  
MEA~PD~WD~20.25~IN□  
REF~LS~ZZ123456799□  
REF~HC~3314A3 04□  
CTT~10□  
SE~45~0001□  
GE~1~1□  
IEA~1~000000001□