Implementation Guidelines: ANSI X12 Transaction Set 856
Advance Ship Notice/Manifest
(Suppliers)

DOCUMENT NUMBER: ICS 004010 856 R Supplier

ESSAR Steel Algoma Inc.

Information Systems and Business Process Improvement

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SECTION 1. REVISION STATUS

REVISION NUMBER	DATE	REVISION	AUTHOR
R00/A	2001 04 20	original draft	G. Masters
R00	2001 04 24	issued	G. Masters
R01	2001 06 20	revised LIN seg.	G. Masters
R02	2001 06 21	revised PRF seg.	G. Masters
R03	2001 07 12	824 requirements	G. Masters
R04	2001 10 05	Removed TD1 TD5 TD3 FOB	G. Masters
R05	2002 03 14	Revised N1 SF seg.	G. Masters
R06	2003 04 04	Revised element & sub-element separator.	G. Masters
R07	2008 06 23	Name change	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.

Essar Steel Algoma Inc. is committed to supporting and using the American National Standards Institute (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:

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SECTION 3. SUMMARY

In order for Essar Steel Algoma Inc. to efficiently receive material from its suppliers, 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 suppliers. There are three levels of hierarchy implemented: shipment, order and item.

The shipment level will contain the packing slip and ship-to/ship-from information for the shipment.

The order level will contain Algoma's purchase order and release number.

The item level will contain the details for each line item such as Algoma’s catalog number and quantity.

Accuracy and timeliness of the ASN is vital to operations at Algoma. The ASN must be sent to Algoma at the time of shipment.

The Application Advice (824) can be sent in response to the ASN. 824s will be sent for rejected ASNs. 824s can be sent for accepted ASNs at the supplier’s request. 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 ensure Algoma will be able to receive the material at the time of delivery.

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.

Essar Steel Algoma Inc. uses the GXS network for electronic data interchange.

Algoma's DUNS number 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 ~010420~1312~U~00401~000000001~1~P~~ N/L

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. "09" for phone number. "ZZ" for mutually defined.
ISA06	705	Interchange Sender ID	M ID 15/15	Use your company's ID 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 EBCDIC Hex "1C"
- Element separator EBCDIC Hex "A1"
- Sub element separator EBCDIC Hex "79"

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 N/L

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~999999999~201495124~20010420~1312~1~X~004010 N/L

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 ID 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 N/L

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

6.1 Data Segment Sequence

ST	Transaction Set Header
BSN	Beginning Segment for Advance Ship Notice
DTM	Date/Time Reference
HL	Hierarchical Level – Shipment
REF	Reference Numbers
N1	Name
HL	Hierarchical Level – Order
PRF	Purchase Order Reference
HL	Hierarchical Level – Item
LIN	Item Identification
SN1	Item Detail
CTT	Transaction Totals
SE	Transaction Set Trailer

6.2 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 N/L

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.

6.3 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~00~123456~20010420~1421 N/L
BSN~05~123456~20010422~1421 N/L

Elem ID	Elem#	Name	Features	Comments
BSN01	353	Transaction Set Purpose Code	M ID 02/02	"00" - original "05" - replace
BSN02	396	Shipment Identification	M AN 02/30	Unique supplier assigned number that is not repeated within a one year period (usually packing slip 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.

6.4 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: Shipment date/time is required. If unavailable, use current date/time. Delivery date is optional, but preferred.

Example: DTM~011~20010416~1421 N/L
DTM~017~20010417~0800 N/L

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. "017" for estimated delivery date.
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.

6.5 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 N/L

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.

6.6 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 Packing Slip Number.

Example: REF~PK~012345678901234 N/L

Elem ID	Elem#	Name	Features	Comments
REF01	128	Reference Number Qualifier	M AN 02/03	"PK" for packing slip number.
REF02	127	Reference Number	M AN 01/30	Algoma will accept a Maximum of 15 characters.
REF03	352	Description	O AN 01/80	Not used.

6.7 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. The Algoma assigned supplier code, off the Algoma PO, is required on the ship-from N1 segment.

Example: N1~SF~ACME~ZZ~ACME ELECT00 N/L
N1~ST~ESSAR Steel Algoma Inc.~1~201495124 N/L

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	C ID 01/02	"1" for DUNS number. "ZZ" for mutually defined.
N104	67	ID Code	C AN 02/80	DUNS number on ST. Algoma's assigned supplier code on SF.
N105	706	Entity Relationship Code	O ID 02/02	Not used.
N106	98	Entity Identifier Code	O AN 02/03	Not used.

6.8 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~O N/L

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	"O" for order level.
HL04	736	Hierarchical Child Code	O ID 01/01	Not used.

6.9 PRF – Purchase Order Reference

Segment: PRF - Purchase Order Reference

Level: Order hierarchical level

Max Usage/Loops: 1 per HL loop.

Purpose: To provide reference to a specific purchase order.

General Information: Used to specify Algoma's purchase order and release number. Release number is required if supplied on the PO.

Example: PRF~123456~1234 N/L

Elem ID	Elem#	Name	Features	Comments
PRF01	324	Purchase Order Number	M AN 01/22	Algoma’s PO number (6 characters).
PRF02	328	Release Number ID Qualifier	C AN 01/30	Algoma’s Release number if supplied on PO. (4 characters).
PRF03	327	Change Order Sequence Number	O AN 01/08	Not used.
.				
.				
.				
PRF07	92	Purchase Order Type Code	O ID 02/02	Not used.

6.10 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 N/L

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.

6.11 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 line item and catalog number (as indicated on the purchase order. You may be referring to this number as Algoma's part number). Algoma's catalog number consists of 4 characters, followed by a dash, followed by 6 characters. Algoma will only accept a dash or space in the 5th position of the catalog number.

Example: LIN~001~CB~1234-654321 N/L

Elem ID	Elem#	Name	Features	Comments
LIN01	350	Assigned Identification	M AN 01/20	Algoma's PO Line item number (3 characters).
LIN02	235	Product/Service ID Qualifier	M ID 02/02	"CB" for buyer's catalog number.
LIN03	234	Product/Service ID	M ID 01/48	Algoma's catalog number.
LIN04	235	Product/Service ID Qualifier	C ID 02/02	Not used.
LIN05	234	Product/Service ID	C ID 01/48	Not used.
LIN06	235	Product/Service ID Qualifier	C ID 02/02	Not used.
.				
.				
.				
LIN31	234	Product/Service ID	C ID 01/48	Not used.

6.12 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 quantity shipped in the **ordered** units, as specified on Algoma's Purchase Order.
See the Data Element Dictionary section for a complete list of values for element 355. Additional values will be added as required.

Example: SN1~~5~PC N/L

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 units shipped in the **ordered** units.
SN103	355	Unit of Measurement Code	M ID 02/02	ordered units.
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.

6.13 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 N/L

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.

6.14 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 N/L

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

66 ID Code Qualifier
- 1 DUNS number
- ZZ Mutually defined

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

128 Reference Number Qualifier
- PK Packing slip number

235 Product/Service ID Qualifier
- CB Buyer's catalog number

353 Transaction Set Purpose Code
- 00 original - standard shipment
- 05 replace - replace of the original ASN

355 Unit of Measurement Code
- EA Each
- FT Foot
- GA Gallon
- IN Inch
- KG Kilogram
- LB Pound
- LT Litre
- MR Metre
- MM Millimeter
- PC Piece

374 Date/Time Qualifier
- 011 Date/time shipment leaves the supplier's premises
- 017 Delivery date - estimated.

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

SECTION 8. 856 SAMPLE TRANSACTION

```
ISA~00~          ~00~          ~01~201495124      ~01~
207663412      ~010420~1312~U~00401~000000001~1~P~`
GS~SH~207663412~201495124~20010420~1312~1~X~004010
ST~856~0001
BSN~00~123456~20010420~1421
DTM~011~20010420~1421
DTM~017~20010422~0800
HL~1~~S
REF~PK~012345678901234
N1~SF~ACME~ZZ~ACME ELECT00
N1~ST~ESSAR Steel Algoma Inc.~1~201495124
HL~2~1~O
PRF~123456~1234
HL~3~2~I
LIN~001~CB~1234-123456
SN1~~16~PC
HL~4~2~I
LIN~002~CB~1234-654321
SN1~~23~LB
HL~5~2~I
LIN~004~CB~1234-223456
SN1~~16~PC
CTT~5
SE~27~0001
GE~1~1
IEA~1~000000001
```