



International Truck and Engine Corporation

Indianapolis Engine Plant
Melrose Park Engine Plant
International Diesel of Alabama LLC

Electronic Data Interchange **BUSINESS PROCESS GUIDE**

Version 2.0
July 22, 2005

**International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide**

Table of Contents

Topic	Page
Introduction	2
Electronic Data Interchange Transactions	2 - 3
Electronic Data Interchange Communication Problems	3
Supplier Options	3
Manufacturing Resource Planning	3
Electronic Data Interchange Transaction Summaries:	
830 Material Release	4
846 Inventory Inquiry/Advice	5
856 Shipment Notification	6 -8
Electronic Data Interchange Data Conventions:	
830 Material Release	9 - 12
846 Inventory Inquiry/Advice	13 - 14
856 Shipment Notification	15
International EDI Reference Information	16

International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide

Electronic Data Interchange (EDI):

Electronic Data Interchange (EDI) is the electronic exchange of routine business transactions (material releases, shipping authorizations, shipment notifications, etc.) using standard data formats and **integrating them into software applications and business processes.**

It is recommended that the suppliers make arrangements to check their EDI mailbox on a daily basis.

EDI Transactions:

International Truck and Engine assembly plants will be using several EDI transactions to facilitate our communications with suppliers. These transactions are supported by ANSI X-12 and AIAG Automotive Industry Implementation Guides. The following is an explanation of each transaction currently utilized at the Indianapolis Engine Assembly Plant, the Melrose Park Engine Assembly Plant, and International Diesel of Alabama, LLC in Huntsville:

830 Material Release:

The 830 material release will be used primarily as a materials planning schedule and will contain actual engine orders, collateral demand, and production forecast. It is to be used by the supplier to schedule their production and purchase of raw material. It will reflect the plant's scheduled vacation shutdown, holidays, and projected customer orders.

846 Inventory Inquiry/Advice:

The 846 Inventory Inquiry/Advice will be used to communicate quantities consumed in production. It will note the invoice number, part number, and quantity. It should be used as a replenishment tool for SMI inventory. It is valuable for the accounts receivable department of the supplier because it will match the 820 for the check when it is issued.

856 Shipment Notification:

The 856 shipment notification must be sent by **all** suppliers to identify shipping information. This information **must be** communicated as soon as a shipment leaves the suppliers location and will be used to facilitate the receiving process for all engine plants.

International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide

997 Functional Acknowledgment:

The 997 functional acknowledgment must be sent and received by the respective engine plants and the supplier. This transaction is used to acknowledge retrieval of the electronic communication from the respective mailboxes. Supplier EDI and delivery performance will be measured and tracked based upon receipt and transmittal of this transaction set.

EDI Communications Problems:

If for any reason you experience problems relative to the electronic communication (sending/retrieval) of EDI data, please contact our **EDI Hot Line at (630) 753-6199.**

Supplier Options:

The EDI Coordinator for the engine plants will work with each supplier to determine the EDI implementation schedule and which combination of transactions will best fit the business need of our companies.

MRP (Manufacturing Resource Planning):

The requirements horizon is 12 weeks plus 3 months and contains customer orders and production forecast.

The schedules generated for suppliers are calculated on a manual basis by the material scheduling department. These schedules will be transmitted via the 830 EDI transaction set at a time determined by your material scheduling contact at the individual engine plant.

**International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide**

Material Release - 830

Type	Regenerative
Frequency	As required (determined by Indianapolis/Melrose Park Park/Huntsville Materials)
EDI Transaction	ANSI-X12/AIAG - 830
Version	2040
Extent of Commitment:	
Shipping Authorization*	As authorized by the International ordering facility
Firm Commitment*	See Below
Planning Only*	See Below

Currently, the International engine facilities only send discrete quantities through the firm commitment time period.

***Forecasting Authorization:**

The 830 material release will be used as forecasting tool for the SMI material.

***Firm Commitment:**

Timeframe to be negotiated between the individual plant material control groups and the individual suppliers on a part by part basis. Suppliers are authorized to fabricate as necessary and ready for shipment, requirements in the firm commitment timeframe. International liability equals full purchased price of production parts or assemblies.

***Planning Only:**

Requirements beginning after the negotiated firm commitment and continuing through month 6 of the materials release are for information and planning only. International assumes no liability for these materials.

In addition, the International facilities will send alternate ship to locations to selected suppliers within the "N1*ST" segment.

**International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide**

Inventory Inquiry/Advice – 846

Type	Regenerative
Frequency	Daily
EDI Transaction	ANSI-X12/AIAG - 846
Version	4020

Application

This transaction will be used to transmit inventory information from one location to another location. The transaction will note the consumption and include the automatic triggering of replenishment based on inventory levels.

The 846 Inventory Inquiry/Advice will include the invoice number, date, part number, purchase order number, and quantity. That quantity is specified as quantity used or transfer quantity.

The transaction will be used as a tool in supplier managed inventory.

**International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide**

Shipping Notification - 856

Type	Regenerative with each shipment
Frequency	As required
EDI Transaction	ANSI-X12/AIAG - 856
Version	3050

Application:

The 856 shipment notification will be used by each supplier to communicate shipping information relative to each shipment being made for the Indianapolis, Melrose Park, or the Huntsville engine plants. **Unless otherwise specified**, this data is to be transmitted at the time a shipment leaves the supplier's location to insure that it is available for the engine plants prior to the arrival of the shipment.

Industry convention requires that each shipment be identified by a single unique number called a shipment identification number (SID). This number cannot be reused or repeated within a 1-year period. This number must be contained in the ship notice in the "BSN" segment.

The International Engine division intends to utilize the AIAG Quick Receive Guidelines. In accordance with these guidelines, a quick receive label is required to be printed in both bar code format and human readable format and affixed to the packing slip.

International requires that all suppliers identify each container with bar code labels in accordance with International's Supplier Packing and Shipping Standard (Form D-13). In addition, any pallets containing multiple containers must have an additional master label or pallets containing mixed loads (more than one part number) must have an additional mixed load label.

International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide
Shipping Notification - 856 (continued)

International requires shippers to identify the International ship-to-location using the appropriate codes contained in the Appendix of Ship-To Location Codes (Indianapolis = 006, Melrose Park = 083, Huntsville = 040).

See the document Appendix of Ship-To Location Codes found in the Other Documentation on the ISN website. While several codes have been provided, only the International ship-to code and the International assigned supplier code indicating shipping point are required (use the 7 position supplier code transmitted in the "N1*ST" segment of the material release transaction (830).

International also requires shippers to identify the International component part number in the LIN segment of the detail level of the 856. International component part numbers must be identified with a "BP" identifier.

The "SCAC" code is a four character alphabetic code used by the transportation industry to identify member companies. This code must be transmitted in the TD5 segment. Authorized carriers are determined and communicated by International's corporate transportation department. If you need a "SCAC" code, please contact corporate transportation. Please refer to the International Supplier website / Other Documentation / Logistics / International SCAC Code Listing to find SCAC codes. If a deviation from an authorized carrier is needed, please contact the individual plant traffic department for a carrier and "SCAC" code to use in the 856 transactions.

The trailer number (the qualifier is TL) is transmitted in the TD3 segment. The trailer number is necessary in tracing and expediting a delivery.

Additional items of importance are the bill of lading number, the packing list number, and the carrier "pro" number. These items are transmitted at the shipment level in the "REF" segments with the following qualifiers:

Bill of Lading = BM

Packing Slip = PK

Pro Number = CN

A pro number is necessary in the tracing and expediting of deliveries. Carriers will generally "pre-assign" a series of "pro" numbers to a shipper to assure their availability concurrent with the shipment. Bill of lading and packing slip numbers are necessary in the processing of freight bills and material receipts.

International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide

Shipping Notification - 856 (continued)

The "TD1" segment of the 856 transactions contains information identifying packaging, quantities, and weight. The following is a list of the valid packaging codes for the engine plants:

<u>Description</u>	<u>Code</u>
Plastic Pallet	PLT79
Plastic Tote Box (small/medium)	TBN79
Plastic Xytec Box (knockdown)	BOX79
Plastic Molded Tray	TRY64
Wire Mesh Basket (any size)	BSK51
Metal Rack	RCK58
Metal Pallet	PLT58
Cardboard Box	BOX25
Wood Pallet	PLT94
Wood Engine Skid	SKD94

**International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide**

Material Release - 830 (Example)
See Implementation Guide for complete details

<u>EDI Data Elements</u>	<u>Data Content</u>	<u>Explanation</u>
ST*830*0001 N/L	ANSI transaction set 830, Transaction ID number 0001.	Material release for Materials planning.
BFR*05*878780096001 *0838787800960102* DL*A*960102*960531* 960102 N/L	Reference number 878780096001 Release Number 0838787800 960102, delivery based, forecast horizon start date is 1/2/96, forecast horizon end date is 5/31/96, date forecast is generated is 1/2/96.	Identifies the time horizon covered this release, type of requirements (net), discrete, planning forecast horizon, date requirements were generated.
N1*SU**92*8787800 N/L	Supplier Code	Indicates that the International assigned supplier code is 8787800.
N1*ST**92*RM N/L	Ship to location "RM"	Indicates that the ship to location is the Main Receiving Dock At Melrose Park Plant.
LIN**BP*1818732C94 *PO*8787800 N/L	Buyer's part number and purchase order number.	Identifies the Melrose part number as 1818732C94 and purchase order number as 8787800.
PER*SC*LCT N/L	Clerk code	Identifies the Melrose scheduler as "LCT".
UIT*EA N/L	Unit of Measure	Identifies that the unit of measure is each.
SDP*N*F N/L	Ship delivery pattern and time	Indicates ship delivery pattern and time is "as directed".

**International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide**

Material Release - 830 (Example, continued)

<u>EDI Data Elements</u>	<u>Data Content</u>	<u>Explanation</u>
FST*880*C*D*960102 N/L	<u>Firm</u> discrete quantity/timing	Discrete quantity of 880 pieces is due as directed on 1/2/96.
FST*1100*C*D*960108 N/L	<u>Firm</u> discrete quantity/timing	Discrete quantity of 1100 pieces is due as directed on 1/8/96.
FST*880*C*D*960116 N/L	<u>Firm</u> discrete quantity/timing	Discrete quantity of 880 pieces is due as directed on 1/16/96.
FST*1100*C*D*960122 N/L	<u>Firm</u> discrete quantity/timing	Discrete quantity of 1100 pieces is due as directed on 1/22/96.
FST*1100*C*D*960129 N/L	<u>Firm</u> discrete quantity/timing	Discrete quantity of 1100 pieces is due as directed on 1/29/96.
FST*1100*C*D*960205 N/L	<u>Firm</u> discrete quantity/timing	Discrete quantity of 1100 pieces is due as directed on 2/5/96.
FST*1000*C*D*960212 N/L	<u>Firm</u> discrete quantity/timing	Discrete quantity of 1000 pieces is due as directed on 2/12/96.
FST*1000*C*D*960219 N/L	<u>Firm</u> discrete quantity/timing	Discrete quantity of 1000 pieces is due as directed on 2/19/96.
FST*1000*D*D*960226 N/L	<u>Planning</u> discrete quantity/timing	discrete quantity of 1000 pieces is due as directed on 2/26/96.
FST*1000*D*D*960304 N/L	<u>Planning</u> discrete quantity/timing	discrete quantity of 1000 pieces is due as directed on 3/4/96.

**International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide**

Material Release - 830 (Example, continued)

<u>EDI Data Elements</u>	<u>Data Content</u>	<u>Explanation</u>
FST*1000*D*D*960311 N/L	<u>Planning</u> discrete quantity/timing	discrete quantity of 1000 pieces is due as directed on 3/11/96.
FST*1000*D*D*960318 N/L	<u>Planning</u> discrete quantity/timing	discrete quantity of 1000 pieces is due as directed on 3/18/96.
FST*1000*D*F*960325* 960331 N/L	<u>Planning</u> interval quantity. Monthly balance not yet converted to a specific week.	Indicates a balance of 1000 pieces is due as directed between 3/25/96 and 3/31/96.
FST*4200*D*M*960401 N/L	<u>Planning</u> monthly quantity and timing.	Monthly quantity of 4200 is due as as directed the month of April 1996.
FST*4400*D*M*960501 N/L	<u>Planning</u> monthly quantity and timing.	Monthly quantity of 4400 is due as as directed the month of May 1996.
FST*3600*D*M*960601 N/L	<u>Planning</u> monthly quantity and timing.	Monthly quantity of 3600 is due as as directed the month of June 1996.
SHP*01*650*050*951218 N/L	Quantity and date of last receipt	Indicates the last received quantity was 650 pieces on 12/18/95.
SHP*02*9500*051*951101 *951218 N/L	Cumulative <u>fiscal</u> YTD receipts	Indicates that total YTD receipts from 11/1/95 through 12/18/95 is 9500 pieces.

International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide

Material Release - 830 (Example, continued)

<u>EDI Data Elements</u>	<u>Data Content</u>	<u>Explanation</u>
CTT*1 N/L	Line Segments	Total number of LIN segments.
SE*28*0001 N/L	Number of included segments	Indicates that there were 28 segments transmitted in transaction 0001.

**International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide**

Inventory Inquiry/Advice – 846 (Example)

See Implementation Guide for complete details

<u>EDI Data Elements</u>	<u>Data Content</u>	<u>Explanation</u>
ST*846*0001 N/L	ANSI Transaction set 846 Transaction ID number 0001.	Inventory Inquiry/ Advice
BIA*00*MM*00025 *20000606 N/L	Manufacturer Inventory Report Number is 00025 dated 06/06/00.	Identifies the number and date of the advice.
REF*IK*00025 N/L	Reference number 00025 is the Invoice number.	Identifies the Invoice number.
N1*MP**92*040 N/L	Manufacturing Plant code is 040.	Identifies the plant code.
N1*SU**92*87878S1 N/L	International Assigned Supplier Code is 87878S1.	Identifies the supplier.
LIN*1*BP*123456C1* PO*P000001 N/L	First Buyer's Part Number is 123456C1. Purchase Order Number is P000001.	Identifies the buyer's first part number and Purchase Order Number.
DTM*405* 20000605 N/L	Production Date is 06/05/00.	Identifies date and time operation was performed.
UIT*EA*0 N/L	Unit of measure for part Number 123456C1 is "EA" For Each.	Identifies the unit of measurement code.
QTY*99*100 N/L	Quantity Used is 100 pieces.	Identifies the quantity
N1*ST**92*RS N/L	Ship to code for shipment is Receiving.	Identifies the Stock- room at Huntsville.

**International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide**

Inventory Inquiry/Advice - 846 (Example, Continued)

LIN*2*BP*456789C1 PO*P000001 N/L	Second Buyer's Part number is 456789C1. Purchase Order Is P000001.	Identifies the buyer's second part number and Purchase Order Number.
DTM*405* 20000605 N/L	Production Date is 06/05/00.	Identifies date and time operation was performed.
UIT*EA*0 N/L	Unit of measure for part Number 456789C1 is "EA" For Each.	Identifies the unit of measurement code.
QTY*99*50 N/L	Quantity Used is 50 pieces.	Identifies the quantity.
N1*ST**92*RS N/L	Ship to code for shipment is Receiving.	Identifies the Stockroom at Huntsville.
CTT*2 N/L	There are 2 LIN segments (part number records) Contained in this transaction.	Identifies the total Number of line items.
SE*17*0001 N/L	17 Segments were transmitted In Transaction 0001.	Identifies the total number of segments Transmitted.

**International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide**

Shipment Notification/Manifest - 856 (Example)

For complete details
see Implementation Guide
Appendix Engine Example I

**International Truck and Engine Corporation
Engine Division
Manufacturing's Business Process Guide**

Engine Division - EDI Contacts

<u>Activity</u>	<u>Contact</u>	<u>Phone</u>
Indianapolis Plant	Kim Boomershine	(317) 352-4981
Huntsville Plant	kim.boomershine@	(317) 352-4616 Fax
Melrose Park Plant	nav-international.com	

- ◆ Data Content
- ◆ Interpretation

Indianapolis DUNS Number = 094 465 028
Huntsville DUNS Number = 115 117 926
Melrose Park DUNS Number = 005 245 238

Corporate Implementation Guides

- www.internationalsupplier.com / Other Documentation / EDI

SCAC Codes

- www.internationalsupplier.com / Other Documentation / Logistics / Transportation SCAC Code Listing

Routing Matrix

- www.internationalsupplier.com / Other Documentation / Logistics / Transportation Routing Matrix

Labeling Guidelines

- www.internationalsupplier.com / Other Documentation / Engine Division / Quick Receive Guideline
- www.internationalsupplier.com / Other Documentation / Engine Division / D-13 Packaging Specification

EDI Hot Line

(630) 753-6199

- Communication Problem