



Bill Of Lading



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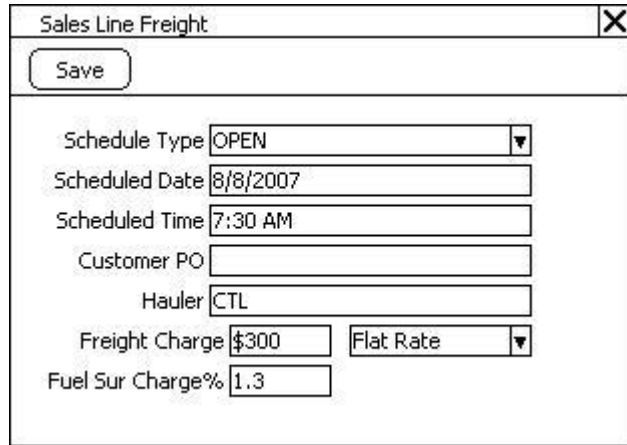
Problem Definition

<i>Problem Definition</i>	CCDA
<p>ACMECO distributes agricultural chemicals, pesticides and fertilizers. They are currently using Dynamics GP, and are looking for a way to eliminate some manual record keeping by the Traffic Department and Scale Operators, by bringing this external data into the system.</p> <p>The external information falls into three broad areas:</p> <ul style="list-style-type: none"> - The Traffic Department records information about the freight company or customer's truck that will pick up the product. This information is used to generate the Shipping Schedule Report (sample in Appendix). - Scale Operators record information about each individual shipment that is used to produce a Bill of Lading Document (sample in Appendix) - Additional information needs to be captured about each Item Number to handle concentration and purity calculations (Conversion Factors). 	



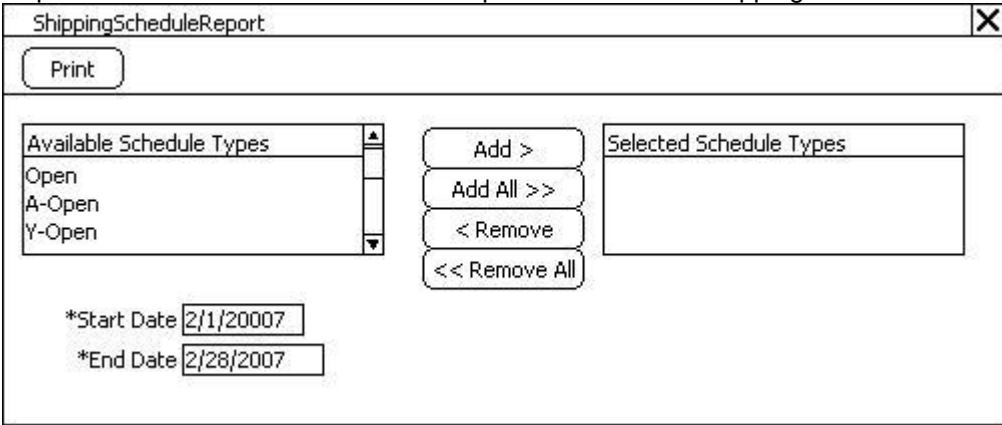
Design Features

<i>Solution Overview</i>	CCDA
<p>The process begins with the Traffic Department recording a Sales Orders in Dynamics GP.</p> <p>The proposed solution will add a window to Sales Transaction Entry to capture additional information (such as Scheduled Ship Time and Date) associated with each sales order line. This information will be used to print the Shipping Schedule report from Dynamics GP. In addition to the fields shown on the sample Shipping Schedule (appendix), the report will also print the Sales Order Number.</p> <p>The Scale Operators will use Shipping Schedule report, which shows the Sales Order Number, to retrieve the correct document in the BOL Entry window when a truck arrives to load a shipment. The BOL Entry window will capture information needed to create and print a BOL. When the shipment and BOL are complete, the Scale Operator will mark the BOL as complete.</p> <p>Accounting will review the “complete” Bills of Lading, and post those that are complete. Posting a complete BOL will update fulfillment information on the Sales Order, then open the transaction in Sales Transaction Entry. The user will then Transfer the Order to an Invoice, at which time any Freight Charge or Fuel Surcharge will automatically be added to the invoice.</p>	

Sales Line Freight	CCDA
<p>A new window will be added in Sales Transaction Entry called Sales Line Freight. This new window will capture the information needed to generate the Shipping Schedule report, and freight information used to add freight charge lines when the order is invoiced. This window will be opened from an Extras menu (Extras >> Additional >> Sales Line Freight) when in Sales Transaction Entry, and is “attached” to the Sales Line (the information shown on this window can be recorded separately for each sales line item).</p> <div data-bbox="415 602 1037 1044" data-label="Form">  <p>The screenshot shows a window titled "Sales Line Freight" with a close button (X) in the top right corner. Below the title bar is a "Save" button. The main area contains several input fields: "Schedule Type" is a dropdown menu with "OPEN" selected; "Scheduled Date" is a date field with "8/8/2007" entered; "Scheduled Time" is a time field with "7:30 AM" entered; "Customer PO" is an empty text field; "Hauler" is a text field with "CTL" entered; "Freight Charge" is a currency field with "\$300" entered and a "Flat Rate" dropdown menu; "Fuel Sur Charge%" is a percentage field with "1.3" entered.</p> </div> <p>Schedule Type: comes from Schedule Type Maintenance described below. The Default Schedule Type will always be displayed first, but the user can change it to any of the other available Types.</p> <p>Scheduled Date and Scheduled Time are entered, if known.</p> <p>Hauler is a free-entry text field.</p> <p>Customer PO is a free text entry field. By default it will be filled with the Customer PO entered on the Sales Transaction Entry window, but the user can change it if necessary.</p>	



<p>During discussions with ACMECO it was decided that all sales transactions would be for one customer PO, and would have only one item on the transaction.</p> <p>Freight Charge: can be entered either as a “Flat Rate” (shown above) or “Per Ton”. The drop-down box will contain the two options (Flat Rate, Per Ton). Freight Charge and Fuel Sur Charge % are provided by the Hauler and recorded for each line on the sales transaction. If customer brings their own truck, freight is not used. If delivered, ACMECO calls the shipper and gets freight information.</p> <p>This information will stay “attached” to the order when an order is transferred to an invoice, and will also be visible after posting the transactions (when the transactions are moved to history).</p>	

Shipping Schedule Report	CCDA
<p>The Shipping Schedule report window will print the Shipping Schedule Report from Dynamics GP in a format similar to the current report.</p> <p>The report window will be accessed from Reports >> Sales >> Shipping Schedule.</p>  <p>Schedule Types come from Schedule Type Maintenance (see section Schedule Type Maintenance). The Schedule Type controls into which section of the report the sales lines are placed. By default, all Schedule Types will be selected, but the user can de-select one or more of the Schedule Types by “Removing” it from the Selected Schedule Types list</p> <p>The report will show sales lines that are not fulfilled and, either have a Schedule Date that falls within the specified date range, or are assigned one of the Schedule Types.</p> <p>The report will group records by:</p> <ul style="list-style-type: none"> - Scheduled Date & Time (if assigned), then - Schedule Type in alphabetical order, then - Sort method assigned to the Schedule Type (customer then item, or item then customer) 	

Regardless of the Schedule Type assigned to a sales line, if a Schedule Date/Time has been assigned the line will sort at the top of the report.

Within the Schedule lines section of the report, if multiple dates are present a blank line will be inserted between each change in date.

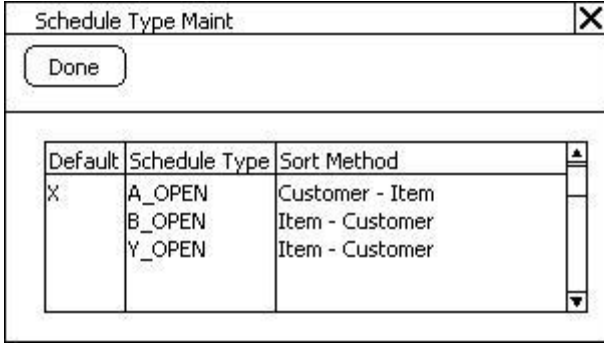
If the Sort Method is Customer-Item, a separator line (black line) will be added after the entire section.

If the Sort Method is Item-Custom, a separator line (black line) will be added after each change in Item within the section.

The report will be designed for Legal size paper, portrait layout.

Columns on the report are (see appendix):

- Date: Schedule Date field on Sales Line Freight
- Hauler: Hauler field on Sales Line Freight
- Product: Item Number on Sales Line
- Description: Item Description on Sales Line
- Time: Schedule Time on Sales Line Freight
- SOP Number: Sales Order Number
- Sold To Customer: Customer Name from Sales Transaction
- Ship To Customer: Contact Name from Ship To Address on Sales Transaction
- PO Number: PO Number on Sales Line Freight

Schedule Type Maintenance	CCDA
<p>A new window will be added called Schedule Type Maintenance for maintaining a list of Schedule Types. The Shipping Schedule Report uses Schedule Type to group scheduled sales line fulfillment. This window will be accessed from Tools >> Setup >> Sales >> Schedule Type Maintenance.</p>  <p>An unlimited number of Schedule Types can be created, and one of them marked as Default. Each Schedule Type can be assigned a Sort Method, either "Customer – Item", or "Item". The Sort Method is used by the Shipping Schedule Report (see above).</p> <p>The Default Schedule Type will be displayed automatically in the Sales Freight Line window.</p>	

BOL Entry	CCDA

A new window called BOL Entry will record shipment specific information associated with each fulfillment. It will be accessed from Transactions >> Sales >> BOL Entry.

X
BOL Entry

Save
Clear
Delete
Void
Post
Print

BOL Number	<input type="text" value="145210"/>	<input type="button" value="L"/>	<input checked="" type="checkbox"/> Complete	
SOP Number	<input type="text" value="ORD0123"/>	<input type="button" value="L"/>	Weighed By	<input type="text" value="dnc"/>
Customer Nm	<input type="text" value="AA123"/>	<input type="button" value="L"/> <input type="button" value="-->"/>	Tare Weight LBS	<input type="text" value="30540"/>
Name	<input type="text" value="Aaron Fitz"/>		Gross Weight LBS	<input type="text" value="78860"/>
Item Number	<input type="text" value="FERTILZER001"/>	<input type="button" value="L"/>	# Shipping Units	<input type="text" value="1"/>
Description	<input type="text" value="Fertilizer"/>		Shipping U of M	<input type="text" value="Palette"/>
Time In	<input type="text" value="1:00 PM"/>	<input type="button" value="T"/>	Net Weight LBS	<input type="text" value="48320"/>
Time Out	<input type="text" value="1:20 PM"/>	<input type="button" value="T"/>	Product Weight	<input type="text" value="48320"/>
Hauler	<input type="text" value="CTL"/>		Prod. Strength	<input type="text" value="0.9215"/>
Truck Num	<input type="text" value="58"/>			

Total N	<input type="text" value="29.06"/>	pH	<input type="text"/>
Ammonium Nitrate	<input type="text" value="83.07"/>	Temp	<input type="text" value="91"/>
Free Ammonia	<input type="text"/>	Urea	<input type="text" value="0"/>
Spec Grav @60F	<input type="text" value="1.373"/>		

= Lookup Button = Time Button = Expansion Button

The scale operator will fill in information on the BOL Entry window, and print the BOL. When the document is complete and printed, the operator will mark the Complete box and save the BOL. Later a user with BOL Posting security permissions will review Complete BOLs, and Post them. Posting will create an Invoice and update fulfillment information., and the BOL will move to history (become un-editable). This process will also add (if needed) two service items to the invoice for Fuel Charge and Fuel Surcharge (see BOL Setup).

BOL Number: The Scale Operator accepts the next BOL Number (see section BOL Setup), or manually enters a BOL Number. The system will auto-increment the BOL Number, and will also accept manually entered BOL Numbers. The user can retrieve existing BOL documents by typing in the BOL number, using the BOL Lookup (see section BOL Lookup), or using the VCR buttons on the bottom of the window to scroll through documents.

SOP Number: Sales Order Processing Number. The Shipping Schedule Report will have a column for the SOP Number for each line on the report. The user can enter the number into the SOP Number field, or use the Lookup to select one.

The user will then be prompted to confirm the customer on the sales order is the correct customer (this is to confirm the correct order was selected). If not, the SOP Number will be cleared.

Customer Number: will automatically fill in from the Sales Order, and will not be editable if a Sales Order is entered. If the Scale Operator is creating a BOL for material not on a Sales Order, this field will be editable and required.

Customer Number Expansion: Clicking this button opens the Shipping Information window:

X
Shipping Information

Sold To

Destination

The window provides fields to record free-text address/shipping information that will print at the top of the BOL. The system will provide the following defaults if the user does not manually edit this information.

First Line: Defaults to Customer Name.

Second Line: in the Sold To section it will default to Sales Order Bill To address City & State. In the Destination section it will default to Sales Order Ship To City & State.

Item Number: ACMECO has indicated there will always be only one Item Number on a Sales Order. The system will automatically locate and display that Item Number on the BOL Entry window. Description fills automatically. If the displayed Item Number is not correct, the user can click the Lookup button and select a different Item. Changing the Item Number to one that is not on the Sales Order will blank out the SOP Number field. If the customer wants something but does not have an Order, the Scale Operator will create a BOL without a Sales Order (just selecting a Customer and Item). The Lookup button will open the normal GP Item Number Lookup, which displays all Items in GP.

Time In: Scale Operator clicks the Time In button. The current time automatically fills into the Time In field.

Hauler fills in from information on the Sales Line Freight window (see section Sales Line Freight). User can edit if necessary.

Truck Num: filled in by the user.

Weight By: free-text field used to record who weighed the truck

Tare Weight LBS: tare weight is recorded.

After recording the Tare Weight, the truck leaves the scale and proceeds to be loaded. The operator will save the BOL, and may begin creating a new BOL.

When the truck returns from filling, the BOL document is retrieved, and the remaining information filled in, such as **Time Out** and **Gross Weight LBS**. Entering Gross Weight LBS will cause the **Net Weight LBS** to be calculated (Gross – Tare). Net Weight cannot be edited.

Shipping Units and Shipping U of M: these may be entered by the operator, but are not required. This information, if present, will appear in the “No Shipping Units” column on the BOL (see sample in Appendix). If a Quantity is entered the U of M will default to be Base U of M from the BOL Unit of Measure Schedule (see section BOL Setup). The user can select a different U of M from the Lookup. Shipping Units will default to 1 TL (truck load). (See Shipping U of M Setup).

Product Weight: defaults to Net Weight, but can be edited by the user. This field might be changed to remove weight due to palettes or other packaging. Product Weight will be used to update fulfillment information in Sales Transaction Entry on the Order.

Inventory Conversion: Defaults from BOL Item Maintenance window (see section BOL Item Maintenance). It may be editable depending on setup. This is informational and has no effect on how BOL fulfills the sales order.

Product Analysis fields (inside box) – may be editable depending on setup in BOL Item Maintenance window. These fields print in the “chemical properties” boxes towards the bottom of the BOL report.

When data entry is complete, the operator will mark the **Complete** checkbox and Save the

document. The Complete checkbox will be used by accounting users to identify which BOLs are ready to Post.

SAVE: saves the BOL.

CLEAR: clears the screen without saving the BOL, or without saving changes to the BOL

DELETE: confirms user wants to delete the document, permanently deletes the document. Documents cannot be deleted if the BOL has been printed. After the BOL has been printed, the delete button will be disabled.

VOID: confirms the user wants to void the document, then marks the Void flag and moves the BOL to history. Any document can be voided.

POST: IGNORE- there will not be a POST button on this window. A separate BOL Posting window has been added below. Posting updates fulfillment information on the sales order based on the quantity on the Net Weight LBS from the BOL. Posting moves the document to history, where it is no longer editable, and cannot be voided or deleted. This button will only be active for certain User IDs based on BOL Posting Setup (see section BOL Posting Setup).

At any point the BOL Report can be printed. It will print with as much information has been entered.

A BOL can be saved when data entry is incomplete. It will not have any effect on the sales order until the BOL is Posted. An incomplete BOL can be retrieved later, finished, then posted. See appendix for the format of the BOL report.

BOL Posting

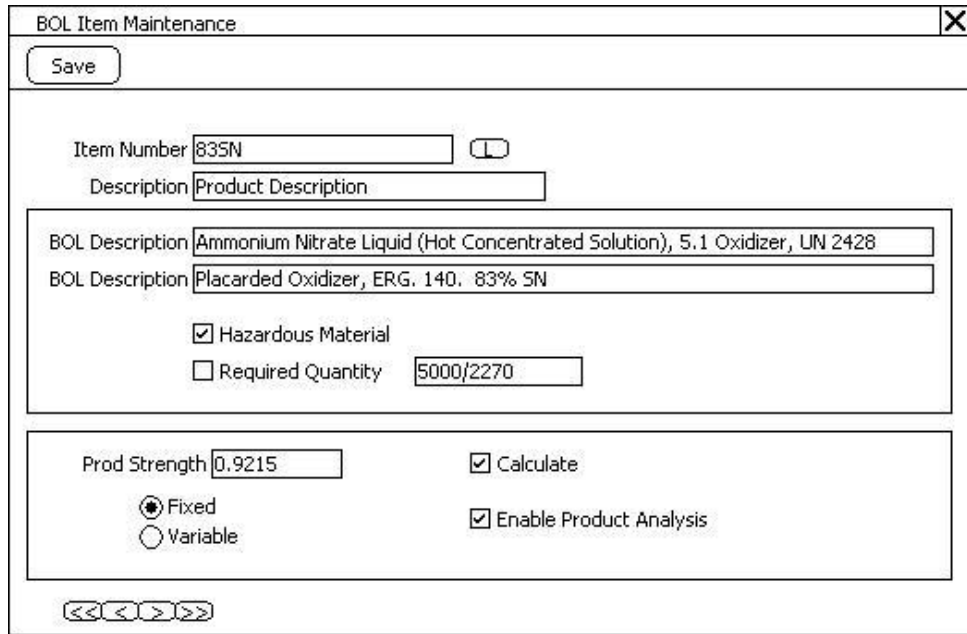
Posting will not be allowed if the Time Out is blank, if the Product Weight is zero, or if there is no SOP Number assigned. If there is no SOP Number assigned, the user will need to first manually create a Sales Order for the BOL Item, then add the SOP Number to the BOL.

When the BOL is posted the Product Weight will be used to update fulfillment information on the sales order. For example, if the Sales Order has Item-X for 10ton, the BOL could be for



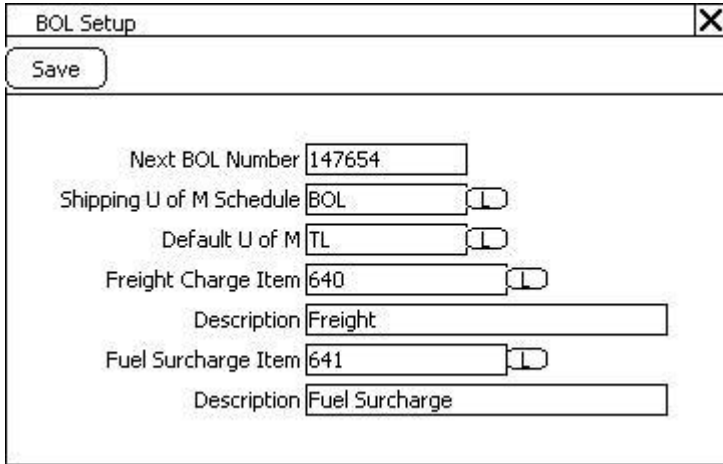
<p>2ton, which will fulfill 2-ton of Item-X and create an Invoice for those 2-ton.</p> <p>After posting the BOL the system will open the sales order in Sales Transaction Entry. At this point the user can transfer the sales order to a sales invoice. During the transfer process, if there is a Freight Charge or Fuel Surcharge amount on Sales Line Freight, the system will add freight/surcharge to the invoice by adding a new line item (see BOL Setup for the Freight Charge and Fuel Surcharge Item Number setup). Document totals will be recalculated accordingly.</p>	

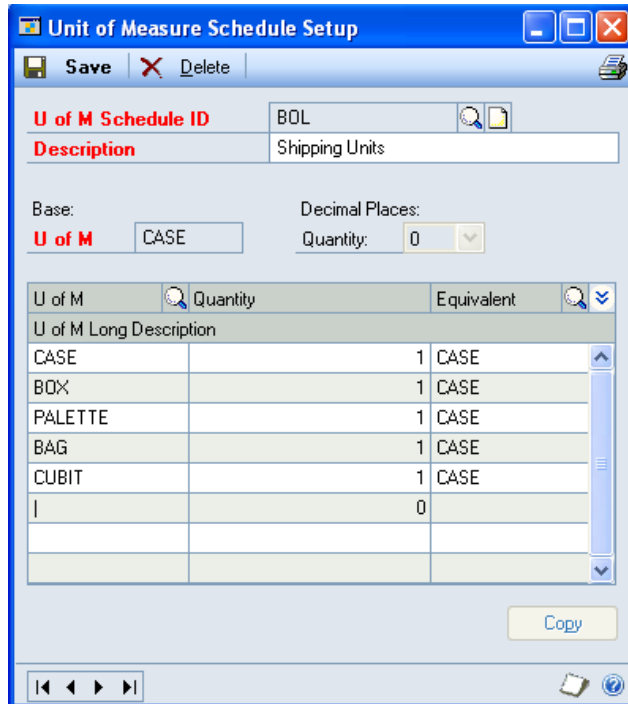
<i>BOL Inquiry</i>	CCDA
<p>The BOL Inquiry will be a view-only version of the BOL Entry window. This window will be accessed from Inquiry >> Sales >> BOL Inquiry.</p> <p>This window is a copy of the BOL Entry window (see above), with all fields set to be un-editable. No changes can be made to the BOL from the Inquiry window.</p> <p>This window is used to view both open and posted BOL documents.</p> <p>The BOL report will always be available for Reprint. The system will track the number of times printed. On reprints the report will display REPRINT and also the number of times printed. These fields will not be shown on the first printing.</p>	

BOL Item Maintenance	CCDA
<p>A new window will be added called BOL Item Maintenance for maintaining several Item-specific pieces of information needed for the BOL. This window will be accessed from Cards >> Inventory >> BOL Item Maintenance, and also when the Item Maintenance window is opened from Extras >> Additional >> BOL Item Maintenance.</p> <div data-bbox="247 540 1207 1170">  </div> <p>BOL Description: these are two, 100-character fields used to store the description for the Item that will appear on the BOL report.</p> <p>Hazardous Material: marking this box will cause an X to appear in the HM column on the</p>	

<p>BOL report.</p> <p>Required Quantity: marking this box will cause RQ to be printed in RED on the BOL report, and beneath the letters the RQ quantity will print.</p> <p>Either one box or the other can be marked, but not both (Hazardous or Required Qty).</p> <p>Inventory Conversion: is informational and has no effect on how BOL fulfills a sales order. If the value is marked as Fixed, it will not be editable on the BOL Entry window. Variable values will be editable on BOL Entry.</p> <p>Calculate: when marked, the Inventory Conversion factor will be used to calculate the Quantity Fulfilled on the sales order line (see section BOL Entry). IGNORE – this field has been removed and will not be on the window.</p> <p>Enable Product Analysis: when marked, the chemical properties section of the BOL Entry window (the part in a box) is enabled and editable by the user. Otherwise those fields will not be editable.</p>	

BOL Posting	CCDA																				
<p>The BOL Posting window is used to post complete Bills of Lading. Accessed from Transactions >> Sales >> BOL Posting.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <div style="border: 1px solid black; padding: 2px;"> X </div> <div style="border: 1px solid black; padding: 2px; margin-top: 2px;"> Post Refresh </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th style="width: 20px;">X</th> <th style="width: 150px;">BOL Number</th> <th style="width: 100px;">SOP Number</th> <th style="width: 150px;">PO Number</th> <th style="width: 100px;">Item Number</th> <th style="width: 100px;">Hauler</th> <th style="width: 100px;">Date</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">X</td> <td>147654</td> <td>ORD0123</td> <td>4500310610-4</td> <td>651</td> <td>CTL</td> <td>8/21/2007</td> </tr> <tr> <td></td> <td>147657</td> <td></td> <td></td> <td>123AN</td> <td>CTL</td> <td>8/21/2007</td> </tr> </tbody> </table> </div>	X	BOL Number	SOP Number	PO Number	Item Number	Hauler	Date	X	147654	ORD0123	4500310610-4	651	CTL	8/21/2007		147657			123AN	CTL	8/21/2007
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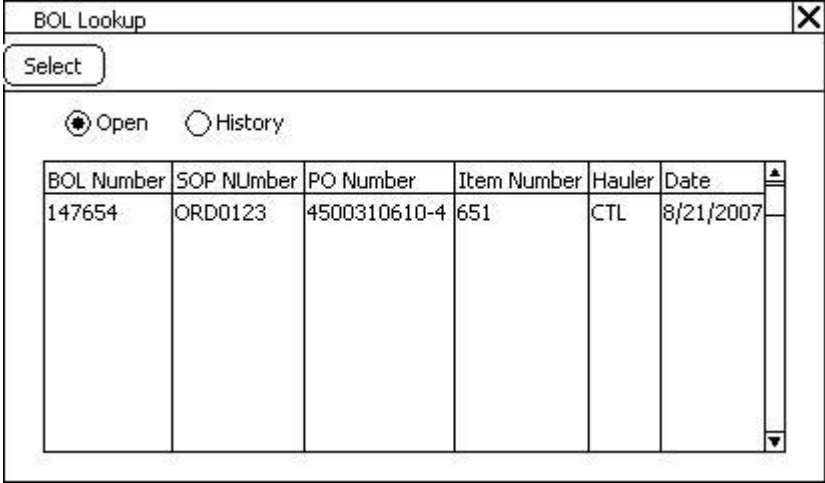
BOL Setup	CCDA
<p>BOL Setup is used to create and maintain the Next Bill of Lading document number, and the BOL U of M Schedule. The window is accessed from Tools >> Setup >> Sales >> BOL Setup.</p>  <p>On BOL Entry there are fields called # Shipping Units and Shipping U of M. ACMECO will create a U of M Schedule in Dynamics GP that has all possible Shipping U of M on it. The quantity relationship will not be used. This will allow us to use this existing functionality in GP to provide a Lookup on BOL Entry, rather than re-creating identical functionality just for this customization.</p> <p>Default U of M: pick one of the available Units of Measure from the selected Schedule to be used on BOL Entry as the default Shipping U of M.</p> <p>When the user clicks the Shipping U of M lookup button, the Lookup window will show all of the Units specified on the U of M Schedule shown here on the Setup window. An example is shown below:</p>	



U of M	Quantity	Equivalent
U of M Long Description		
CASE		1 CASE
BOX		1 CASE
PALETTE		1 CASE
BAG		1 CASE
CUBIT		1 CASE
		0

The only relevant information is in the U of M column—these are the Units of Measure that will be shown in the lookup. The Quantity and Equivalent will not be used, so can be set to anything. The default will automatically be filled in on the BOL Entry window.

Fuel Charge and Fuel Surcharge are service items that will be added to an invoice after BOL Posting (see section BOL Entry for BOL Posting). The system will ensure that the items entered here are of an item type = service.

BOL Lookup	CCDA												
<p>BOL Lookup is used by BOL Entry and BOL Inquiry to retrieve saved documents. This window is accessed from a Lookup button and those windows.</p>  <p>The screenshot shows a window titled "BOL Lookup" with a "Select" button and radio buttons for "Open" (selected) and "History". Below is a table with the following data:</p> <table border="1"><thead><tr><th>BOL Number</th><th>SOP Number</th><th>PO Number</th><th>Item Number</th><th>Hauler</th><th>Date</th></tr></thead><tbody><tr><td>147654</td><td>ORD0123</td><td>4500310610-4</td><td>651</td><td>CTL</td><td>8/21/2007</td></tr></tbody></table>	BOL Number	SOP Number	PO Number	Item Number	Hauler	Date	147654	ORD0123	4500310610-4	651	CTL	8/21/2007	
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147654	ORD0123	4500310610-4	651	CTL	8/21/2007								

BOL Process Flow

