



**DS0482**

**Agile Integration**



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## Problem Definition

<b><i>Problem Definition</i></b>	<b>CCDA</b>
<p>ACME Co. sells interconnecting materials for the semiconductor and electronics industry. Their products are sold worldwide, and some of the products are considered hazardous material.</p> <p>These two characteristics (international shipments of hazardous materials) create unique requirements for shipping. A shipment may pass through a freight forwarder, and a number of different shipping documents can be required based on the method of shipment and destination country.</p> <p>ACME Co. looked at many of the common freight rate calculation packages that integrate with GP, such as Starship and vShip, but none of them could fully support their needs.</p> <p>Agile Network’s Transportation Management Solution (<a href="http://www.agile-network.com">www.agile-network.com</a>) has software that meets all of ACME Co.’s needs. ACME Co. will be using the Agile Pack, Ship, Export, Hazmat, and View solutions. Agile does not have an integration to GP, and there is additional information Agile needs about a shipment that GP does not currently have the ability to store.</p> <p>Pick Tickets are printed from GP with a barcoded Order Number. A user scans this document into Agile to perform the pick and pack. Agile also performs a pick verification during the packing process where the user scans each item that was picked, before packing it, and Agile confirms the correct item/quantity were picked. When the user indicates packing is complete, Agile will go to the GP database and retrieve the order information needed to calculate freight and print the required shipping documents.</p> <p>On a daily basis a user will execute a process from Agile that sends freight information back into a table in the GP Company Database.</p> <p>ACME Co. needs to add to GP the ability to store the additional shipping and freight information needed by Agile, and provide a way for GP to update the freight amount based</p>	



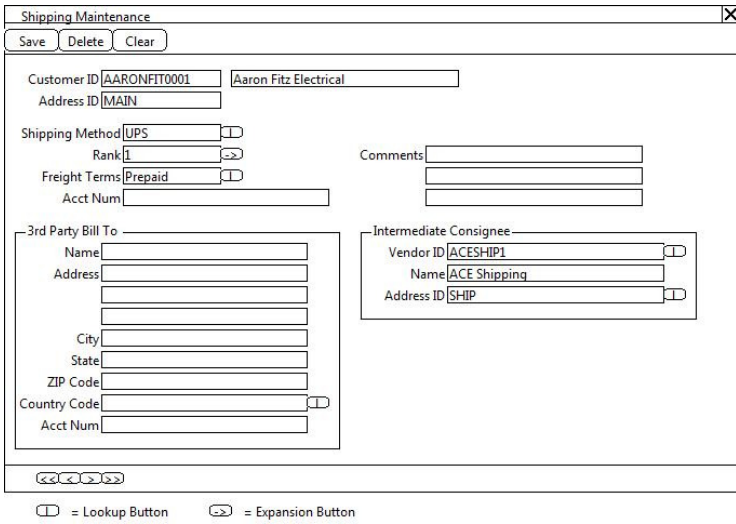
on information provided by the Agile software.

Also, since the Agile system will use only the Shipping Method and Ship To Address on the Sales Transaction Header, to avoid user confusion ACME Co. would like to lock those fields on the Sales line so that they user cannot edit them.

## Solution Overview

<b><i>Solution Overview</i></b>	<b>CCDA</b>
<p>There are three broad areas covered by the proposed solution:</p> <ol style="list-style-type: none"> <li>1) Customer Address Maintenance – each Customer Address in GP needs to have the ability to be associated to multiple Shipping Methods, and each Shipping Method has a number of additional fields associated with it, such as 3<sup>rd</sup> Party Ship To address fields, and Intermediate Consignee address fields.               <ol style="list-style-type: none"> <li>a. We will add a new window (Customer Address Shipping Maintenance) that will be used to record/maintain/edit this information.</li> </ol> </li> <li>2) Sales Transaction Entry – when a Ship To Address is selected on a Sales Order, the Shipping Information from #1 needs to be copied onto the Sales Order. The information needs to be “attached” to that order, and the user needs to be able to make changes to it on a per-order basis (without changing the Master record).               <ol style="list-style-type: none"> <li>a. We will add a new window (Sales Shipping Method Entry) where the user can see/edit the Shipping Information for each order. This information will follow the document when posted (i.e. history), and will be viewable in an Inquiry window when a document is viewed in Sales Transaction Inquiry.</li> <li>b. The Shipping Method and Ship To Address will be locked on the Sales Line for all users except SA. Leaving the editable for SA ensures that if the need arises to edit those fields, it will still be possible to do so without having to disable the customization.</li> </ol> </li> <li>3) Agile Freight Calculation Integration – a new window (Agile Integration) will be added from which a user can run a process that does the following:               <ol style="list-style-type: none"> <li>a. Locate documents with updated freight. This data will be in a new “agile integration” table in the GP company database. Agile will update this table on a daily basis based on the orders that were shipped through Agile.</li> <li>b. Move those documents into a common batch (i.e. Ready To Invoice).</li> <li>c. Update freight on those documents, and recalculate taxes, totals and distributions as needed.</li> <li>d. The user will then open the batch in the Sales Batches window and transfer the batch of Orders to Invoices.</li> </ol> </li> </ol>	

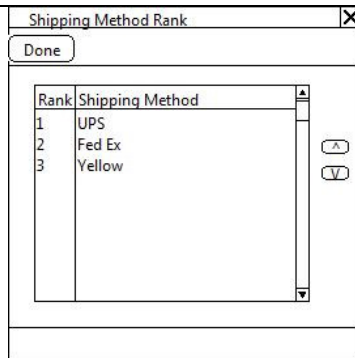
## Design Features

<i>Customer Address Shipping Maintenance</i>	CCDA								
<p>This window is used to enter/maintain the Shipping information for a Customer Address.</p> <p><b>Navigation: from the Customer Address Maintenance window &gt;&gt; Additional &gt;&gt; Shipping Maintenance.</b></p> 									
<table border="1"> <thead> <tr> <th>Field</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>Customer ID, Name</td> <td>Not editable. Pulled in from the Customer Address Maintenance window.</td> </tr> <tr> <td>Address ID</td> <td>Not editable. Pulled in from the Customer Address Maintenance window.</td> </tr> <tr> <td>Shipping Method</td> <td>User enters a Shipping Method, or selects one from the Lookup.</td> </tr> </tbody> </table>	Field	Function	Customer ID, Name	Not editable. Pulled in from the Customer Address Maintenance window.	Address ID	Not editable. Pulled in from the Customer Address Maintenance window.	Shipping Method	User enters a Shipping Method, or selects one from the Lookup.	
Field	Function								
Customer ID, Name	Not editable. Pulled in from the Customer Address Maintenance window.								
Address ID	Not editable. Pulled in from the Customer Address Maintenance window.								
Shipping Method	User enters a Shipping Method, or selects one from the Lookup.								

Rank	Displays the Shipping Method's Rank. Click the expansion button to open the Shipping Method Rank window. See below for changing the Rank.
Freight Terms	User enters the Freight Terms, or selects one from the Lookup. The Lookup is the SOP User Defined Table #1 Lookup. Users will not be allowed to add new values from this location—if they enter a value that does not already exists, they will receive a warning to that effect, the field will clear, and they will have to enter a new value.
Account Number	A 30-character alpha-number field
Comments	Three 50-character fields.
3 <sup>rd</sup> Party	Name and Address fields. These all are the same as the Customer Address maintenance fields (same length of field, datatypes, etc).
Consignee	The Consignee Information will be pulled from a linked Vendor/Vendor Address. See below for more details.
VCR buttons	The VCR buttons in the bottom left corner scroll through the Shipping Methods assigned to the displayed Customer-Address combination. To view Shipping Methods for a different Customer-Address, the user must close this window and select a different Customer-Address on Customer Address Maintenance.

**Shipping Method Rank**  
The Shipping Method Rank determines the order in which the Shipping Methods are displayed in a new Lookup on the Sales Transaction Entry window.

When a Shipping Method is moved into the #1 position, it will automatically be set at the Shipping Method on the Customer Address Maintenance window. This is done because the Shipping Method on Customer Address Maintenance will be used by default when a new Sales Transaction is created for the selected Ship To Address.



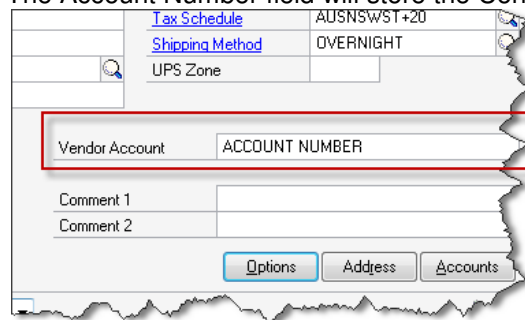
To change a Rank, click on a row in the window, then click the up/down buttons on the right.

### Consignee

The Consignee's are common to all Customers. Rather than repeating the data entry of Name, Address, etc on every Customer Shipping Maintenance record, the Consignee will be specified with a reference to an existing Vendor record.

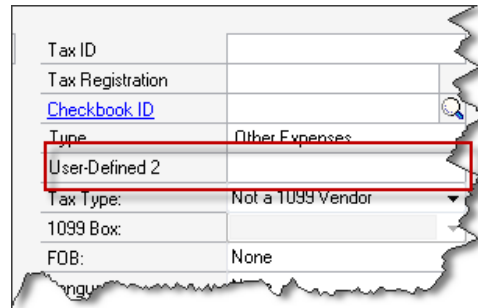
This will reduce duplicate data entry, and facilitate easier updates of information (like a changed address). The Consignee Information will be recorded as follows:


**Vendor Maintenance:** The Account Number field will store the Consignee Account Number.





**Vendor Maintenance Options:** the User-Defined 2 field will store the Freight Terms.

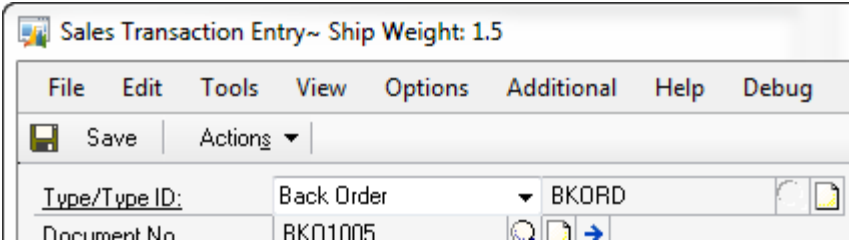


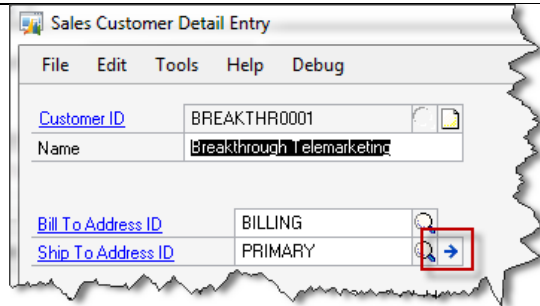
Tax ID	
Tax Registration	
<a href="#">Checkbook ID</a>	
Type	Other Expenses
<b>User-Defined 2</b>	
Tax Type:	Not a 1099 Vendor
1099 Box:	
FOB:	None

Controls will be added to this field so that if when the user enters a value it is verified against the list of SOP User Defined Table#1 values. If it is not valid, a warning will be displayed, and the user will have to enter a new value.

A Lookup of the pre-defined Freight Terms can also be accessed via Additional >> Lookup Freight Terms. The SOP User Defined List Lookup window will open, and the selected value will be returned to the User-Definfed2 field.

**Vendor Address Maintenance:** all other information (address, name, phones, Shipping Method) will be stored on the Vendor Address.

<b>Sales Transaction Entry</b>	<b>CCDA</b>
<p>When a user starts a new sales transaction, GP defaults to use the Ship To Address ID specified on the Customer Maintenance window. When the Ship To Address ID is populated (or changed by the user), the customization will pull in the Customer Address Shipping Information described in the previous section. The Shipping Method and Freight Terms will display in the Title Bar of the window, in a manner similar to what is shown below.</p>  <p>Example of showing additional information in the Title Bar</p> <p>In this case, the Title Bar will show something like: Sales Transaction Entry~ Ship Method: UPS Freight Terms: Prepay</p> <p>By displaying this information on the main window, the user will not need to go into an additional window to know whether or not they need to make changes. This information will display for new documents, and for existing documents (that have the new Shipping Information).</p> <p>If any changes need to be made to the Shipping Method, Freight Terms, or any of the associated address fields or account numbers, the new Sales Shipping Entry window will be opened from the Ship To Address Expansion button on the Sales Customer Detail Entry window (below).</p>	



Sales Customer Detail Entry

File Edit Tools Help Debug

Customer ID: BREAKTHR0001

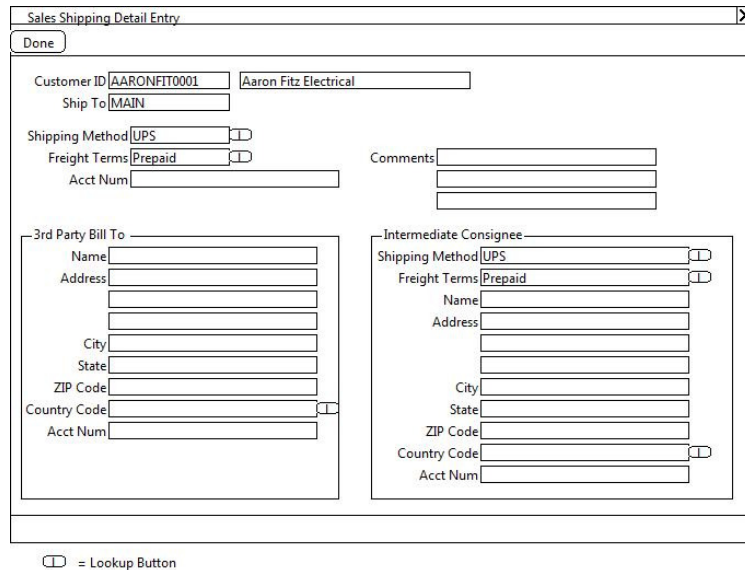
Name: Breakthrough Telemarketing

Bill To Address ID: BILLING

Ship To Address ID: PRIMARY

A red box highlights the expansion arrow next to the Ship To Address ID field.

Clicking the Ship To Address expansion opens the window below:



Sales Shipping Detail Entry

Done

Customer ID: [AARONFIT0001] Aaron Fitz Electrical

Ship To: [MAIN]

Shipping Method: [UPS]

Freight Terms: [Prepaid]

Acct Num: [ ]

Comments: [ ]

3rd Party Bill To:

Name: [ ]

Address: [ ]

City: [ ]

State: [ ]

ZIP Code: [ ]

Country Code: [ ]

Acct Num: [ ]

Intermediate Consignee:

Shipping Method: [UPS]

Freight Terms: [Prepaid]

Name: [ ]

Address: [ ]

City: [ ]

State: [ ]

ZIP Code: [ ]

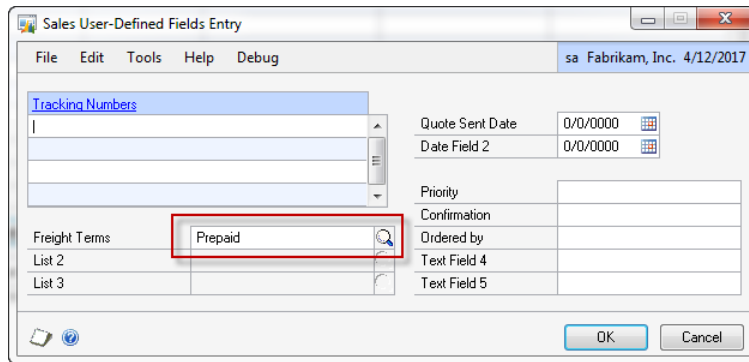
Country Code: [ ]

Acct Num: [ ]

[ ] = Lookup Button

Both the Sales Customer Detail Entry (SCDE) window and Sales Shipping Detail Entry (SSDE) windows will open. The SSDE window will contain all of the information for the Customer-Address-Shipping Method that was entered on the customer's Shipping Maintenance window. All of the fields function as previously described, with a couple of exceptions noted below.

Field	Function
Shipping Method	<p>The Shipping Method used by GP is also displayed on the SCDE window. If the Shipping Method is changed on the SSDE window it will be changed automatically on the SCDE, and vice versa.</p> <p>The Lookup button opens a custom Shipping Method lookup window. By default the window will show only Shipping Methods assigned to the Ship To Address. A radio button will allow changing the view between Assigned and All shipping methods.</p> <p>The user can choose any Shipping Method (either from the Assigned or All list).</p> <p>If the user changes the Shipping Method to a different Assigned Shipping Method, all of the fields on the window will be repopulated with data from the Shipping Maintenance window.</p> <p>If the user changes the Shipping Method to one that is not assigned, any data on the window will remain and only the Shipping Method will change.</p>
Freight Terms	<p>When the Shipping Information is pulled-in to the sales transaction, Freight Terms will be updated on the SSDE and on the SOP User Defined Table #1 field (see below). If the user selects new Freight Terms in SSDE it will also update on the SOP User Defined window, and vice versa.</p> <p>The user will not be allowed to add a new Freight Terms record from this location. If a value is entered which does not already exist, the user will see a warning to that effect, and the field will clear. See below for more detail on how this field will function—the Freight Terms field on the SSDE window will behave the same as the Freight Terms SOP UDF List#1 field (which is described below).</p>



A control will be added to the Sales User-Defined Fields Entry window to prevent adding new values to any of the three “list fields”. Normally GP will ask the user if they want to add the new value. With the new control, GP will check if the value entered by the user already exists in setup, and if not the user will see a warning that the value is not valid, the field will clear, and they will have to select a new value. For example:

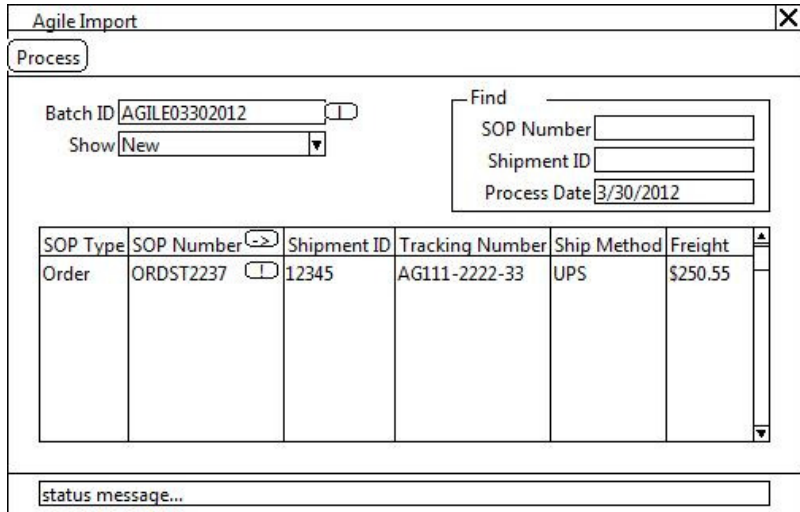
PREPAID is not a valid Freight Terms.

The warning message will incorporate the value entered by the user, and the “label” assigned to the List Field.





<p>The Ship To Address ID and Shipping Method fields will be locked (still visible, but not editable). The Ship To Address expansion button will be locked, as will the Lookup buttons for each field. The zooms, and the Notes button will still be functional. These controls will be applied to both the sales line in the scrolling window, and on the Sales Item Detail Entry window. These controls will be applied for all users EXCEPT "SA".</p>	
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<b>Agile Import Utility</b>		<b>CCDA</b>
<p>On a daily basis an export routine will be run in Agile that updates a table in the GP Company Database with freight and shipping information. A new utility will be added to GP that reads this imported information, locates the relevant sales transactions, and updates them.</p> <p><b>Navigation: Tools &gt;&gt; Utilities &gt;&gt; Sales &gt;&gt; Agile Import</b></p> 		
<b>Field</b>	<b>Function</b>	
Batch ID	The user will enter a new Sales Batch ID, or select an existing Batch ID from the Lookup. As documents are processed, they will be moved into this batch.	
Show	Options are (1) New, (2) Processed, (3) Processed with Errors, (4) Partially Processed, (5) Voids. Changing this selecting redisplay the scrolling window to show the selected desired records.	

Find	<p>Used to locate a specific document by SOP Number, or the Agile Shipment ID. The user will put a value into this field, then tab out of the field. Leaving the field will cause the window to perform a search for the SOP Number or Shipment ID. Clear the field(s) to redisplay showing all records.</p> <p>Process Date: this field can be used to find all records processed on a given date.</p>	
	<p><b>Scrolling Window</b></p>	
	<p>There will be a second row of data, not shown here, containing:</p> <ul style="list-style-type: none"> <li>• Void Status, Voided By User, Void Date, Void Time</li> <li>• Status, showing             <ul style="list-style-type: none"> <li>○ New</li> <li>○ In Process</li> <li>○ Processed OK</li> <li>○ Processed with errors</li> </ul> </li> <li>• Processed By User, Processed Date, Processed Time</li> </ul>	
SOP Number	<p>If an attempt was made to process a document, but it had errors, a yellow warning sign will display (shown by the exclamation point). A GP Record Note will be created for the import record containing plain text description of the error(s) involved. This note can be opened by clicking the Expansion Button in the "SOP Number" column header.</p>	
<p><b>Import Routine</b></p> <p>The Batch ID is a required field. The user can create a new Batch ID from this window, or select an existing Batch ID. For any error condition mentioned below, the Status for the record will be set to 2 (Processed with Errors), and a description of the problem added to the record note. The presence of ANY error will result in the SOP Document not being updated with any information.</p> <p>For each new record in the Agile Import table, which is NOT voided, the routine will:</p> <ul style="list-style-type: none"> <li>• Locate the SOP Document</li> </ul>		



- An invalid SOP Number is an error
- Set Status = 1 in the Agile Import table
- Move the document to the new Batch
- If the Tracking Number is populated, add the Tracking Number to the SOP Tracking Numbers table
- If the Ship Method is populated:
  - Validate that the Ship Method exists in GP
    - An invalid Ship Method is an error
  - Update the Ship Method on the SOP Header and SOP Lines
- If the Ship Date is not 00/00/0000 or 1/1/1900 (GP empty date), update the Actual Ship Date on the SOP Header and SOP Lines. No attempt will be made to validate the date is a “reasonable” date.
- If Freight Charges is greater than zero, update the Freight Amount on the SOP Header.
  - A negative Freight Amount is not allowed, and is an error
- Recalculate the document’s totals, taxes, distributions
- Update the Status field to 2 if there were no errors, or 3 if there were errors.
  - If the process fails, a document at status 1 could indicate several issues that will need to be addressed:
    - The Batch Totals could be off
    - The SOP Document Totals could be off
    - Any of the fields on the document that should have been updated, might not have been updated.
  - If the process fails, SOP Reconcile should be run. Then any documents at a 1-status should be reviewed manually to make the changes indicated by the Agile Import table.
  - When the Agile Import window opens, it will look for any 1-status records. If any are found, it will ask the user: “There are partially processed records. Do you want to update their status NOW to Completed With Errors?”.
    - If YES, the system will set the Status of all records to 3 (processed, but has errors) and add a note that the record was partially processed and forced to a complete status.
    - If NO, the system will open so the records can be viewed, but the user will not be allowed to process additional records.

When the process completes, the Process Date will fill with the current date, and the window

will redisplay to show all records processed during the current run.

Also, the Sales Batch Entry window will open with the Batch ID from the Agile Import window, so that the user can transfer the batch of documents.

NOTE: the user executing the import routine must have access to the SOP Reconcile-Remove Sales Documents window. The recalculation routine will run a process contained in that window, so the user needs security access to it. Before the import routine runs, it will check that the user can open the window (Tools >> Utilities >> Sales >> Reconcile – Remove Sales Documents).

**Integration Table**

Agile will write to a table in the GP company database. The customization proposed in this document will create that table during the installation process for the software. As the step in developing this solution we will create the Import Table and provide ACME Co. with a SQL Script to create the table in a test company so that work can begin on the Agile-to-GP part of the project.

The table will contain the following columns:

Column	Description
Shipment ID	This is a unique number generated by Agile for every shipment. It is the KEY in the import table. The import table supports an unlimited number of shipments linked to the same GP SOP Document. This allows for multiple partial shipments against a single order, and/or re-submission of shipment info if a previous shipment record is voided.
SOPType	GP SOP Type is part of the key in the GP SOP Tables. This must be provided to allow for shipping information recorded against Order, Invoices or Fulfillment Orders.
SOPNumber	Required.
Tracking Number	May be blank

Ship Method	The actual ship method used, if different than the Ship Method recorded on the SOP Document.	
Actual Ship Date	May be 00/00/0000 or 1/1/1900 (GP Blank), or populated with the actual ship date.	
Freight Amount	May be \$0.	
Void	0 or 1 (1 = voided). Voided records are not imported by the Agile Import Utility.	
VoidDate		
VoidTime	GP requires separate fields for date & time	
Status	Agile will import all records with 0. Any other value will cause the record to be ignored. 0 = New 1 = In process 2 = Processed OK 3 = Has Errors	
ProcessedBy	Agile should not populate this field	
ProcessedDate	Agile should not populate this field	
ProcessedTime	Agile should not populate this field	
NoteIndex	Agile should populate this with 0 (zero).	