DS0668

Automated Allocations

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Problem Definition

Problem Definition	**CCDA**
ACME Co. utilizes Dynamics GP as its ERP system. They are using GP with multi-bins enabled and SOP Documents are set up to allocate by document/batch. Sales Documents are saved in a batch, and any given batch may contain multiple SOP Types. Since their Go Live Date, their business requirements have changed significantly. They have very specific rules on how product should be allocated to Sales Documents. As the rules have some complexity, it makes it difficult to continue to have the allocation process be a manual task. ACME needs a SOP Batch Allocation utility that can apply business-specific rules for selecting the order in which documents should be fulfilled. Their current Allocation Rules are set by Priority and a high-level overview is below: 1. Any Sales Document for Customer IDs assigned to Customer Class ECOMMERCE or ONLINE regardless of Requested Ship Date or Hold Status. 2. Any Sales Document with a Backorder quantity that is past due or due to ship on the current date. Documents must NOT be on Hold. 3. Any Sales Document with Payment Terms set to PREPAID with an Account Balance less than or equal to $0.00 where the Requested Ship Date is less than or equal to the current date plus 10 days regardless of the Hold Status. 4. Any Sales Document for Customer IDs assigned to Customer Class INTERNATIONAL where the Requested Ship Date is less than or equal to the current date plus 10 days. Documents must NOT be on Hold. 5. Any Sales Document for Customer IDs assigned to Customer Class RETAIL where the Requested Ship Date is less than or equal to the current date plus 7 days. Documents must NOT be on Hold. 6. Any Sales Document for Customer IDs assigned to Customer Class PACESETTER, OEM or PROFESSIONAL where the Requested Ship Date is less than or equal to the current date plus 7 days. Documents must NOT be on Hold.	

ACME requires the ability to update the Allocation Rules in the future as business requirements may change. In addition, ACME requires the ability to view allocated Sales Documents by Batch and select Sales Document Lines to unallocate.	

Solution Overview

Solution Overview	CCDA
Please see the section entitled Design Features below.	

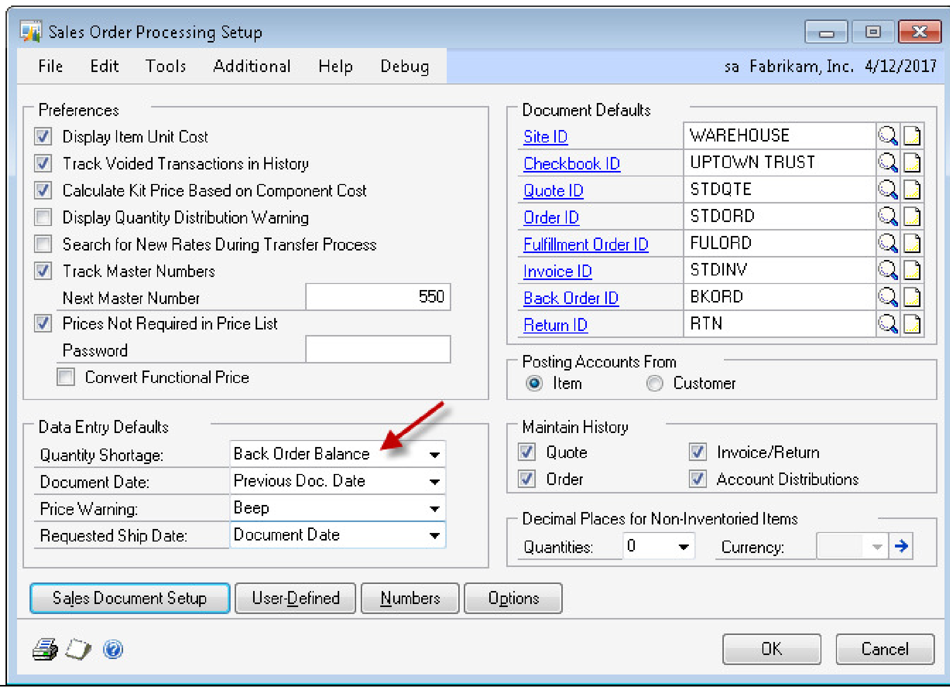
SOP Settings

SOP Settings	**CCDA**

Settings for Sales Order Processing

ACME must have the following SOP Settings for the enhancement to allocate and fulfill Sales Documents properly:

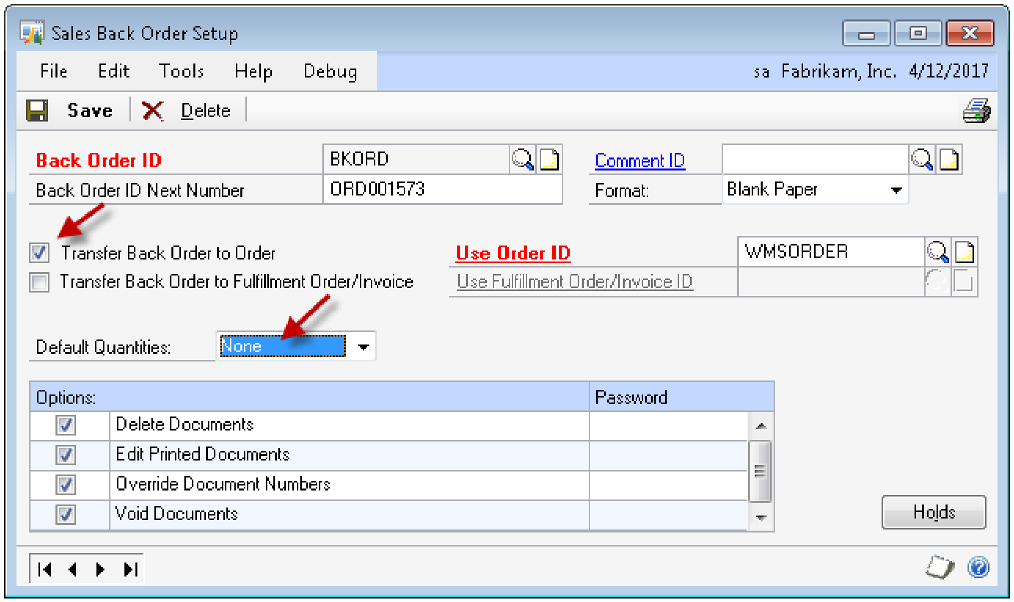
1. Data Entry Default for Quantity Shortage set to Back Order Balance for the enhancement to be able to allocate and fulfill Sales Documents properly. If the Quantity Shortage is NOT set to Back Order Balance, the enhancement will warn the user when the Allocation Utility is run. The user will be unable to continue.



Settings for Back Order ID's

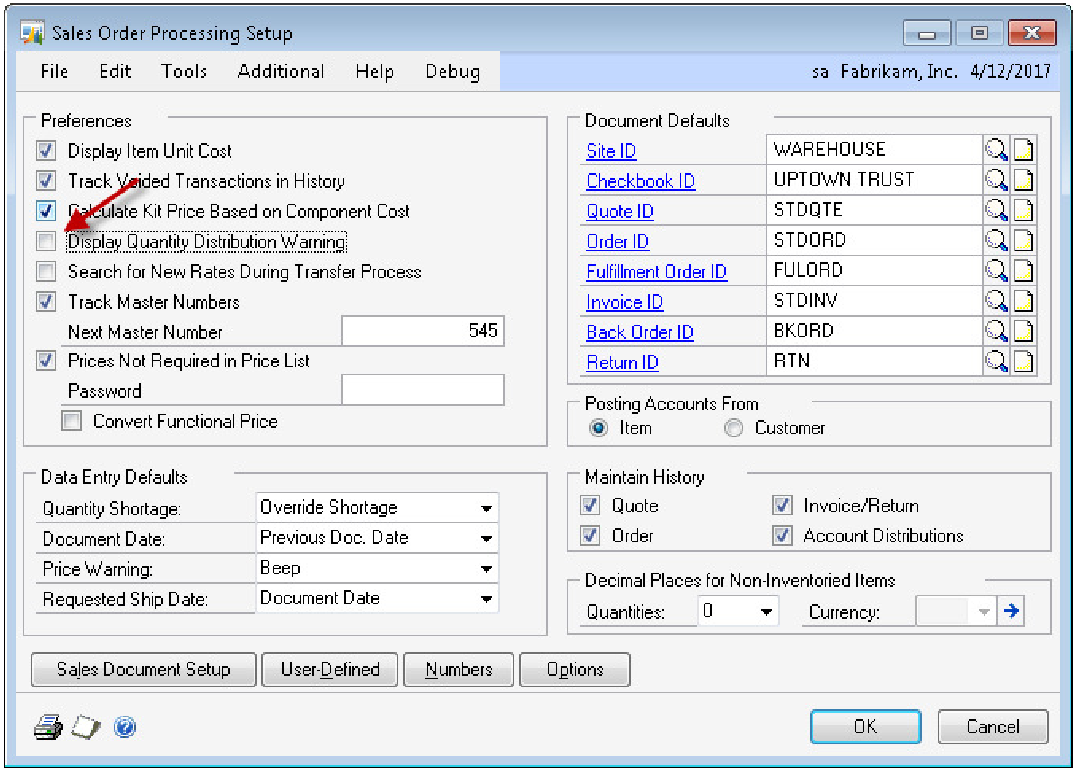
ACME must have their Back Order Documents setup in the following manner for the enhancement to be able to allocate, transfer and fulfill the documents properly. Documents will NOT be included when the Allocation Process is run if they do NOT have the correct settings.

1. Transfer Back Order to Order must be marked
2. Default Quantities must be set to None



Setting the Default Quantities to None will generate a warning message that the Back Order document is not fully distributed as each Sales Line is entered. To prevent the warning message from popping up, the following Sales Order Set Up should NOT be marked (this is NOT required).

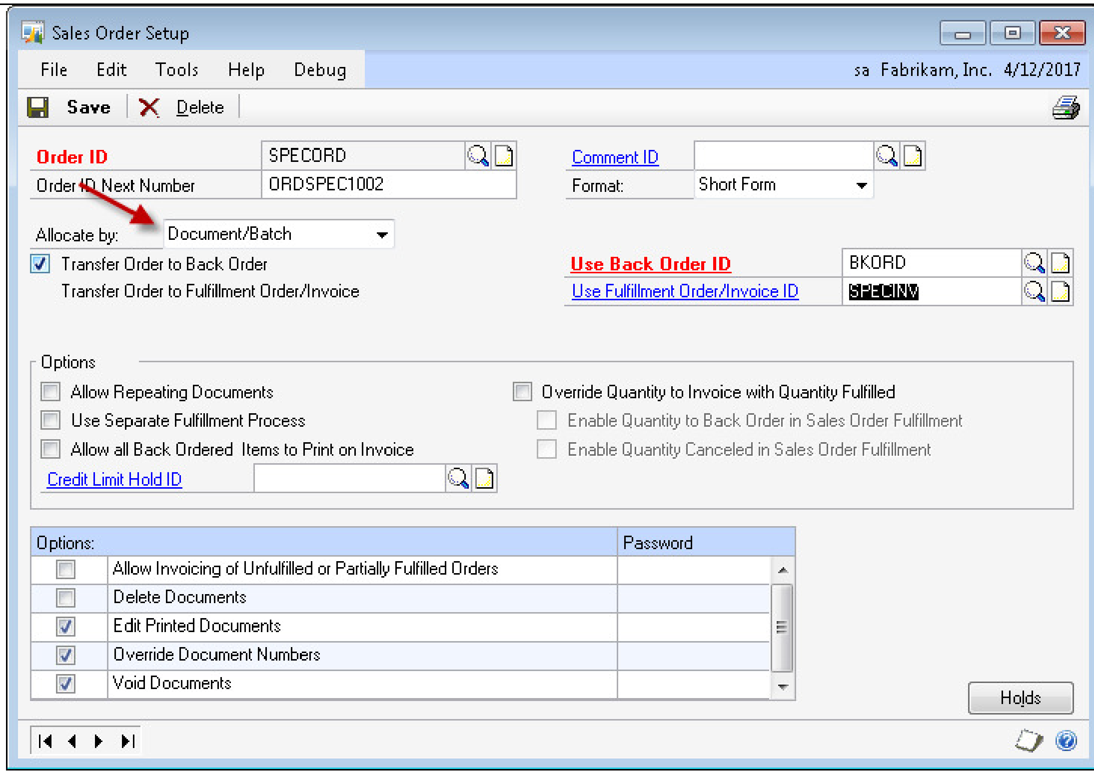
1. Display Quantity Distribution Warning



Settings for Order ID’s

ACME must have their Order ID’s setup in the following manner for the enhancement to be able to allocate and fulfill the documents properly. Documents will NOT be included when the Allocation Process is run if they do NOT have the correct settings.

1. “Allocate by” must be set to Document/Batch.

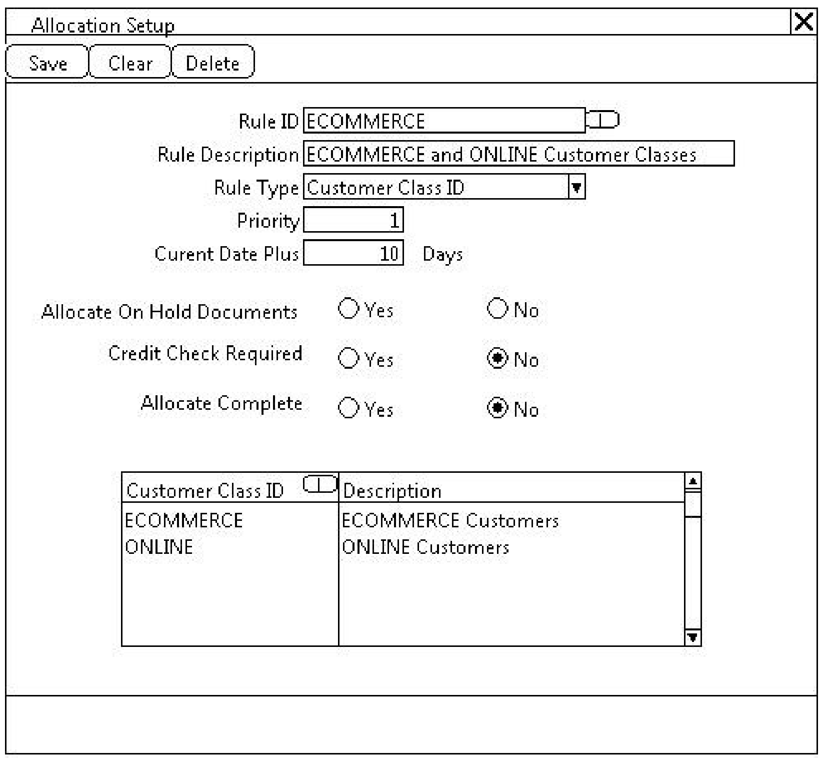

Sales Order Setup
File Edit Tools Help Debug
sa Fabrikam, Inc. 4/12/2017
Save
Delete
Order ID
SPECORD
Order ID Next Number
ORDSPEC1002
Comment ID
Format:
Short Form
Allocate by:
Document/Batch
Transfer Order to Back Order
Transfer Order to Fulfillment Order/Invoice
Use Back Order ID
BKORD
Use Fulfillment Order/Invoice ID
SPECINV
Options
Allow Repeating Documents
Use Separate Fulfillment Process
Allow all Back Ordered Items to Print on Invoice
Credit Limit Hold ID
Override Quantity to Invoice with Quantity Fulfilled
Enable Quantity to Back Order in Sales Order Fulfillment
Enable Quantity Canceled in Sales Order Fulfillment
Options:
Password
Allow Invoicing of Unfulfilled or Partially Fulfilled Orders
Delete Documents
Edit Printed Documents
Override Document Numbers
Void Documents
Holds

Design Features

Allocation Priority Setup	CCDA

Navigation: Setup→Sales→Allocation Priority Setup

This window is used to set up Allocation Priorities.



= Lookup Button

Field	Function
Save Button	The user will click the SAVE button to save the Rule ID.
Clear Button	The user will click the CLEAR button to clear the window.
Delete Button	The user will click the DELETE button to delete the Rule ID.
Rule ID	The user will enter or select a Rule ID from the lookup. The Rule ID is a string field that may contain up to 20 characters.
Rule Description	The user will enter a Rule Description.
Rule Type Dropdown	The user will select a Rule Type from the dropdown. Options include: • **Customer Class ID –** If Customer Class ID is selected, during the Allocation Process, the enhancement will review Sales Documents assigned to Customer ID's within the Rule ID's assigned Customer Class(s). • **Payment Term–** If Payment Term is selected, during the Allocation Process, the enhancement will review Sales Documents with a Payment Term equal to the Rule ID's assigned Payment Term(s). • **Qty Backorder–** If Qty Backorder is selected, during the Allocation Process, the enhancement will review Sales Documents with Items which have a Qty To Backorder greater than 0 and any Sales Document with Sales Lines which are Past Due.
Priority	The user will enter the Rule ID's priority. The Priority entered must be unique. Rule ID's may NOT share the same Priority. The highest Priority is 1. When entering a new Rule ID, the Priority will default to the next available Priority. For example, if 9 Rule ID's have been entered, the next Priority will be 10. When the Allocation Process is run, the enhancement will review Sales Documents in order of Priority beginning with Priority 1.

	When the Allocation Process is run, the enhancement will begin allocating available Item quantities to Sales Documents by first reviewing the Sales Documents which meet the criteria set in the Rule ID with the highest priority set. When complete, the enhancement will then review the Sales Documents which meet the criteria set in the Rule ID with the 2nd highest priority and so on….until the enhancement has completed the Allocation Process.	
Current Date Plus X Days	The user will enter a whole number greater than or equal to 0. When the Allocation Process is run, the enhancement will review Sales Document Lines which fall within the Rule ID and where the Requested Ship Date is equal to or less than the specified days. For example, if the Current Date Plus X Days field is set to 10 and today's date is August 1st, the enhancement will review all Sales Documents which match the Rule ID Type where the Requested Ship Date of the Sales Line is equal to or less than August 11th, including Past Due Sales Lines. If the Current Date Plus X Days field is set to 0, the enhancement will review all Sales Documents which match the Rule ID Type where the Requested Ship Date of the Sales Line is equal to or less than the current date including Past Due Sales Lines. If the user wishes to set up a Rule ID with no Requested Ship Date restriction, the user should enter 999,999,999,999 in the field.	
Allocate On Hold Documents Radio Button	The user will select an option for the Radio button: • **Yes –** The Allocation Process will include Sales Documents which have been assigned a Sales Document Process Hold. • **No -** The Allocation Process will NOT include Sales Documents which have been assigned a Sales Document Process Hold.	

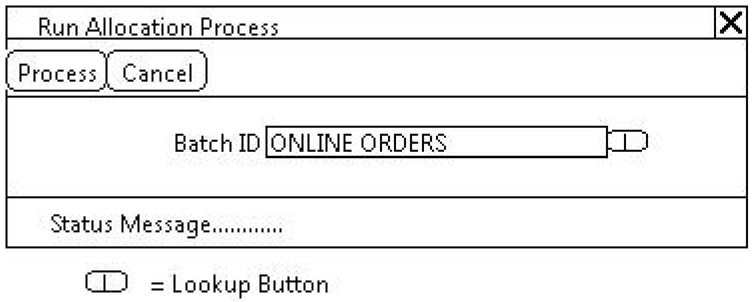
Credit Check Required Radio Button	The user will select an option for the Radio button: • **Yes –** The Allocation Process will perform a Credit Check on the Customer ID prior to allocating the Document. Sales Documents placed for Customer ID's who are over their Credit Limit will NOT be allocated. The standard Dynamics Credit Check rules will be utilized to determine if a Customer ID has met their Credit Limit. However, if a Sales Document has a payment term of "PREPAID", a second step will be performed where the Customer ID's Account Balance will be reviewed. If the Customer ID's Account Balance is equal to or less than $0.00 after applying the Sales Document's Remaining Subtotal, the Sales Document will be allocated. • **No -** The Allocation Process will NOT perform a Credit Check on the Customer ID prior to allocating the Sales Document. **Please Note:** **1.** ACME uses National Accounts. If the Sales Document's Customer ID is a "child", the PREPAID credit check step defined above will be performed on the parent Customer ID. **2.** If there are multiple Sales documents for the same Customer ID, they may all pass the credit check even though cumulatively the Customer ID's credit limit may be reached.
Allocate Complete	The user will select an option for the Radio button: • **Yes –** The Allocation Process will only allocate a Sales Document if ***ALL*** Sales Lines on the Sales Document can be fully allocated for the Qty Remaining. If all Sales Lines

	on the Sales Document cannot be allocated, the Sales Document will be skipped. • **No -** The Allocation Process will allocate a Sales Document even if all Sales Lines on the Sales Document cannot be fully allocated for the Qty Remaining.
Customer Class ID (Scrolling Window Column 1)	The scrolling window will accept entries based on the Rule Type dropdown setting. The column header will update based on the Rule Type as well: • **Customer Class ID –** If Customer Class ID is selected, the user will enter or select a Customer Class ID from the lookup. Multiple Class ID's may be selected per Rule ID. • **Payment Term–** If Payment Term is selected, the user will enter or select a Payment Term from the lookup. Multiple Payment Terms may be selected per Rule ID. • **Qty Backorder–** If Qty Backorder is selected, the scrolling window will be locked.
Description (Scrolling Window Column 2)	The scrolling window will populate with the Customer Class ID Description or the Payment Term Description when a Customer ID or Payment Term ID is entered.

Allocation Process	CCDA

Navigation: Transactions→Sales→Allocation Process

This window is used to run the allocation process.



Field	Function
Process Button	The user will click the PROCESS button to run the Allocation Process. **Please see the Allocation Process description below.** If the Batch ID field is left blank when the PROCESS button is clicked, the user will be prompted with the following message, “Do you wish to run the allocation process for all Sales Batches?” If the user clicks YES, the Allocation Process will be run on all Sales Batches. If the user clicks NO, the Allocation will NOT be run. The user may then limit the Allocation Process to a specific Batch Range.
Cancel Button	The user will click the CANCEL button to exit the window without running the allocation process.
Batch ID	The user will enter or select a Batch ID from the lookup.
Status Message	When the user clicks the PROCESS button, a Status Message will appear alerting the user to the status of the Allocation Process. When the Allocation Process is complete, the status message will read “Complete”

Allocation Process

When the Allocation Process is run by clicking on the PROCESS button, the enhancement will find the Rule ID with the highest priority set in the Allocation Setup window. The enhancement will then locate open Sales Documents which match the criteria set for the Rule ID and begin the Allocation process.

To be included in the Allocation Process, a sales document must:

- Be a Backorder or Order document with the correct settings defined in the SOP Settings section of this document
- Not be in-use
- Have one or more lines that are not allocated or have a Qty to Backorder

The Allocation Process will review each matched Sales Document in order of the Sales Document's entry into Dynamics GP by reviewing the Sales Document's DEX_ROW_ID for the ORIGINAL Document Number. So if an Order has been transferred from Order to Backorder and back to Order, the DEX_ROW_ID on the originating Order will be used.

If the Sales Document is an Order, the enhancement will do the following:

1. Allocate each eligible Sales Line if the Order ID is set to use a Separate Order Fulfillment Process.
2. Allocate and fulfill each eligible Sales Line if the Order ID is NOT set to use a Separate Order Fulfillment Process.
3. If the full Sales Line quantity CANNOT be allocated, the Qty To Invoice will be set to the Qty Allocated and the remaining balance will be moved to the Qty to Backorder field mimicking the functionality of the Sales Quantity Shortage Option - "Back Order Balance."

PLEASE NOTE: The allocation process can create partially-allocated Sales Order documents. If a partially allocated Order remains open in the system and is subsequently processed by the Allocation routine, additional allocation of product will occur subject to the Allocation Rules which include the Priority of Customer Orders.

If the Sales Document is a Back Order, the enhancement will do the following:

1. Enter the Qty to Allocate in the Qty To Order field.

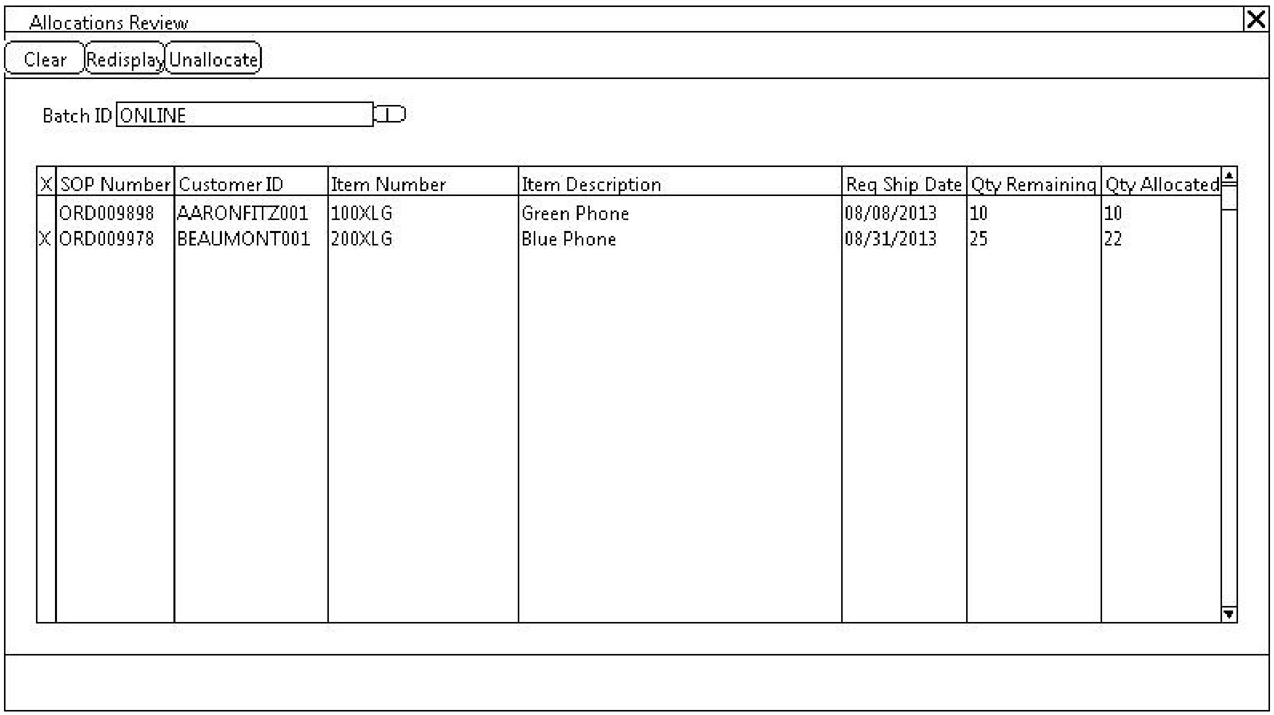
2. Transfer the Back Order document to an Order. 3. Allocate each eligible Sales Line if the Order ID is set to use a Separate Order Fulfillment Process. 4. Allocate and fulfill each eligible Sales Line if the Order ID is NOT set to use a Separate Order Fulfillment Process. <u>Multiple Bins</u> ACME utilizes Multiple Bins. It was determined that bin quantities should be allocated from the Item's Default Bin only. The Default Bin will be chosen as follows: ○ If a default Sales Fulfillment Bin is specified at the Item-Site level, this is considered the Default Bin for the Item. ○ If a default Sales Fulfillment Bin does NOT exist at the Item-Site level, GP considers the default Sales Fulfillment Bin specified at the Site level to be the Default Bin for the Item. The enhancement will attempt to allocate out of the Default Bin. If it cannot completely allocate out of the Default Bin, the enhancement will not attempt to allocate Inventory from any other bin.	

Allocation Review

CCDA

Navigation: Transactions→Sales→Allocation Review

This window is used to review Sales Order Allocations by Batch ID and unallocate Sales Order quantities. This window will show ALL Sales Order Allocations – not just those allocated by the Allocation Utility.



= Lookup Button

Field	Function
Clear Button	The user will click the CLEAR button to clear the window.

Redisplay Button	The user will click the REDISPLAY button to populate the scrolling window with Orders. Only Sales Order Lines with Qty Allocated will display in the scrolling window. (SOP Type must equal Order). Only Orders which are not in use will display. The user may click REDISPLAY without entering a Batch ID. If a Batch ID is entered, only Sales Order Lines with Qty Allocated for the Batch ID and are not in use will display in the scrolling window. Sales Orders will display in Document Number order with the lowest Sales Order Document displaying first. Sales Order Lines will display in their ordinal position on the Sales Order Document.		
Unallocate Button	The user will click the UNALLOCATE button to unallocate Sales Order Lines which have been marked in the scrolling window. Marking a Sales Order Line is described below in the X Field.		
Batch ID	The user will enter or select a Batch ID from the lookup.		
X	This column is checkbox. The user will check the checkbox for all Sales Order Lines which they want to unallocate. The entire Qty Allocated for the Sales Order Line will be unallocated when the UNALLOCATE button is clicked. The X column is the only editable field in the scrolling window. All other fields are NOT editable.		
SOP Number	The Sales Order's Number will display.		
Customer ID	The Sales Order's Customer ID will display.		
Item Number	The Sales Order Line's Item Number will display.		
Item Description	The Item's Description will display.		
Requested Ship Date	The Sales Order Line's Requested Ship Date will display.		
Qty Remaining	The Sales Order Line's Qty Remaining will display.		
Qty Allocated	The Sales Order Line's Qty Allocated will display.		

Assumptions/Requirements	
• **Multiple bins are enabled.** • **Multi-currency is enabled, but only Z-US$ is used.** • **Sales Document Trade Discounts are used.** • **The Sales Document Freight field is used to apply Freight Charges. No tax schedule ID's are utilized in this process.** • **The Sales Document Miscellaneous field is used to apply additional charges. No tax schedule ID's are utilized in this process.** • **Sales Tax is charged.** • **Sales Drop Shipments are used. Drop Ship Sales Lines will not be allocated by the Allocation Utility.** • **Items are NOT serial or lot controlled.** • **Manufacturing/Sales Links are NOT used. (MOP/SOP Links)** • **Sales Kits are NOT utilized.** • **Advanced Distribution and Fulfillment Orders are NOT used.** • **All Sales Order ID's are set to allocate by Document/Batch.**	