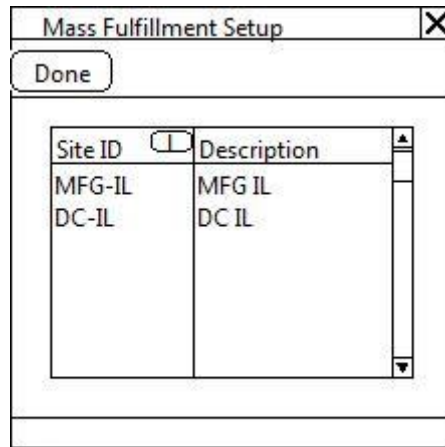


CHANGE REQUEST	
Change Request #	CR0460 – Retailer Fulfillment Plan
Description of Change	
<p>Description of Need: ACME Co. is a white label manufacturer supplying nutritional products to a large, national retail supplement chain. The retailer places orders for a large amount of inventory to be fulfilled out of dedicated distribution centers. There are multiple Customer IDs (stores) for the Retailer associated with each DC. The same item can be on multiple orders, for multiple Customer IDs (stores), with different Requested Ship Dates.</p> <p>As ACME Co. produces inventory some portion is allocated to each DC so that all DCs get some inventory from each production run. The quantity to allocate is based on a ratio of the original Quantity Ordered for each DC. So if the POs for the three DCs ordered 20, 10 and 5 of the same item, the available quantity would be allocated to each DC as follows:</p> <ul style="list-style-type: none"> • $(20 / 35) * \text{Qty Available}$ • $(10 / 35) * \text{Qty Available}$ • $(5 / 35) * \text{Qty Available}$ <p>The Quantity Allocated is then assigned a Ship Number. A Ship Number is assigned per truck, so if the allocated inventory is more than one truckload the allocated quantity will be split, and assigned to multiple Ship Numbers.</p> <p>This process is currently done manually, with the user finding Orders for the available inventory, figuring out how much to allocate to each one, then manually adjusting down the Quantity Ordered on the original Orders by the quantity of inventory allocated to the DC, then putting the quantity allocated onto new sales orders that can be fulfilled and shipped. Because creating the “split” orders is a manual process, it induces errors in pricing and quantities, and it is time-consuming.</p> <p>ACME Co. would like a utility that</p> <ul style="list-style-type: none"> • Identifies the open orders that need the available inventory • Figures out how to distribute the available inventory across the DCs • Provides the ability to assign the allocated quantities to one or more Ship Numbers • Creates new sales orders per Ship Number, showing the inventory assigned to that Ship Number • Update the original Sales Orders to show the “remaining quantity” ordered after the allocated quantities are put onto the new sales orders • Changes the Batch ID on the new orders to the “Released” Batch so that they are picked up by the SOAP Module (see DS0304). <p>Description of Solution: Although there currently are three distribution centers dedicated to this Retailer, we are proposing to provide the ability to set up an unlimited number of DCs, and assign Customer IDs to each DC as needed. This will provide the flexibility to add/remove/rename/change DCs as needed in the future, whereas a hard-coded solution based on the existing three DCs could be difficult to change, if the need arose.</p>	
<p>Mass Fulfillment Setup Navigation: Tools >> Setup >> Sales >> Mass Fulfillment Setup</p>	

This window is used to define a default list of sites which will be used when determining how much inventory can be allocated to the Retailer orders. The user will be able to change the sites on the Fulfillment window, if needed.



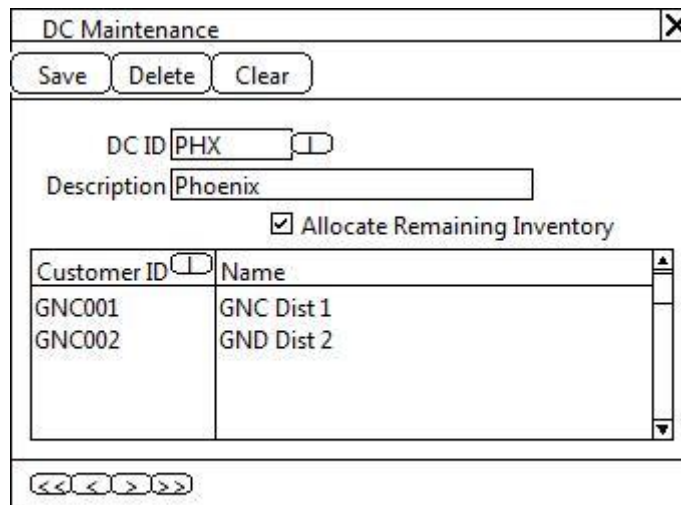
 = Lookup Button


Field	Function
Site ID	Inventory Site ID.
Description	Description of the Site

DC Maintenance

Navigation: Tools >> Setup >> Sales >> DC Maintenance

This window is used to create/edit/maintain Customer Distribution Centers.



 = Lookup Button

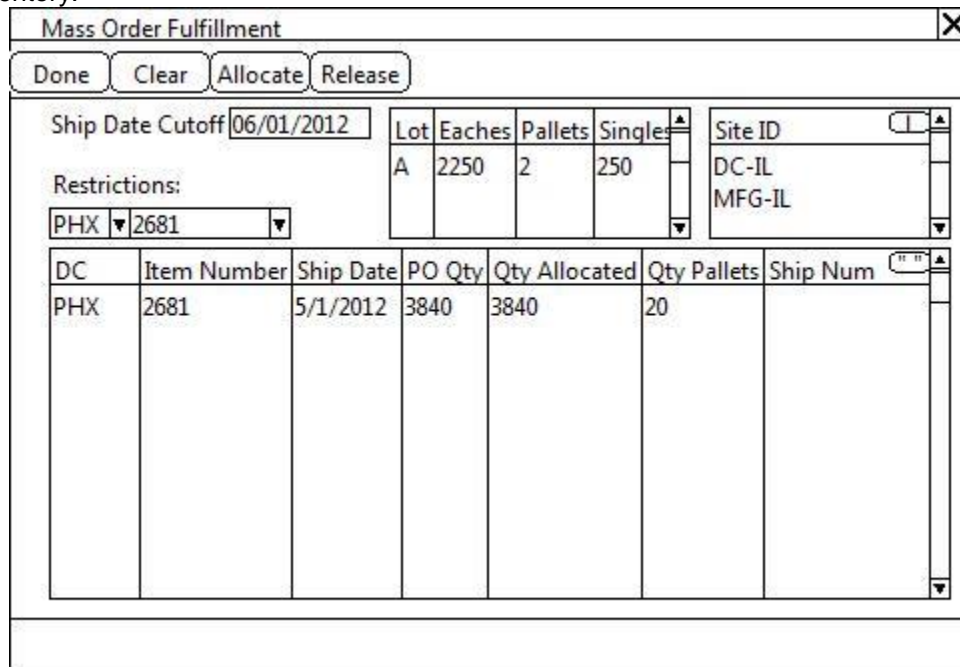
Field	Function
DC ID	Distribution Center ID. This is a 5-character, upper-case field.
Description	Long Name/Description. 60 characters.
Allocate Remaining Inventory	This box can be marked on only one DC. This DC will get any "left over" inventory when the automated process finishes allocating

	inventory to the DCs.
	Scrolling Window
Customer ID	User enters a Customer ID, or selects one from the Lookup. At least one Customer must be assigned to a DC. If a DC exists but has no assigned Customers it will not be included in the allocation process.


Order Fulfillment

Navigation: Transactions >> Sales >> Mass Order Fulfillment

The Mass Order Fulfillment window auto-generates a “fulfillment plan” for the Retailer DCs using the available inventory.



 = Lookup Button

 = Split Button

Field	Function
Ship Date Cutoff	Retailer Order lines are selected where the Requested Ship Date is on or before this date
Restrictions	These are two drop-down boxes which contain a list of the DCs shown in the scrolling window, and a list of the Item Numbers. Selecting a DC restriction causes the window to show only items on orders for the selected DC. Selecting an Item restriction causes the window to display only lines for the selected item from one or more DC. If both are selected, the window will show 1-item for 1-DC.
Lot Qty Window	When a line is clicked into in the scrolling window, the Lot Quantity information for the selected Item Number will display in the Lot Qty Window. This window shows the lot numbers available, the total quantity in Eaches (the Base UofM), the quantity of whole Pallets, and the number of Singles (quantity of Eaches remaining less whole pallets). NOTE: the existing UofM Mapping window will be used to identify the Units of Measure that mean “each” and “pallet”.

	In the even the selected item does not have a UofM for “pallet”, only the Eaches quantity will display.
Fulfillment Site IDs	This list populates with the defaults from Mass Fulfillment Setup. The user can change the sites if needed.
	SCROLLING WINDOW
DC	The DC ID from DC Maintenance.
Item Number	Displays the Item Number
Ship Date	Requested Ship Date from the Sales Line (**confirm Sales Line and not Sales Header)
PO Qty	The Quantity Ordered from the Sales Order
Qty Allocated	The suggested quantity of eaches to allocate to the order. This field is editable.
Qty Pallets	The each quantity displayed in the Pallet UofM
Ship Num	User enters the Ship Num. When the Sales Orders are created, this will be stored is SOP User Defined 4 (**confirm).
	BUTTONS
Split Button	User puts cursor into a line where the Qty Allocated exceeds one truckload, then clicks the Split button. User will be asked to confirm they want to split the line. A new line will be created with zeros in the quantity allocated fields. The user must manually set the quantity allocated for the two lines.
Allocate	Described above. This auto-calculates the suggested Fulfillment Plan.
Release	Described above.

When first opened, the window will be empty. The process of planning the distribution of inventory to the Retailer DC's starts by clicking the Allocate button.

ALLOCATE PROCESS

The Allocate process (started by clicking the Allocate button) finds all Sales Orders for the Customers specified in the DCs, which have sales lines WHERE the Site ID is in the Fulfillment Site list (above this list is DC-IL and MFG-IL), and where there is available inventory in the Fulfillment Sites for the item. If a Retailer order has any type of Sales Hold, it will be excluded.

Inventory from the Fulfillment Sites is considered when the window calculates how much inventory is available to allocate. Inventory from MFG-IL will become physically available when it is transferred to DC-IL.

The Allocate Process calculates how to allocate inventory to each of the DCs based on the total inventory that WILL BE available when inventory from MFG-IL is transferred into DC-IL. “Releasing” the “fulfillment plan” generated by the Allocate process, creates new Sales Orders for quantities split off from the original Retailer blanket orders, sets the Batch ID to ENTERED (which makes them visible to the SOAP module), and inserts them into the Priority Pick list.

The next time SOAP runs, it will process these orders just like any other order. If inventory has not yet been transferred from MFG-IL to DC-IL, the Retailer orders will not be picked-up by the processor because there is not enough inventory in DC-IL yet to completely fulfill the order.

For example, there are 50 units in MFG-IL and 50 units in DC-IL, and there is a Retailer order that needs 5000 units. The Allocate Process will reduce the Retailer order to 4900, and create a new split-order for 100 units. The split order is then put into the ENTERED Batch ID in the Priority Pick queue of the SOAP processor. When the SOAP Processor runs it will see that the order needs 100 units, and it will NOT

release the order until the 50-units are transferred from MFG-IL into DC-IL. At that point the SOAP Processor will allocate the inventory to the split-order and release it to be picked.

To avoid over-allocating inventory while an existing Retailer order is sitting in the processing queue waiting to be picked, the utility can only be run if there are no Retailer orders in the Priority Pick queue. Once all Retailer orders have been removed from the SOAP Processor Priority Pick queue, a new batch of Retailer split orders can be created.

The Allocate Process will process documents oldest first by Requested Ship Date. Normally there are a set of matching orders for each of the DCs that all have the same Requested Ship Date. The process will locate as many documents as it can for the DCs that all have the same Requested Ship Date. When there is more than one DC with an order for an item that have the same requested ship date, those documents are Allocated as Set. There could be multiple Requested Ship Dates for the same item. Lines for the same item, same requested ship date, will be grouped and handled as a Set.

For each Set of documents for the DCs the system will calculate the quantity to allocate as follows:

- A = sum of Qty Ordered for the item on each of the Orders. If there are three DCs, there could be three orders in each “set” (depending on the rate at which each is fulfilled, one DC could be fulfilled completely before the others, so there might be only two documents...or one). A is the sum of the Qty Ordered on each of the three documents.
- For each DC (in alphanumeric order):
 - Qty To Allocate = Qty Available * (Qty Ordered for the DC / A), rounded down to nearest whole pallet
- Repeat for all DCs.
- If one DC is marked as Allocate Remaining Inventory, the DC will be processed last, and it will get all remaining inventory.

The objective is to plan how much to allocate to each DC based on a ratio of the Qty Ordered for each Item for each DC. So if the three DCs ordered 100, 50 and 50, available inventory would be allocated 50%, 25% and 25%.

The result is a “suggested” fulfillment plan. The user can manually override any of the quantities, and assign a Ship Number to each line. The Ship Number is stored in SOP UDF #4 (**need to confirm).









If the Qty Pallets is greater than fits into one truck, the Split Button is clicked to split the line into two. If this is done the user must manually enter the Pallet Quantity on each of the lines.

RELEASE PROCESS

When the fulfillment plan is acceptable, the user clicks RELEASE to release it. This process does the following:

- Checks that no lines have Quantity Allocation errors. If so, warns user and aborts.
- On the originating Blanket Orders it reduces the Quantity Ordered by the Quantity Allocated
- It creates a new Sales Order per Customer Number/Ship Number. The information from the originating order is copied to the new order (Customer, Address, Ship Method, Tax Schedule, etc.). It will be created using the same Document ID and SOP Numbering sequence as the originating order. Lines from multiple documents will NOT be merged onto a single split order. The new documents will be created in a 1:1 relationship with the originating orders. The Original Type/Original SOP Number fields on the new document will reference the source document (see screen capture below).
- The Ship Number is added to SOP UDF#4 (**need to confirm).
- The items to be fulfilled are added to the new order.
- The Batch ID on the new order is changed to ENTERED
- The new order is added to the SOAP Priority Pick Queue

A "split-order" referencing the Originating Order

Transfer to Back Order:			Transfer to Fulfillment Order/Invoice:		
Type ID	BKORD	 	Type ID	STDINV	 
Batch ID		 	Batch ID		 

Type	Type ID	Document Number	Date	Orig. Type	Orig. Number
Order	STDORD	ORDST2226	4/12/2017	Order	ORDST2057

Restrictions

- The Order Fulfillment window can be opened by only one user at a time
- The Order Fulfillment window cannot be opened if there are Retailer orders still waiting in the Priority Pick Queue.

Changing the Qty Allocated

When the quantity is changed, the Pallet Qty recalculates on the selected line. If quantities are manually changed, the other lines for the item must also be manually adjusted. If the total quantity allocated on all lines for the item exceeds the quantity available in the Fulfillment Sites, a yellow Warning Sign will display next in the Qty Allocated fields for the item. The quantity allocated can be less, but not more, than the quantity available in the Fulfillment Sites.

If an item has a Quantity Allocation Error (i.e. it was manually changed and now exceeds the quantity available), the window will not allow the Fulfillment Plan to be released.