CHAPTER 59 - CONSOLIDATED ORDER PROCESSING / MASS MANIFESTING PROCESSING.....2

CHAPTER 59 - CONSOLIDATED ORDER PROCESSING / MASS MANIFESTING PROCESSING

Consolidated Order Processing

This processing enables SYNPASE to allow outbound orders going to the same “ship to” to be grouped in to a “consolidated” order for planning, picking, packing and shipping purposes yet maintain the original order identity for tracking and reporting purposes.

The goals for this process include:

- Increase warehouse efficiency in pick, pack and ship tasks by consolidating multiple orders with the same ship to and processing the “consolidated orders” as if it were a single order.
- Consolidate Normal and Back Orders for a single ship to into a single wave.
- Increase ease of transportation planning and cost allocation.

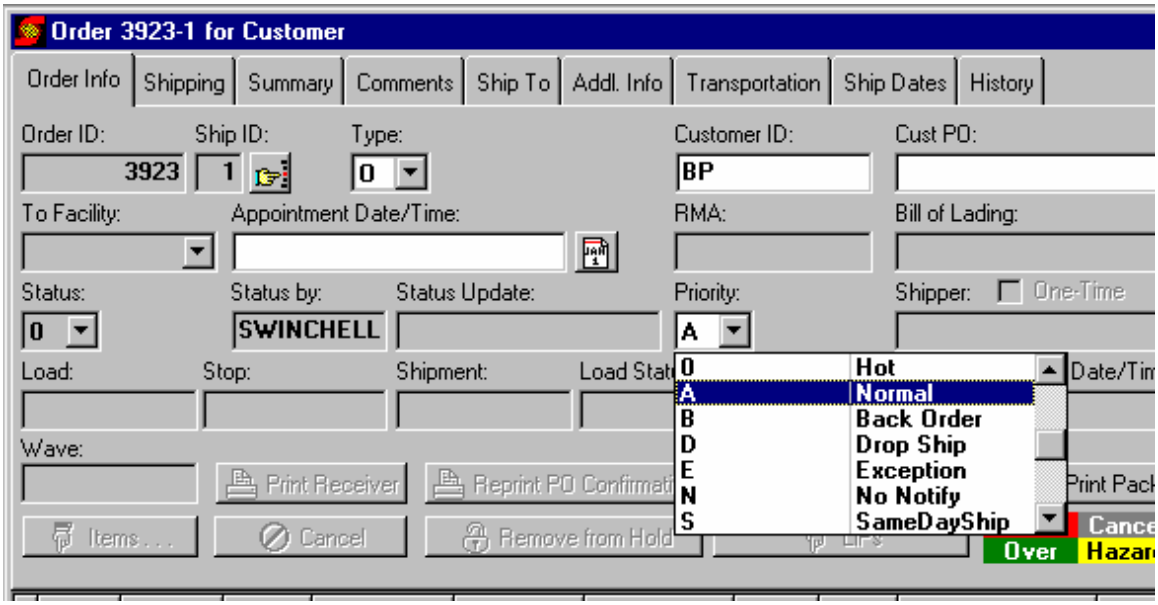
The orders are pulled together for consolidation via the wave ID and special consolidation logic. The original orders are not changed. The orders in one consolidation are picked together and shipped in the same load.

Order Entry

- Individual outbound orders can be entered via the normal means of CRT, Web or EDI. Only orders entered via EDI are eligible for the auto wave consolidation.
- A consolidated order is not entered. The individual orders are consolidated via the wave id. No actual order header of order detail is entered for the consolidated order. The Wave ID with a Ship ID = 0, will become the consolidated order identifier. (Example 123445-0). If there are existing orders in the database with the same ID as the wave, the 0 ship ID will differentiate the consolidated order.
- The orders must be in the same wave and load for consolidation purposes.

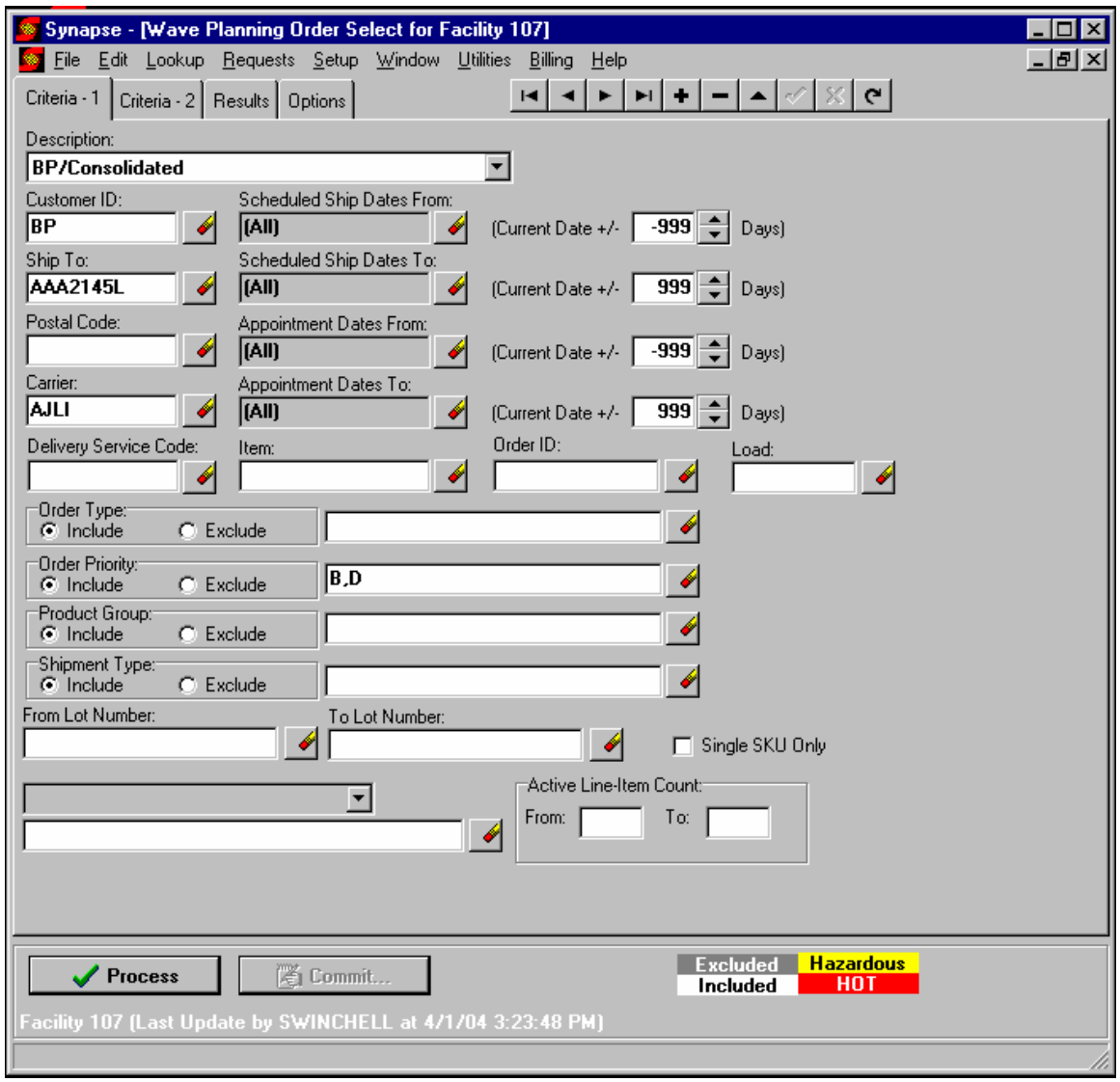
New Order Priorities

There are two Order Priority Types to classify orders that are “Back Order” and “Drop Ship” for this processing. It is not required that orders have these priorities for Consolidated processing.

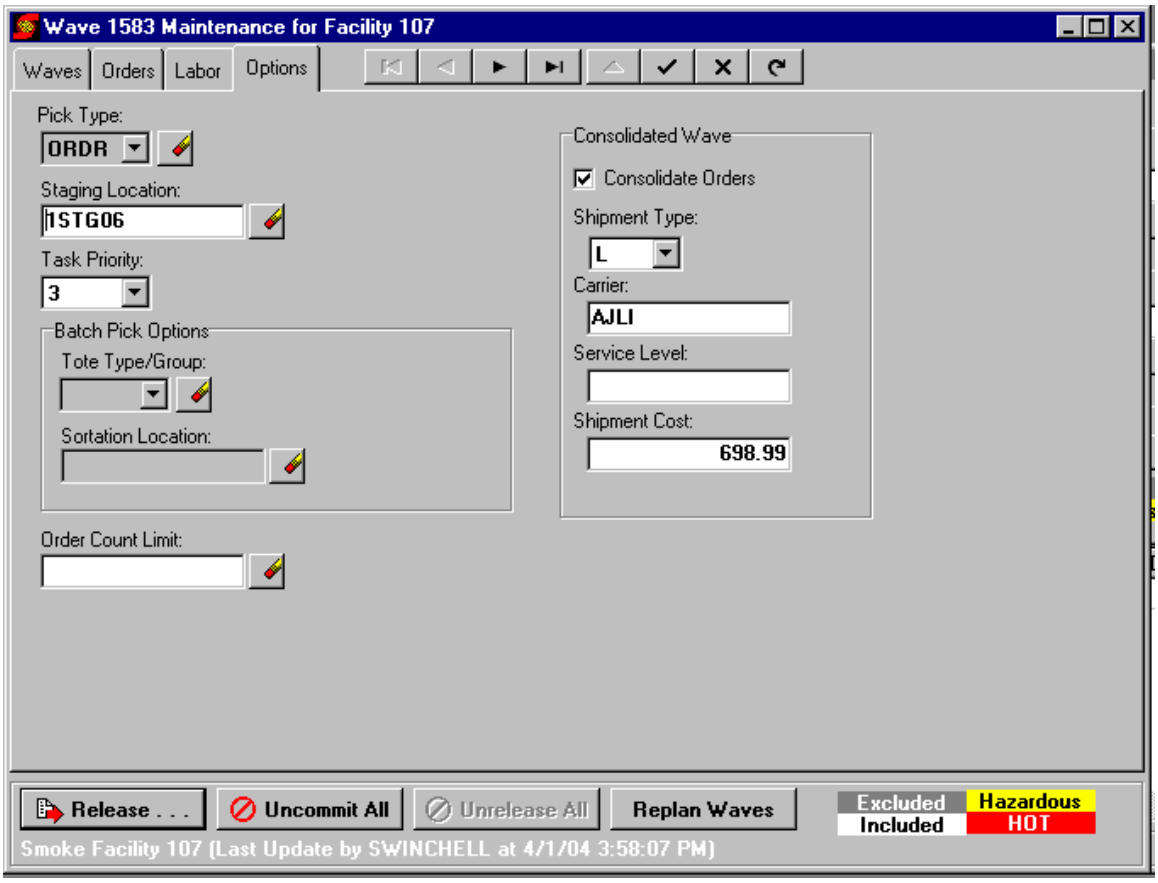


Wave Planning

All of the orders combining into one consolidated order must be in the same wave. The Wave ID with a Ship ID = 0, will become the consolidated order identifier. The wave planning can be accomplished using the Wave Planning Templates set up by customer and Ship To or Postal Code or other unique characteristic or through manual wave planning. The actual consolidation does not become effective until wave release.


Synapse - [Wave Planning Order Select for Facility 107]
File Edit Lookup Requests Setup Window Utilities Billing Help
Criteria - 1
Criteria - 2
Results
Options
Description:
BP/Consolidated
Customer ID:
BP
Scheduled Ship Dates From:
(All)
(Current Date +/-
-999
Days)
Ship To:
AAA2145L
Scheduled Ship Dates To:
(All)
(Current Date +/-
999
Days)
Postal Code:
Appointment Dates From:
(All)
(Current Date +/-
-999
Days)
Carrier:
AJLI
Appointment Dates To:
(All)
(Current Date +/-
999
Days)
Delivery Service Code:
Item:
Order ID:
Load:
Order Type:
Include
Exclude
Order Priority:
Include
Exclude
B,D
Product Group:
Include
Exclude
Shipment Type:
Include
Exclude
From Lot Number:
To Lot Number:
Single SKU Only
Active Line-Item Count:
From:
To:
Process
Commit...
Excluded
Included
Hazardous
HOT
Facility 107 (Last Update by SWINCHELL at 4/1/04 3:23:48 PM)

Wave Release



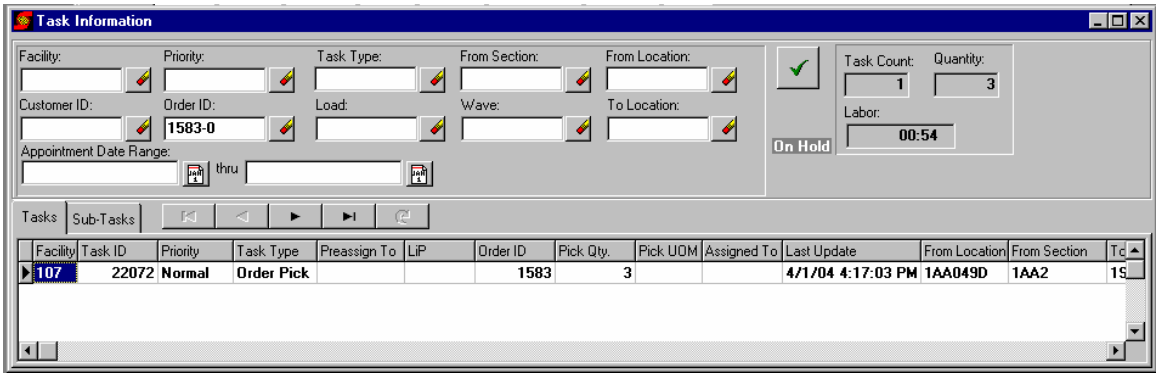
To actually change individual orders to a consolidated order, additional data is on the Requests/Update Requests/Wave Release screen.

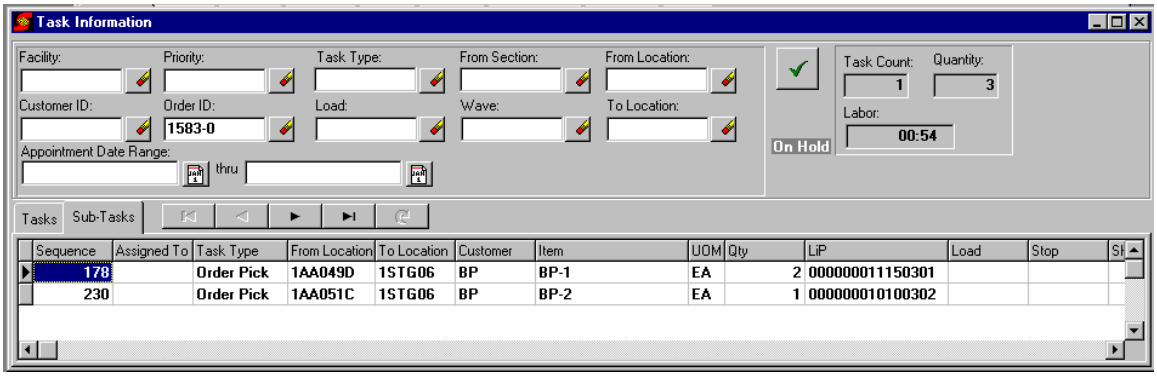
- This includes
  - Shipment Type
  - Carrier
  - Service Level (if applicable)
  - Shipment Cost. Note that a shipment cost > 0 is required.
- If the “Consolidate Orders” box is not checked these new fields are not available.
- The consolidated order number will be the wave number dash 0 (example 125603-0).
- A staging location is required for a consolidated wave.
- Note that the consolidation set up fields are only available at Wave Release and are not available at Wave Planning.

When the order is shipped out of Synapse, transportation costs are allocated across all orders in the consolidated wave based on the percentage of the weight of the order to the weight of the whole wave. Carrier, transportation type, service level and cost will be updated automatically on each individual order when the consolidated wave is released. Until the orders are closed, the Transportation Cost for the consolidated wave can be adjusted.

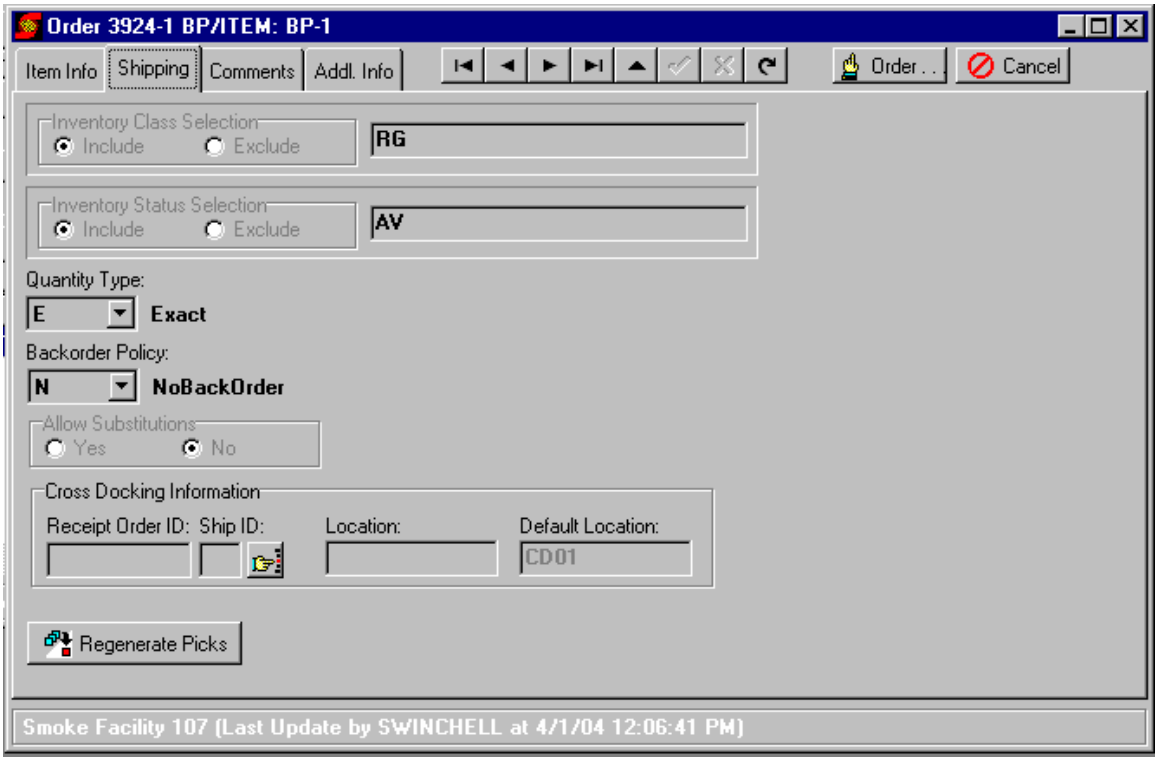
Processing in consolidated orders goes in order ID sequence. If the order is picked short, the highest number order(s) will be shorted since the lowest numbers get the inventory first.

At wave release, picks will be generated for the consolidated wave. The picks are generated like batch picks but are order picks for the entire wave as a single order. When looking up the tasks on the Lookup/Tasks screen, use the Consolidated order ID (Wave ID, ship ID =0). The picker should use order pick (RF option 54) and request the picks using the consolidated ID.





Regenerate Picks Button on Order Item Shipping tab, will make a request to regenerate the picks for the component order, but will attempt to recreate picks for all the orders in the consolidated wave for that item.

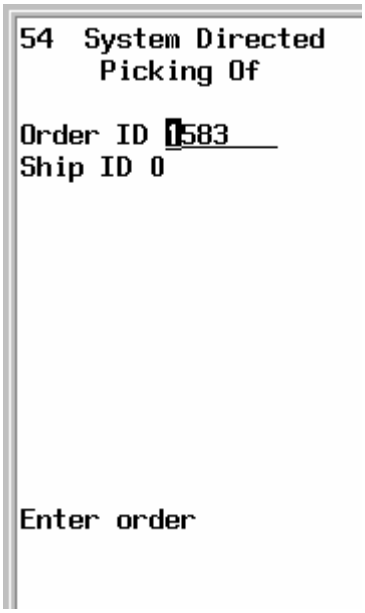


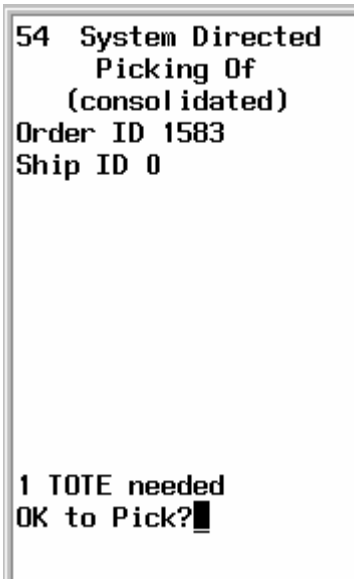
RF Picking

Orders will be picked using order picking via RF. The RF operator enters the consolidated order ID and picks items.

RF Picking specific to supporting consolidated orders:

- Order Picking (option 54) requires the operator to enter a zero for the ship ID of a consolidated (a blank ship ID will not be treated as zero) and to identify a consolidated order with the text "(consolidated)" displayed on the 3rd line. An operator can also receive a consolidated order pick by requesting any work or by not specifying an order ID/ship ID on the Order Picking screen.
- Picking instructions displays all instructions for all suborders of a consolidated order. Also, if any suborder has automatically displayed instructions, the consolidated order is considered to have them also.



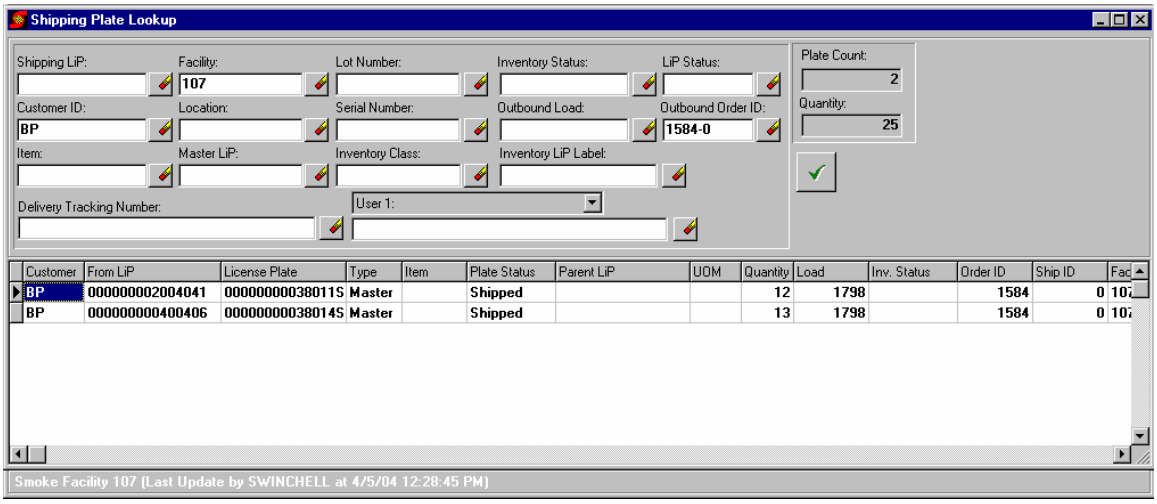


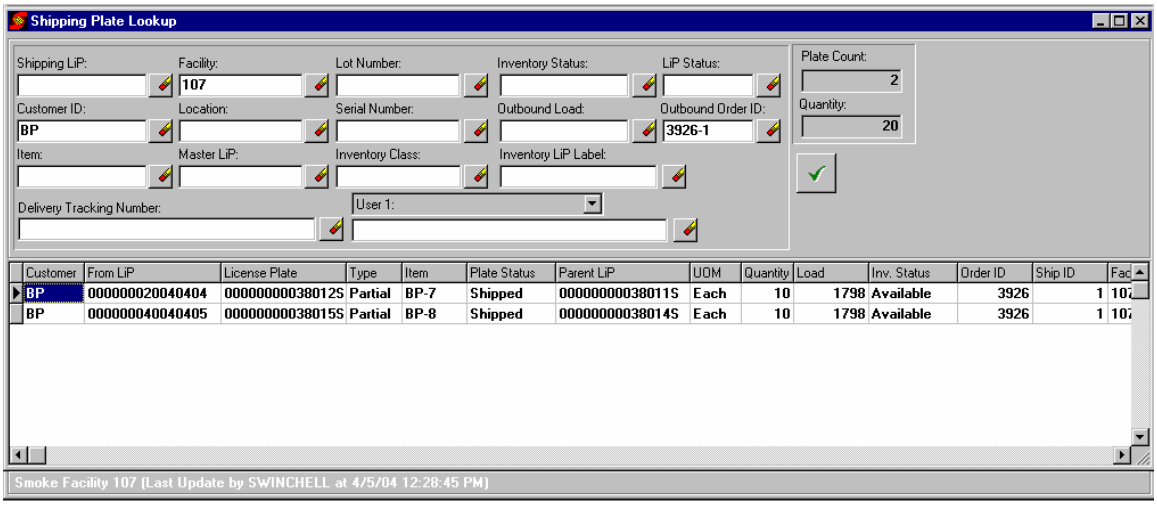
Additional Picking Notes:

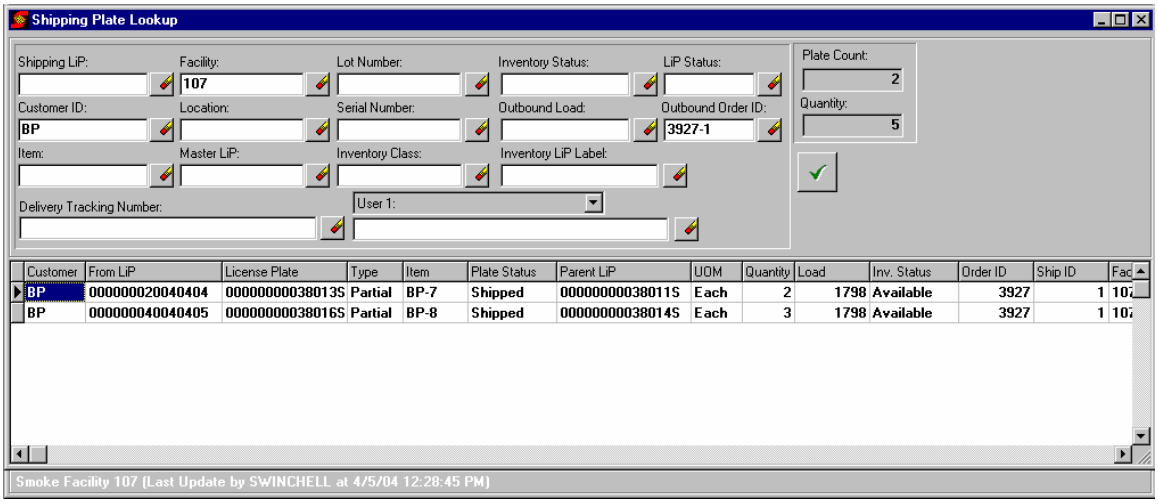
- Picked quantities and any captured data (e.g. serial number) are applied to suborders according to numerical order ID.
- Paper picking does not support consolidated orders.
- Order history is only posted for the suborders. The “Action” column on the order history will display, “Pick Cord” for these picks.
- No shipping plates exist prior to picking. After picking, the parent plate will contain the consolidated order number (wave number with a ship ID of zero) and the child plates will contain the respective suborder numbers. See the example below:

Example

Consolidated order 1584-0 has 2 orders, 3926-1 and 3927-1. The master shipping plates reflect the consolidated order id and the child plates reflect the order ID.


Shipping Plate Lookup
Shipping LiP:
Facility: 107
Lot Number:
Inventory Status:
LiP Status:
Customer ID: BP
Location:
Serial Number:
Outbound Load:
Outbound Order ID: 1584-0
Item:
Master LiP:
Inventory Class:
Inventory LiP Label:
Delivery Tracking Number:
User 1:
Plate Count: 2
Quantity: 25
Customer | From LiP | License Plate | Type | Item | Plate Status | Parent LiP | UOM | Quantity | Load | Inv. Status | Order ID | Ship ID | Fac
BP | 000000002004041 | 000000000380115 | Master | | Shipped | | | 12 | 1798 | | 1584 | 0 | 107
BP | 000000000400406 | 000000000380145 | Master | | Shipped | | | 13 | 1798 | | 1584 | 0 | 107
Smoke Facility 107 (Last Update by SWINCHELL at 4/5/04 12:28:45 PM)


Shipping Plate Lookup
Shipping LiP:
Facility: 107
Lot Number:
Inventory Status:
LiP Status:
Customer ID: BP
Location:
Serial Number:
Outbound Load:
Outbound Order ID: 3926-1
Item:
Master LiP:
Inventory Class:
Inventory LiP Label:
Delivery Tracking Number:
User 1:
Plate Count: 2
Quantity: 20
Customer | From LiP | License Plate | Type | Item | Plate Status | Parent LiP | UOM | Quantity | Load | Inv. Status | Order ID | Ship ID | Fac
BP | 000000020040404 | 000000000381125 | Partial | BP-7 | Shipped | 000000000380115 | Each | 10 | 1798 | Available | 3926 | 1 | 107
BP | 000000040040405 | 000000000381585 | Partial | BP-8 | Shipped | 000000000380145 | Each | 10 | 1798 | Available | 3926 | 1 | 107
Smoke Facility 107 (Last Update by SWINCHELL at 4/5/04 12:28:45 PM)

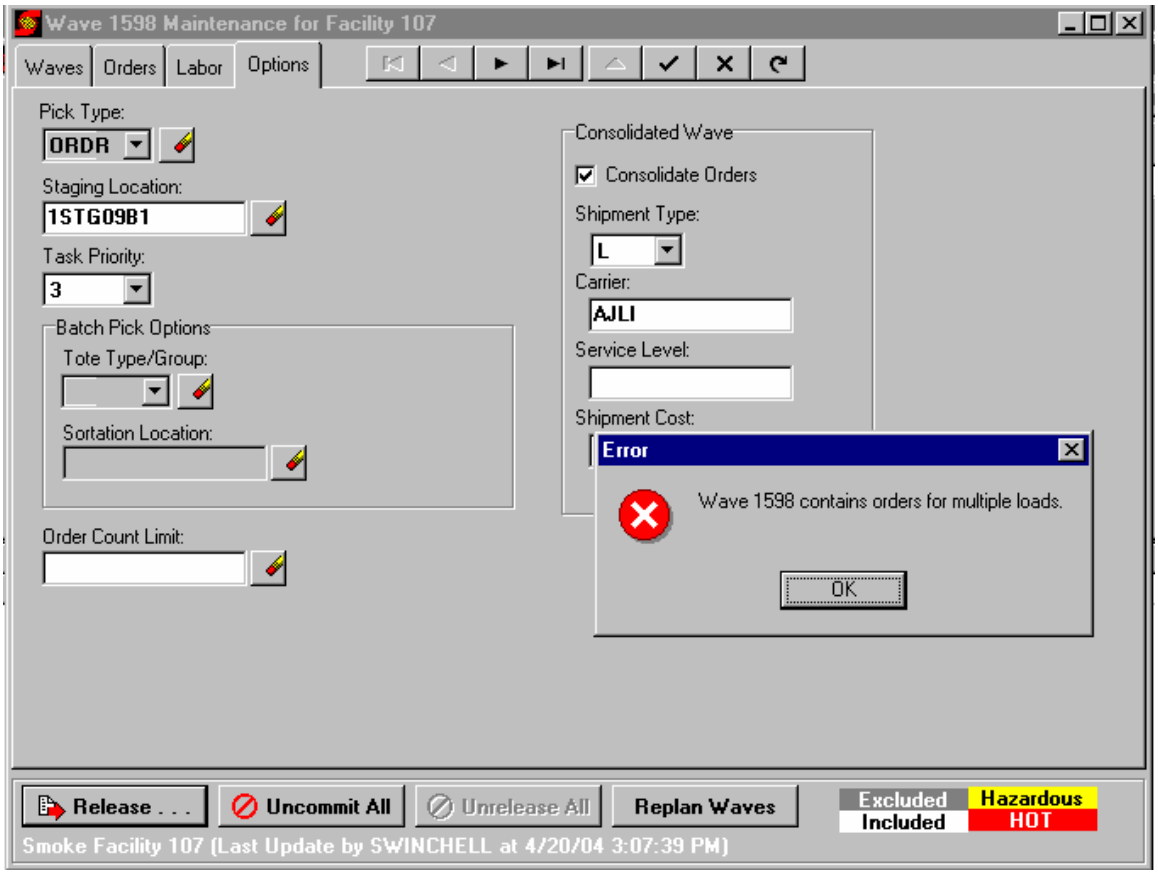

Shipping Plate Lookup
Shipping LiP:
Facility: 107
Lot Number:
Inventory Status:
LiP Status:
Customer ID: BP
Location:
Serial Number:
Outbound Load:
Outbound Order ID: 3927-1
Item:
Master LiP:
Inventory Class:
Inventory LiP Label:
Delivery Tracking Number:
User 1:
Plate Count: 2
Quantity: 5
Customer | From LiP | License Plate | Type | Item | Plate Status | Parent LiP | UOM | Quantity | Load | Inv. Status | Order ID | Ship ID | Fac
BP | 000000020040404 | 000000000381135 | Partial | BP-7 | Shipped | 000000000380115 | Each | 2 | 1798 | Available | 3927 | 1 | 107
BP | 000000040040405 | 000000000381655 | Partial | BP-8 | Shipped | 000000000380145 | Each | 3 | 1798 | Available | 3927 | 1 | 107
Smoke Facility 107 (Last Update by SWINCHELL at 4/5/04 12:28:45 PM)

Packing

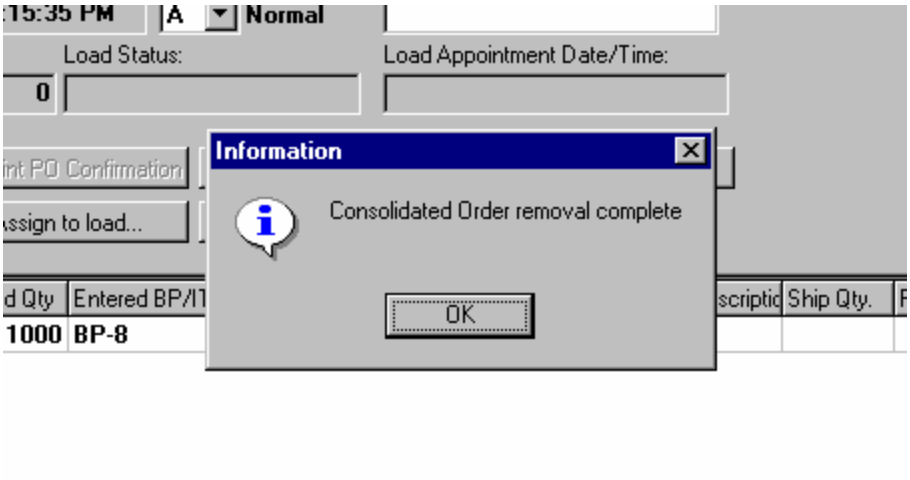
If packing is used in the processing, the packing operation for repacking totes into cartons will create cartons that are for the wave (order ID-ship ID = wave-0) and the component items will be for the individual orders of the combined wave.

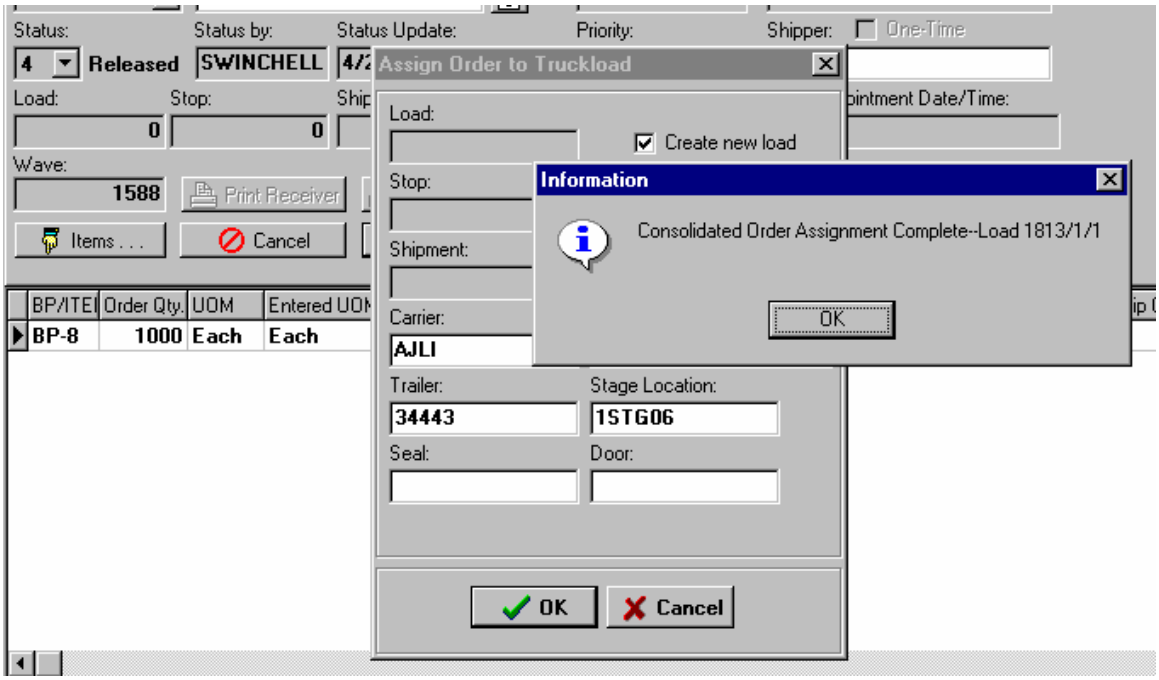
Load Assignment

- All orders for the combined wave are **required** to be in the same load. Since load assignment can occur at multiple points in the order processing, logic is in place to keep all the orders in the same consolidation in the same load.
- During consolidation creation (at wave release) all orders must "have the same load". This is either a specific load number or "no load".



- After creation, if any suborder is assigned to or de-assigned from a load, then all suborders are operated upon identically. The only exception occurs if a suborder is cancelled - it is de-assigned by itself.





- A load can't be closed unless all the orders for a combined wave are included in the load.
- The shipment cost > 0 must be provided on the wave release screen before the load can be closed.

The wave ID is available on the Lookup/Orders/Order Lookup filter. This allows a user to group orders by wave and then use the right click feature for load assignment.

Multi-Ship

The Multi-ship function, writes the information to the Multi-ship tables as if there was a single order (wave-0). As the detail components are shipped, the individual orders are updated as shipped.

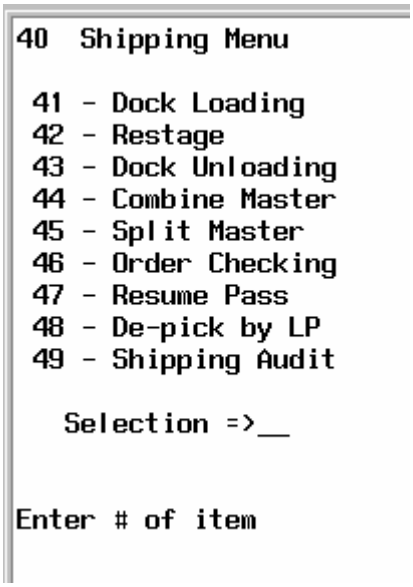
RF Consolidated Order Processing Additional Notes

1. Material issue (option 87) will return the error message "Cons order invalid" if a consolidated order is entered and the error message "Cons subordr invalid" if a sub-order is entered.
2. Misc Charges (option 93) will spread the charge for a consolidated order across all suborders based upon qtyordered.
3. Order Checking (option 46) will return the error message "Cons subordr invalid" if a sub-order is entered. When a consolidated order is checked, the ordercheck table contains data for the consolidated order, but orderhistory and orderdtl are updated only for the suborders.
4. Prompted customer level charges will spread the charge for a consolidated order across all suborders based upon qtyordered.
5. Prompted LP level charges will spread the charge for a consolidated order across all suborders containing the item based upon qtyordered.
6. Automatic customer level charges will post a zero quantity invoice detail for each suborder.
7. Restage (option 42) will return the error message "Cons order invalid" if a consolidated order is entered and the error message "Cons subordr invalid" if a suborder is entered.

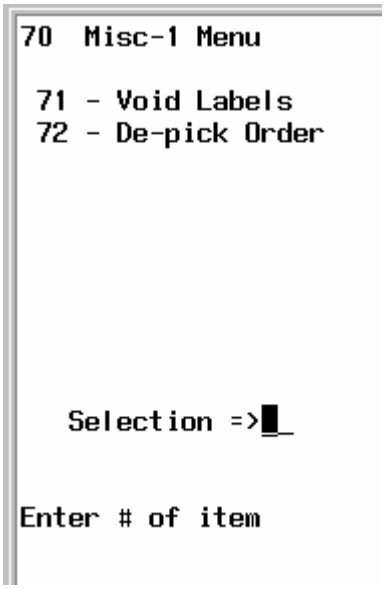
De-Picking

De-pick Order (option 72), supports Consolidated Orders. The previous "De-pick" function (option 48) was renamed to "De-pick by LP". Option 48 processing was not changed.

Option 48 Renamed

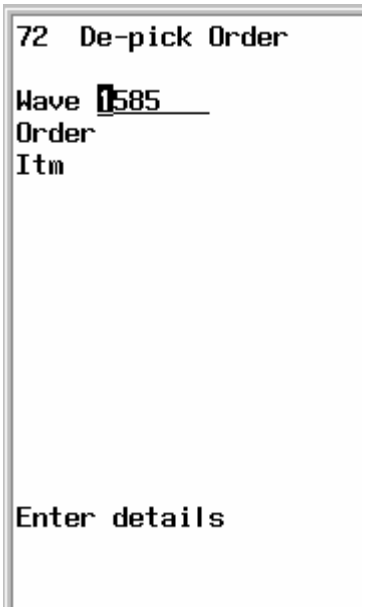


Option 72

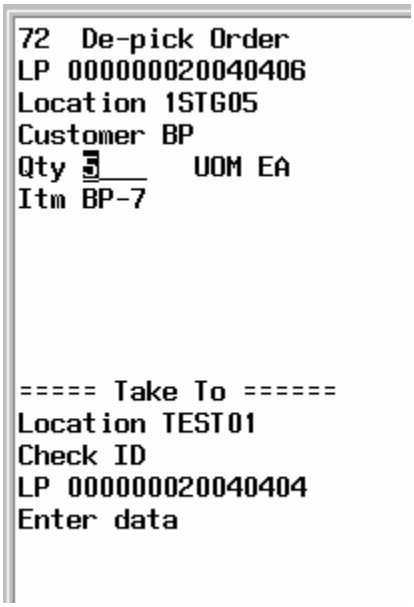


The first screen of this option allows an operator to enter a wave and/or order and optionally an item.

- If both wave and order are entered, then the order must be in the wave.
- The wave is not restricted to only being used to identify consolidated orders. If an integer is entered for the order, then the system assumes a shipid of 1. To enter an alternate ship ID use the format: order ID-ship ID (i.e. order ID "dash" ship ID, 5677-2).



Screen 1

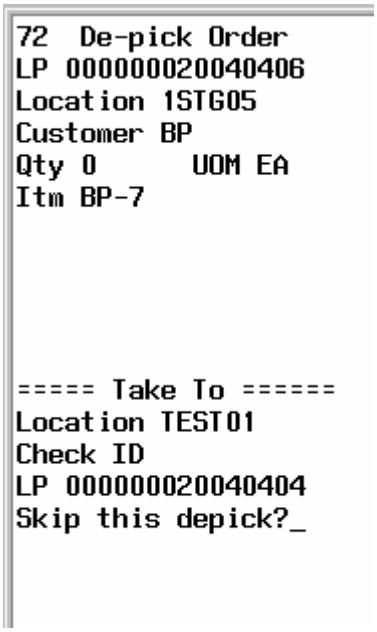


Screen 2

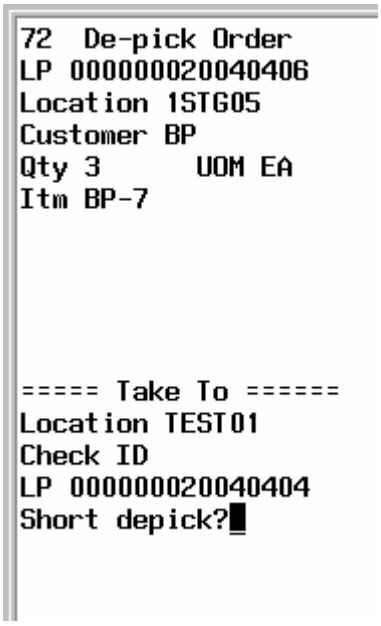
The second screen is where the system guides the operator thru depicking what was requested on the first screen. This is determined by summing the "quantity available for depicking" using the combination specified on the first screen and grouping by: "depick from plate", customer, item, lotnumber, serialnumber, useritem1, useritem2, useritem3 and picked from location. This data along with the unitofmeasure, location of the "depick from plate", a "depick to location" and a "depick to plate" are displayed. The operator can enter (override) the quantity, unitofmeasure, "depick to location" and "depick to plate". The operator must enter the check ID for the "depick

to location". The quantity (converted to the entered unitofmeasure) cannot exceed the original quantity.

If 0 is entered for the quantity, the operator will be asked whether they want to skip this depick.



- If a quantity less than the original quantity is entered, the operator will be asked whether they want to perform a short depick.



- If the operator indicates that no short depick is intended, then after the current depick is processed, the quantity displayed is updated to reflect the amount left to depick and the operator stays on the same set of data and the same set of rules for quantity

entered still apply. Once the quantity for the current depick has been depleted (i.e. depick all, depick short or skipped) the next set of data is displayed.

Security

If an operator has security for option 48 (De-pick by LP), the same security settings will be used for De-pick by Order.

Pack List

The following changes support the Packing List for customers using the VICS BOL server:

- System Defaults: MASTERPACKLISTREPORT
- Loads: if closing a load containing combined order wave generates the master pack list for the wave
- ShipOrder: if shipping the order completes the combined order wave generates the master packlist for the wave
- OrderDtl: If canceling the line item causes the order to go to shipped status and this completes the combined order wave it generates the master pack list.

In the manifesting background process, when an order goes to shipped status and the combined order wave is completed a request for a master packlist is generated.

Wave Planning Job

To make consolidated orders effective, orders using the same ship to must be grouped into the same wave.

To facilitate wave planning in conjunctions with consolidated orders, a cron or Scheduler process to automatically Wave Plan new orders can be created to fit the needs for the customer using the consolidated order processing. Each consignee (ship to) needs to have its own wave plan template that waves together all Back Orders and Normal Orders for a specific store.

The cron job should call the auto_wave_plan (zcm.auto_wave_plan) procedure in the ZCOMMITMENT proc with 3 parameters:

- facility
- custid
- wave_prefix

The wave_prefix will match against the wave template description with a “like” sql statement. The naming convention for the wave template should reflect how many waves should be planned at the same time.

To be eligible for this automatic wave planning, orders must be created by EDI and have a commitment status = 0.

The job should be scheduled to meet the needs of the customer and shipping schedule.

A sample sql script follows:

```
exec zcm.auto_wave_plan('107','1ASBAH','B+');

exit;
```

Notes on Auto Wave Planning:

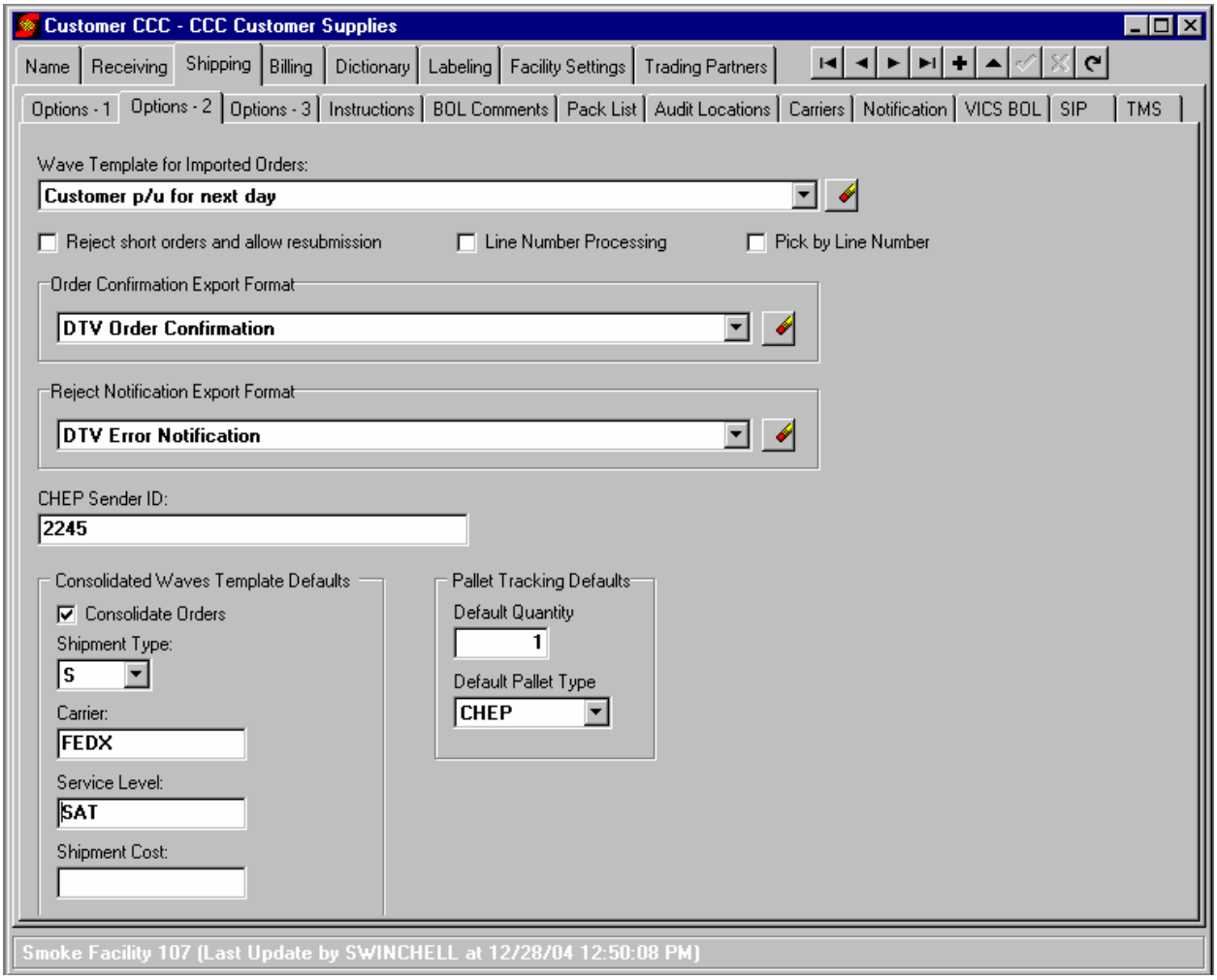
- There is a main loop which iterates through all orders for the specified facility and customer which also have a commitstatus of '0' and a source of EDI - the orders are not selected in any particular order.
- For each order, all "saved wave templates" which have a description that begin with the specified wave prefix are "tested" - the templates are scanned in description sequence.
- If an order is assigned to a template, there is a message posted with an author of “AUTOWAVEPLAN” indicating which wave it was assigned to.
- If the order is not assigned to any wave a message is also posted (same author) but there is no reason since the order could fail each candidate wave template for a different reason.
- The system default, AUTO_PLAN_ONHOLD_ORDERS is available to be set. If this value is set to anything other than 'Y', (including not being set), orders on hold will NOT be automatically planned.

For some Synapse installations, the screen 'Consolidate Orders' is in the requests menu. It requires the facility (defaults to the current facility) and the customer ID. The operator can use the button to perform the same consolidate function that is done from the cron job.

Consolidated Waves Template Defaults on Customer Setup

If this area is complete, the values will be transferred to the Consolidated Wave Box on the Wave/Options Tab at wave release. If the “Consolidate Orders” box is not checked these new fields are not available. Please see additional documentation for the Consolidated Order Processing option in Synapse.

- Consolidate Orders
- Shipment Type
- Carrier
- Service Level (if applicable for Carrier)
- Shipment Cost



Setup/Customer/Shipping/Options -2

Mass Manifesting Functionality

Overview

The *Mass Manifesting* functionality was designed to provide an efficient process for picking and shipping large volumes of small package carrier (i.e., FedEx and UPS) shipments. The *Mass Manifesting* modification can be utilized for both automated and manual (book provided by individual small package carriers) small package machine operations.

The *Mass Manifesting* functionality requires that the orders are planned in a wave that has the 'pick type' selected as Batch (BAT). Also the *Mass Manifesting* check box on the Options tab of the *Wave Release* screen must be selected. ***Very Important….*** *If either of these two settings is incorrect, the process* ***will fail!***

When 

is checked, the wave must be composed entirely of small package orders with the same carrier and that each line of each order resolve to even quantities of the Label UOM. This means that, if the *LabelUOM* for an item on an order is *CASE*, the order must be for full cases - no partials.

The release of a *"Mass Manifesting Wave"* will trigger BAT pick (BP) tasks to be generated in the typical manner. In addition to the tasks, Synapse will generate *Package Labels* and a *Data File.*

- The use of the *Package Labels* eliminates the need for Sort Picks "SO", the 2nd step of batch picking. Synapse will not create Sort Pick tasks for *Mass Manifest* processed waves.

- The *Data File* exported will be suitable for importing into the *small package carrier (FedEx, UPS)* Ship Manager software. When the file is imported an automated routine on some small package systems creates the shipping labels and updates the Synapse data base with tracking numbers as though the operator scanned each individual package (Multi-Ship Processing). See the section below on Label Profiles for additional information regarding the *Data File*.

Once this update is done, each order will have tracking number(s) associated with it as assigned by the Small Package Carrier software and the order will be updated to shipped status.

The *Package Labels* will be created for each package based on the "Label UOM" field on the SPECS tab of the Customer > Item Maintenance screen. A *Label Profile* must be set up (*see section on Label Profiles below for details*) and associated on the Customer > Item Maintenance > Labeling tab with each Consignee that requires mass manifesting functionality.

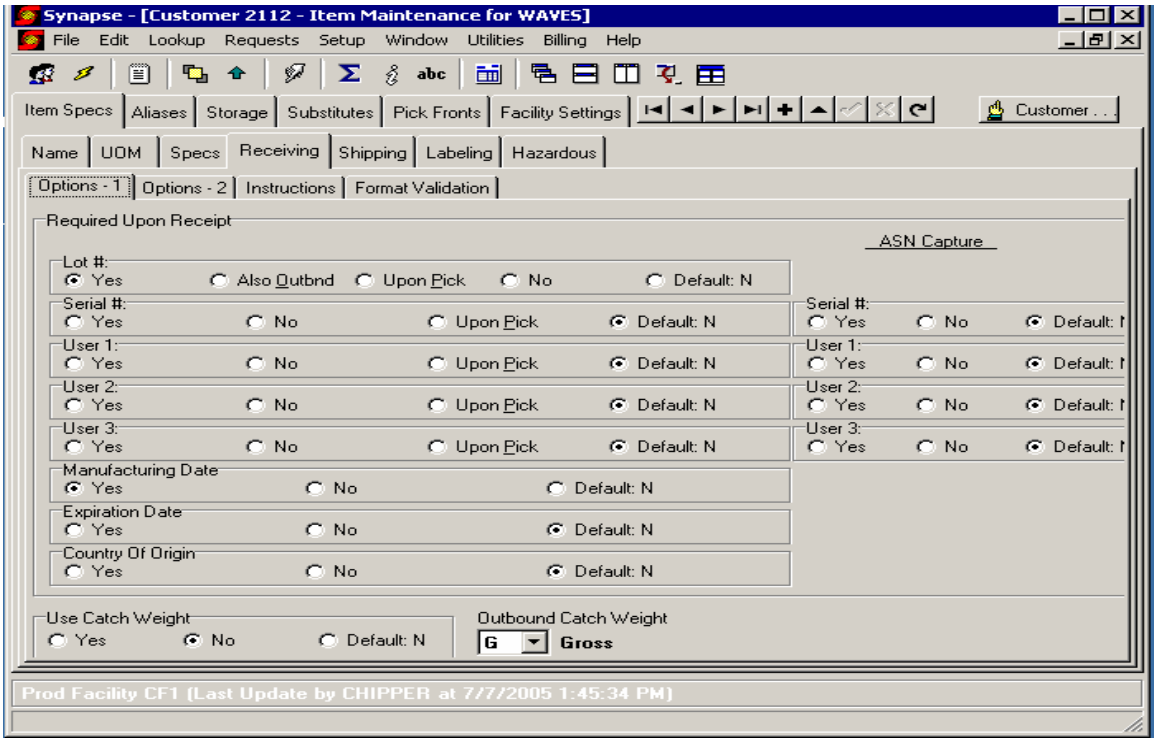
Note: The word package used above is relative to the UOM data found on the SPECS tab. For example: If an item is set up with a <u>BaseUOM</u> on the Item Maintenance > UOM tab where the value is <u>EACHES</u> and have the

LabelUOM value set at the Item Maintenance > SPECS tab where the value is CASES then a "Package" is equal to a CASE.

Setup/Customer/Item Maintenance

Receiving Tab

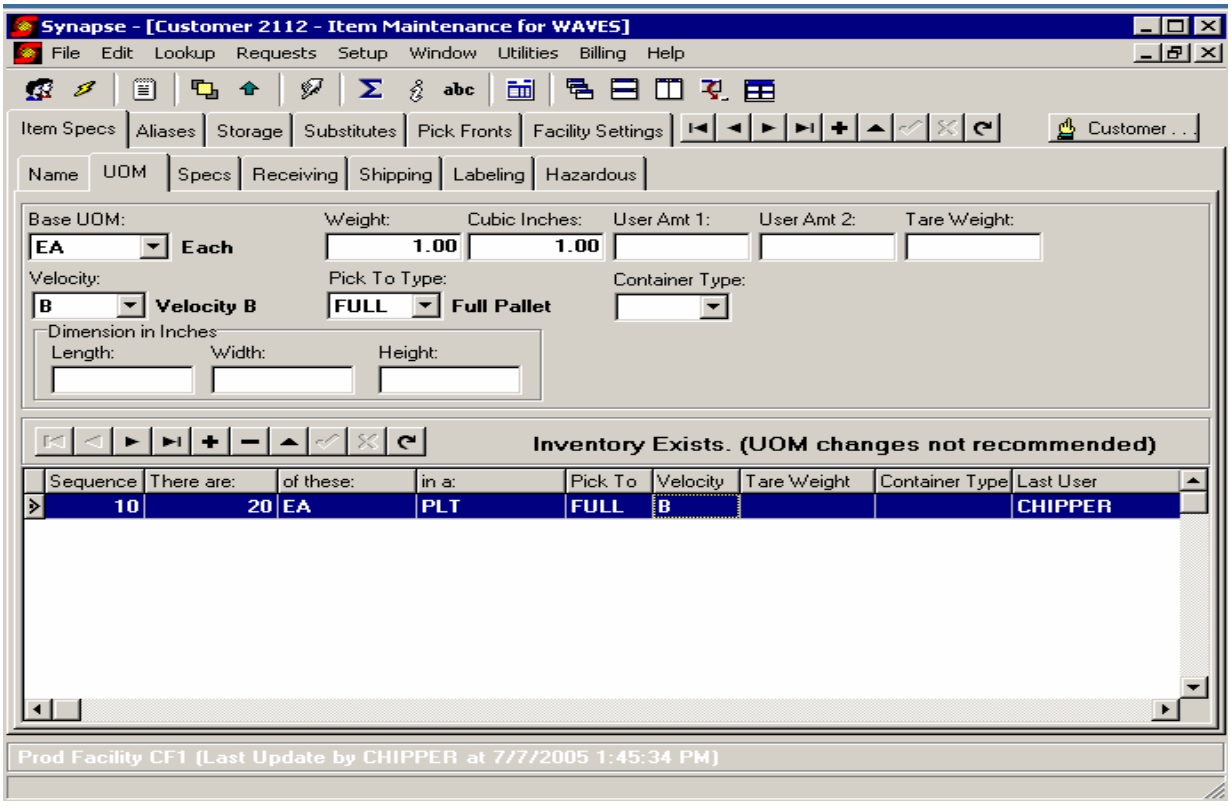
The orders in the *Mass Manifesting* wave cannot contain any items which have "Upon Pick" attributes - this is because the functionality is following the batch pick without the sortation and this type of capture is normally done during sortation.



UOM Tab

The BaseUOM and additional Item UOM are set on this tab. *Please note* that there must be an entry in this screen for the *LabelUOM* that will be set on the SPECS tab.

For example, the screen shot below shows an item that has a BaseUOM of Each "EA" and an additional UOM entry for pallets "PLT". If you need to label the item at the Case "CS" UOM and have set the LabelUOM to "CS" the system will not have any means of translating how many labels to print out because the UOM of "CS" is not related to any UOM currently set as it is not represented in this table.

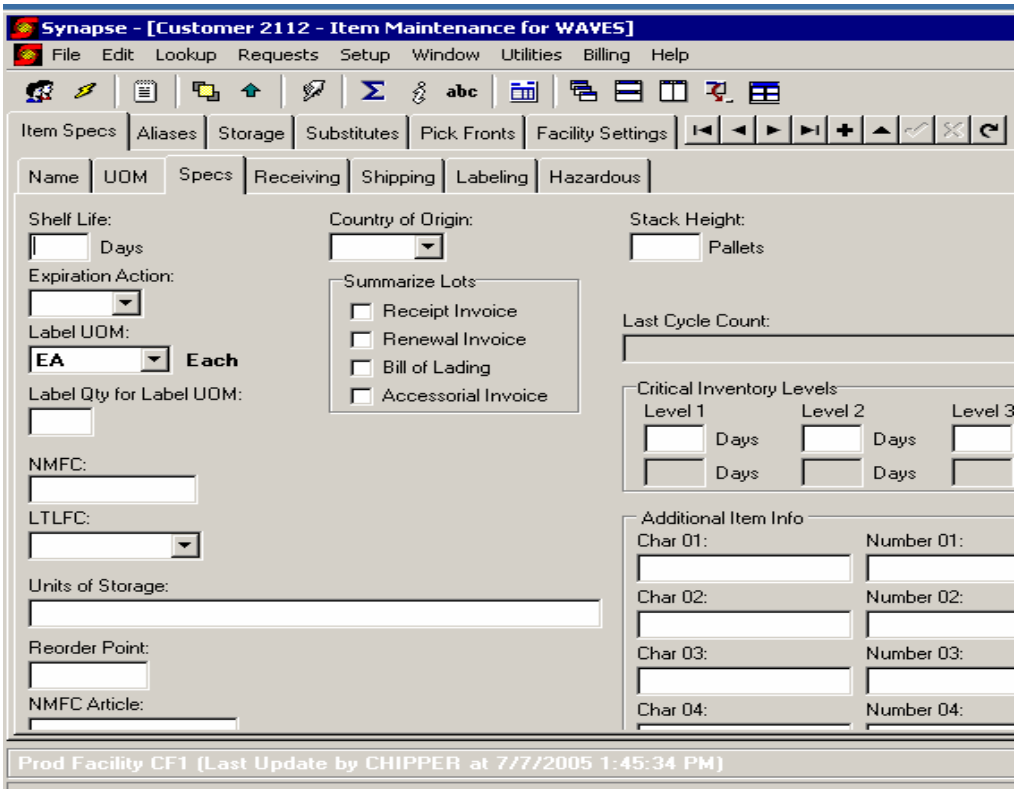


Note: This document is written for an audience that already understands the basic Synapse receipt and outbound order flow.

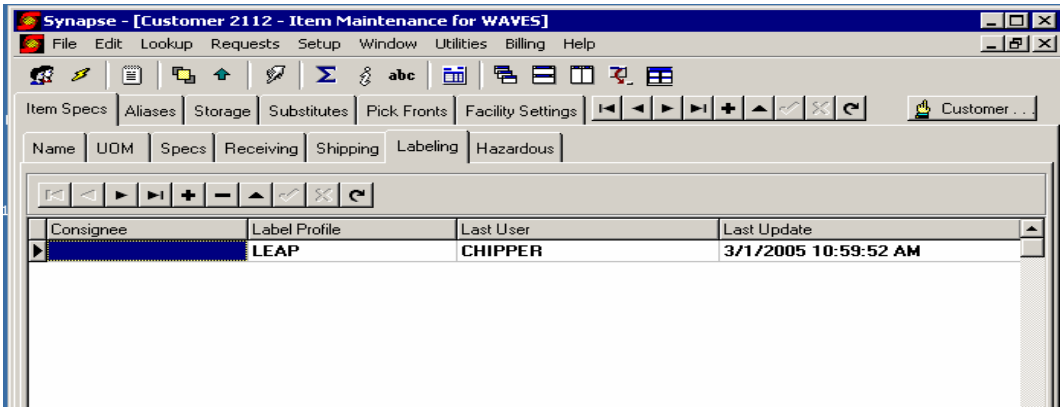
Specs Tab

An UOM will need to be entered for *Package Labels* to generate.

Mass Manifesting functionality *only* supports the use of any UOM that is set up in Synapse and associated to the Item in the LabelUOM field of the SPECS tab.



Labeling Tab



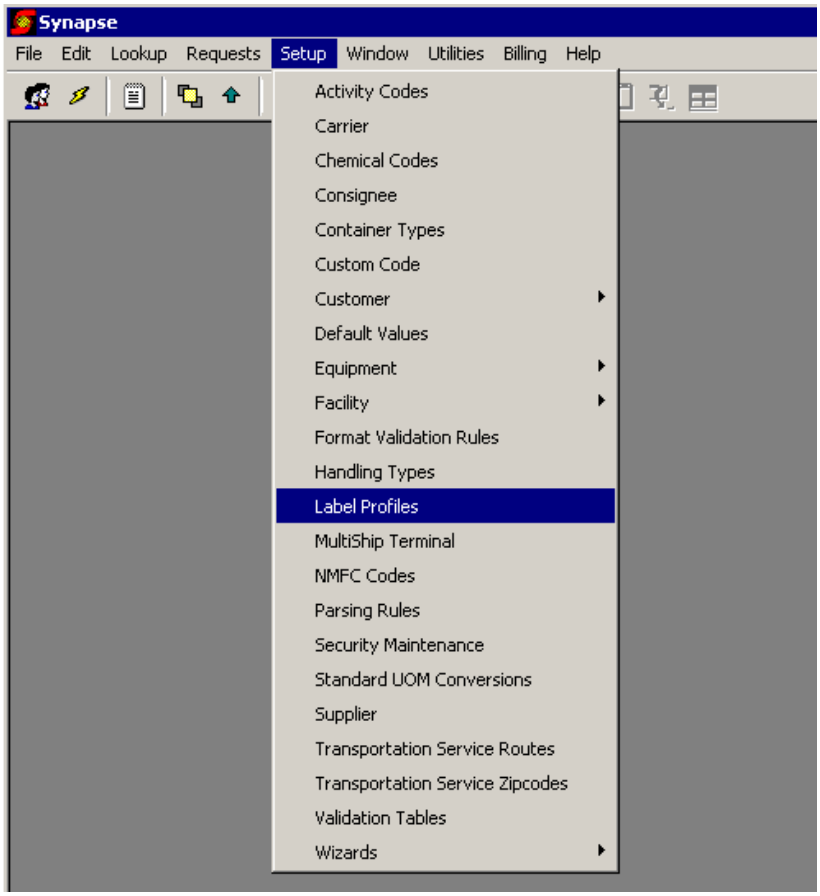
**** Note: A Label Profile has to be set up in the Set Up > Label Profiles screen before you can associate it to any labeling tab in Synapse.**

The above screen shot shows a *Label Profile* set up at the item level. If the Consignee field is left blank (also referred to as *Default),* the label profile applies to ALL Consignees. If there are individual Consignee labeling needs, each consignee needs to be set up individually.

Mass Manifesting Labeling functionality *only* supports even quantities of the *LabelUOM* for each order. This means that, if the label UOM for an item on an order is CASE, the order must be for full cases - no partials.

Set Up/Label Profiles

Select Set Up from the menu and then scroll down to select Label Profiles.



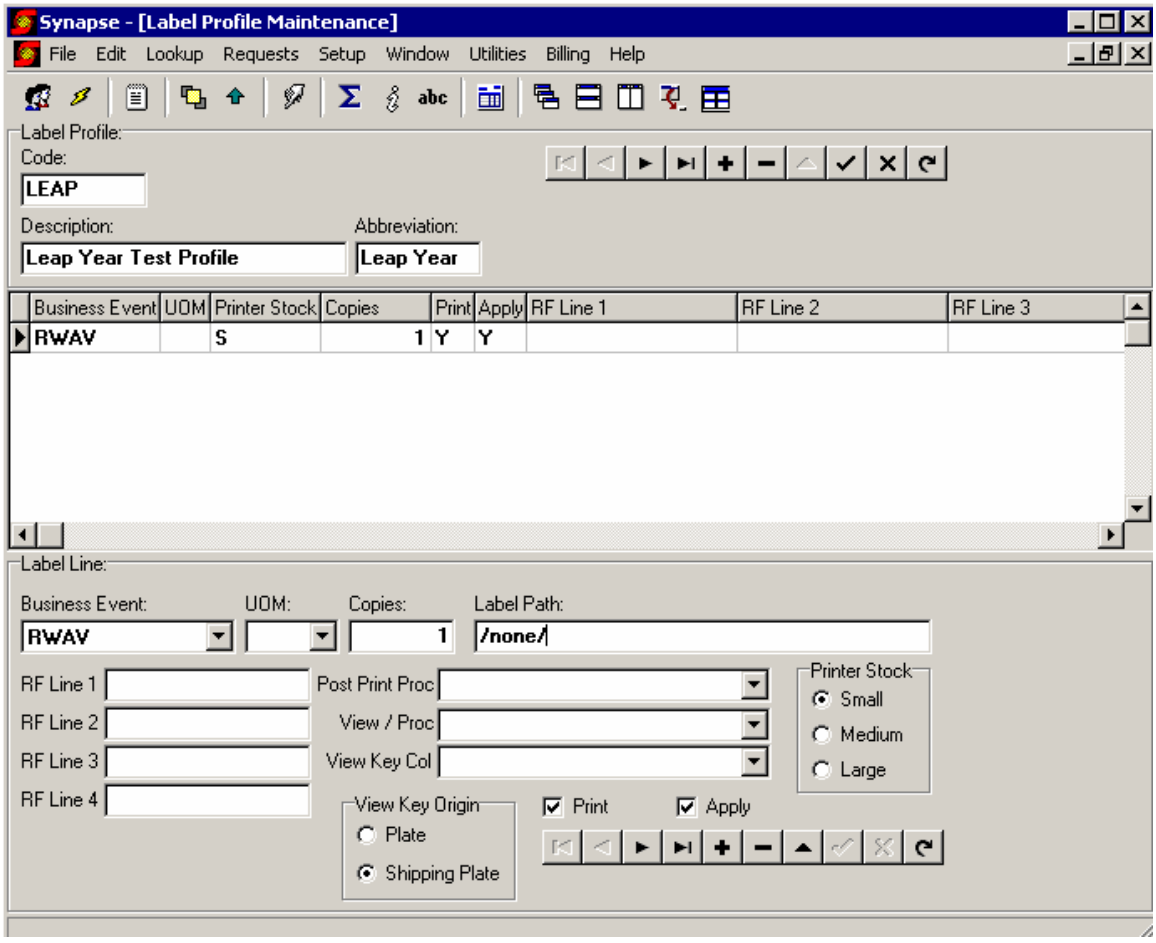
Shipping labels are produced during wave release and require that a label profile line be created with a Business Event of RWAV and a View / Proc specified. A standard proc and label view are provided for Mass Manifesting to serve as a template for this functionality. The proc is mass_man_lbls.mass_man_labels. This proc should be specified in the Label Profile in the View/Proc field.

The mass_man_lbls.mass_man_labels proc generates the label view mass_man_lblview, populates the multiship database tables and executes an export request to create the data file. The proc may be cloned to create a custom label view or execute a custom export map.

The standard map provided is Mass Manifest FedX Batch Export. It can be cloned to create a custom map.

(Please check with a Synapse support personnel if additional information is required regarding Label Profiles.)

To complete the Label Profile the View Key Col (*see next screen shot*) is not required because this profile is based on a proc; the View Key Origin should be Shipping Plate; and a Synapse Production environment label path should be entered.



When the *Mass Manifesting* wave is released, a message will appear asking for selection of a shipping label printer - if the label profile has not been set up then a warning message will appear. At this point labels will be printed, the multi-ship data will be populated and a file will be generated for the Small Package Carrier.

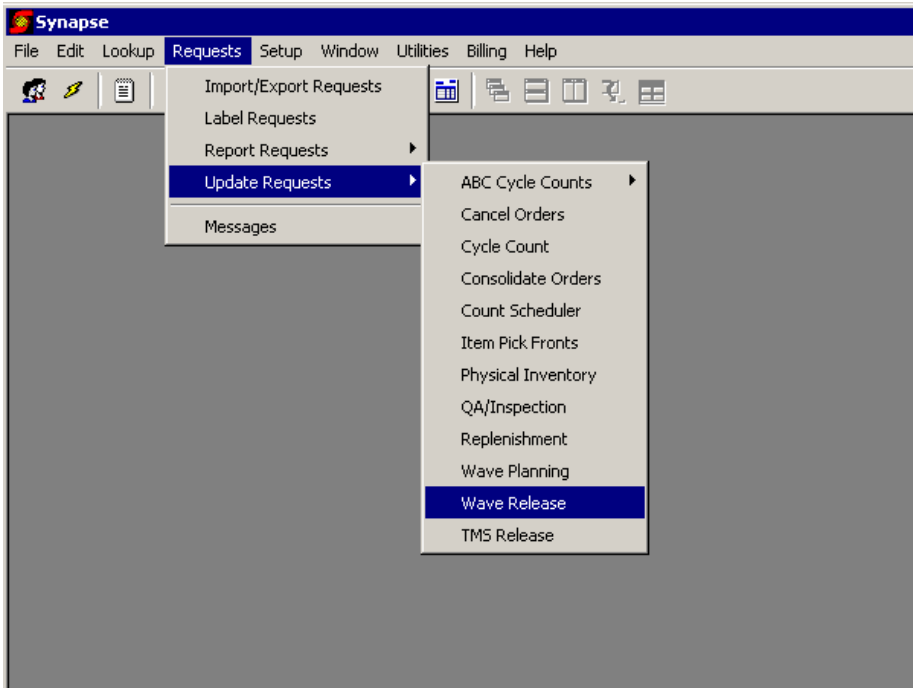
Requests/Update Requests/Wave Planning

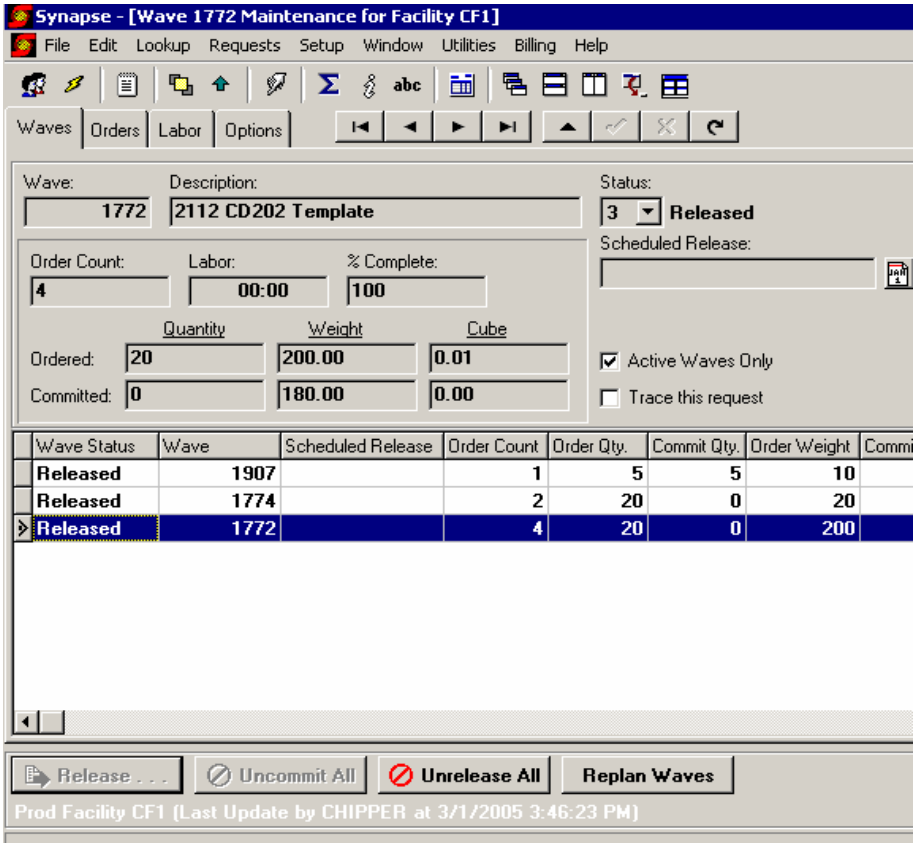
Select the Requests Menu, scroll down and select Update Requests, then select Wave Planning on right menu bar.

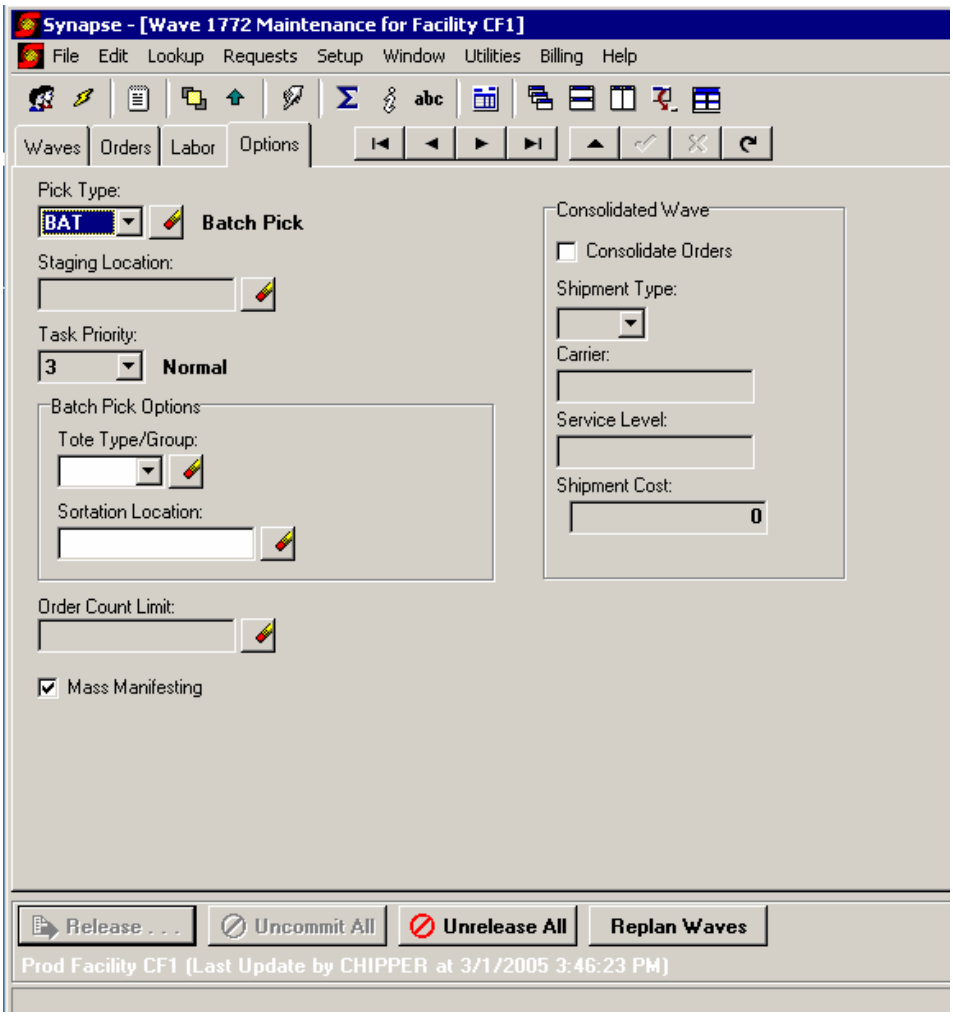
The *Mass Manifesting* flag (appears only on the Wave Release Options Tab) will require that the wave be composed entirely of small package orders of the same carrier and that each line of order resolve to even quantities of the Label UOM for each order. This means that, if the *LabelUOM* for an item on an order is *CASE*, the order must be for full cases - no partials.

Requests/Update Requests/Wave Release

Select the Requests Menu, scroll down and select Update Requests, then select Wave Release on the right menu bar.




Synapse - [Wave 1772 Maintenance for Facility CF1]
File Edit Lookup Requests Setup Window Utilities Billing Help
Waves Orders Labor Options
Wave: 1772
Description: 2112 CD202 Template
Status: 3 Released
Scheduled Release:
Order Count: 4
Labor: 00:00
% Complete: 100
Quantity Weight Cube
Ordered: 20 200.00 0.01
Committed: 0 180.00 0.00
Active Waves Only
Trace this request
Wave Status | Wave | Scheduled Release | Order Count | Order Qty. | Commit Qty. | Order Weight
Released 1907 1 5 5 10
Released 1774 2 20 0 20
Released 1772 4 20 0 200
Release . . .
Uncommit All
Unrelease All
Replan Waves
Prod Facility CF1 (Last Update by CHIPPER at 3/1/2005 3:46:23 PM)



If a wave is released, unreleased and then re-released; the old multi-ship data will be deleted and a new FedEx file generated.

RF Reprint Labels using Option 85

Once picking has started, the shipping labels can be re-printed via rf option 85 using any shippingplate or crossreference from any order and an Event of RWAV. In this case only the labels will be printed, NO new multi-ship data is generated and NO FedEx file is created.

Manual End of Day Processing – Tools Available

The *Labels* are generated in the same sort order as the data listed on the exported *File.* If Small Package Carrier orders and daily shipment information needs to be processed manually, clear and consistent tools are available.

Automatic End of Day Processing - Critical Warning

It is ***CRITICAL*** that operations keep the Small Package machine open until all of the BAT pick (BP) tasks for that day's orders have been completed. If operations attempts to run the end of day processes to provide the carrier with the day's shipments, ***it will fail*****.** The Synapse shipping data will be damaged.