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CHAPTER 4 - LICENSE PLATES

A **License Plate** (aka **LiP or LP**) is a unique system identifier used to distinguish a single pallet or case. License plates are used to identify and track inventory. Each LiP typically has a bar coded label.

A LiP is assigned to a quantity of an item during RF receiving. The receiving operator determines the UOM and quantity of an item in the LiP. Associated information about the LiP, such as **Lot Number**, is also captured during receiving. SYNAPSE expects the LiP to represent no more than the defined full pallet quantity.

Types of License Plates:

There are **4 types** of plates (identified by the type column in the plate table) and any other values in the **LicensePlateTypes** validation table (e.g. IP for Inner-Pack) are not recognized by the system:

PA - this is a *normal* plate which contains/identifies inventory in the system. It can be created by receiving, location load, kitting, import, etc. When this type of plate gets deleted in the system its quantity gets set to zero and it gets moved into the **deleted plate** table.

MP - this is a *multi* plate and it has 1 or more child plates (**PA**) associated with it – the **parentlpid** column of the child will contain the lpid of the MP. The purpose of this type of plate is to be able to group plates with different characteristics (e.g. item, lot number, etc.) together and also to be able to refer to them collectively with a unique name - i.e. the lpid of the MP. These plates do not go into the **deleted plate** table but rather get physically deleted from the database once the last child has been removed.

In various parts of the **RF** code (e.g. putaway and lp movement) if the operator wands a child they will be asked whether the operation is to be performed on the child or parent. Also, during receiving, if an operator has created an MP they will be asked whether it should be putaway as one unit (single) or whether each child (multiple) should be considered for putaway separately.

Various columns (custid, item, lotnumber, invstatus, inventoryclass, orderid, shipid, loadno, stopno and shipno) in the MP depend upon the contents of the same columns in the child plates. If there is a mixture, then one or more columns in the MP could become null - e.g. if at least 2 child plates have different custid columns then the custid, item and lotnumber column of the MP will be null. Other columns (e.g. facility, location and status) are identical among all plates. Two columns in the MP (quantity and weight) are always equal to the sum of the corresponding columns in the child plates.

These plates can be created with the build pallet **RF** function and also during receiving. During receiving the operator can specify that they want to build an MP. The system will also automatically build an MP during receiving if the operator tries to receive an

incompatible item onto an existing plate. Compatibility is determined by custid, item, status, hold reason, unit of measure, serial number, lotnumber, manufacture date, expiration date, anniversary date, condition, country of, useritem1, useritem2, useritem3, invstatus, inventoryclass and recmethod.

TO - this is a *tote* plate. It is similar to an MP in that it has child (**PA**) plates but it is only used during picking, sorting and packing. It differs from an MP in that it does not get deleted when the last child is removed. It stays in the system to be used again and again. Think of this as a real tote which can contain inventory temporarily. Totes are only used if pick-to-tote was specified for the task. If a picker is requested to enter a tote during picking and a non-existent lpid is entered, the system will ask the user if they want to create a new tote.

XP - this is a *cross-reference* plate. It's only function in life is to point to a **shippingplate** (master or carton) - the parentlpid column of the XP contains the lpid of the shippingplate it refers to.

Using Drop Down Selection

On many lookup screens, the user is given a choice of filter criteria for one entry through the use of a drop down selection box. The user should select the option desired and then enter the lookup data.

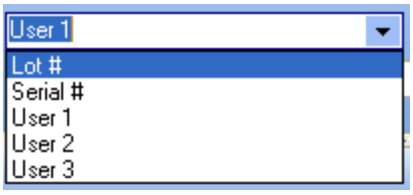
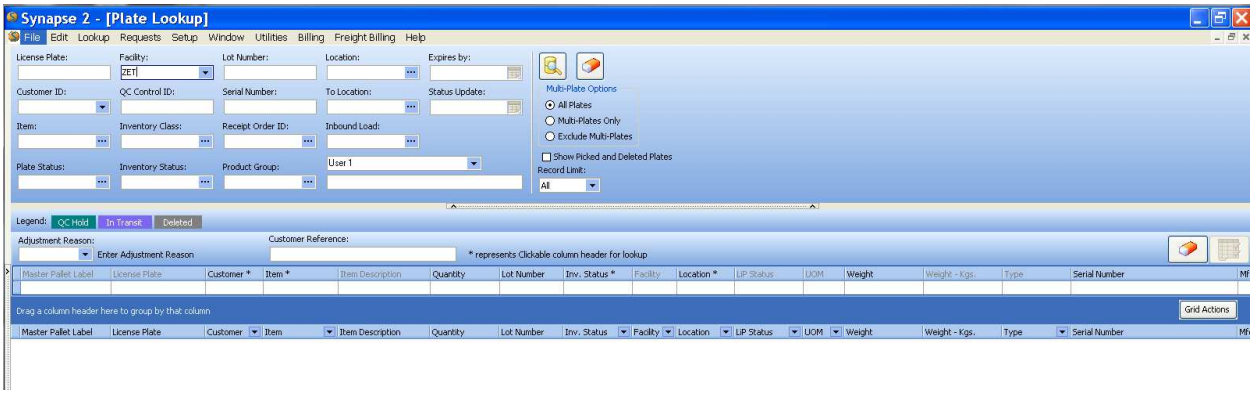


Plate Lookup

From the Main Menu, select Lookup/License Plate Information.

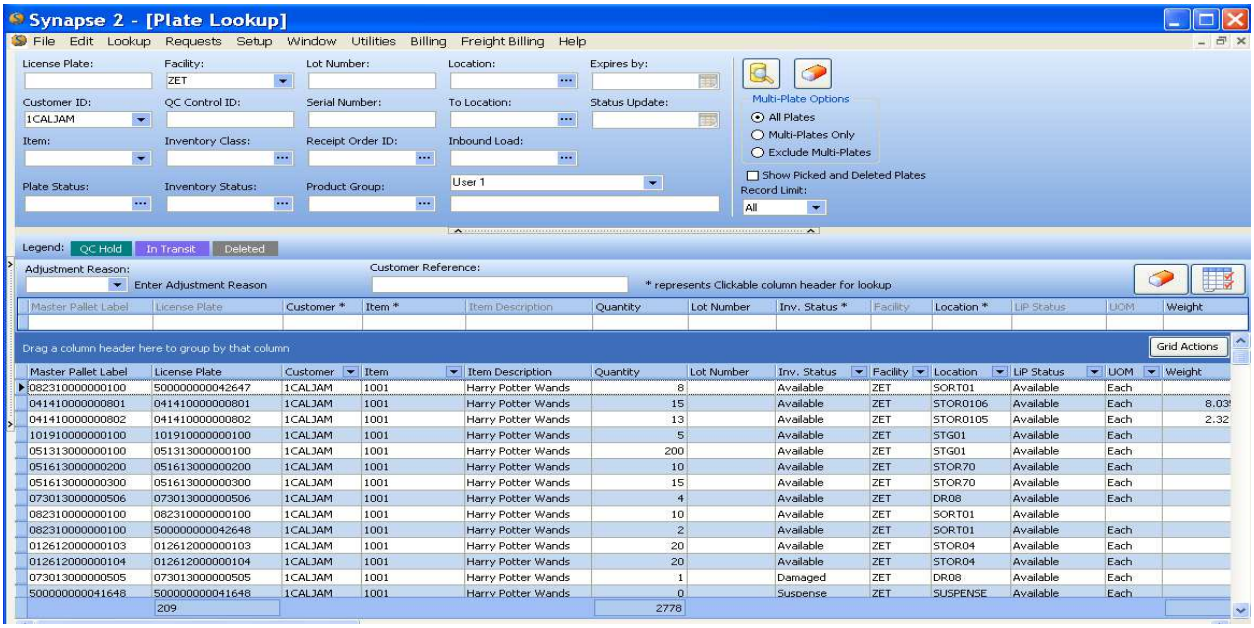
The screen will display as follows:



License Plate Information/Plate Lookup

- Enter the parameters to limit the search for the LiPs you need to view. If you know the specific LiP you want to see, then enter the ID in the **License Plate Field**. Click on the **Lookup Box**  . To view a more general list, enter the Customer ID or Facility and click on the **Lookup Box**  . From the general list you will be able to select the specific LiP by double clicking on the **LiP** field.

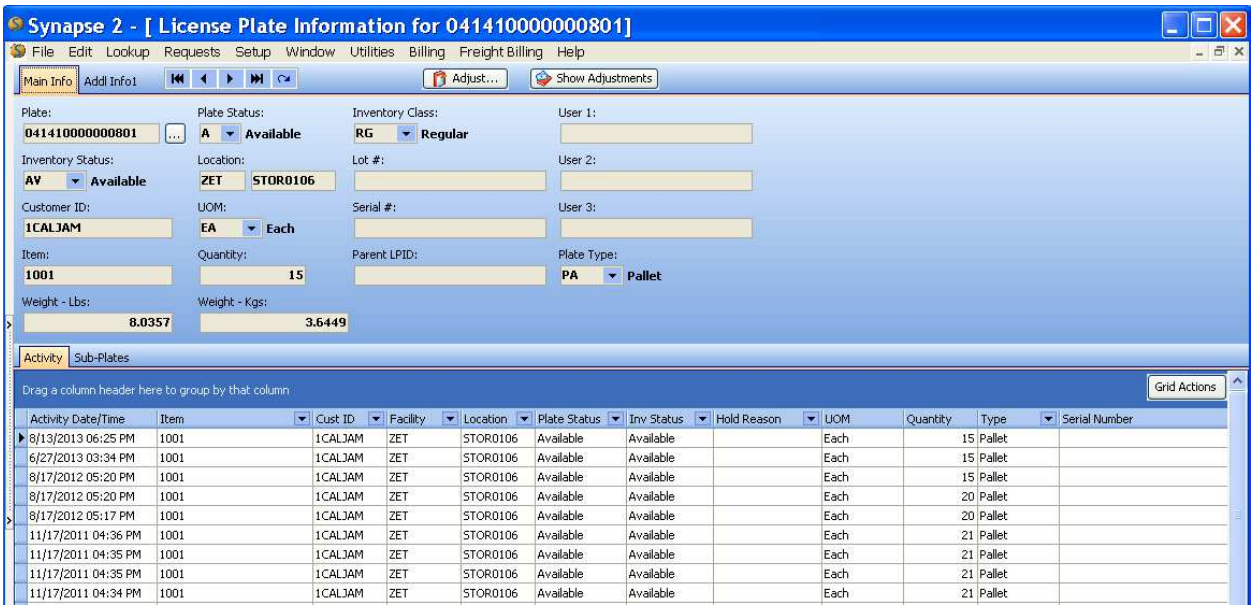
HINT: **You do not need to enter the leading zeros for the LiP ID. SYNAPSE will fill them in for you.**



- To view limited data for an individual LiP, use the bottom scroll bar to view information that is listed to the right and left of what is currently displayed on the screen.

- To view more data on a particular LiP, double click on the line for the specified LiP.

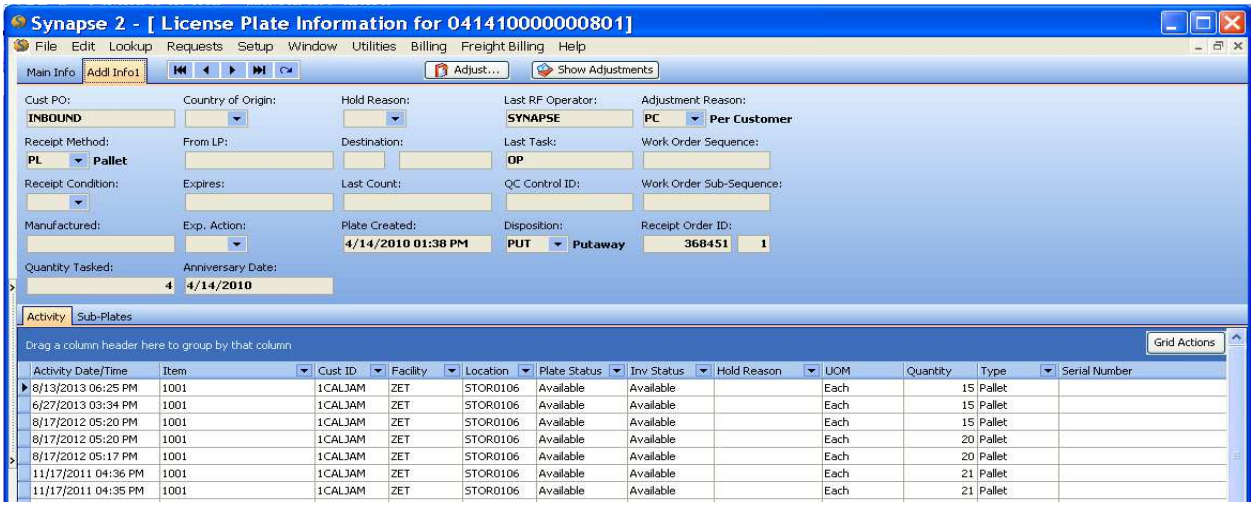
The screen will display as follows:



License Plate Information/Main Info

Additional data for the LiP is available by clicking on the **Addl Info** tab.

The **Additional Info** tab screen will display as follows:



License Plate Information/Additional Info1

The **LiP Activity History** information appears at the bottom of both screens. The normal sequence is to show the LiP history with the most current activity first. To reverse this order, click on the 

bar and the activity data will be displayed in reverse order. This sorting feature is also available on other fields.

Note: LiP Activity History is maintained by a trigger in the database. Whenever any one of the different fields (columns) within a plate changes, the trigger fires and a snapshot of those fields is taken BEFORE the change and recorded along with the current system time. This change could originate from anywhere (even if someone from the technical staff changed the plate behind the scenes with a utility such as sqlplus or Toad). The platehistory entries are not in 1-1 correspondence with tasks performed on a plate - i.e. if a user moves a plate you will see 1 history record when the plate is scanned by the user and another when they place the plate in the final location.

Remember that display shows data BEFORE it changes, so the user needs to look at the next chronological record to see what changed. The user also needs to go from the "newest" history record to the current data to see the last change. The first history record shows what the plate was originally before any change.

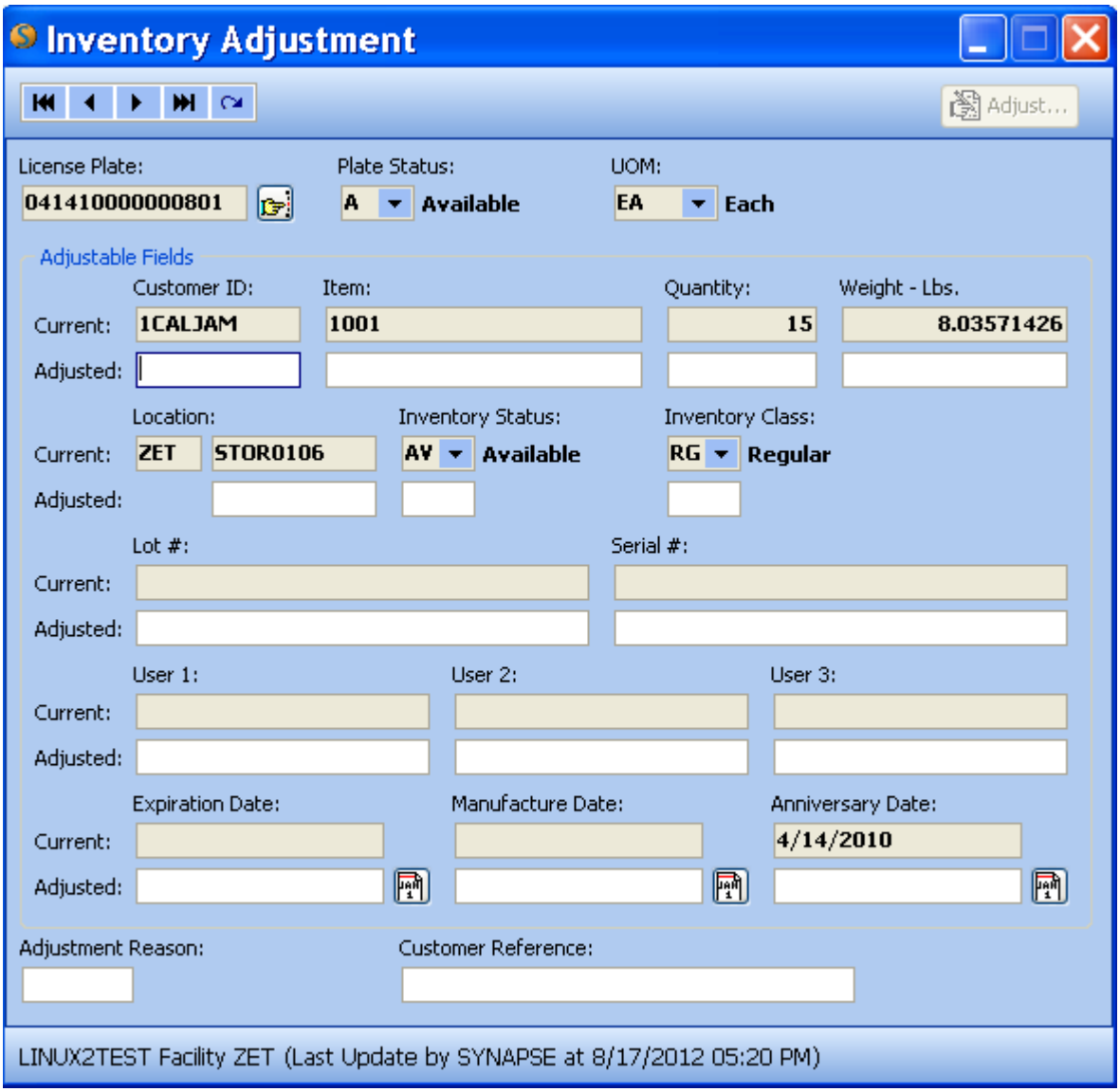
CRT Inventory Adjustment

The user must be working in the same facility as the plate to be adjusted. The adjustment logic is the same if the user makes the adjustment via the CRT or the RF.

To make an adjustment on a LiP, click on the 

button.

The screen will display as follows:



License Plate Information/Inventory Adjustment/Main Info

- Enter the data to be adjusted.
  - Any field that is white can be changed. Remember if the **Quantity** field is the one to be changed make sure it is done in the correct UOM that is listed at the top right of the screen. If the item is a catch weight item and the quantity is being adjusted, then the weight should also be adjusted also. The system will not recalculate the weight. If the item is a standard weight, the weight can be adjusted even when the field is grey. Just double click into the adjust field to enter a new weight.
- An **Adjustment Reason Code** is needed for ALL adjustments.

- A list of **Reason Codes** can be viewed by double clicking in this field. Select the correct code and double click on it to carry it over to the **Inventory Adjustment** screen.

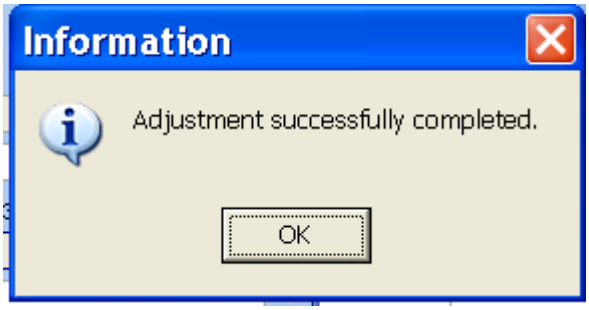
- When finished, click the 

Button.

The system will prompt with the message:

- Click the 'Yes' button to complete.

A new message will then display:

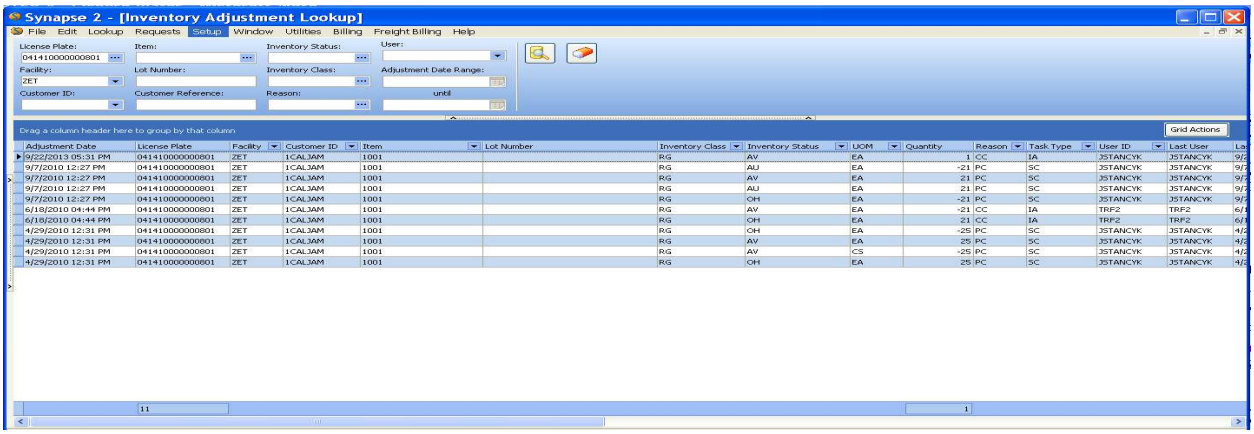


- Click "OK" and the process is complete.

To view the adjustment history for a LiP, click the 

button.

The screen will display as follows:



License Plate Information/Inventory Adjustment Lookup

Use the scroll bar at the bottom of the screen to see all of the adjustment information for each row.

Shippingplates

All shippingplates are uniquely identified by a **14 digit number** plus a trailing character of '**S**'. Shippingplates are either created during wave release or (in the case of batch picking and consolidated orders) after the pick is performed.

There are **4 types** of shippingplates (identified by the type column in the **shippingplate** table) and any other values in the **ShippingPlateTypes** validation table are not recognized by the system:

F - this denotes a full pick and it is either created during pick task generation (if the system decides to *take* a complete plate) or when the operator overrides their pick on the **Can't Pick** screen - the operator can split their original pick however they want as long as they do not pick more than requested. With this type of shippingplate the associated plate *tags along* (i.e. the PA's status gets set to 'P') and the inventory is considered to still be on the plate. The fromlpid column will indicate the plate that was actually picked by the user. After picking, a full can either stand alone or have a parent - either master or carton.

P - this denotes a partial pick and it is either created during pick task generation or when the operator overrides their pick on the **Can't Pick** screen. With this type of shippingplate the inventory is on the shippingplate – the picking decreased the quantity on the picked from plate(s). When this shippingplate is first created by task generation the fromlpid column will be null if the pick should be from a pickfront, otherwise the pick should be from the specified plate. After picking is complete, the **fromlpid** column indicates the *first* plate that was picked from. If the pick was from a pickfront, multiple plates could have been picked from, only the first is recorded rather than splitting the

shippingplate. After picking, a partial will always have a parent shippingplate – either master or carton.

C - this is a **carton shippingplate** and it has 1 or more child shippingplates (full or partial) associated with it – the parentlpid column of the child will contain the lpid of the carton. These shippingplates are constructed during picking by the operator if pick-to-pack was specified for the task.

Cartons are similar to MP type plates in that they:

- Contain no inventory (their child shippingplates handle that)
- Certain columns (e.g. custid, item, etc.) can be null, based upon the mix of child shippingplates
- Other columns (e.g. facility, location, etc.) will be identical
- Two columns in the carton (quantity and weight) are always equal to the sum of the corresponding columns in the child shippingplates
- Are used to group shippingplates together and to be able to refer to them collectively with a unique name - i.e. the lpid of the carton.

The contents of cartons can also be adjusted with the Combine Master and Split Master rf functions.

M - this is a master shippingplate and it has 1 or more child shippingplates (full, partial or carton) associated with it – the parentlpid column of the child will contain the lpid of the master. These shippingplates are constructed during picking by the operator if pick-to-pack was not specified for the task and partial picking is required. Master shippingplates are almost identical to carton shippingplates except that they can contain cartons whereas a carton can only contain full and partials.

Shippingplate status:

FA - the shippingplate failed the **RF Shipping Audit function** and is awaiting resolution (the location should be a physical location)

L - the shippingplate has been loaded (the location should be the Door Location for the load)

P - the shippingplate is picked (the location could be an operator or a physical location)

S - the shippingplate is staged after being picked (the location should be a physical location)

SH - the shippingplate is shipped (the location should be the first 10 characters of the trailer for the load)

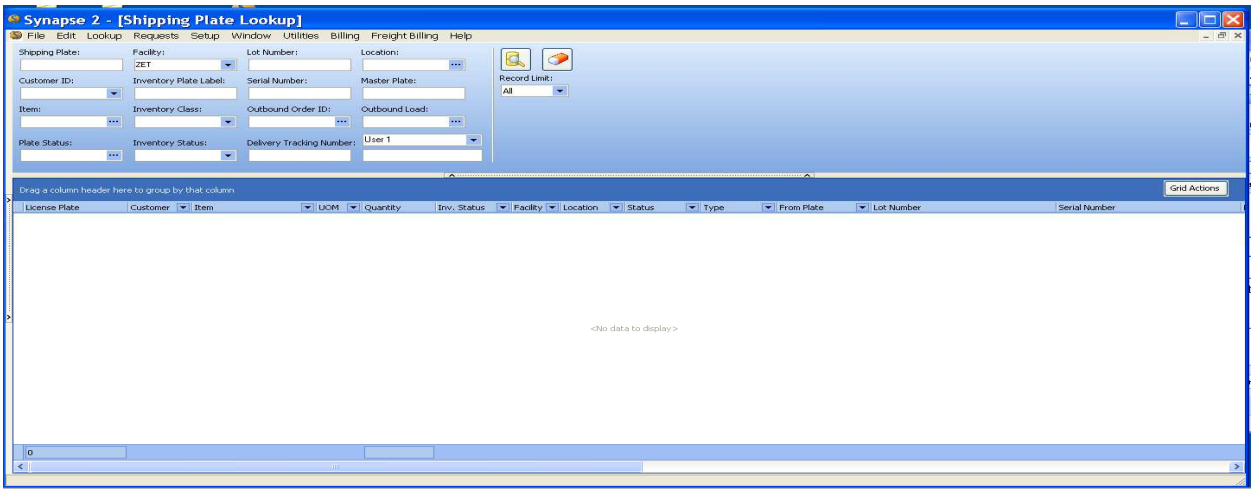
U - the shippingplate is unpicked and contains no inventory, it is just an indicator of what "should" be picked

Lookup Shipping Plates

This screen is similar to the **License Plate Information** screen with one exception. The information displayed here deals with shipping plates.

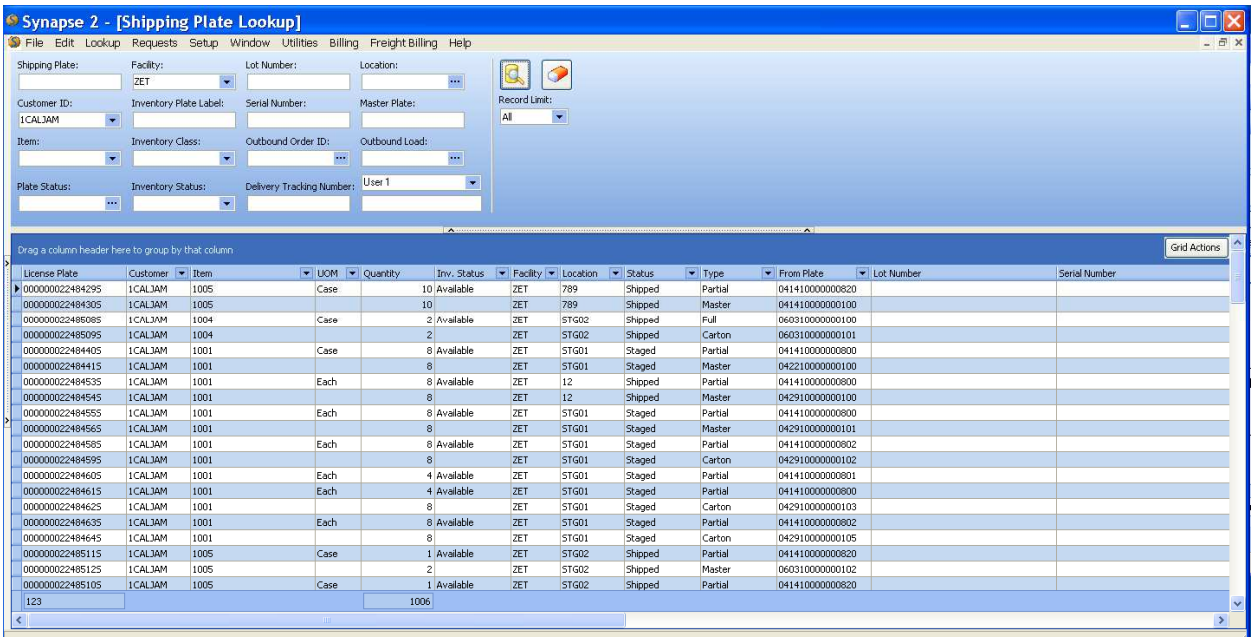
- From the Lookup Menu, select Shipping Plates.

The screen will display as follows:



- Enter the parameters to limit the search for the Shipping LiPs you need to view. If you know the specific Shipping LiP you want to see, then enter the ID in the **Shipping Plate** field. Click the **Lookup Box**  . To view a more general list, enter the Customer ID or Facility and click on the **Lookup Box**  . From the general list you will be able to select the specific Shipping LiP by double clicking on the **LiP** field.

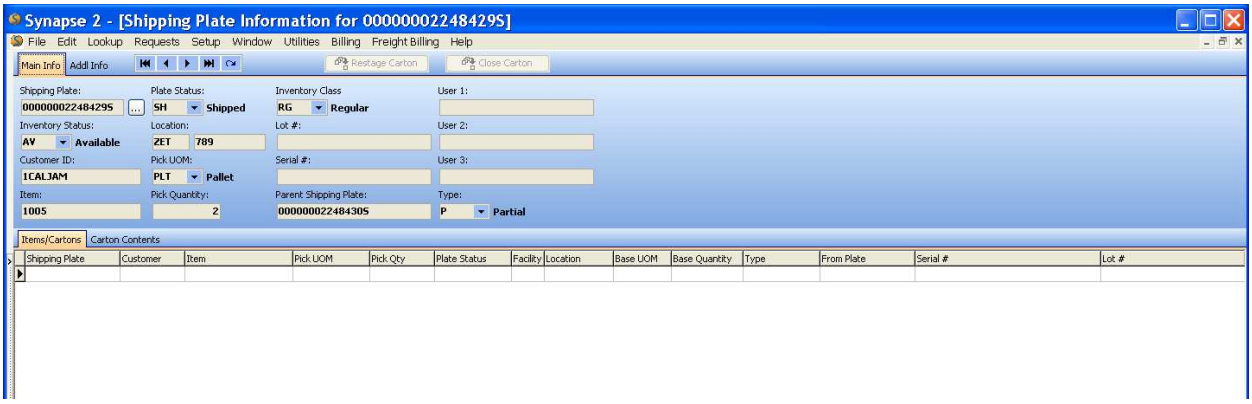
The information will display as follows:



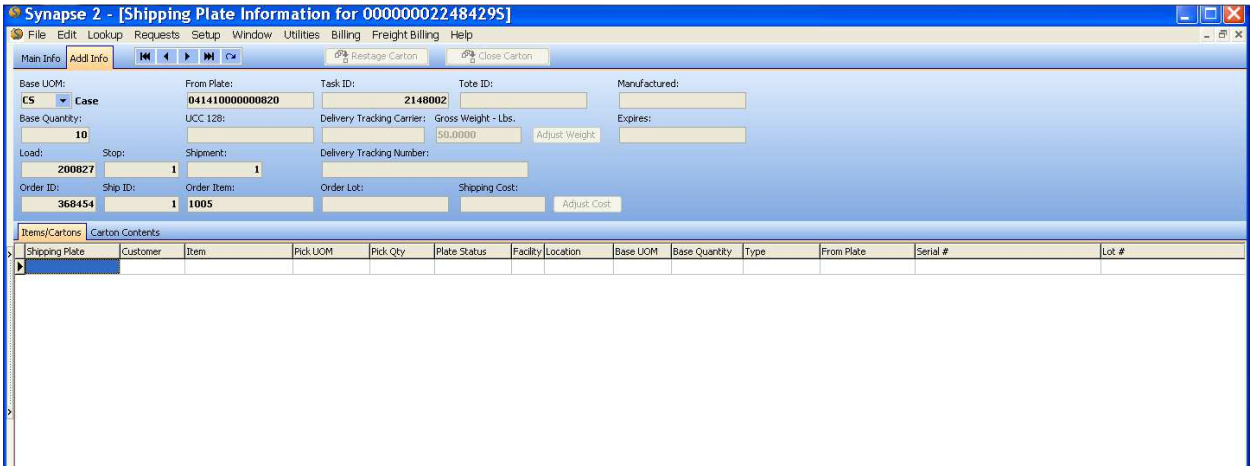
Shipping Plates/Shipping Plate Lookup

- To view detailed information on a shipping plate, double click on the desired line. This will open the **Shipping Plate Information** screen.

The **Shipping Plate Information** screen will display as follows:



Shipping Plates/Shipping Plate Information



Shipping Plates/Shipping Plate/Addl Information

- To view tracking information for a shipping plate that has a tracking number, right click on the appropriate plate and select **Delivery Tracking**. This will take the user to the tracking information provided there is appropriate internet access available and the carrier is properly setup.

Notes:

All plates were originally intended to be uniquely identified by a **15 digit number**. Recently the system was changed to allow for alphanumeric characters. Within the RF there is one Unix environment variable which controls lpid (license plate id) formatting:

ALPS_LEADING0 - if this is set to any value then leading zeroes will be padded on the left of whatever the operator has entered (and redisplayed) to fill the 15 character limit. This comes in very handy when testing without a real RF unit/scanner and using a simulator. This is set up by the System Administrator.

To permit alphanumeric characters in an LP, the system default **ALPHANUMERICLIPS** should be set to "**Y**." This can be used in conjunction with **ALPS_LEADING0** to also allow for entry less than 15 characters. This is set up by the System Administrator.

Plates status:

A - the plate is available to be picked, moved, adjusted, counted, etc. (the location should be a physical location)

I - the plate is part of a transfer order that is still in transit (the location should be the first 10 characters of the trailer for the load)

M - the plate is being moved (the location is an operator)

D - this status is not used, rather there is a deletedplate table

P - the plate is picked (the location could be an operator or a physical location)

U - the plate is not available (not Unassigned as the LicensePlateStatus validation table indicates) and is (probably) in receiving prior to putaway

K - the plate is somewhere in the kitting process

Deletedplates Table

This is where all deleted "**PA**" plates go rather than just getting their status changed to "**D**". Cycle counting will "resurrect" plates from here if so indicated by the operator.