Lots

SYSPRO 8

Reference Guide

SYSPRO™
Simplifying your Success

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Exploring

Where does it fit in?

SYSPRO's Lot Traceability system lets you track an item through the manufacturing process, providing full traceability at transactional level.

It caters for the tracking of materials through their receipt, manufacture, assembly, inspection, stocking and final distribution. Integration facilities caters for full upward and downward traceability.

Companies best suited to benefit from a lot traceable system are those in highly regulated industries for safety or health compliance (e.g. electronics, aeronautics, defense, food, pharmaceutical, medical devices and motor vehicles).

Reserving lots

Reserving lots and serials refers to the allocation of existing lots/serials for component parts and the creation of new lots/serials for parent parts.

Within SYSPRO, reserving lots and serials represents the provisional reserving of lots/serials for a specific job to ensure that they are not used for any other job.

- For material allocations, this means reserving or pre-allocating existing lots and serials to a job without having to physically issue them.
- For parent parts, this means reserving lots/serials to prevent other jobs from being receipted under these numbers.

When a job is created, you can either capture lot and/or serial information against the material allocation (which will be used when you kit issue the job) or you can create lot and/or serial information for the parent part, which will be reserved and can be used when the job is receipted into stock.

SYSPRO lets you reserve both a lot and a serial number for an item at the time of creating or confirming a job. This is useful, for example, where items in a particular production run require individual serial numbers for warranty purposes, but batch lot numbers for traceability and recall purposes, and these numbers are assigned by a third-party system prior to production.

In SYSPRO you can reserve lots for parent parts (before they are receipted into stock) and you can reserve lots for allocations (before they are issued) when a job is confirmed. You can also track which component lots were used in the production of a particular parent lot.

Inspection

Inspection is often only required for a sample of items rather than the entire quantity made or received. SYSPRO's flexible method of controlling the inspection of lots speeds up throughput (i.e. you can indicate whether a lot traceable item requires inspection, and whether this applies to a sample quantity only).

Starting

Prerequisites

The Inventory module is mandatory if you want to use the lot traceability feature. It is also typically integrated to Purchase Orders, Sales Orders and Work in Progress to control the supply chain from purchase to manufacture, service and/or sale.

Other integration points include:

- Accounts Receivable

  Customer information is used for lot traceable items bought by the customer.

- Inventory

  Stock codes are flagged as lot traceable and assigned a lot number which is used when recording transactions.

- Product Configurator

  Lot traceable non-stocked items can be linked to traceable parent or component parts.

- Purchase Orders

  Lot numbers are recorded when entering purchase orders and receipts, and when items are inspected.

- Quotations

  Non-stocked codes which are made-in are flagged as lot traceable. Quotations are created using the non-stocked codes.

- Return Merchandise Authorization

  Lot numbers are recorded against lot traceable items which have been returned.

- Sales Orders

  Lot numbers are recorded when entering a sales order or raising a credit note

- Work in Progress

  Lot numbers are recorded when adding a job, issuing material and receipting a job.

Restrictions and Limits

- You can only set an item to be traceable if the quantity on hand is zero in all warehouses and there are no outstanding sales orders, purchase orders or jobs for the item.

- You can't change a previously traceable item to be non-traceable if an on-hand

quantity exists for the item in any warehouse (i.e. you can't deselect the option once transactions exist for the item).

- SYSPRO doesn't allow negative on hand quantities for traceable items, regardless of whether stock on hand is allowed to go negative.

- Floorstock, bulk issue and Kit type items can't be made traceable items.

- Once a lot has been archived, you won't be able to process further transactions against the lot, unless you select to restore the files from archive.

  You won't be able to archive a lot if:

  - there's a quantity still in inspection for the lot.

  - there's a quantity reserved against the lot, even if the lot has a zero quantity on hand and the last processed date for the lot is before the date selected.

  - you enabled the option to capture lots at the end of WIP inspection (as no lot information is available until the item is accepted into stock).

- If lots exist for a traceable item then it can't be deleted, regardless of whether the lots are archived.

  To prevent transactions from being processed against the item, you need to place the item on full hold (i.e. lot information can only be archived; never deleted).

- You won't be able to receive items from inspection into stock if you haven't defined a **WIP Inspection** account (at company or warehouse level) unless you enable the inventory configuration option to request a ledger code for inventory receipt transactions.

Setup Options

Setup options are configured using the **Setup Options** program and can affect processing within this program.

- *Setup Options > Configuration > Distribution > Inventory*

Automatic depletion of lots by

Receipt date depletes lots by the earliest date that a lot was received into stock. If a lot does not already exist then it retains the date of when the lot was receipted for that stock item. Upon transfer to a new warehouse, the receipt date from the original lot is used. **Expiry date** depletes lots by the earliest lot expiry date. Upon transfer to a new warehouse, the receipt date is set to the transaction date. If a lot does not already exist then it is created with the transaction date.

Balance lots from most recent bucket

This makes adjustments to lots from the most recent FIFO bucket when running the

Balance function of the **Inventory Period End** program. This applies only when FIFO valuation is enabled.

- *Setup Options > Preferences > Distribution > Inventory*

Record inventory movements

This allows you to view details of actual costs used in **Inventory Movements** and on lot or serial transactions. Otherwise the unit cost displayed is the warehouse cost based on the costing method applied to that warehouse. If the **Lot traceable** or **Batch serial** option is selected at the **Actual costing** field together with this option, then it applies to all modules and a movement record is output per actual cost bucket per lot/actual cost bucket per serial.

- *Setup Options > Keys > Distribution - Inventory*

Lot is equal to job

This sets the lot number to be the same as the job number when processing transactions in the **Job Receipts** program. Both your lot and job number key types must be the same (i.e. either both must be numeric, or both must be alphanumeric). This option is only applied to co-products if the **Same lot to be used on multiple stock codes** option is enabled.

- *Setup Options > Configuration > Manufacturing > Lot Traceability*

Parent traceable if component traceable

This prevents you from attaching a traceable component to a non-traceable parent item (ensuring that you can trace a component through all the levels as well as see where a lot has been used). You can still attach non-traceable components to a traceable parent part (e.g. you may not want to trace 'grease' as an item, but you still want to be able to use grease when making a traceable parent item). This option also affects the replacement of components.

Use same lot on multiple stock codes

This allows the same lot numbers to be used for different stock codes when adding new lot numbers in the Inventory, Purchase Orders and Work In Progress modules. Don't select this if you require lot numbers to be unique at company level. This option does not apply to adding lots if the **Automatic lot numbering** option is enabled as you won't be able to receipt in a specific lot. The option is ignored by the **Job Receipts** program if you enabled the **Lot number to be equal to job number** option.

Next archive number

This is the next number that will be used by the system when you select to purge and archive lot records.

- *Setup Options > Preferences > Manufacturing > Requirements Planning*

Make provision for lot expiry

This decreases stock on hand for expired lots when generating material requirements in the **Requirements Calculation** program. You will also need to enable the **Stock on hand** option at the **Include in requirements calculation** field, because the suggestions made by the system vary depending on your selections. If this field is disabled, then stock on hand for expired lots is included as stock on hand in the **Requirements Calculation** program.

- *Setup Options > Configuration > Manufacturing > Work in Progress*

Capture lots at end of WIP inspection

This allows the capture of lots numbers for jobs requiring inspection only once the item is received into stock after the inspection phase. Otherwise, you can capture lots at the time the item is received into inspection. You cannot deselect this option once WIP inspection references for traceable items are in progress. You can, however, generate a report to identify the inspection references that must still be completed.

Component to parent lot tracking

This tracks lots from the components through to the parent part. This enables you to track which component lot numbers were used in the production of a particular parent lot (i.e. one-to-one tracking between component lots and parent item lots).

- *Setup Options > Preferences > Manufacturing > Work in Progress*

Component substitution of lots/serials

This allows components to be issued to a job using different lots/serials to the ones that were reserved for the material allocations at the time the job was confirmed.

Reserve lots for parent

Choose whether you want to reserve lots for parent parts and co-products when confirming a job. If **No**, then lots are captured only when the job is receipted into stock. If **Yes**, then the **WIP Reserve Lots & Serials Maintenance** program is loaded for each traceable parent part and co-product when the job is confirmed. If **Prompt operator** then the operator is prompted once only to reserve lots for

parent parts and co-products upon job confirmation.

Reserve lots for allocations

Choose whether you want to reserve lots for material allocations when confirming a job. If **No**, then lots are captured only when the materials are issued to the job. If **Yes**, then the **WIP Reserve Lots & Serials Maintenance** program is loaded for each lot traceable component when the job is confirmed. If **Prompt operator**, then the operator is prompted once only to reserve lots for material allocations upon job confirmation.

Solving

FAQs

Traceability

Why can't I make an item traceable?

You can only set an item to be traceable if the quantity on hand is zero in all warehouses and there are no outstanding sales orders, purchase orders or jobs for the item.

Why can't I make a previously traceable item to be non-traceable?

You can't change a previously traceable item to be non-traceable if an on-hand quantity exists for the item in any warehouse (i.e. you can't deselect the option once transactions exist for the item).

Why can't on-hand quantities for certain stock codes have a negative value?

SYSPRO doesn't allow negative on hand quantities for traceable items, regardless of whether stock on hand is allowed to go negative.

Why can't certain items be made traceable?

Floorstock, bulk issue and Kit type items can't be made traceable items.

Archiving Lots

Why can't I process transactions against a lot?

Once a lot has been archived, you won't be able to process further transactions against the lot, unless you select to restore the files from archive.

Why can't I archive certain lots?

You won't be able to archive a lot if:

- there's a quantity still in inspection for the lot.
- there's a quantity reserved against the lot, even if the lot has a zero quantity on hand and the last processed date for the lot is before the date selected.
- you enabled the option to capture lots at the end of WIP inspection (as no lot information is available until the item is accepted into stock).

Working with Lots

Why can't I a delete a lot for a traceable item?

If lots exist for a traceable item then it can't be deleted, regardless of whether the lots are archived.

To prevent transactions from being processed against the item, you need to place the item on full hold (i.e. lot information can only be archived; never deleted).

Why can't I receive items back into stock from inspection?

You won't be able to receive items from inspection into stock if you haven't defined a **WIP Inspection** account (at company or warehouse level) unless you enable the inventory configuration option to request a ledger code for inventory receipt transactions.

Using

Transaction Processing

Lot numbers are recorded when:

- items are inspected and receipted into stock
- items are issued to job
- items have been converted or used in manufacturing and are receipted into stock
- items are sold to the customer

The following indicates the interaction points in SYSPRO programs when processing transactions against lot traceable items.

Program	Details
Sales Order Entry	This records and maintains various types of customer orders. When selling lot traceable items, you will be prompted to enter lot numbers (if manual numbering is required) bins (if multiple bins are used) and serial numbers (if serial tracking is required) in the **SO Lots, Bins, Serials Allocations** program. You must assign lot numbers for each traceable item before you can invoice the order or dispatch note.
RMA Issues and Receipts	When issuing lot traceable items you can optionally enter the lot number allocated during the sales transaction. Depending on the action type and the inventory action you select, the lot number will be required when ending the receipt process if you did not enter it at the time of creating the detail line. When receipting the item, a credit note is automatically created unless you select the **Archive**, **Narration** or **Fix In-house** action types.
	The **RMA entry** function passes the entered lot number to the sales order, credit note or job, which you may change when maintaining the sales order, credit note or job. If you raise a credit note for traceable items against the original invoice, you can select the lines required for credit, using the invoiced lot numbers. You may select the **Edit Lots** function to remove the original lot allocations and replace them with alternative lot numbers.

Program	Details
Purchase Order Entry , **Purchase Order Receipts**, **Purchase Order Inspection**	These programs allow you to enter a lot/serial number at the time of processing transactions against them. Defining an item as traceable or requiring inspection means that it will go through the SYSPRO two-stage receipting process when you receive it against a purchase order. This involves an inspection phase during which you may count, inspect, reject or return the stock items to the supplier. It is only when you accept the items into stock that the warehouse quantity on hand is incremented.
Quotations and **Estimates**	In *Quotations*, you can define a non-stocked code as traceable if the part category is **Made-in**. At this point, marking the non-stocked code as traceable merely defines an attribute of the item and there is no link to the traceable or inventory data. Within the **Estimates** program, you can select to convert non-stocked codes into stock codes with lot traceability. In *Product Configurator* , lot traceable non-stocked items can be linked to traceable parent or component parts.
Job Entry	When creating jobs for traceable items, you need to review the Lot Traceability configuration options to see how the program handles this. If you select the **Lot number to be equal to job number** option then you want the lot number to be the same as the job number when processing transactions in the **Job Receipts** program. This helps you identify the lots related to the job (or vice versa). Both your lot and job number key types must be the same.
Job Receipts	Within **Job Receipts** you can select to add a single lot number against a job receipt using the **Lot** field. Alternatively, you can select to capture multiple lots for a job receipt using the Lot Capture program from the **Lot number** field. This program allows you to either manually add lots with the required quantity or automatically apply a range of lot numbers for a specific quantity. Therefore, if you are working in an environment where multiple lots are used for job receipts, it makes the capturing of lots much quicker.

Program	Details
Inventory Movements	You can enter a lot/serial numbers against a stock item when performing the following Inventory movement transactions: - Receipts - Adjustments - Backflushing - Goods in Transit or Warehouse Transfers - Bin transfers - Expense Issues
eSignature Setup	Electronic signatures can be defined against the following lot traceability transactions: - Lot number added - Lot number changed - Lot Maintenance add operation (e.net) - Lot Maintenance update operation (e.net)
Purge and Archive	This copies lot transactions and inspection records to an archive file, enabling you to conserve disc space. It also purges transaction details for lots that are complete (i.e. where the quantity on hand for a lot reaches zero prior to the specified archive date).

Program	Details
SO Lots, Bins, Serials Allocations	If you are selling a traceable item then you need to indicate the lot number from which the item must be issued.
	If you indicated that you require the automatic depletion in sales orders then stock is issued automatically from the oldest and smallest available lot first.
	When automatically depleting lots, the lot information is sorted in the following sequence:
	1. Date of expiry or receipt date (depending on the configuration option for depleting lots). If automatic depletion of lots is set to **Expiry date** and there is no expiry date on the lot, then the receipt date is used. If there is more than one lot with the oldest date then stock is allocated/reserved from the smallest lot first.
	2. Quantity available (calculated as Quantity on hand less Quantity to ship less Quantity reserved) If issues are not permitted from multiple lots then a single lot must satisfy the full ship quantity or the whole quantity is placed on back order.
	Stock is taken from the first lot that can satisfy the quantity.
	If more than one lot can satisfy the quantity then the lot with the earliest expiry or receipt date (whichever is applicable) is depleted first.
	If you subsequently reduce the order or ship quantity against an existing sales order line or after invoicing you process a partial credit note to the invoice, then you will be required to de-allocate the lots, bins and serials manually. However, if you cancel an order line or the entire order or, after invoicing you credit the entire invoice, all allocations are automatically de-allocated.
	If you do not allow stock to go negative and there is insufficient stock available, then a warning message is displayed indicating that the remaining quantity will be placed on back order. If back orders are not required, then the order line is canceled.
	3. Lot number

Program	Details
	4. Bin number The lot number and bin number are used to preserve the sequence of receipt when you receive two lots on the same day or when two lots have the same expiry date. When automatic depletion is applied, a lot is ignored if: - it has been archived. - it is on hold. - there is no available stock. - it expires before the ship date. - the stock item is ECC-controlled, but the lot revision and release does not match the revision and release against the sales order line. The following must apply if you want to be able to allocate a lot that is on hold when processing a Supply Chain Transfer using the **Sales Order Entry** program or processing a GIT Transfer Out transaction using the **Inventory Movements** program: - The **GIT transfer of lots on hold** must be allowed against your operator code. - The **Give warning if lot is on hold** preference must be enabled (**Sales Order Entry**). - The **Give warning if lot is on hold** preference must be enabled (**Inventory Movements**).

Reports and Queries

The following indicates the interaction points in SYSPRO programs when reporting and querying lot traceable items.

Program	Details
Traceability Query	This allows you to view details of lots and associated transactions, including inspection and sales order details. The transactions displayed may have occurred during the inspection process, or during the life of the lot number itself. The **Search Up** function lets you establish what was used to manufacture the lot from the raw material. The **Search Down** function lets you establish where the lot number was used. This query is particularly viable in industries where components and/or finished products are either high risk/hazard (e.g. pharmaceuticals/chemicals) or of a perishable nature (e.g. foods, consumables). It allows you to gain insight into how many affected parties could be involved with in the supply chain pertaining to a particular lot/serial number.
Component to Parent Tracking Query	This traces a lot from the time it was purchased or manufactured, through to its issue to a job. This enables you to establish the parent item in which the component was used.
Inventory Query	This lets you view reserved lot details.
Traceability Report	This provides details of lots and the transactions processed against them. Transactions for lots may be archived once the quantity on hand reaches zero.

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