Serials

SYSPRO 8

Reference Guide

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Where does it fit in?

SYSPRO's Serial Tracking system lets you capture and maintain serial numbers for existing stock items held in the Inventory system. It is designed to provide full tracking at transactional level for items that have serial numbers assigned for warranty or compliance purposes.

Companies best suited to benefit from a serial tracking system are those in industries such as electronics, food, pharmaceutical, electrical goods and computer hardware.

Serial numbers are held on file against each warehouse and can be defined as either manual or batch. A manual serial number must be unique for each individual item, while a batch serial number describes a group of items that have the same serial number (i.e. a product defined with batch serial numbering allows the same serial number to be allocated to more than one individual item per stock code and warehouse).

You can capture serial numbers at the time of receipting serialized items into stock or at the time of processing a sales order for the serialized item. If the latter, then other programs that normally request serial numbers ignore the fact that the item is serialized.

You can automatically create serial number ranges with a prefix set at company or stock code level to save time and reduce errors.

You can reserve serials for parent parts and components in Work in Progress. You can also trace a serial from the time it was purchased or manufactured, through to its issue to a job.

Several reports are available to assist in tracking and balancing serial numbers and serial numbers can be printed on inventory and sales documents.

Starting

Access Control

Activities

You can restrict operator access to **activities** within a program. These are configured using the **Operator Maintenance** program.

Inv Allow reuse of existing serial number

Controls whether an operator can:

- return an existing manual serial number back into stock using the **Inventory Movements** and **Serial Entry for Receipts** programs, providing the option: **Retain all serial information** is enabled (*Setup Options > Configuration > Distribution > Inventory*) and:
    - the last transaction for the serial was for a negative receipt and
    - there is no stock on hand available against the existing serial
- process a negative issue of an existing manual serial using the **Inventory Movements** and **Serial Entry for Receipts** programs, providing:
    - the last transaction for the serial was for a positive issue and
    - there is no stock on hand available against the existing serial
- process a positive adjustment transaction (using the **Inventory Movements** and **Serial Entry for Receipts** programs) for a manual serial that was sold providing the quantity available for the serial is zero.

    In addition, if the warehouse is not the same as the original warehouse for the sold serial, then the serial can be transferred.

When this activity is not allowed, a message is displayed indicating that the serial has already been used.

Restrictions and Limits

- Serialized items cannot be defined as floorstock or bulk issue items.
- You won't be able to allocate a serial number if it has expired or has been scrapped.
- The **Record serial numbers during order entry** stock code setup option is not available for serialized items that are also lot traceable.
- When the consumption method for an ECC-controlled item is **Deplete oldest**,

the allocation serials cannot be reserved. If any serials are reserved, the ECC consumption method is changed from **Use current** to **Specified** and the current revision / release at that point is used.

- Serials reserved for a parent item are reserved until you use either the **Job Receipts** or **WIP Inspection Maintenance** programs to receipt the item into stock. Serials reserved for allocations are reserved until the allocations are issued to the job.

- A maximum of 1000 serial numbers per receipt can be processed against a single stock code.

- You won't be able to save a purchase order line for a Kit type parent if a component is serialized and you require serials to be entered at the time of processing receipts.

Setup Options

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

- *Setup Options > Configuration > Distribution > Inventory*

Serial tracking system required

This records serial number information when processing transactions for serialized stock items. Once selected, you can only deselect this option when no active orders exist for any serialized item and there is no allocated quantities of serialized items.

Retain all serial information

This retains the history of header and transaction details for manual serial numbers against which a negative receipt has been processed (i.e. reversing a receipt processed against the wrong serial number). You won't be able to re-use the serial number for the same stock item. If this option is not enabled, serial history is removed if the only other transaction for the serial was a receipt (i.e. the system assumes you are reversing a receipt done against an incorrect serial number).

Use same serial for multiple stock codes

This allows the same serial numbers to be used for different stock codes when accepting items into stock. When receipting batch serialized items (and you have not enabled the **Multiple batch serial receipts allowed** option) the existing serial numbers must be stocked in the warehouse in which the receipt is being processed. This does not apply to manual serials. If this option is not selected, then you cannot receipt reserved serials into an alternate stock code from inspection.

Allow multiple batch serial receipts

Select this to allow a batch serial number that exists against a stock code in one warehouse to be receipted against the same stock code in another warehouse. Otherwise, a batch serial can only exist in one warehouse and subsequent receipts against the serial number must occur in the warehouse in which it is stocked.

Allow serial number transfer

This allows the transfer of a serial (currently selected for stock take out) of the stock take warehouse into another warehouse using the **Serial Entry for Receipts** program. This does not apply to serials created in the current stock take.

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.

Request lots/bins/serials

This requires the entry of lot, bin and serial information when reserving stock (unless the **Capture serial numbers for orders** option is not selected; multiple bins is not in use; and the item is not traceable, in which case you are only prompted when the items are shipped). The **Apply automatic depletion in Sales orders** option takes precedence over this option (i.e. lots are allocated automatically from the first lot that can fully satisfy the requirement).

Capture serial numbers for orders

This prompts you to enter serial numbers when processing order lines for serialized items. Otherwise you'll need to supply the serial numbers at the time of releasing the order for invoicing. If multiple bins is in use and the stock code is lot traceable, then you have to capture serial numbers regardless of your selection here. If the **Request lots/bins/serials** Reserving stock option is enabled, then you are only prompted for serials if multiple bins is not installed and the item is not traceable.

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 serial tracking

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

Substitutions of lots/serials for parent

This allows a job to be receipted into stock using different lots/serials to the ones that were reserved for the parent at the time the job was confirmed.

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 serials for parent

This lets you choose whether you want to reserve serials for parent parts and co-products when confirming a job. If **No**, then serial numbers are captured only when the job is receipted into stock. If **Yes**, then serial numbers are reserved for serialized parent parts and co-products. The **WIP Reserve Lots & Serials Maintenance** program is loaded for each serialized parent part and co-product when the job is confirmed. If **Prompt operator**, then the operator is prompted once only to reserve serials for parent parts and co-products upon job confirmation.

Reserve serials for allocations

This lets you choose whether you want to reserve serials for material allocations when confirming a job. If **No**, then serial numbers 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 serialized component when the job is

confirmed. If **Prompt operator**, then the operator is prompted once only to reserve serials for material allocations upon job confirmation.

■ *Setup Options > Configuration > Distribution > Return Merchandise Authorization*

Capture serial numbers

This prompts you to enter serial numbers when processing a cross-shipment. Otherwise you only need to supply the serial numbers at the time of invoicing (i.e. when the order goes to a status of 8). If multiple bins is installed in the warehouse, or the stock code is lot traceable or ECC-controlled, then you have to capture serial numbers regardless of your selection here.

■ *Setup Options > Keys > Distribution - Inventory*

Numbering method

By company lets you create ranges of manual serial numbers that are sequential within the company - created according to the prefix and suffix defined against the company (the combined prefix and suffix cannot exceed 20 characters). **By stock code** lets you track the last serial number range created for a specific stock code (you define the prefix and next suffix against each individual stock item).

Serial prefix

This is the character(s) that must form the start of the serial number when you add a range of manual serial numbers within this company.

Serial suffix

This number is appended to the prefix and together they form the serial number. The system automatically increments the next suffix for each new serial number created in the range, providing the number was created using the prefix. The number of numeric characters entered for the suffix must cater for the total quantity of serial numbers you want to add using the defined prefix. For example: A suffix of 1 character will allow 9 serials to be added for the prefix you defined.

■ *Program List > Inventory > Setup > Stock Codes*

Serial tracking method

None indicates no serials are not tracked.

Manual serial indicates that each serial number represents an individual item.

Batch serial indicates that a group of items have the same serial number.

Record serial numbers

During receipts captures numbers when receiving a serialized item into stock. This must be selected if you chose to apply actual costing to batch serialised items.

During order entry captures numbers when you order a serialized item. This is requested either at line level or when releasing an order for invoicing (depending on your selection at the **Capture serial number for orders** option (*Setup Options > Preferences > Distribution > Sales Orders*).

Solving

Error messages

Serials out-of-balance

If you have enabled the stock code option to record serial numbers during order entry, then the warehouse's stock on hand will probably not balance to the total serials on hand. The **Serial File Balance Report** program will also not indicate an imbalance between the stock on hand and the serial quantities on hand for those items where serial numbers are being recorded during order entry.

Inadmissible serial tracking flag

This message is displayed / printed from the **Cost Implosion** program if the system detects a serialized item defined with a part category of planning bill, phantom part, or kit part.

Custom form fields not transferred (batch items)

Custom form fields are not transferred for batch serial items when using the normal warehouse Transfer IN transaction because the system does not know which warehouse the specific quantity was transferred from. This is only available in the INVTRF file if FIFO is in use. This is a limitation of batch serials in a non-GIT company.

FAQs

Prompting for serial numbers

Why am I prompted for serials when reserving stock?

You are prompted to enter serial numbers when reserving stock if the **Request lots/bins/serials when reserving stock** and **Capture serial number for orders** setup options are enabled (*Setup Options > Configuration > Distribution > Sales Orders*).

Why am I prompted for serials for new orders?

You're prompted to enter serial numbers when:

- The **Capture serial number for orders** setup option is enabled (*Setup Options > Configuration > Distribution > Sales Orders*).

- You have changed the warehouse, but serials were already allocated to the previous warehouse (regardless of your selection at the **Capture serial number for orders** setup option).

- Multiple bins are used for the specific warehouse. You are prompted for serial numbers regardless of whether the item is traceable.

Why am I not prompted for serials for new orders?

- If the item is non-traceable and multiple bins is not enabled for the specific warehouse, then you are not automatically prompted for serial numbers at line level for new orders.

- If the order is linked to a job and multiple bins is in use and/or the item is traceable and requires inspection, then serials are requested in the **WIP Inspection** program.

- If the order is linked to a job (with or without inspection) and multiple bins is in use and/or the item is traceable, then serials are requested in the **Job Receipts** program.

Allocation of serial numbers

Why can't I allocate certain serial numbers?

You won't be able to allocate serial numbers when they have been scrapped or have expired.

Why is the Record serial numbers during order entry stock code setup option not available?

The **Record serial numbers during order entry** stock code setup option is not available for serialized items that are also lot traceable.

Why can't I reserve allocation serial numbers?

When the consumption method for an ECC-controlled item is **Deplete oldest**, the allocation serials cannot be reserved. If any serials are reserved, the ECC consumption method is changed from **Use current** to **Specified** and the current revision / release at that point is used.

Until when are serial numbers reserved?

Serials reserved for a parent item are reserved until you use either the **Job Receipts** or **WIP Inspection Maintenance** programs to receipt the item into stock. Serials reserved for allocations are reserved until the allocations are issued to the job.

How many serial numbers can be allocated to a stock code?

A maximum of 1000 serial numbers per receipt can be processed against a single stock code.

Reusing serial numbers

Why can't I return an existing manual serial number back into stock?

You might not have the permission to return an existing manual serial number back into stock.

This permission is controlled by the **Inv Allow reuse of existing serial number** operator activity.

Why can't I process a negative issue of an existing manual serial number

You might not have the permission to process a negative issue of an existing manual serial number.

This permission is controlled by the **Inv Allow reuse of existing serial number** operator activity.

Why can't I process a positive adjustment transaction for a manual serial that was sold

You might not have the permission to return an existing manual serial number back into stock.

This permission is controlled by the **Inv Allow reuse of existing serial number** operator activity.

Using

Processing Flows

Working with serials

- Take on serial numbers for stock items that are already held on file using the **Serial Number Take-on** program. You can also create sales transactions for these serial numbers.

- Process transactions against specific serial numbers using the **Serial Tracking Transaction Posting** program.

- Maintain the header information for serialized items using the **Browse on Serial Numbers** program. This program allows you to change the description, expiry date and scrap date of existing items held on file.

- Print a report listing details of all serialized items held on file using the **Serial Tracking Report** program.

- Print a report listing any discrepancy between the on hand quantity for a stock code within the serial tracking system and the on hand quantity within the warehouse file using the **Serial File Balance Report** program.

- Delete serial numbers and / or serial number transactions from the serial number file using the **Serial File Purge** program.

Transaction Processing

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

Program	Details

Inventory Movements	▪ Preferences function
	
	The **Clear serial number field after entry** option lets you clear the **Serial number** field after each entry when entering serial numbers for a receipt. This is typically applicable when using a scanning device to automatically record serial numbers.
	
	▪ Bin transfers function
	
	There is no link between bins and serials in this program. After processing a bin transfer for serialized items, you need to use the **Serial Tracking Transaction Posting** program to record the serial numbers.
	
	▪ Receipts function
	
	You cannot change the revision of serialized ECC-controlled items once you have allocated the serial numbers.
	
	▪ Adjustments function
	
	    ▫ You cannot change the revision or release of serialized ECC-controlled items once you have allocated the serial numbers.
	
	    ▫ You can only adjust an existing serial number (i.e. you cannot create a new serial to which to process an adjustment).
	
	    ▫ You can only process a positive adjustment against a manual serialized item if a negative adjustment was previously processed for the item and the item has not yet been sold.
	
	▪ Transfers OUT function
	
	    ▫ Lots, bins and serials involved in a transfer are included in the goods in transit records created.
	
	    ▫ You cannot change the revision or release of serialized ECC-controlled items once you have allocated the serial numbers.
	
	      You can only adjust an existing serial number (i.e. you cannot create a new serial to which to process an adjustment).
	
	▪ Transfers IN function

Program	Details
	- You cannot change the revision or release of serialized ECC-controlled items once you have allocated the serial numbers. - You can only adjust an existing serial number (i.e. you cannot create a new serial to which to process an adjustment). - Custom form fields defined against a serial are transferred when processing an Immediate transfer and a Transfer in (GIT) for batch and manual serials and when processing a Transfer in (where the full goods in transit transfers facility is not in use) for manual serials only. - Expense Issues function - You cannot change the revision or release of serialized ECC-controlled items once you have allocated the serial numbers. - You can only adjust an existing serial number (i.e. you cannot create a new serial to which to process an adjustment).
Serial Number Maintenance	This program lets you maintain header information for serialized items.
Serial Number Take-on	This program lets you capture serial numbers for existing stock items, as well as create sales transactions for serial numbers that have already been sold.
Serial Tracking Transaction Posting	This program lets you post transactions against specific serial numbers.
Serial File Purge	This program deletes serial numbers and / or serial number transactions from the serial number file.
Purchase Order Inspection	This program lets you capture serial numbers counted for an item, provided you have indicated against the item that you want to record serial numbers during receipt of the item.
Shipment Receipt	When receiving a shipment into stock, this program requires you to enter the correct number of serial numbers. You can enter a range as well as an expiry date for the batch.

Program	Details
Purchase Order Receipts	This program lets you capture serial numbers for an item, provided you have indicated against the item that you want to record serial numbers at the time of receipt (instead of during order entry).
RMA Detail	When adding and maintaining RMA line details, you can choose the **Select Serial** function to view a list of serial numbers for the stock item entered. You would typically use this function when the invoice number is not known, but the serial number is available (i.e. you can locate the invoice number on which the item was sold. If you use this option to select the required serial number, the Warranty date field is set to the expiry date of the serial number selected.
Job Receipts	The **WIP Track Lots and Serials** program (which enables you to link lots and serial numbers of component parts to the parent part) is loaded if the **Component to parent serial tracking** and **Capture serials at end of WIP inspection** configuration options is enabled.
Browse on Jobs	The **Maintain Tracked Serials** option from the **Edit** menu loads the **WIP Track Lots and Serials** program (which enables you to link lots and serial numbers of component parts to the parent part) if the **Component to parent serial tracking** configuration option is enabled.
WIP Reserve Lots & Serials Maintenance	This program lets you reserve lots and / or serials for parent parts and components or to maintain previously reserved lots. Lots and serials reserved for a **parent** item are reserved until you use either the **Job Receipts** or **WIP Inspection Maintenance** programs to receipt the item into stock. Lots and serials reserved for **allocations** are reserved until the allocations are issued to the job. When you create a job for a notional part, you reserve the serials against the individual co-products.

Program	Details
SO Lots, Bins, Serials Allocations	If you are selling a serialized stock item then you need to indicate the serial number(s) that must be issued, unless you are capturing serial numbers during order entry (in which case, you only have to supply the serial numbers at the time of invoicing). If multiple bins is enabled for the warehouse, or the stock code is either traceable or ECC-controlled, then you have to allocate serial numbers regardless of whether you are capturing serial numbers during order entry. ■ If a credit note is processed for a serialized item, then the credit note must be printed before the serial number can be re-allocated. ■ If you do not complete the allocations for the full ship quantity against a non-kit item sales order line, then the quantity not allocated / reserved is placed on back order. If back orders are not allowed, then the order line is cancelled. For a kit item, you must complete the allocations for the kit components and then (if required) place the entire kit parent into back order. ■ If you reduce the order or ship quantity against an existing sales order line, you will have to de-allocate the lots, bins and serials manually against the lines for which you originally processed allocations. Likewise, if after invoicing, you process a partial credit note to the invoice, then you will have 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, then all allocations are automatically de-allocated. ■ If you require serials to be captured during order entry then the serials are deleted from the system when deleting an allocation, canceling a line, or canceling an order. If the entire ship quantity is placed on back order, then the serial numbers are retained.

Program	Details
Order Purge	The **Balance serial tracking qty available** option lets you re-allocate serial numbers from order lines for serialized items as well as re-allocate inventory to any manual serial numbers in stock which are on loan, in for a service, or at the service depot. If you select **the Balance serial tracking qty available** option and you are reserving serials for allocations then this program checks for any outstanding material allocation reservations for each serial number and reduces the quantity available by the quantities reserved. This ensures that the quantity available on the serial tracking header is correct. If the program detects an imbalance between the ship quantity against each order line and the serial / bin / lot allocations, then the quantities are changed to match the lowest quantity as follows: • If the lowest quantity is the order line ship quantity, then the lot / serial / bin allocation file quantities are updated to match this total. • If the lowest quantity is that allocated to either lots, or bins, or serials, then the allocation quantities against the other numbers are changed to match the lowest quantity, and the order line ship quantity is reduced. The difference is placed on back order (i.e. whatever is reduced from ship quantity is added to back order quantity on the order line).

Reports and Queries

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

Field	Description
Serial File Balance Report	This program generates a report listing any discrepancy between the on hand quantity for a stock code within the serial tracking system and the on hand quantity within the warehouse file.
Serial Tracking Report	This program generates a report listing details of serialized items held on file. You can use this report to track the transactions in which specific serial numbers were used.
Browse on Job Amendment Journals	Amendment journals are not created for **Reserving Lots and / or Serials for a Job and/or material allocation** transactions processed against jobs (tracking and posting detail records exist for these transactions).
Component to Parent Serial Tracking	This program lets you view all parent serials to which component serials were issued.
Component to Parent Tracking Query	This program traces a serial or 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 and to track the serial or lot number of the component back to the parent item.
WIP Job Serial Query	Selected from within the **WIP Material Allocations - Browse** program, this lets you view details of material allocations for serialized items.
WIP Job Reserved Serial Query	Selected from within the **WIP Material Allocations - Browse** program, this lets you view details of reserved serials for the allocations.
WIP Query	The **Additional Information** pane lets you view information on the serial numbers reserved for a job as well as to trace which component serial numbers were used to produce a particular parent lot.

Field	Description
Track Component Lots and Serials to Parent	This program lets you link the lot and serial numbers of component parts to the parent part. This enables you to later track which serial numbers for the components were used to produce the serialized parent part and to trace which component lot numbers were used to produce a particular parent lot.
Browse on Serial Number Transactions	This program lets you view details of transactions processed against a serial number.

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