QAD Enterprise Applications
Enterprise Edition

Training Guide

QAD Warehousing Advanced Concepts

Printing
Batch Picking
Containerization
Container Move
Ship Truck
Inspection (Work Orders)
Kanban Scan
Replenishment
Cross-Docking
Engine Processing
Location Audit

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About This Course

Course Description

This course provides advanced training for QAD Warehousing features and functions. Topics taught in this course are at a deeper level than topics introduced and discussed in the QAD Warehousing Fundamentals training course. This course assumes that features of QAD Warehousing have been enabled and set up.

Course Objectives

By the end of this class, students will:

- Setup and print labels that identify inventory coming into the warehouse; print transactions for tasks and exceptions, and print QA sampling inspection tags.
- Set up and complete the batch picking process.
- Set up and containerize items.
- Move containers through a warehouse onto a truck.
- Ship items on a truck.
- Conduct an inspection for work order items.
- Setup and complete a kanban scan.
- Set up and run a manual and an automatic replenishment.
- Set up, receive, then move stock from dock to dock using cross-docking.
- Set up and use engines to manually process in Warehousing.
- Conduct a location audit.

Audience

- Implementation consultants
- Members of implementation teams
- Advanced warehousing users, including warehouse staff and QAD Warehousing system administrators

Prerequisites

You should be familiar with basic order, pre-shipper, and shipper creation and processing through QAD Enterprise Edition programs. It is imperative that typical manufacturing data such as data for sites, items, customers/suppliers, orders, and so on be setup within QAD EE before you start exercises within this training guide.

You should be familiar with all features and functionality presented in the QAD Warehousing Fundamentals training book.

Basic QAD Warehousing features are taught through the QAD Warehousing Fundamentals Training Course. Basic features and functions are described in the QAD Warehousing user documentation that can be found in the following Website.

Course Credit and Scheduling

This course is valid for 30 hours. It is designed to be taught in 5 days.

QAD Web Resources

The QAD website provides product and company overviews. The Print Solution option on the opening page provides a means of compiling desired content into a document specialized to your industry, business implementation, and needs.

http://www.qad.com/

From QAD's main site, you can access QAD's Learning or Support sites.

Preliminary Setup (for Virtual Training Management System Only)

If you are using this training guide with the QAD Virtual Training Management System (VTMS) in a classroom, student lab environments are reserved for you by your instructor.

1 Select the Virtual Training Management System using the following url:

```
http://training.success.qad.com/
```

Note To test your browser once you access the site, you can click "See if your Browser is ready" and email the results to democenter@qad.com in the form provided before you log on.

2 Click on your local region in the regional map to access the login page.

3 Students login with the student ID and password assigned to them by the instructor.

4 Once you login, click on the Account Info tab and select your local time zone from the dropdown and click Save.

Transferring Files

You can transfer files to and from VTMS, using the following:

- Upload/download files using yousendit.com
- Upload files to Lotus Notes e-mail (5MB limit) and download from outside.qad.com e-mail.
- Upload/download files to and from web-mail account (for example, yahoo, hotmail)

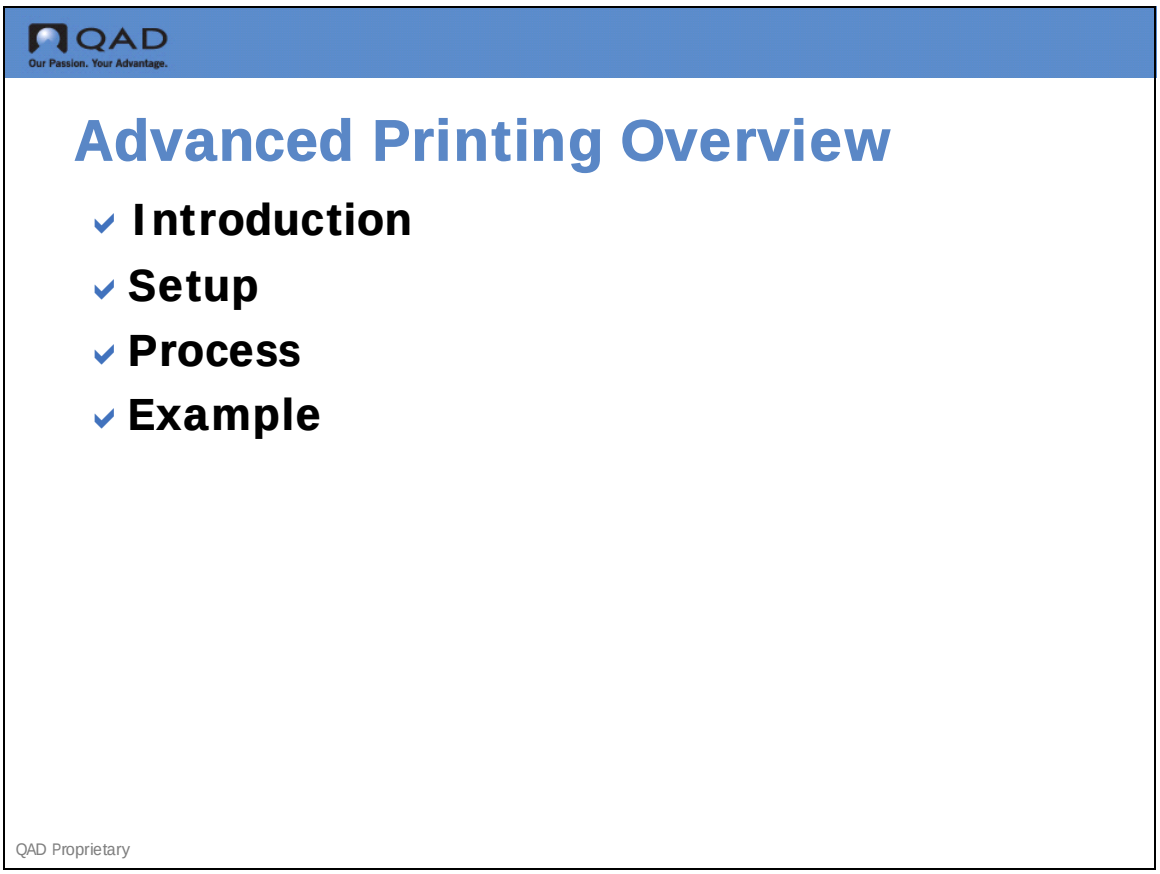
Using the RF for Exercises

Many of the exercises in this training guide use the RF to select or confirm tasks and perform other steps. Your instructor can show you how to simulate QAD Warehousing software through a Unix session. Commands are provided to run the software just as if you were on the RF device.

Chapter 1

Printing

Chapter Overview



Introduction

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Printing Introduction

- ✓ Printing identification of inventory
- ✓ Printing task transactions
- ✓ Printing exceptions
- ✓ Printing inspection tags

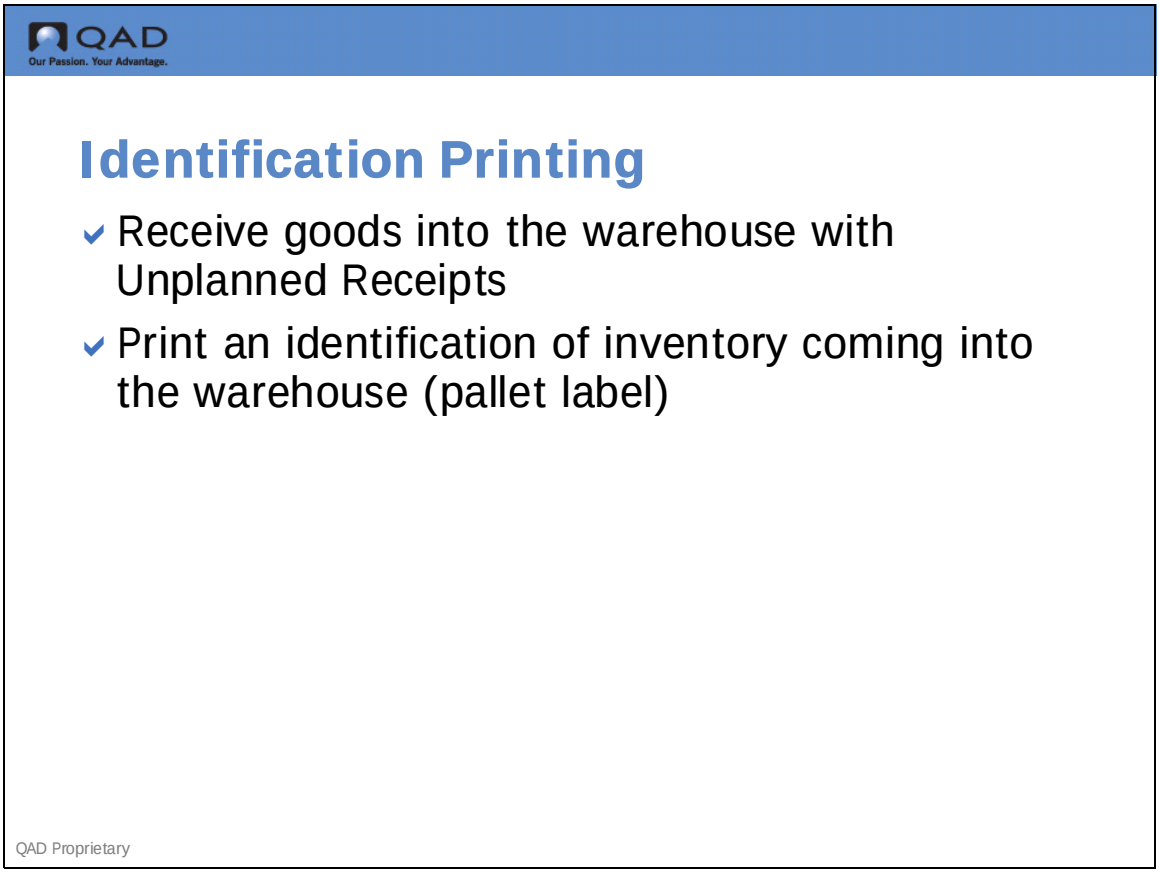
QAD Proprietary

In the QAD Warehousing fundamentals training course, you learned how to set up printing for the various elements—warehouses, SLGs, WLGs, and so on—of a warehouse. In this course, you will learn how to print:

- Identification of inventory coming into the warehouse, such as a pallet label.
- Transactions for tasks when they are created or confirmed.
- Exceptions when changes have been made to the original transaction; for example, a change to the put-away location or quantity.
- QA sampling inspection tags.

The following topics include, setup, process, and examples for the various types of printing.

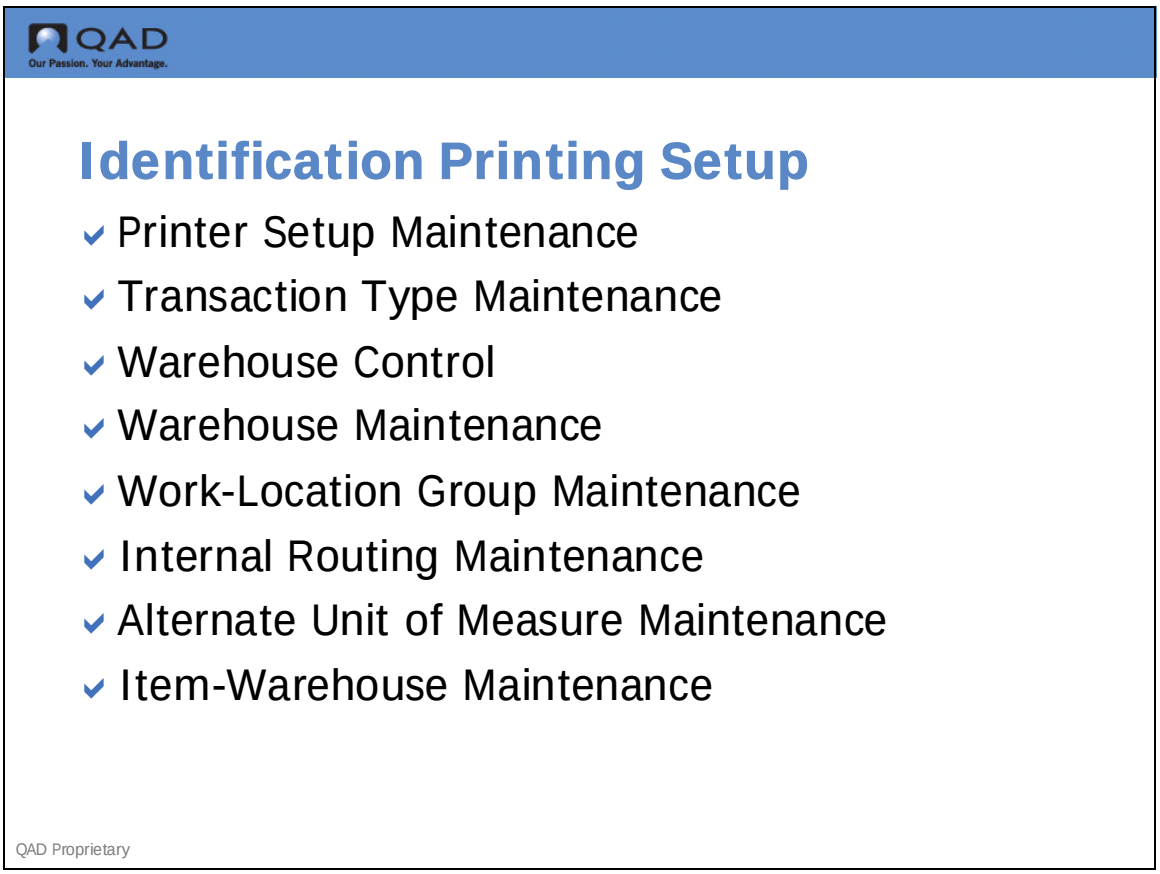
Identification Printing



Warehouse staff need to print identification of inventory as it arrives at the warehouse. This tidally occurs when there is an unplanned receipt transaction.

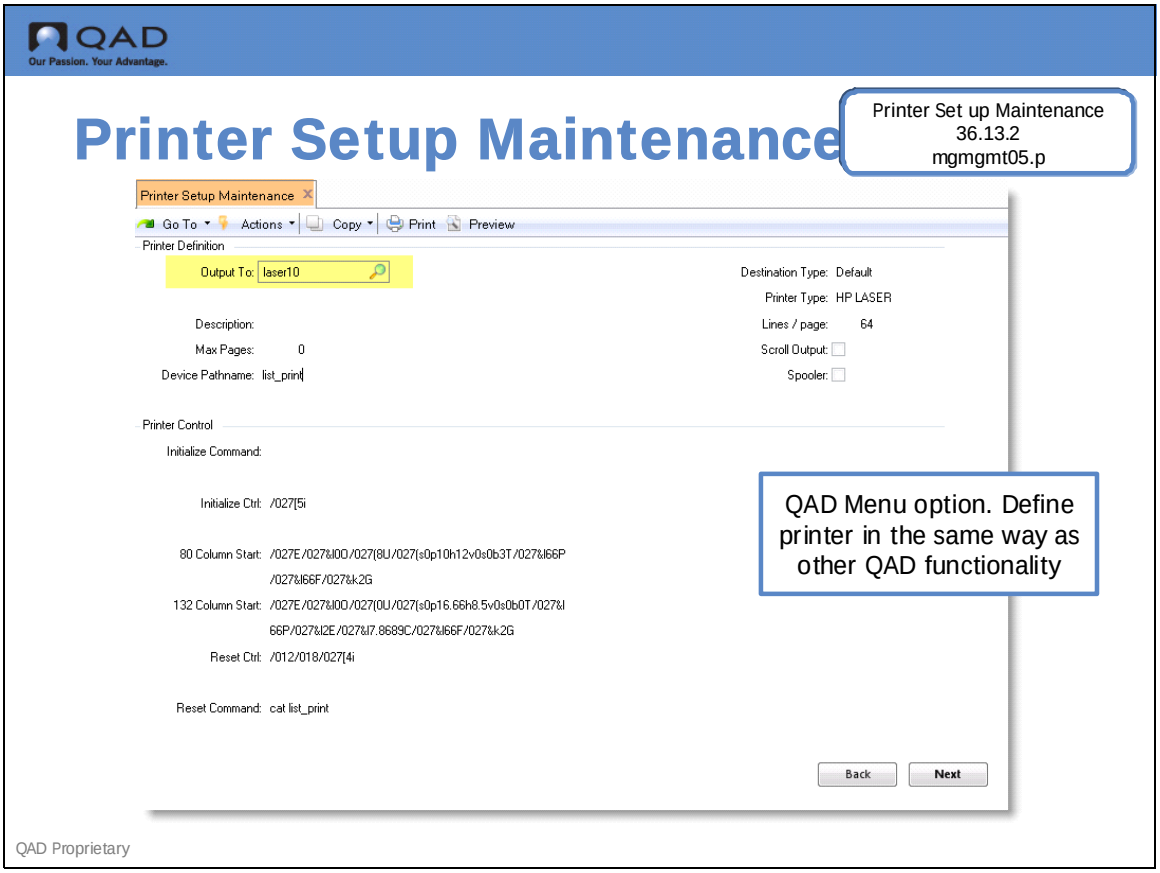
Note QAD Warehousing does not print barcode labels. A third-party product or a barcode printer are needed to print barcode labels.

Setup for Identification Printing



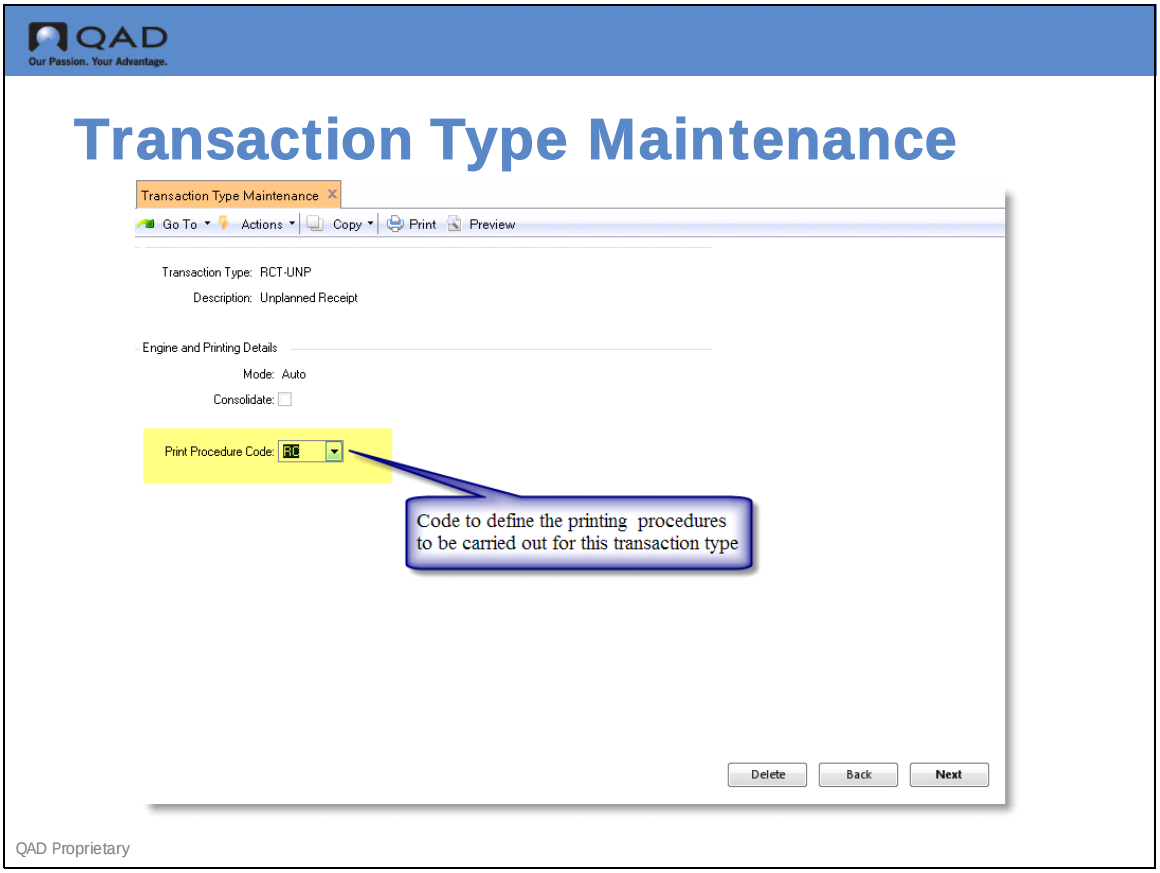
The following topics discuss both QAD EE and QAD Warehousing maintenance programs you use to setup printing for inventory identification.

Printer Setup Maintenance



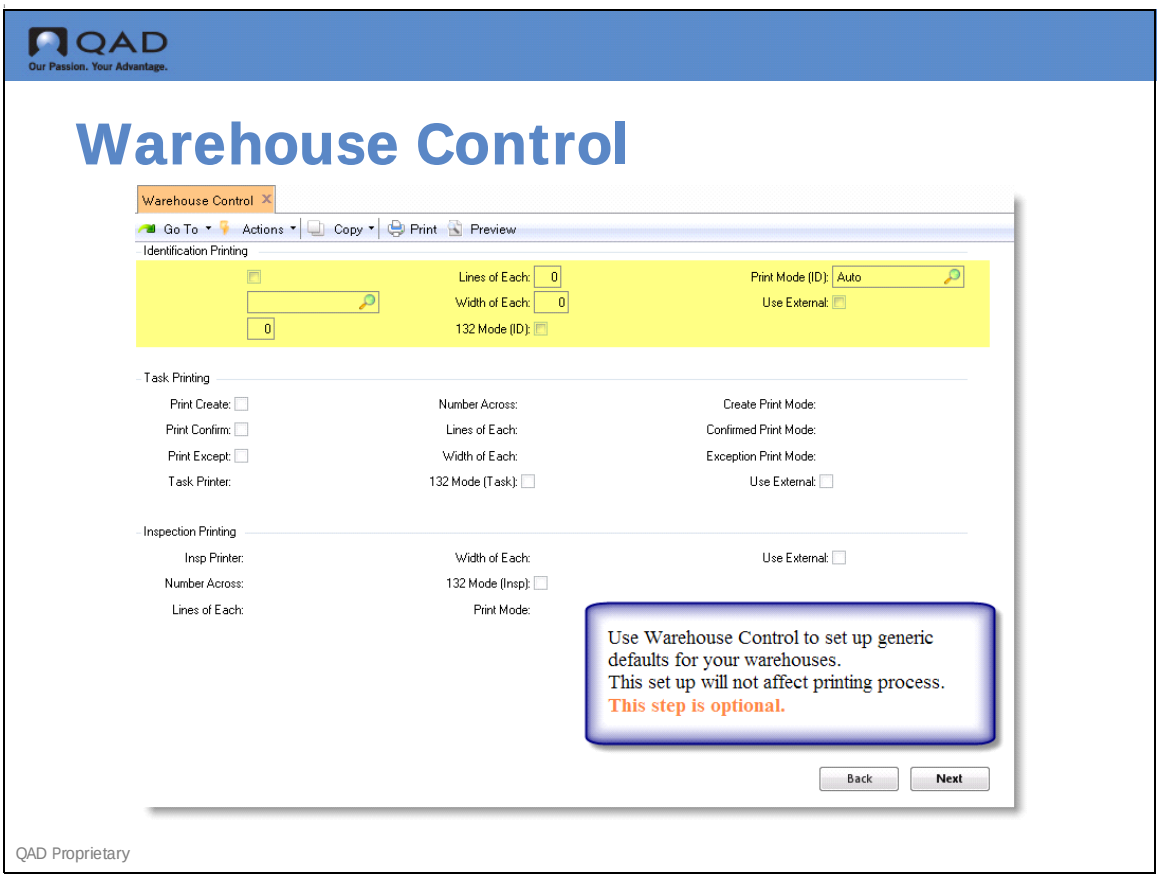
Specify the printer in the Output To field.

Transaction Type Maintenance



Use Transaction Type Maintenance (4.7.1 is using Warehousing for QAD EE and 80.7.6 is using AIM.) to set up the code to define printing procedures for a receipt transaction.

Warehouse Control



Use Warehouse Control (4.1.24 if using Warehousing for QAD EE and 80.1.24 if using AIM) to set up generic defaults for the warehouse.

Fields

Print ID. Enter Yes to print an identification of inventory coming into the warehouse; otherwise, enter No. If you enter No, you can ignore the other fields in this group.

ID Printer. Enter the name of the printer on which the IDs are to be printed.

Number Across. Enter the number of identifications that are to be printed across each page.

Lines of Each. Enter the number of printed lines in each identification.

Width of Each. Enter the width in character positions of the lines of the identification.

132 Mode. Enter Yes if the identifications are to be printed in 132 character position mode; otherwise, enter No.

Print Mode. Select a print mode to determine when output should be printed. The options are as follows:

AUTO: The system prints identifications automatically as soon as they are created

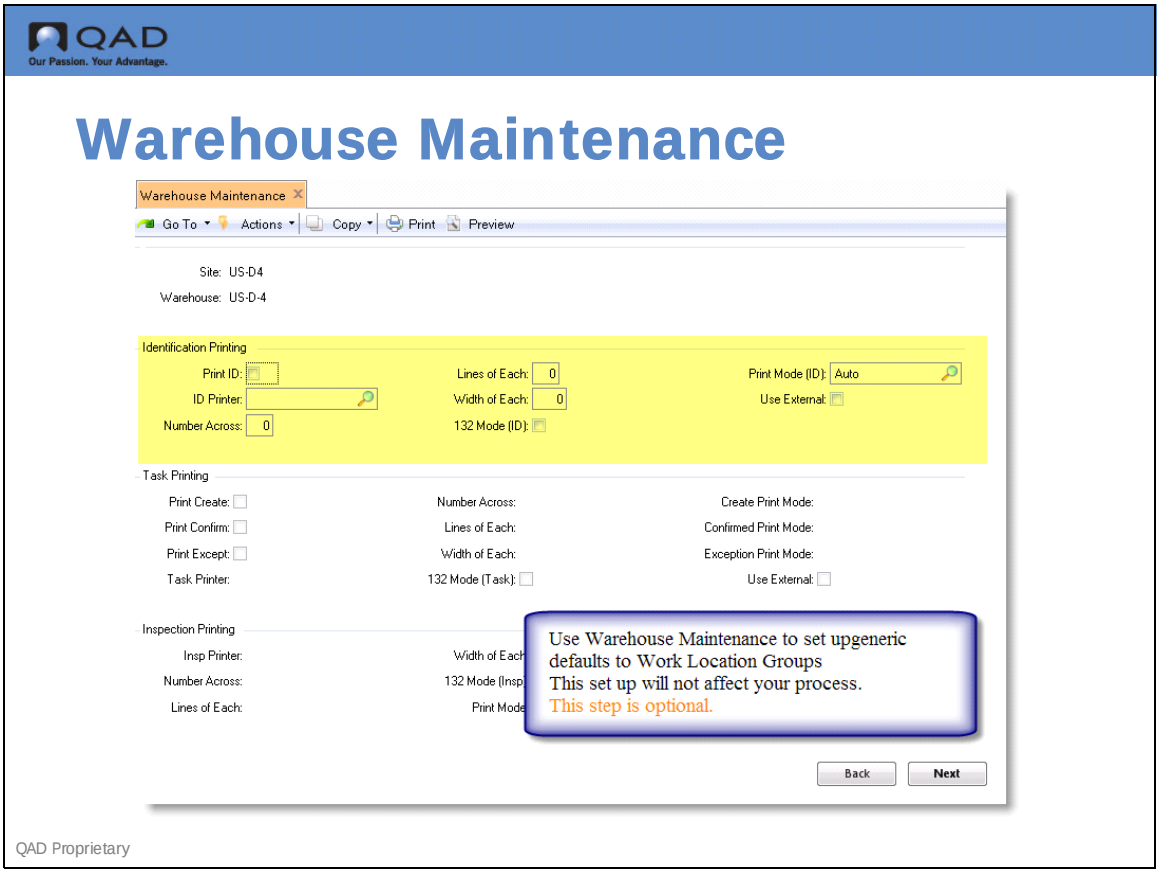
MANUAL: The system holds identification print requests until an online or batch process activates printing.

AUTO SIG: The system prints IDs automatically but holds them until a signal is received.

The signal to trigger AUTOSIG printing is normally a sign that the process creating print requests is complete and that all requested prints can be output at one time. This is particularly relevant when, for example, printing multiple transactions on the same task sheet.

Use External. Enter Yes if you want RDT users to be able to print the identifications on an external printer such as the local printer in a fork-lift truck. Enter No if the identifications must be printed on the ID printer.

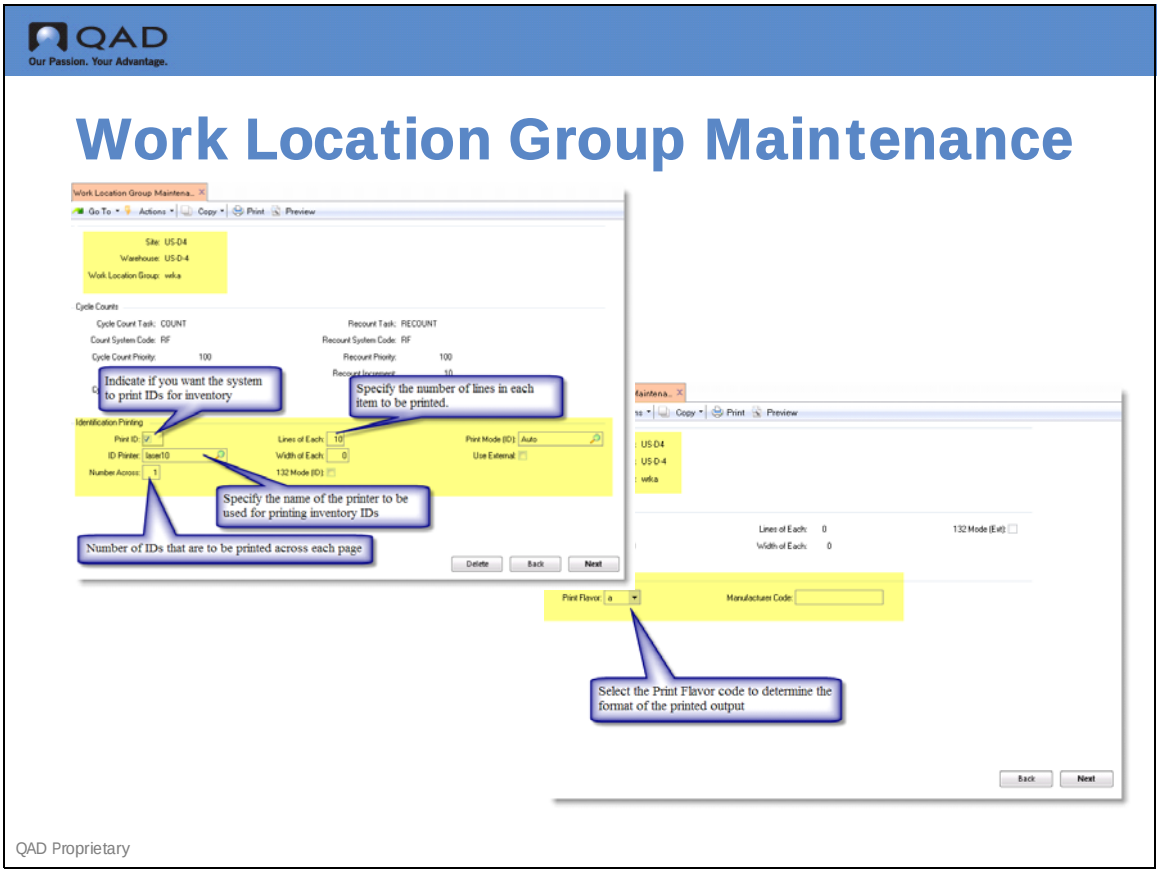
Warehouse Maintenance



Use the Identification Printing frame in Warehouse Maintenance (4.1.1 is using Warehousing for QAD EE and 80.1.1) is using AIM.) to set up generic defaults for work location groups.

These fields default from Warehouse Control; see “Fields” on page 20.

Work Location Group Maintenance

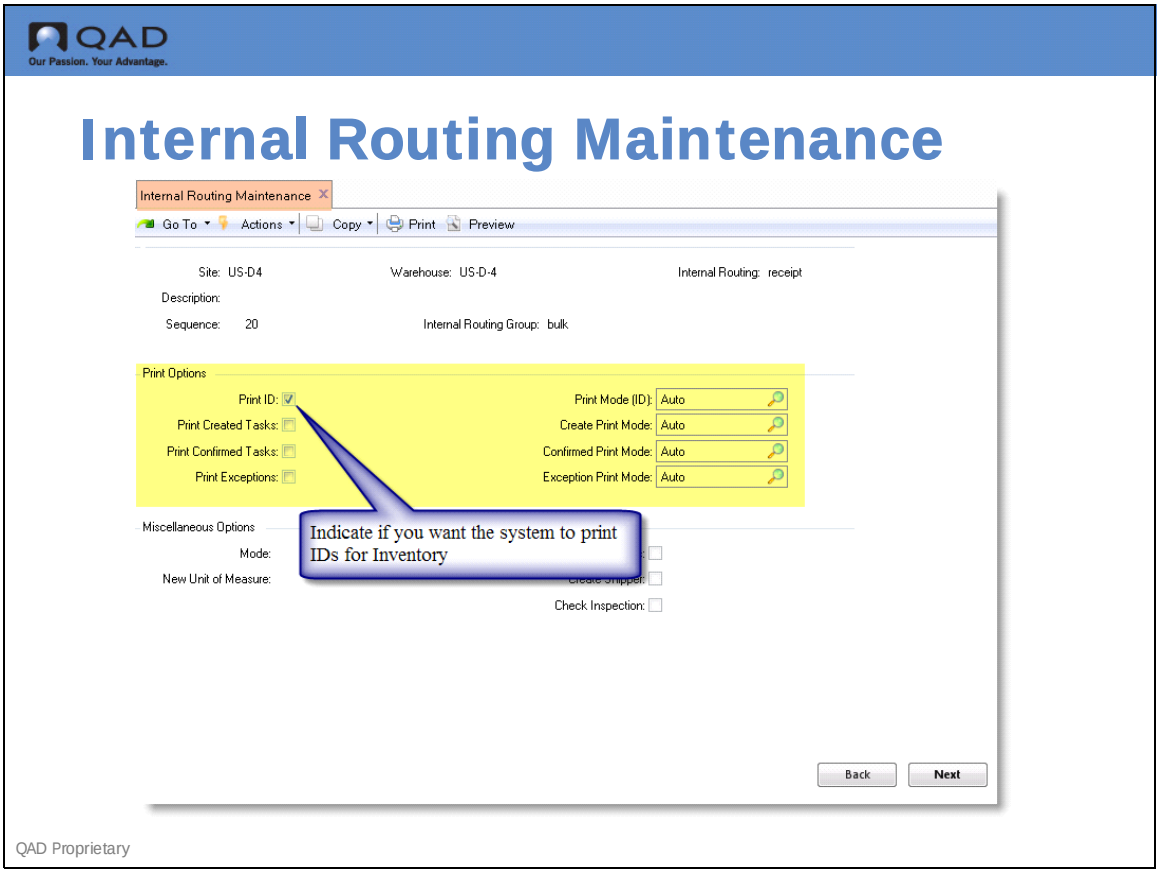


Use Work Location Group Maintenance (4.3.9 is using Warehousing for QAD EE and 80.3.9 if using AIM.) to set up identification. These fields default from Warehouse Maintenance; see “Warehouse Maintenance” on page 22.

In addition, you should set the Print Flavor in the Miscellaneous Printing Frame.

Print Flavor. This field defaults to each work location group you set up within the warehouse. Select the Print Flavor code to determine the format of the printed output. Print Flavor codes are set up in Generalized Code Maintenance (36.2.13).

Internal Routing Maintenance



Use Internal Routing Maintenance (4.2.5 is using Warehousing for QAD EE and 80.2.5 if using AIM) to set up identification. These fields default from Warehouse Maintenance; see “Warehouse Maintenance” on page 22.

Fields

Print Create. Indicate if you want the system to print transactions for tasks when they are created. If you specify Yes, enter values for the other fields related to task printing. If you enter No to both task settings, you can ignore the other printing parameters in the group.

Print Confirm. Indicate if you want the system to print transactions for tasks when they are confirmed. If you specify Yes, enter values for the other fields related to task printing. If you enter No to both task settings, you can ignore the other printing parameters in the group.

Print Except. Indicate if you want the system to print information about errors. If you specify Yes, enter values for the other fields related to error printing. If you enter No, you can ignore the other printing parameters in the group.

Create Print Mode. When Print on Create is Yes, select a Print Mode to determine when output should be printed. The setting you enter in Warehouse Maintenance defaults to internal routings set up within the warehouse. The options are as follows:

AUTO. The system prints transactions automatically as soon as they are created.

MANUAL. The system holds print requests until an on-line or batch process activates printing.

AUTOSIG. The system prints transactions automatically but holds them until a signal to print is received.

The signal to trigger AUTOSIG printing is normally a sign that the process creating print requests is complete and that all requested prints can be output at one time. This is particularly relevant when printing multiple transactions on the same task sheet.

Confirmed Print Mode. When Print on Confirm is Yes, select a Print Mode to determine when output should be printed. The setting you enter in Warehouse Maintenance defaults to internal routings set up within the warehouse. The options are as follows:

AUTO. The system prints transactions automatically as soon as they are created.

MANUAL. The system holds print requests until an on-line or batch process activates printing.

AUTOSIG. The system prints transactions automatically but holds them until a signal to print is received.

The signal to trigger AUTOSIG printing is normally a sign that the process creating print requests is complete and that all requested prints can be output at one time. This is particularly relevant when printing multiple transactions on the same task sheet.

Exception Print Mode . For exceptions, select a Print Mode to determine when output should be printed. The setting you enter in Warehouse Maintenance defaults to internal routings set up within the warehouse. The options are as follows:

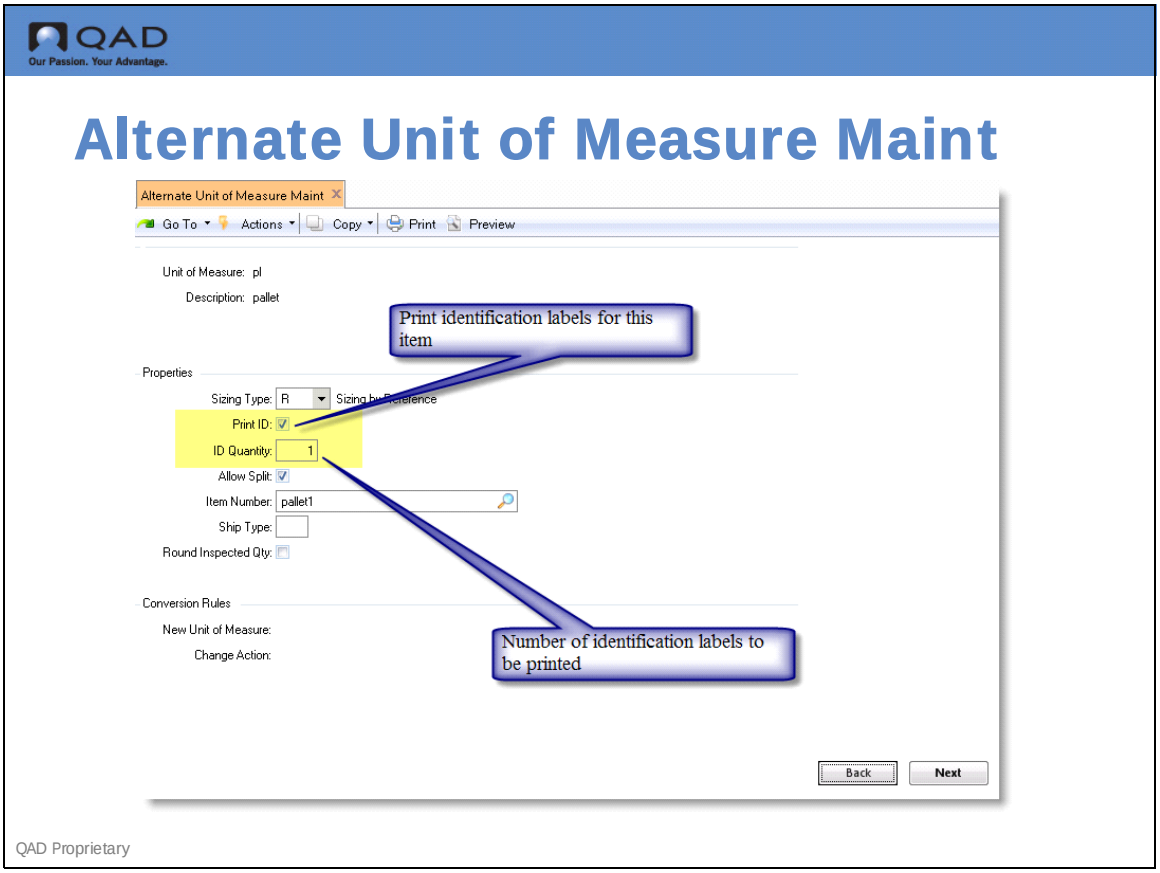
AUTO. The system prints transactions automatically as soon as they are created.

MANUAL. The system holds print requests until an on-line or batch process activates printing.

AUTOSIG. The system prints transactions automatically but holds them until a signal to print is received.

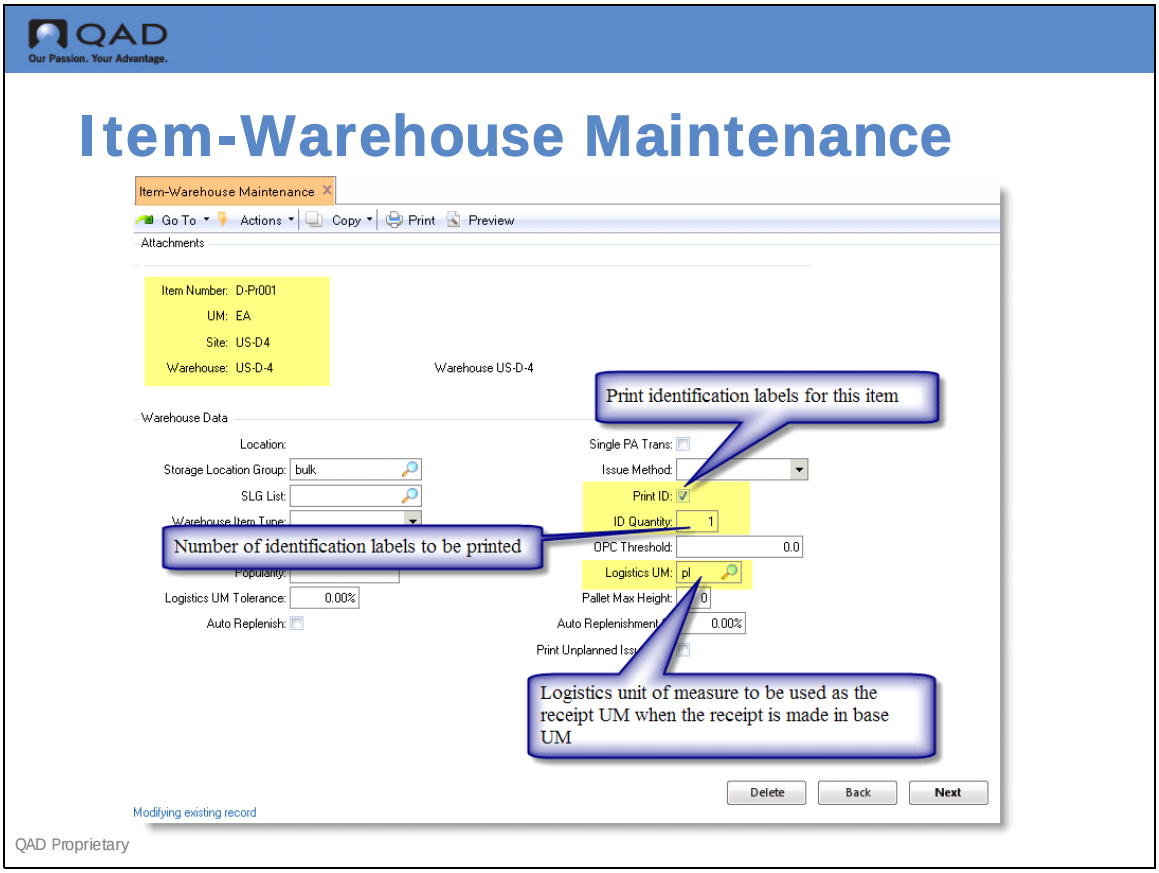
The signal to trigger AUTOSIG printing is normally a sign that the process creating print requests is complete and that all requested prints can be output at one time. This is particularly relevant when printing multiple transactions on the same task sheet.

Alternate Routing Maintenance



Use Alternate Routing Maintenance (4.5.1 is using Warehousing for QAD EE and 80.5.1 if using AIM.) to set up printing. This step is optional.

Item-Warehouse Maintenance



Use Item-Warehouse Maintenance (4.4.11 is using Warehousing for QAD EE and 80.4.11 if using AIM.) to set up printing. This step is optional.

Print Identification Process

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Print ID Process

```
icunrc.p 3+                    3.9 Receipts - Unplanned                    12/21/09

     Item Number: D-Pr001              Lot/Serial Control:     UM: EA
     Description:

        Quantity: 200.0                                    Site: us-d4
 Unit of Measure: EA                                     Location: ddock01
                  Receipt Detail - Quantity: 200 EA
    Site     Location Lot/Serial          Reference      Quantity
    us-d4    ddock01                      PL014484          100.0
    us-d4    ddock01                      PL014485          100.0

 E
 C  Site     Location Lot/Serial          Reference      Quantity
    us-d4    ddock01                      PL014484          100.0

Total lot/serial quantity entered: 200
```

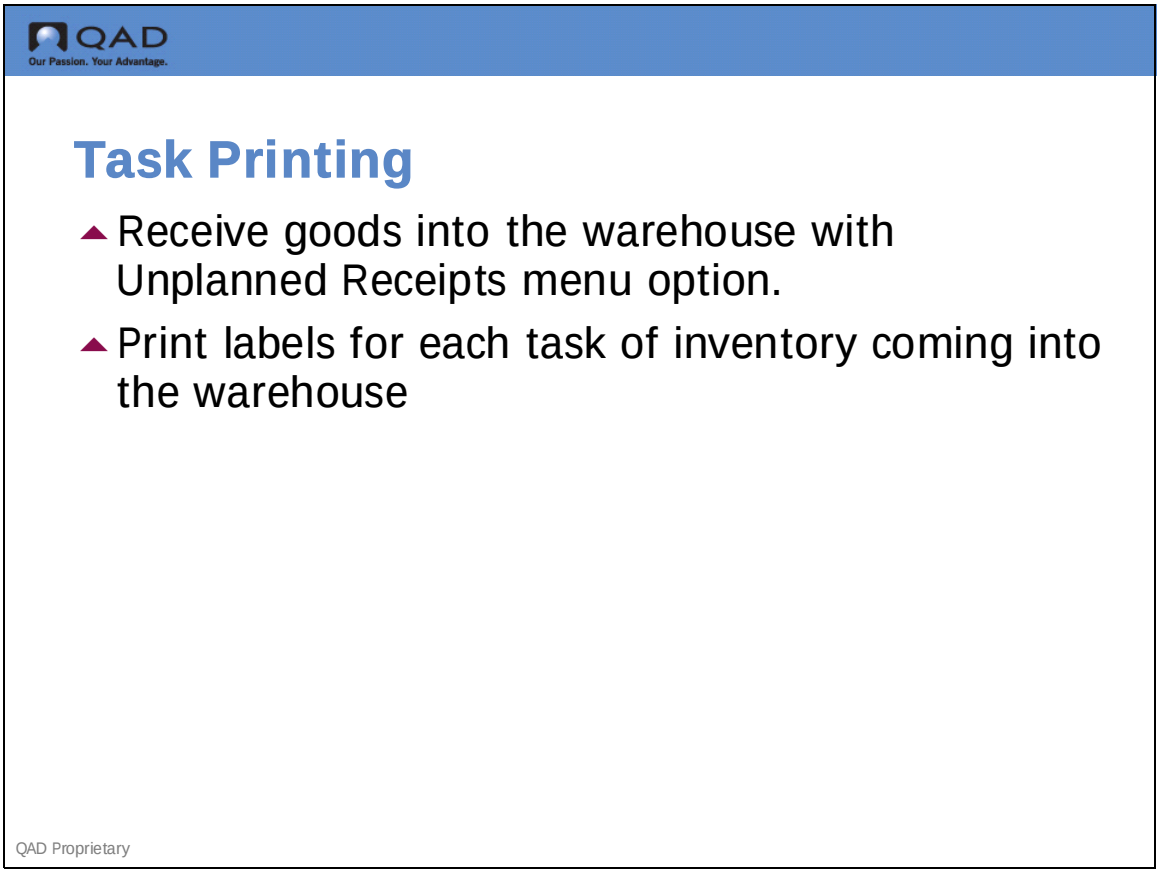
Run Receipt Unplanned in character mode as printer is defined for Unix

QAD Proprietary

Use Receipts—Unplanned (3.9) to record inventory receipts not associated with open sales, purchasing or manufacturing orders.A receipt increases inventory quantity for an item at the designated site and locations.

The receipt creates pallets that you define (such as 1 PL = 100 EA) in Unit of Measure Maintenance (1.13).

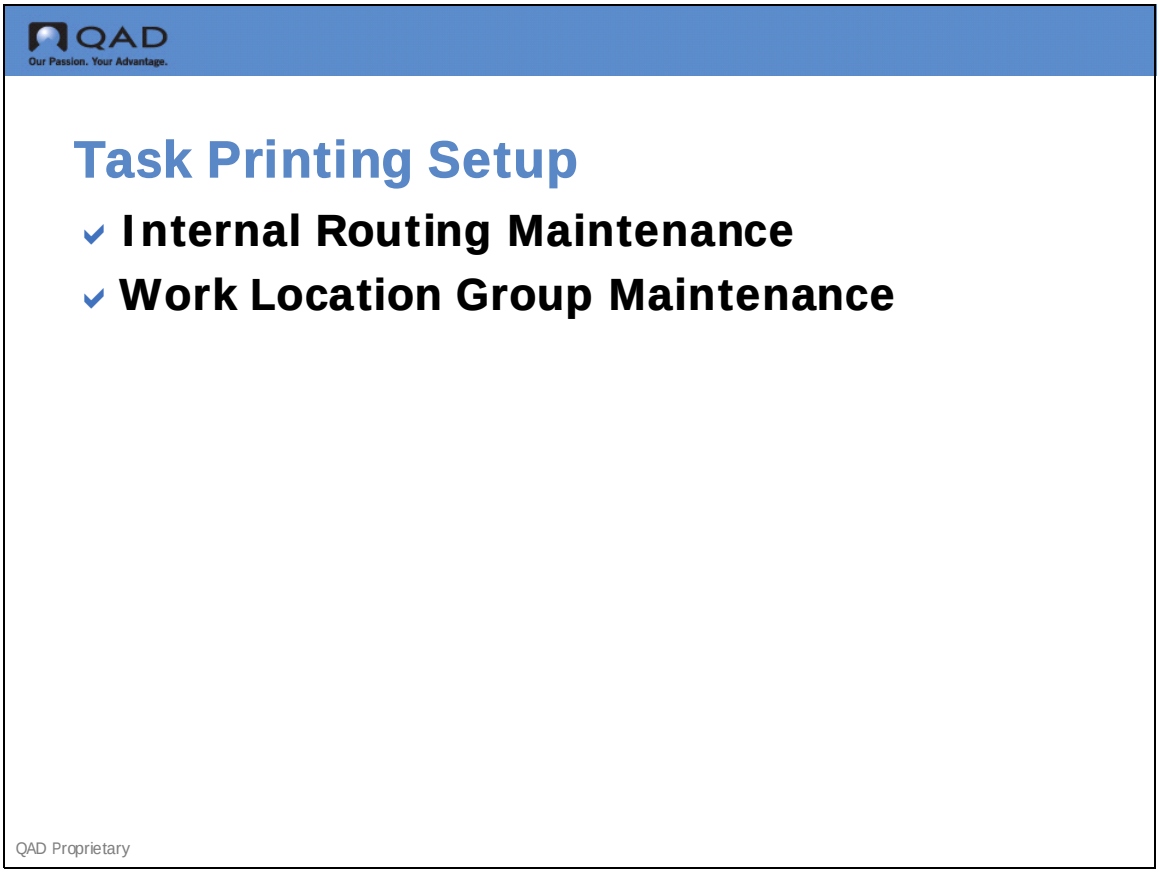
Task Printing



For printing tags, the system uses the Print Mode fields in the Print Options frame of Internal Routing Maintenance (4.2.5) to determine the mode for printing for created, confirmed, and exception tasks.

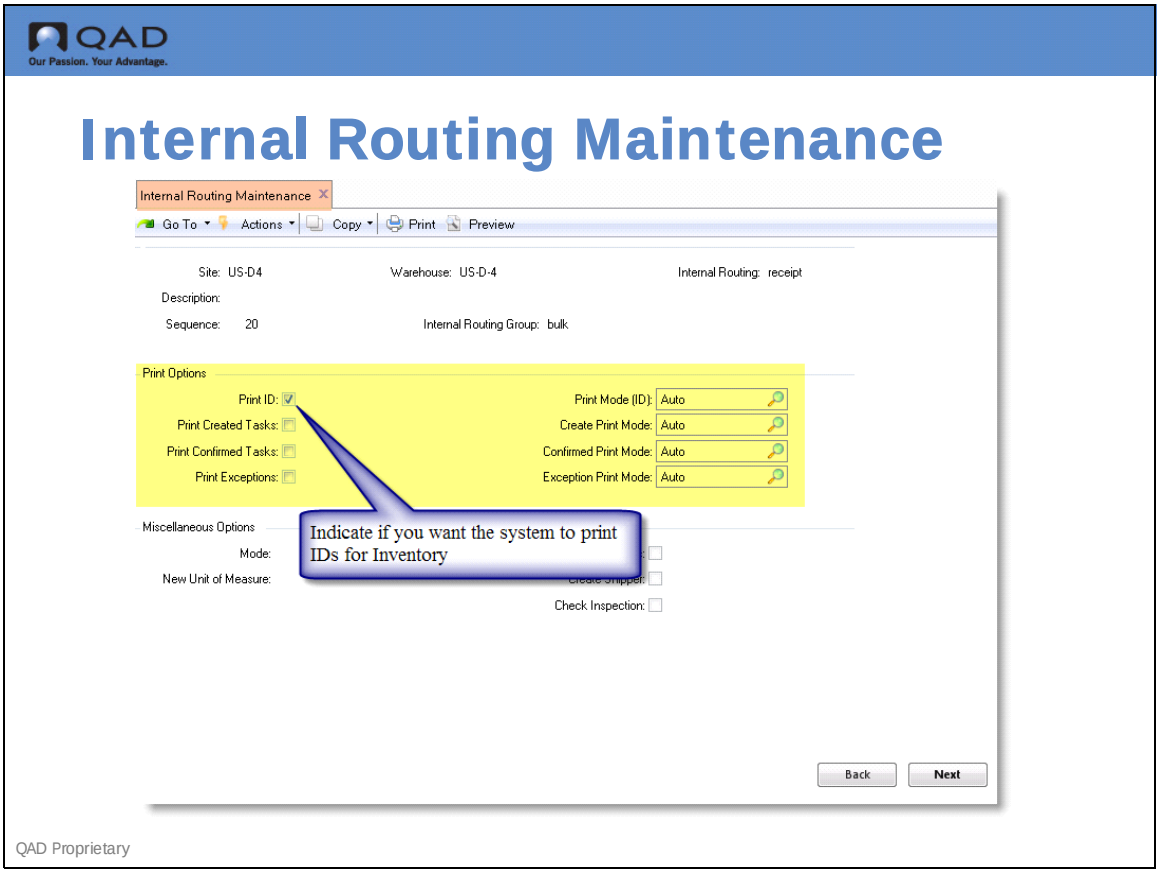
When an internal routing for the movement does not exist, the system determines the print mode for specific movements, such as transfers, from the work location group using the values you specify in the Print Mode fields of the Task Printing frame of Work Location Group Maintenance (4.3.9):

Task Printing Setup



The following topics discuss the QAD Warehousing maintenance programs that you need to set up for task printing.

Internal Routing Maintenance



Use the fields in the Task Printing Frame of Internal Routing Maintenance (4.2.5 if using QAD Warehousing or 80.2.5 is using AIM).

Fields

Print IDs. Indicate if you want the system to print IDs for inventory. If you specify Yes, enter values for the other fields related to ID printing. If you enter No, you can ignore the other printing parameters in the group.

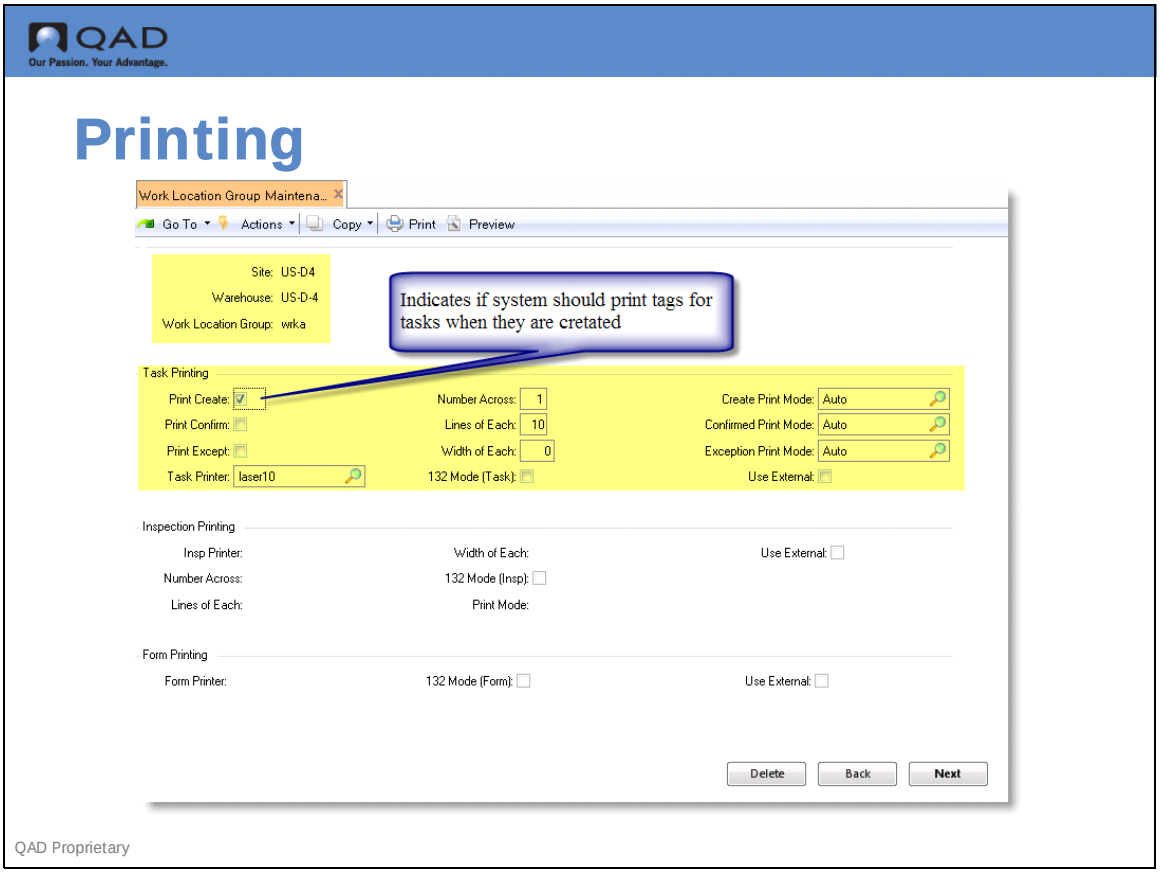
The setting you enter in Warehouse Maintenance defaults to internal routings set up in the warehouse.

You can also specify in Item Maintenance whether you want identifications to be printed for each item by entering Yes in the Print ID field.

Also, in Alternate Unit of Measure Maint, you can set this parameter to control the printing of ID labels for inventory measured in this UM. This is the main level of printing control. However, it is not mandatory to define an alternative unit of measure. If no alternative UM is defined, the printing control comes from the item-warehouse definition.

The other fields are discussed earlier in this chapter; see “Print Create” on page 24.

Work Location Group Maintenance



Use Work Location Group Maintenance (4.3.9 if using QAD Warehousing and 80.3.9 if using AIM) to set task printing fields for the WLG.

Fields

The fields default from Warehouse Control (see “Warehouse Control” on page 20) or Warehouse Maintenance (“Warehouse Maintenance” on page 22).

Print Task Process

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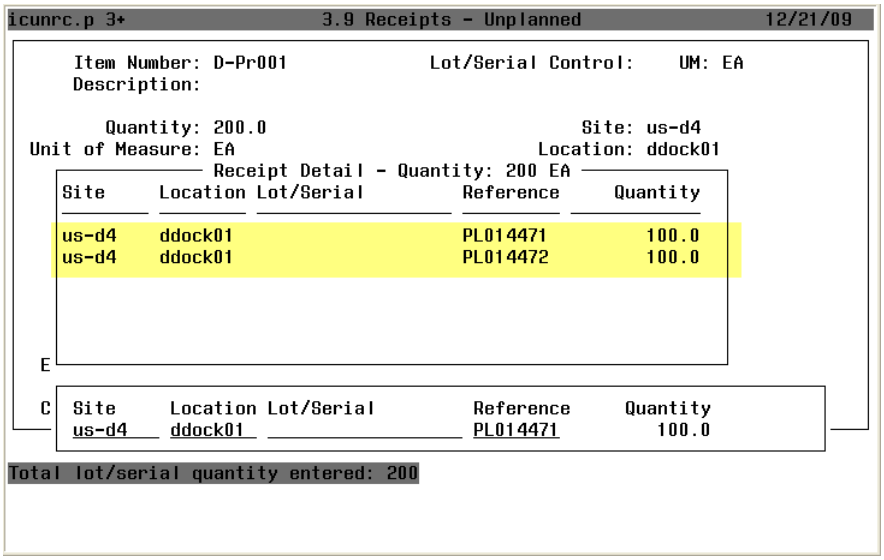
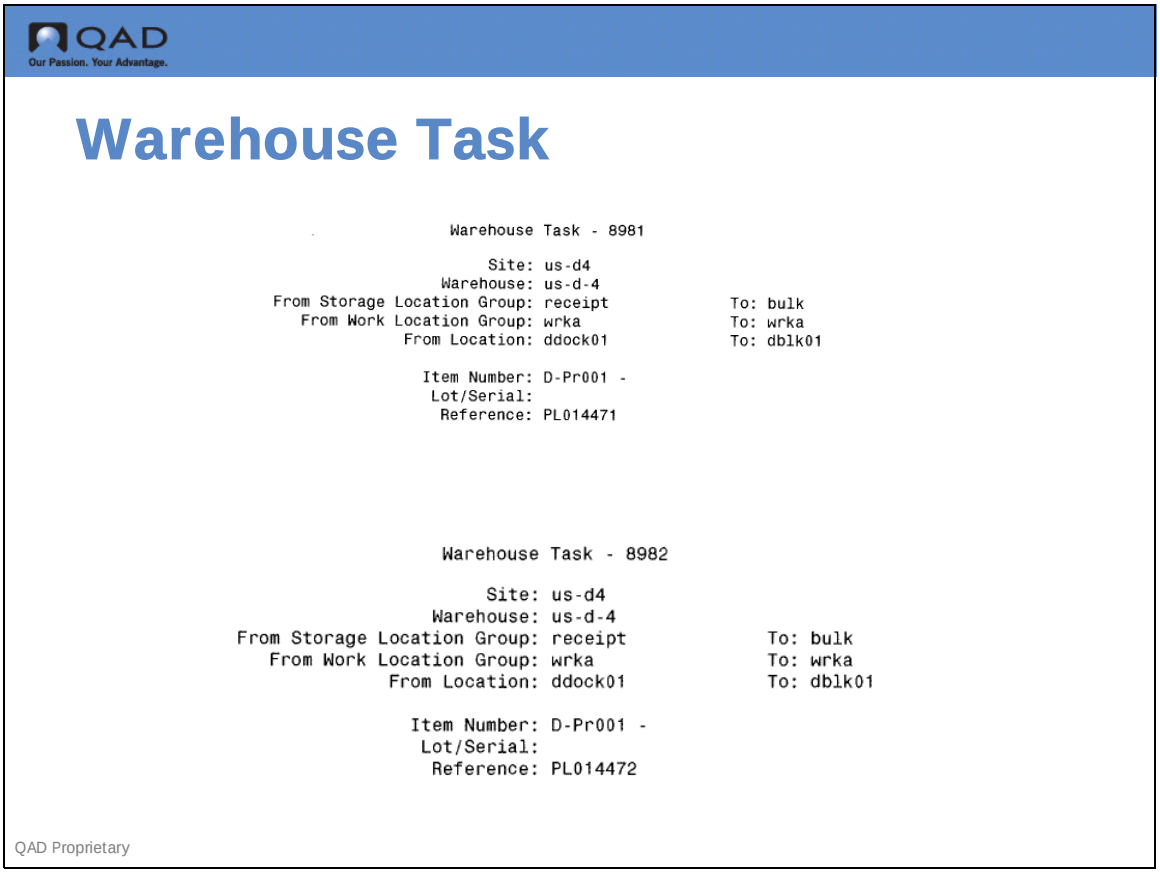
Task Printing Process



QAD Proprietary

Use Receipts—Unplanned (3.9) to record inventory receipts not associated with open sales, purchasing or manufacturing orders. Click on the Receipt Detail frame and check the quantity received for the site, location, and pallet (reference). You can print the IDs for the received inventory.

Print Task



The system prints labels for the pallets. You cannot print barcodes, though, without third-party software.

Study Questions

The answers can be found in the Answers chapter of this advanced training guide.

1 What is an example of identification printing for a warehouse?

2 True or False. QAD Warehousing prints barcode labels when you purchase additional barcode software from QAD.

3 True or False. You set up identification printing only within QAD Warehousing.

4 In which program do you specify a system printer?

5 What are you setting up in Transaction Type Maintenance?

6 In Warehouse Control when setting up print fields, what is the difference between AUTO mode and AUTO SIG mode?

7 True or False. You set up print requirements only for a warehouse in Warehouse Maintenance.

8 Describe the term, print flavor, within warehousing and identify in which program you set up flavor codes.

9 True or False. You must set up printing in alternate routing if you intend to print in all routes of a warehouse.

10 For printing tags, which fields does the system use in Internal Routing Maintenance (4.2.5) to determine the mode for printing for created, confirmed, and exception tasks?

Chapter 2

Batch Picking

Chapter Overview

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Batch Picking Overview

- Batch Picking Control
- Screen Overview
- Function Keys
- Handling Batch Picking Exceptions
- To Lot Field Activation
- Exercise

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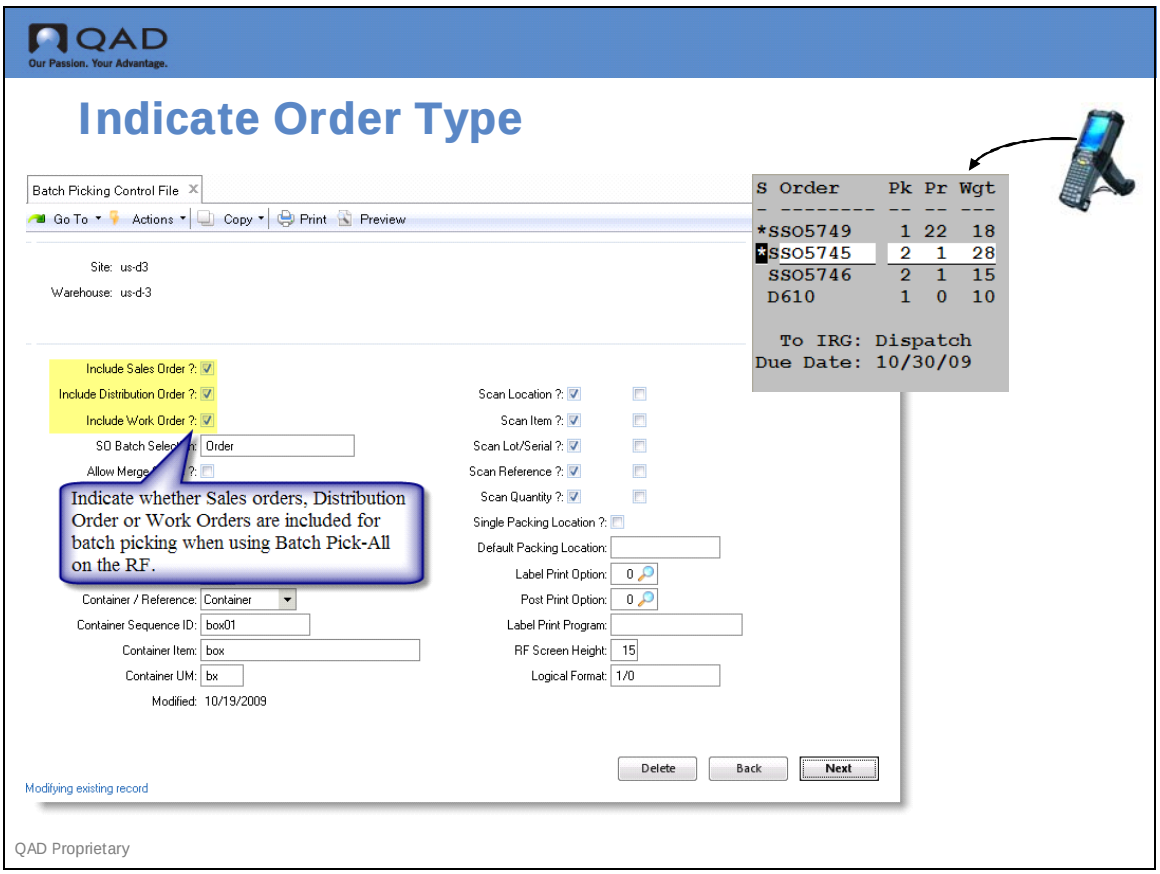
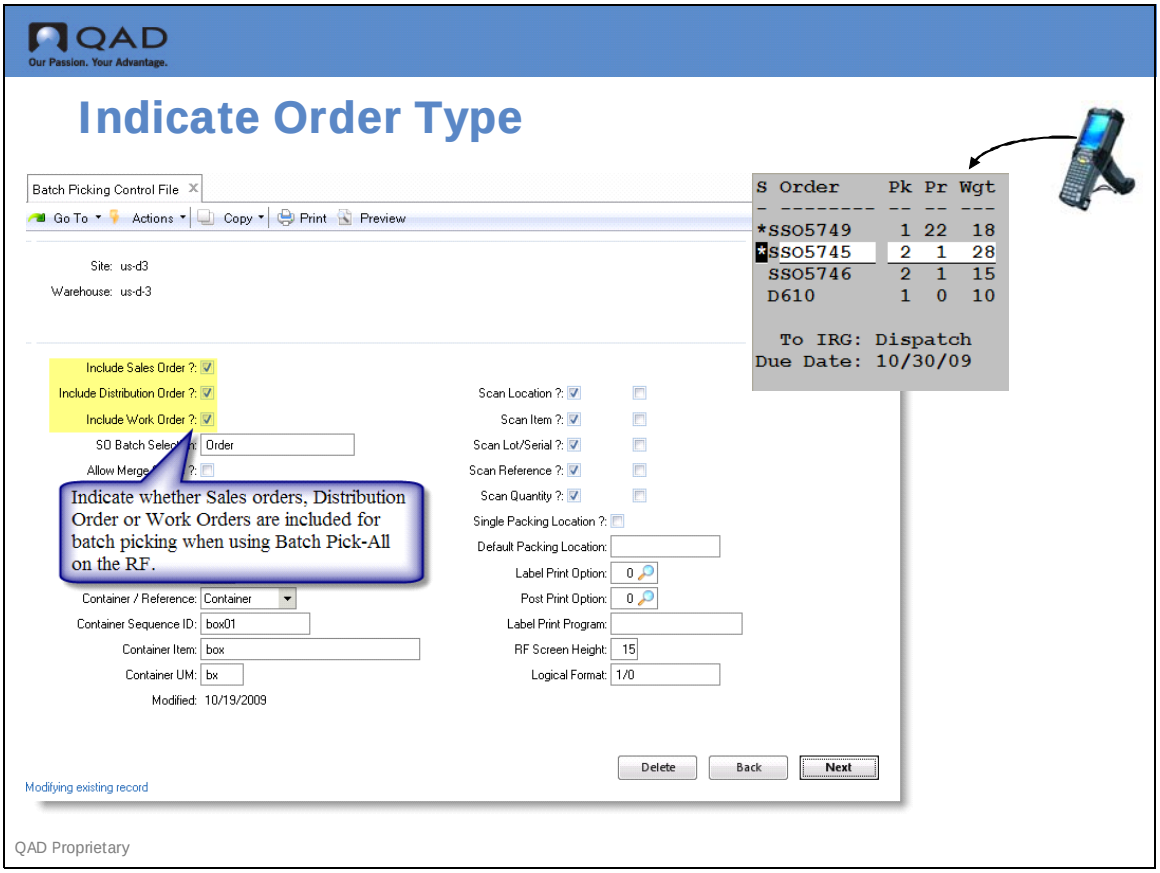
Batch Picking Control



Set options within Batch Pick Control (5.15.24) to:

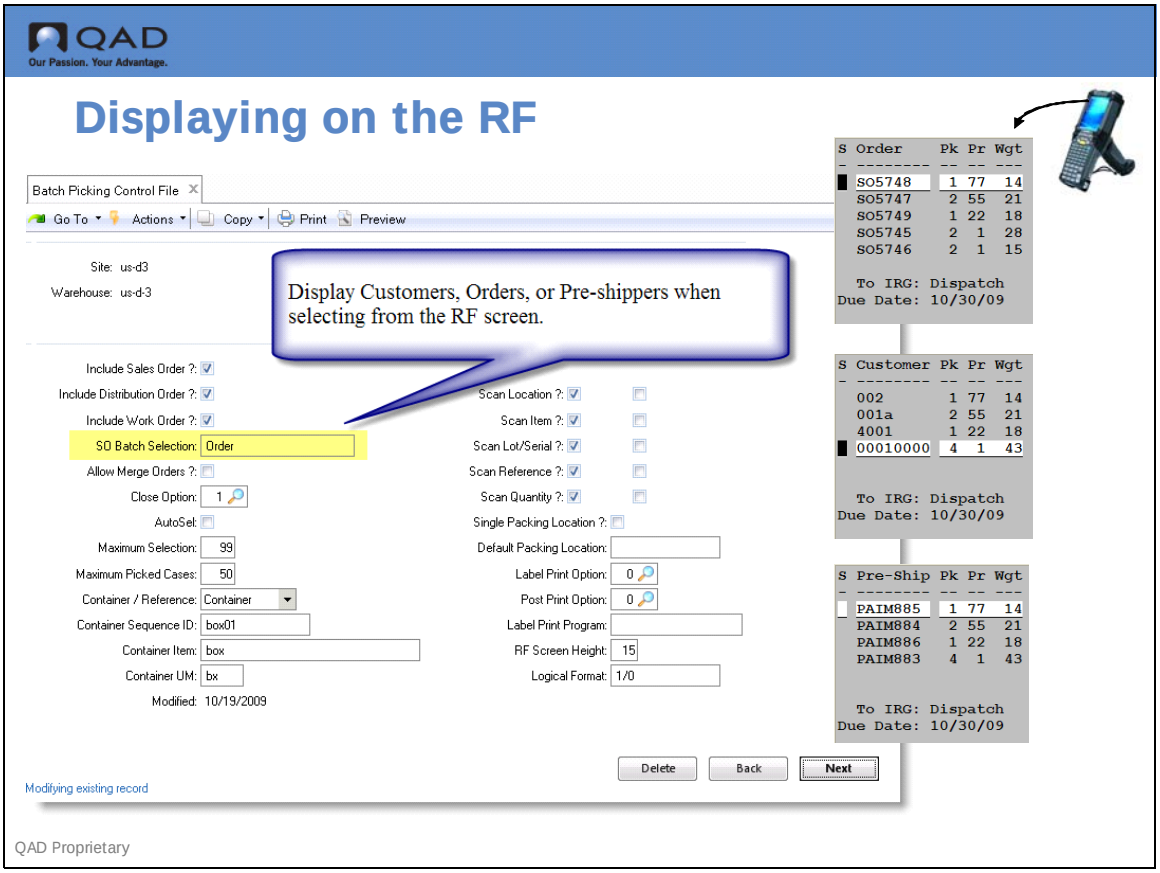
- Pick items per order, customer, or pre-shipper
- Display orders, customers, pre-shippers on the RF
- Combine items from different orders
- Specify maximum orders to display and pick
- Print labels before or after picking.
- Ability to move items from one box to another
- User Location: stock is moved to the Cart (User Location) upon picking
- Drop off all at any time during Batch Picking process to empty the cart
- Skip tasks to continue picking
- Bar-code check for improved accuracy
- Specify the container for items

Pick Items per Order, Customer, or Pre-shipper



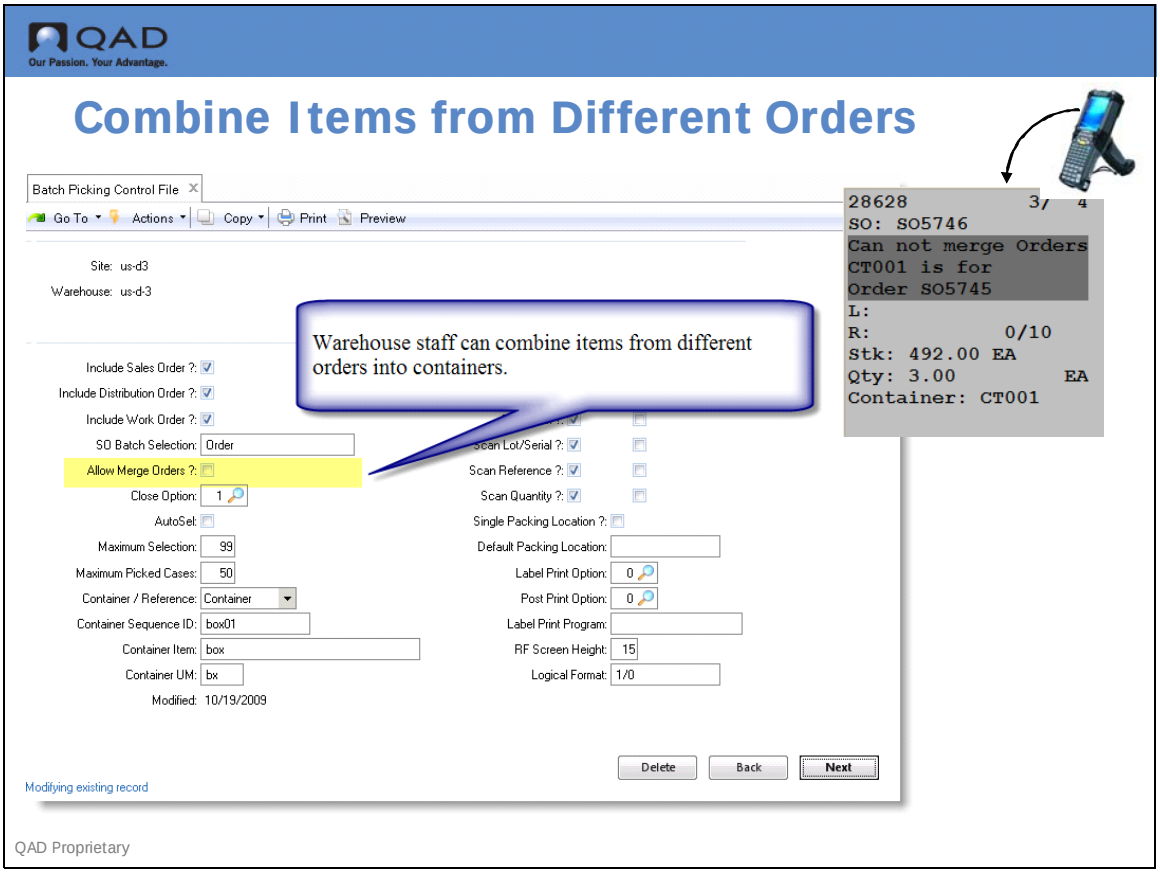
Select the type of order by setting fields that specify sales orders, distribution orders, or work orders. You can select one, two, or all order types.

Display Orders, Customers, Pre-Shippers on the RF



Select the type of order by setting fields that specify sales orders, distribution orders, or work orders. You can select one, two, or all order types.

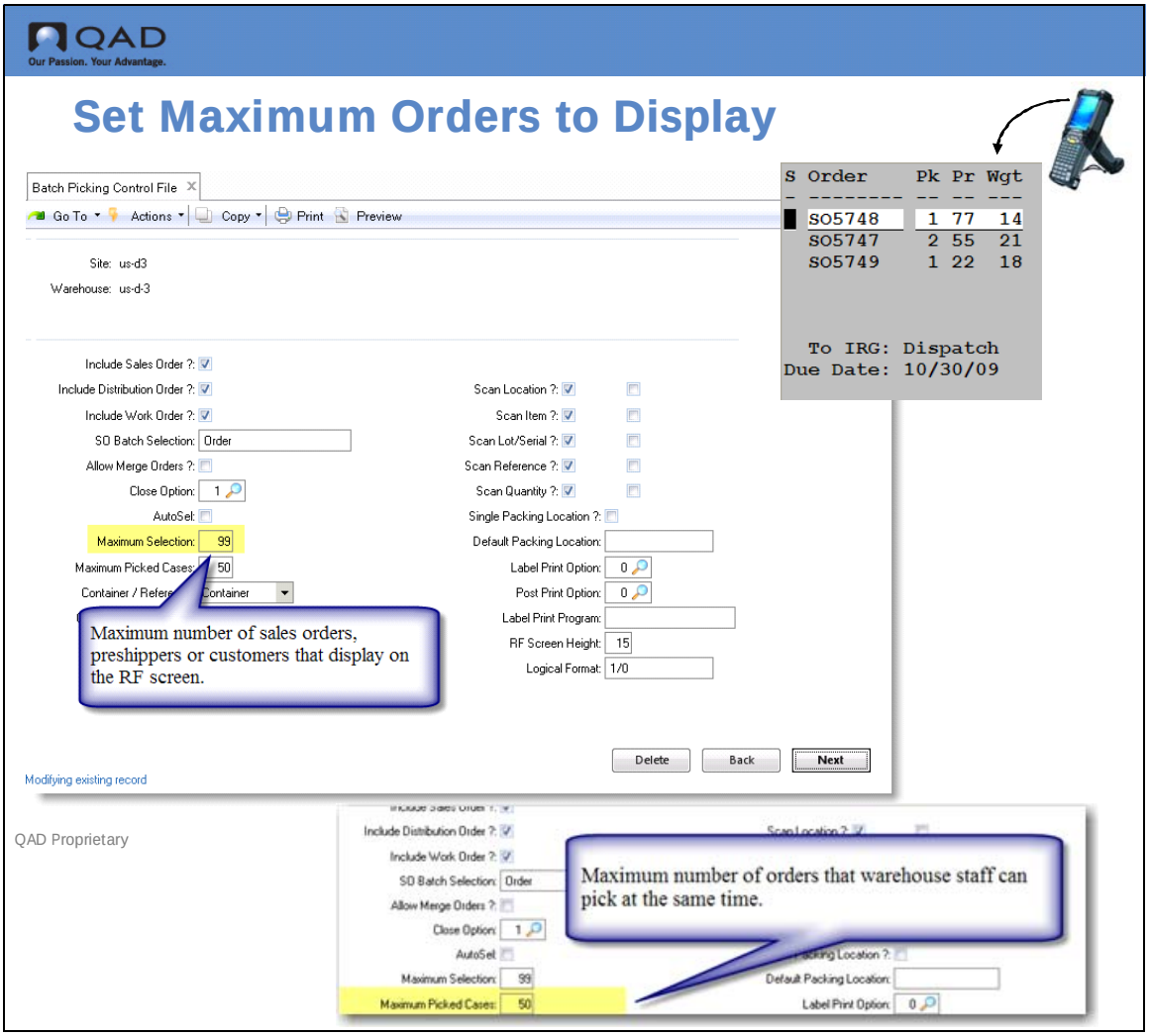
Combine Items from Different Orders



If warehouse staff want to pick for different orders at the same time, select the Allow Merge Orders field.

If you do not select this field, and warehouse staff scan picked items from different orders, the system displays an error message.

Specify Maximum Orders to Display and Pick

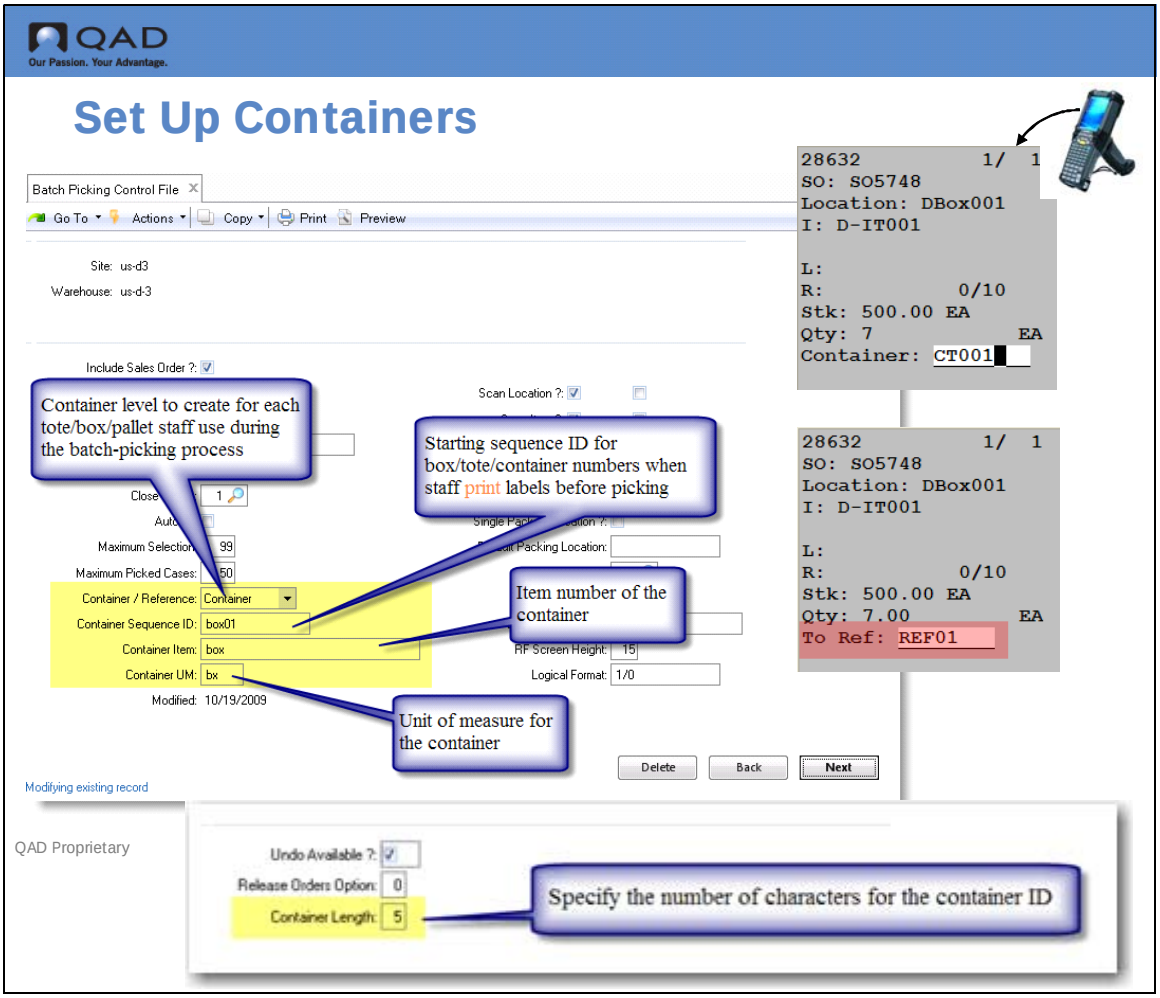


Specify a value in the Maximum Selection field that represents the maximum number of sales orders, pre-shippers, or customers that display on the RF screen.

Specify a value for Maximum Picked Cases to indicate the maximum number of orders to pick.

Specify a value for Maximum Picked Cases to indicate the maximum number of orders to pick.

Set Up Containers



Set up containers in Batch Picking Control through the following fields:

Container/Reference. Specify a container level to create for each tote/box/pallet staff use during the batch-picking process. This field applies to sales and distribution orders only.

Container: The system creates a container level for every tote or pallet in the pre-shipper structure. The items that staff pick and place in the container display as a sub-level of the container. If you set this field to Container, you must specify an item number in Container Item.

Reference: The system does not create a container level. Instead, it uses the reference field of the inventory record as the placeholder for a container number or a kit number. All items staff place in the same container or kit have the same reference number. This field applies to work orders only when specifying a reference for a container. This field also applies to sales orders, if specifying a reference for a kit.

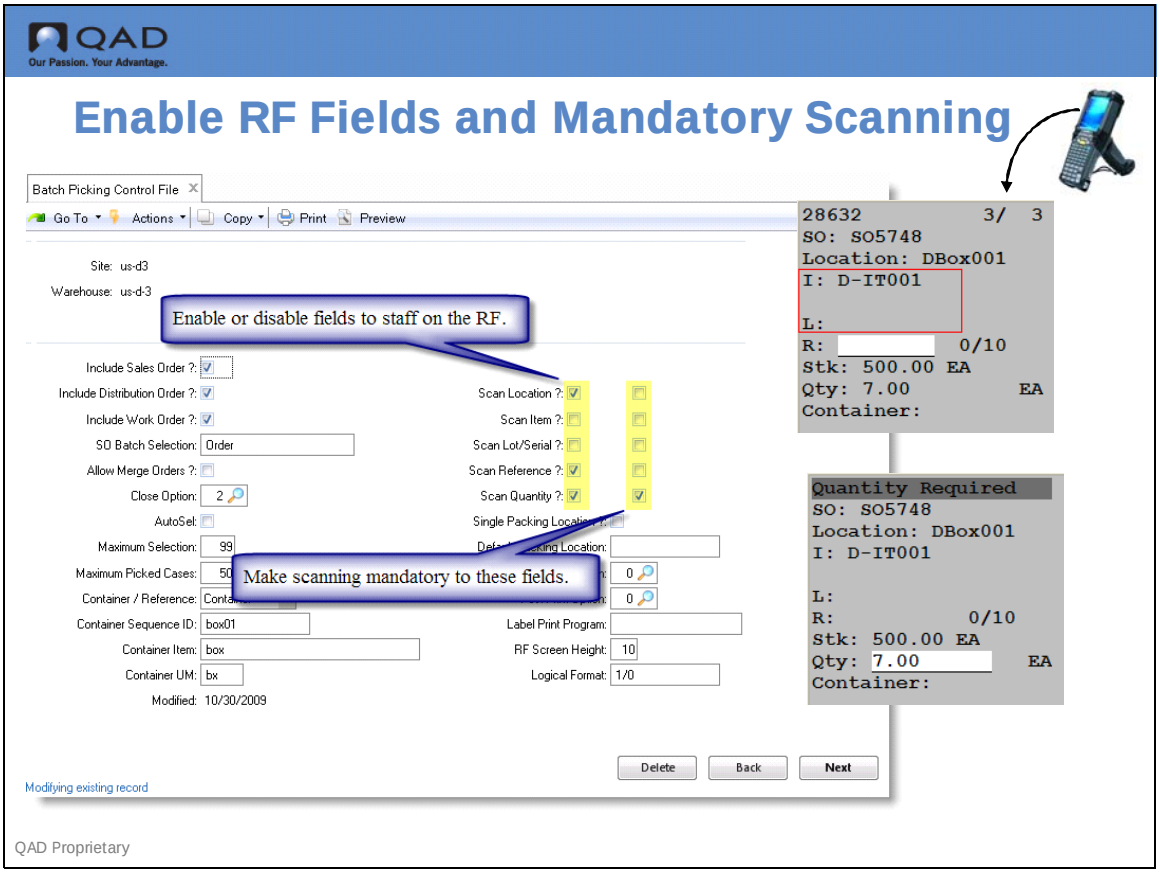
Container Sequence ID. Enter the starting sequence ID for box/tote/container numbers. You specify the sequence IDs in Sequence Definition Maintenance. If staff use preprinted labels, the system does not consider this field.

Container Item. Enter the item number of the container. If you set Container/Reference to Container, you must specify an item number

Container UM. Enter the unit of measure for the container. For example, if batch picking items to a box, enter the box UM. You define the UM in Alternate Unit of Measure Maint.

Container Length. Specify the number of characters for the container ID. For example, if you specify 8 characters, you can have a container ID as CA000001.

Enable RF Fields and Mandatory Scanning



Use the Scanning fields to set the following:

- Enable fields so that warehouse staff can enter data in the fields on the RF. To do this, select Scan Location.
- You can require that warehouse staff scan items by setting Scan Quantity.

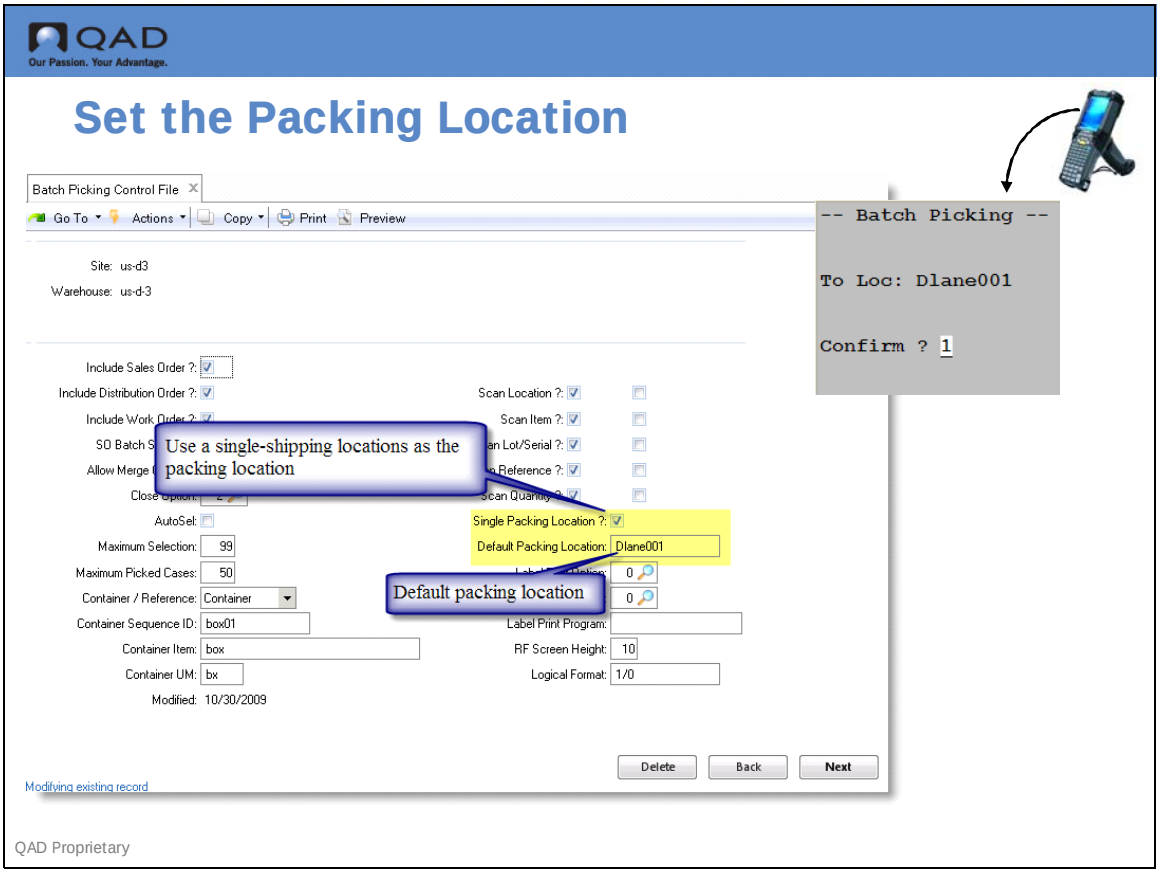
Scan Location. •Indicate whether to scan the location from which items are picked.

No: Do not scan the location label or barcode from which items are picked.

Yes: Warehouse staff can access the Location field and scan. To make scanning mandatory, mark the Required field next to the scan option field.

Required. •Indicate if the associated scanning operation is required on the RF.

Set the Packing Location



Set up the packing location, by setting the following:

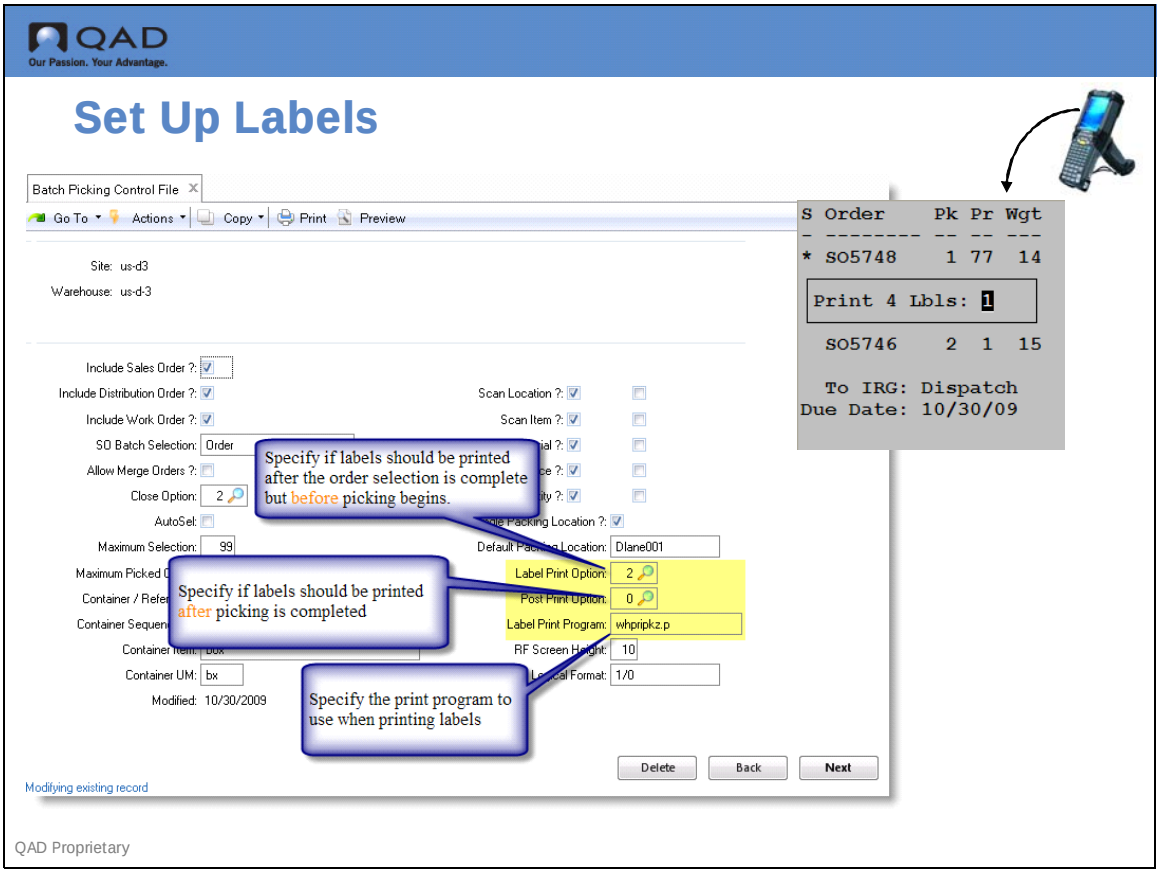
Single Packing Location. Indicate whether batch-picked items are for a single-packing location. For example, if you use a single-shipping location as the packing location, then set this option to Yes. Locations are defined in Warehouse Location Maintenance. Specify a default packing location in Default Packing Location.

No: There are multiple packing locations.

Yes: There is a single packing location. The system eliminates an RF screen since all picks from all references go to the same destination. Once picking tasks are complete and confirmed as completed, the RF screen displays the selection screen with the default location in the To Location field.

Default Packing Location. Specify a default packing location. Locations are defined in Warehouse Location Maintenance.

Set Up Labels



Set up labels for the containers, using the following fields:

Label Print Option. Indicate whether labels print automatically, not at all, or if the system prompts to print labels after the order selection is complete but before picking begins. You must specify the print program in Label Print Program. The system prints UCC128/EAN128-format labels for cases, empty boxes, or totes that do not already have a label. Use the look-up browse to select an option.

0: Never print labels before picking.

1: Always print labels before picking.

2: Prompt RF user to print labels before picking.

Note To specify printing after picking, set Postprint Option to Yes.

Printing before picking is useful when you perform multiple order picking. Warehouse staff can print labels for containers, scan the labels and then use the scanned data to ensure that each order is put into the right container. Use the look-up browse to select an option.

Warehouse staff frequently use different sized containers, depending on their picking experience and the picking information the system provides in the picking order selection program specified in Local Exit Routines Setup.

Since the system does not recommend the size of the container/box that staff should use for a given number of picks, staff can select a container/box, then paste the pre-printed box label on the edge of the box, so that it can be easily removed should a different size container be needed when the batch picking is complete.

Post-Print Option. Indicate whether labels print automatically after picking, not at all, or if the system prompts to postprint labels.

0: Never postprint labels.

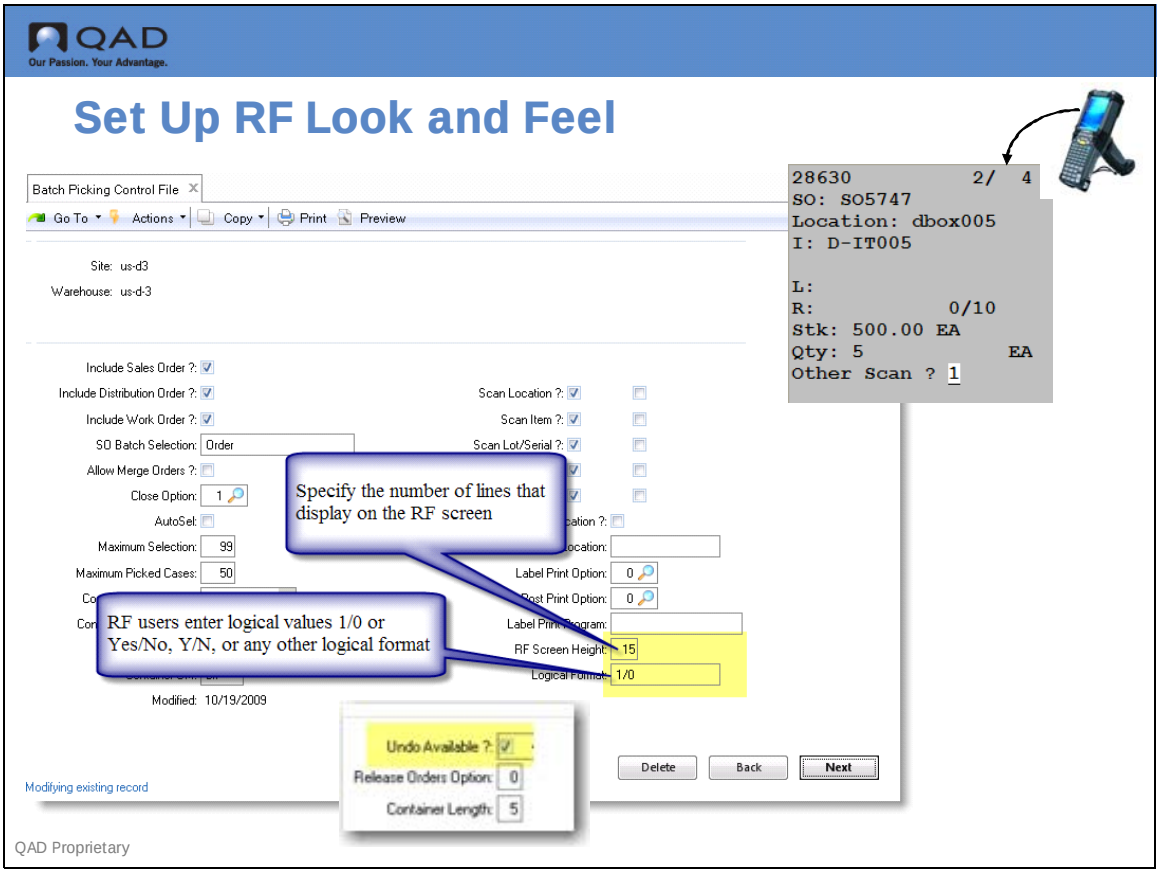
1: Always postprint labels.

2: Prompt to postprint labels.

Printing after picking, or postprinting, is useful when warehouse staff know the exact contents of the box, tote, or pallet to which they pick. If you use batch picking for multi-bin pickup with only one pallet, warehouse staff typically use post-printed labels, not preprinted labels.

Label Print Program. Specify the print program to use when printing labels. One program is supplied with the warehousing system. The whpripkz.p print program is Loftware-format compatible. You can edit whpripkz.p, using a standard text editor; rename the program; then, enter it here.

Set Up RF Look and Feel



You can control some of the look and feel of the RF fields by setting the following fields:

RF Screen Height. Specify the number of lines that display on the RF screen. The default is 0 (zero); however, for RF screen readability, enter a number between 6 and 20.

Logical Format. Indicate whether RF users enter logical values 1/0 or Yes/No. Yes/No is applicable to RF devices that have a keyboard. This field is mandatory. Enter the forward slash (/) with either the 1/0 or Yes/No. The system treats the value preceding the slash as positive, and the value following the slash as negative.

Entering characters without the slash can cause errors in interpretation. For example, if you specify 10, the system interprets the number 10 as negative.

1/0: RF users can enter the number 1 for positive and 0 (zero) for negative responses.

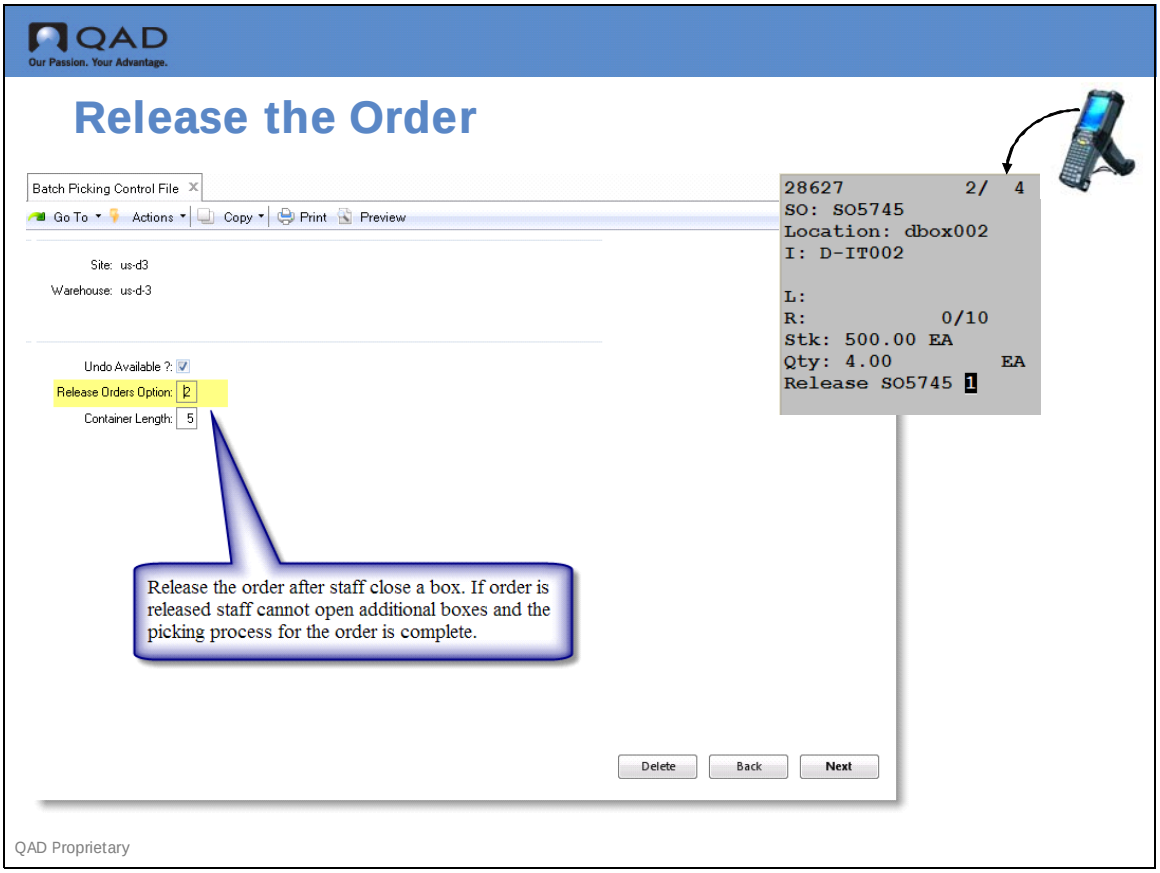
Yes/No: RF users can type Yes or No on their keypad.

Undo Available. Indicate whether the system prompts to undo picking tasks and leave the batch picking process on the RF when the RF user presses cancel (F4) during picking.

No: RF users are not prompted to undo tasks and leave picking functions after they press cancel.

Yes: If RF users press cancel on the RF screen during picking, the system first displays a prompt to exit the process. If the user specifies Yes, the system displays a prompt to undo and leave picking tasks. If Yes, the system rolls back all completed picks and sets pick tasks to unassigned. Upon exiting the picking process, the system sets confirmed to No or 0 (zero).

Release the Order



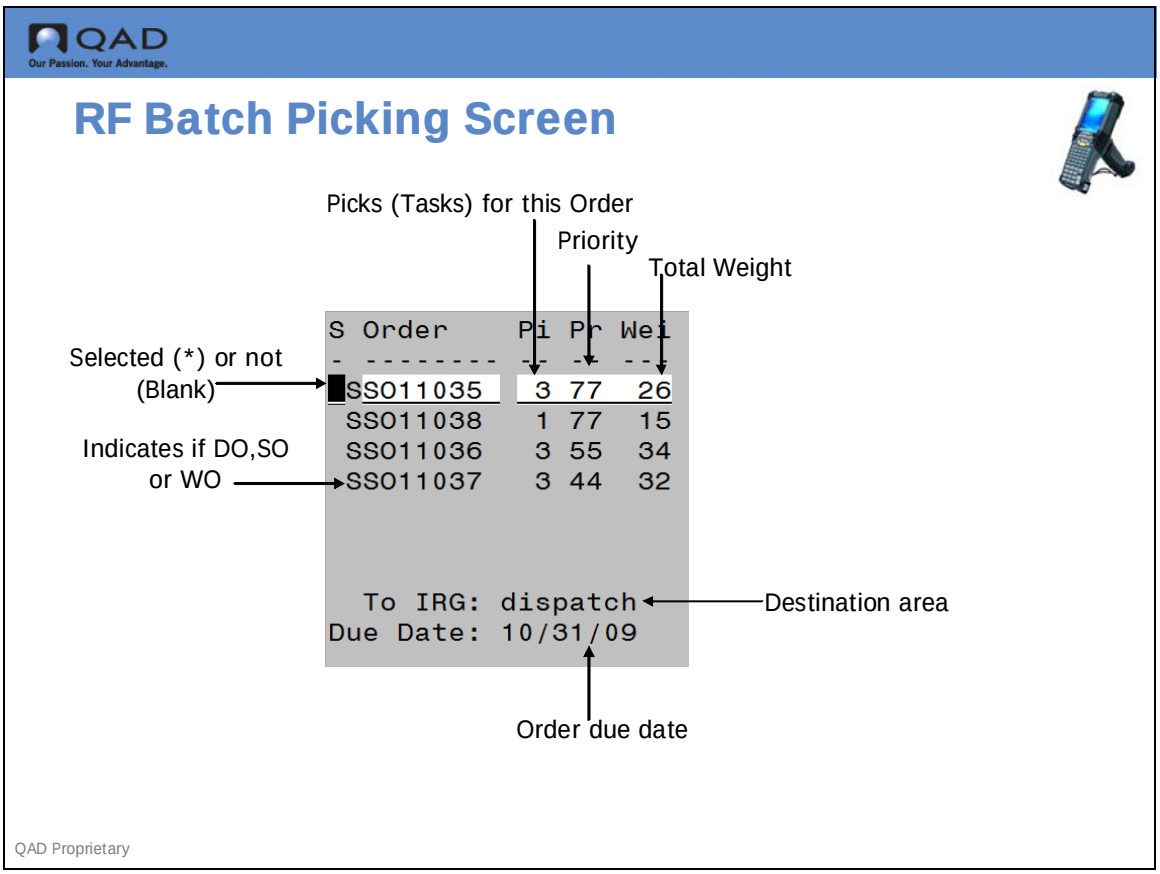
Set the Release Order Option field to specify whether to release the order after the RF user closes a box. Use this field in conjunction with the Close Option field.

0: Never Release Order: When the RF user closes a box, staff can continue picking for the next order lines and open additional boxes for the order.

1: Always Release Order: Staff cannot open additional boxes and the picking process for the order is complete. You should unallocate all remaining picking tasks for the same order so that the system does not present remaining tasks to the picker assigned. You can assign remaining tasks to other pickers.

2: Prompt for Releasing Order: The system prompts to release the order and execute the appropriate action.

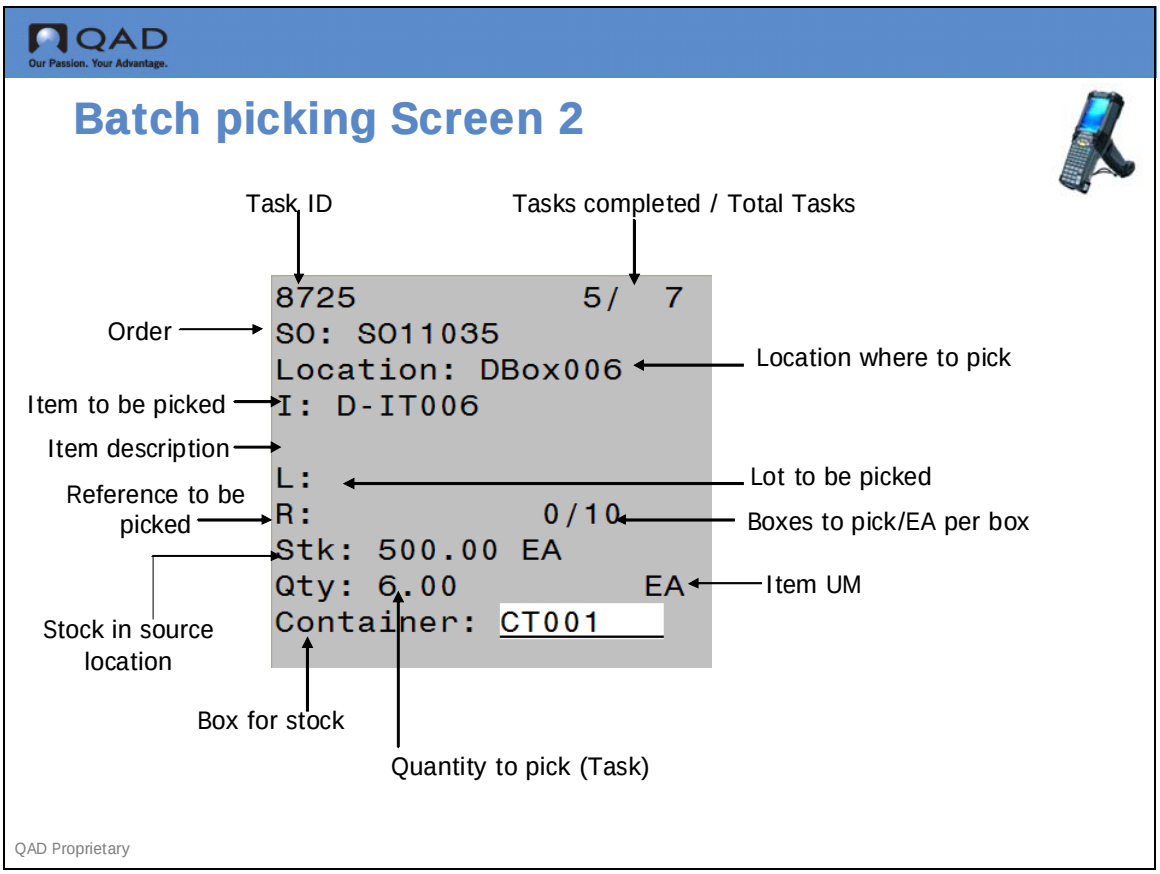
Screen Overview



Warehouse staff conduct batch picking through the RF device. Options you set up in Batch Picking Control control some aspects of the RF screen.

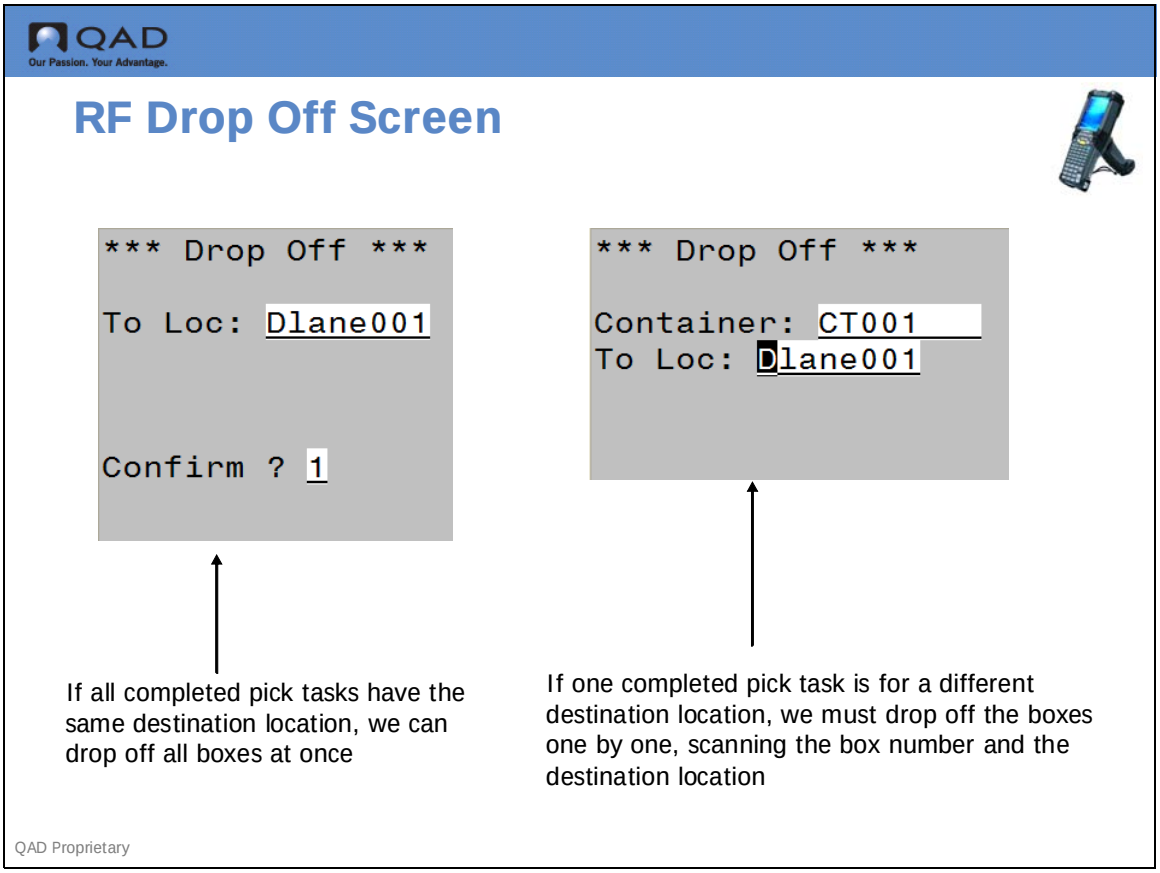
Review the areas of the RF screen, shown above so that you can easily detect order information.

Second RF Batch Picking Screen



The second RF batch-picking screen shows item, reference, box, location, and task information as well as task remaining and task total information.

Drop Off All To Empty Cart



Occasionally, staff need to drop off boxes at consolidation areas or shipping lanes before they complete batch picking for an order. When all completed pick tasks have the same destination location, warehouse staff can optionally drop off all items they finished picking. This lets them avoid scanning each box and the destination location for confirmation.

If one completed pick task is for a different destination location, staff can still drop off completed boxes, but they must drop off the boxes one by one, scanning the box number, then the location in which they drop off boxes, such as the shipping lane.

If all picked boxes are going to the same destination, for example, the same shipping lane, warehouse staff can press F6 on the RF during picking tasks to display the following prompt:

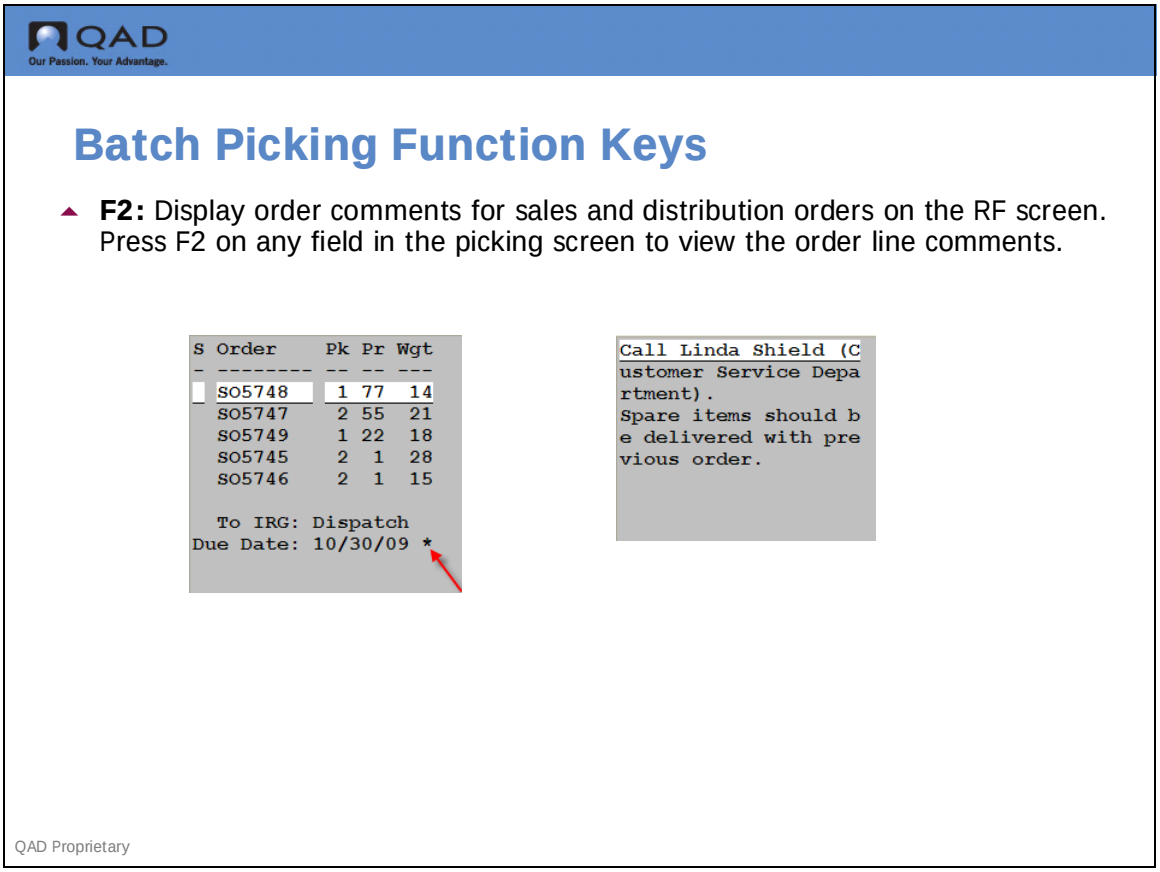
```
Drop All?
```

Staff should specify Yes to drop off all boxes for which they completed picking tasks if the destination location is the same for all boxes.

If one or more boxes are going to a different destination, then staff must scan each box and destination location each time they drop off a single box.

When the drop-off or drop-all is complete, the user can continue the batch-picking process for the remaining allocated tasks.

Function Keys



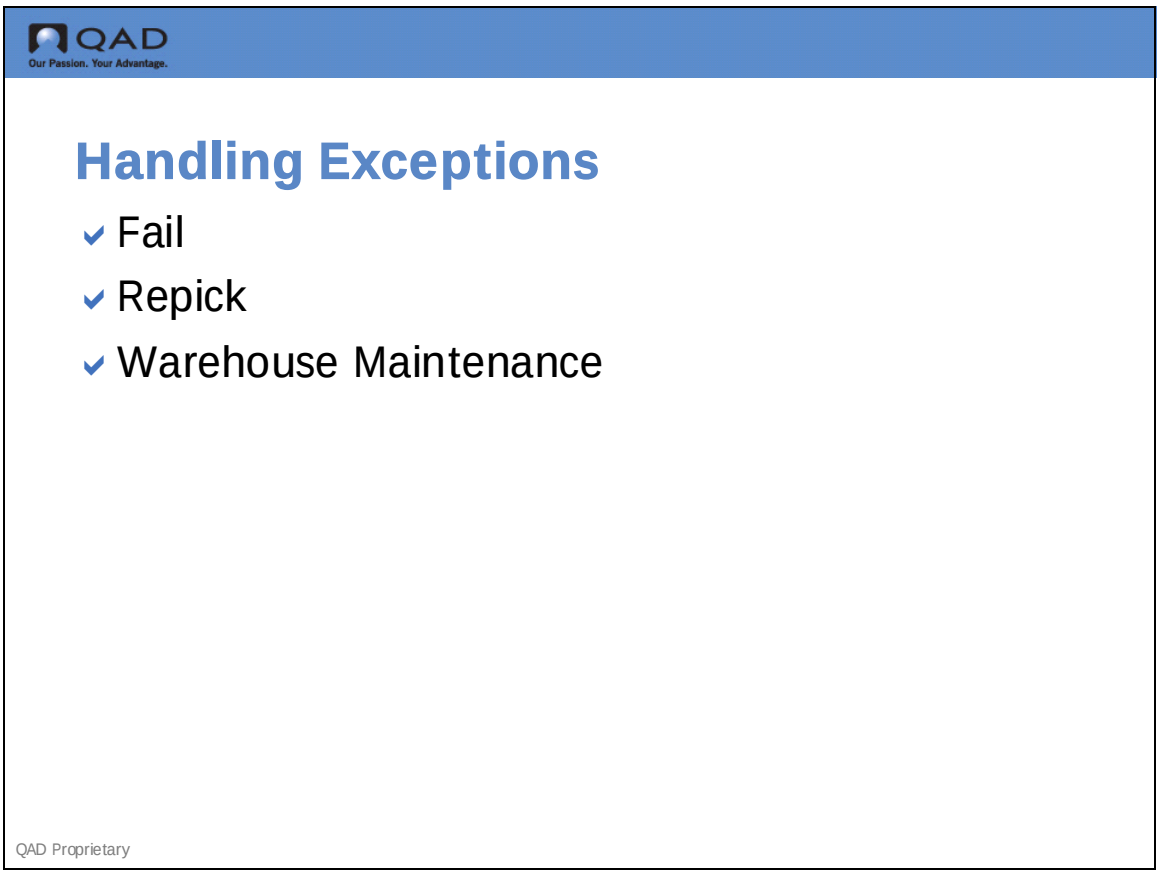
You can use function keys on the RF while you perform certain tasks.

RF Function Keys

Function Key	Description	Task
F2	Display order comments for sales and distribution orders on the RF screen. Press F2 on any field in the picking screen to view the order line comments.	Picking
F3	Display the order picking status. The system displays pick information per order, including the item number, the quantity already picked, and the quantity remaining to pick.	Picking
F3	Fails the task. The system creates a recount task.	Overpick replenishment and put-away
F5	Skip a task and move it to the end of the task queue. This is useful, for example, if a warehouse aisle become blocked.	Any task
F6	If all tasks are for the same destination, the system displays the Drop All prompt, letting you drop all or some boxes completed during picking.	Picking

Function Key	Description	Task
F6	Lets staff repick missing items.	Overpick replenishment and put-away
F7	Move contents from one box to another box during picking. This helps staff balance the content of different boxes based on the volume of the different items. The system prompts to enter a new container ID.	Picking

Handling Exceptions



There are several, possible exceptions that can occur while batch picking:

- Inventory missing in the location
- Inventory broken, rotten or damage in the location
- Not enough space in the cart to put inventory
- Boxes/carton capacity is less than single task

The following topics discuss ways to handle exceptions:

- During a fail
- During repick
- Using Warehouse Maintenance (4.1.)

Handling Exceptions - Fail

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Handling Exceptions -Fail

- **Fail:** When a transaction fails, the system changes the status of the remaining stock in the source location to the Fail Status.

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When the RF user enters a quantity available in a location that is lower than the task quantity, the system can fail the task.

If you specify an option to fail in Warehouse Maintenance, when the system prompts the RF user to scan more and staff specify Yes, the system:

- Changes the status of the source inventory to the fail status, also defined in Warehouse Maintenance. The Fail status is typically a non-available inventory status; therefore, the system no longer considers this specific inventory for picking.
- Creates a recount task to recount stock in this location and assigns the task to the appropriate user if Count on Fail is Yes.

If staff specify No, the system does not fail the task and does not display fail options for the pick.

Handling Exceptions - Repick

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Handling Exceptions- Repick

- **Repick:** Inventory is missing/damaged and they want to fulfill the order quantity by picking the item in another location.

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If you specify an option to repick, when the system prompts staff to scan more and staff specify Yes, the system starts an on-line repick to locate missing quantities from the same location or another location. If staff specify No, the staff cannot repick for the order.

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Handling Exceptions- Repick 2

Case	Complete	Fail	Repick	
A	Y	N	N	Pick selected quantity and release remaining.
B	Y	N	Y	Pick selected quantity and repick remaining.
C	Y	Y	N	Pick selected quantity and fail stock
D	Y	Y	Y	Pick selected quantity, repick remaining and fail stock
E	N	**N**	**N**	Pick selected quantity and creates another taks for remaining quantity.
F	N	**Y**	**N**	Pick selected quantity and creates another taks for remaining quantity.
G	N	**N**	**Y**	Pick selected quantity and creates another taks for remaining quantity.
H	N	**Y**	**Y**	Pick selected quantity and creates another taks for remaining quantity.

useless

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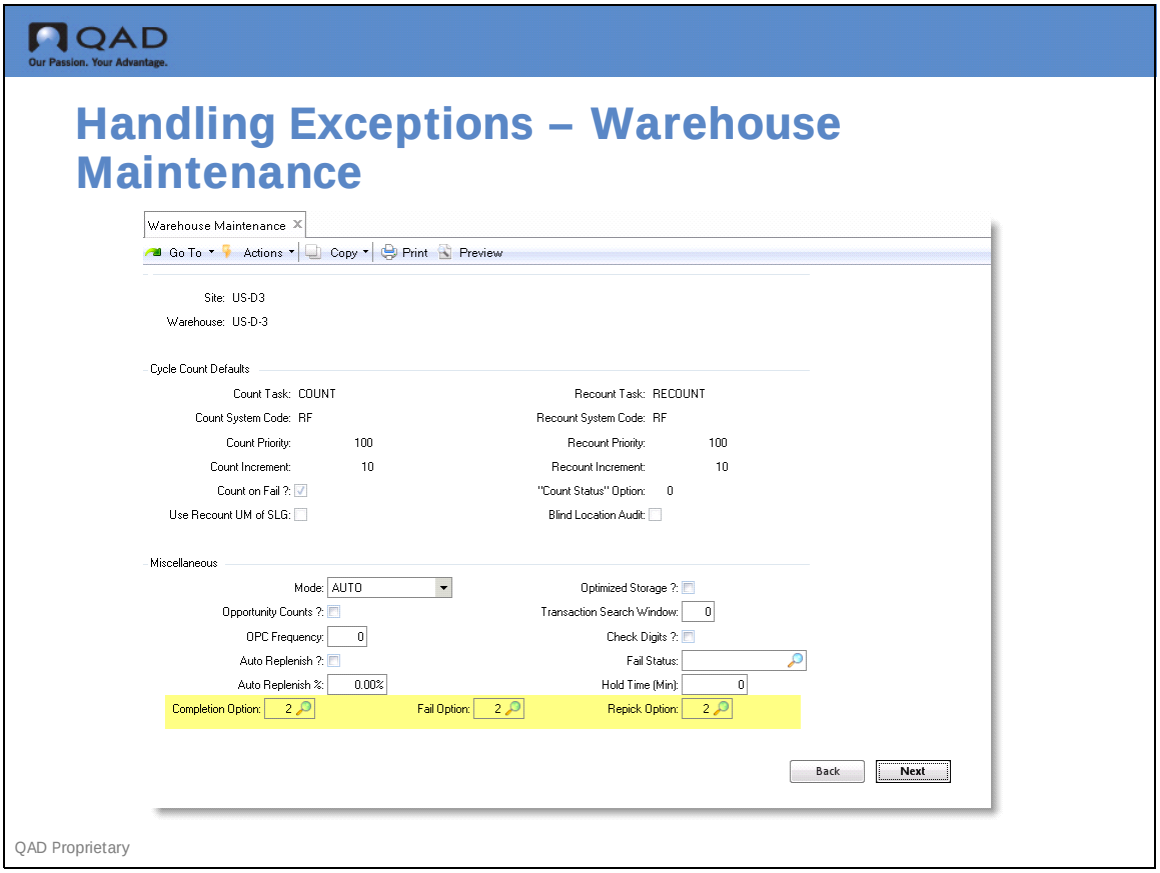
Handling Exceptions - Warehouse Maintenance



The following fields in Warehouse Maintenance (4.1.1.) help you handle exceptions:

Completion Option. Enter one of the following completion options when the RF user enters a quantity available in a location that is lower than the task quantity:

0 (the default): Always complete

1: Default to complete

2: Default to not complete

3: Never complete

If you specify an option to complete picking tasks, when the system prompts the RF user to scan more and staff specify Yes, the system confirms the task with the actual quantity. If No, the system confirms the task with the actual quantity and writes the task into history records. However, the task remains open with the remaining quantity to pick.

Fail Option. Enter one of the following fail options when the RF user enters a quantity available in a location that is lower than the task quantity:

0 (the default): Always fail

1: Default to fail

2: Default to not fail

3: Never fail

Note If you set Count on Fail to Yes in the Cycle Count Defaults frame of Warehouse Maintenance, the system creates a recount task for warehouse staff assigned this task.

If you specify an option to fail, when the system prompts the RF user to scan more and staff specify Yes, the system:

- Changes the status of the source inventory to the fail status, also defined in Warehouse Maintenance. The Fail status is typically a non-available inventory status; therefore, the system no longer considers this specific inventory for picking.
- Creates a recount task to recount stock in this location and assigns the task to the appropriate user if Count on Fail is Yes.

If staff specify No, the system does not fail the task and does not display fail options for the pick.

Repick Option. Enter one of the following repick options when the RF user enters a quantity available in a location that is lower than the task quantity:

0 (the default): Always repick

1: Default to repick

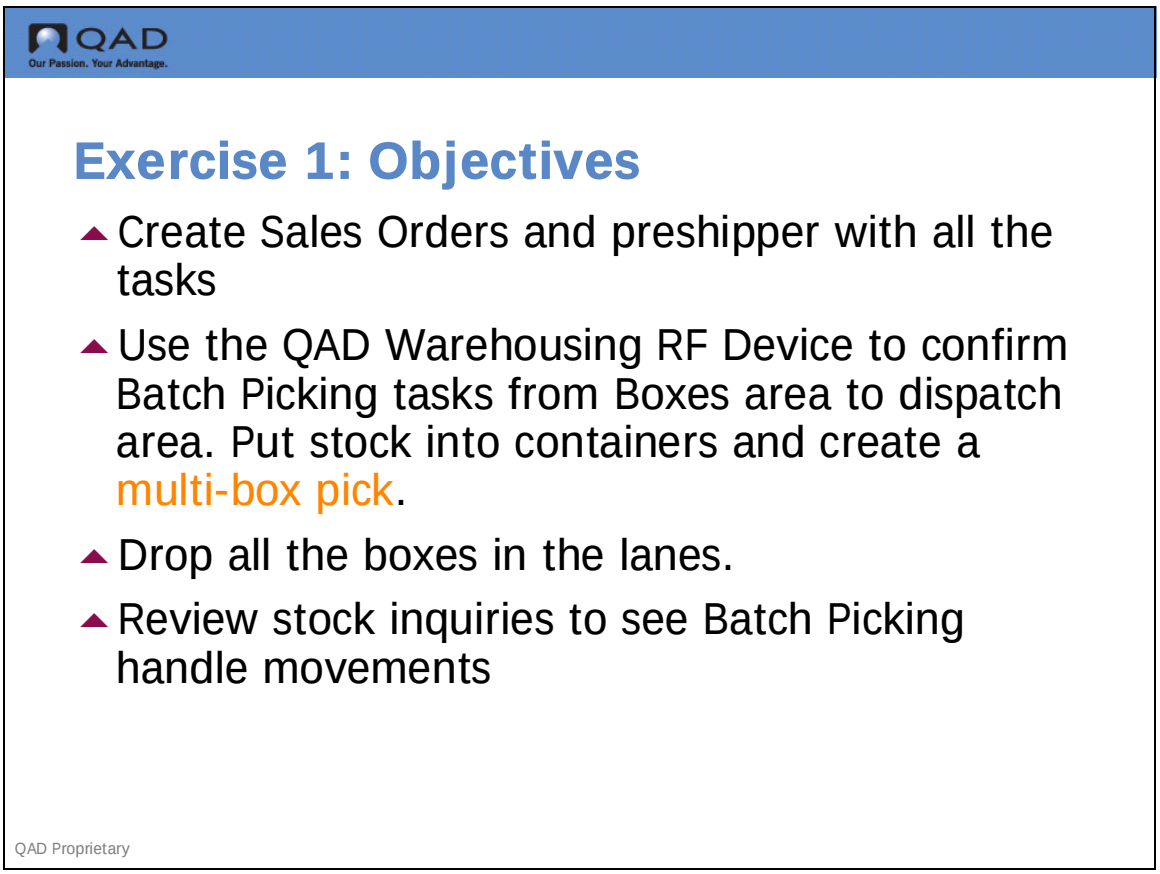
2: Default to not repick

3: Never repick

If you specify an option to repick, when the system prompts staff to scan more and staff specify Yes, the system starts an on-line repick to locate missing quantities from the same location or another location. If staff specify No, staff cannot repick for the order.

In batch picking, users can only see a new task once the picking process is complete. If the system selected an order because it has the highest priority, when staff complete the current batch picking, the system displays the newly created repick task for the order on top of the RF selection list. The repick displays on top of the selection list because the repick is for the same high-priority order.

Exercise1: Use RF to Batch Pick from Box to Dispatch



In this exercise, you must create sales orders and a pre-shipper, then pick from the pre-shipper and move items for the sales orders using RF Warehousing software.

You use the RF device version of QAD Warehousing to:

11 Using QAD EE programs, create sales orders and pre-shipper for the orders.

12 Confirm batch picking tasks, moving them from boxes to the dispatch area.

13 Drop off the boxes to shipping lanes.

14 Review stock inquiries to verify movement.

Before You Start

Before you start the exercise, ensure the following:

Set up data in Batch Picking Control. In particular, set the site and warehouse, then specify the following:

- In the QAD Location Data frame, set the Description and Address fields.
- In the QAD Address Data frame, set the Order Priority.

In Warehouse Location Maintenance, ensure the following:

- Set two locations: DBox005 and DB006

- In the Warehouse Location Data frame, set a travel sequence for each box location by setting the Travel Sequence field.

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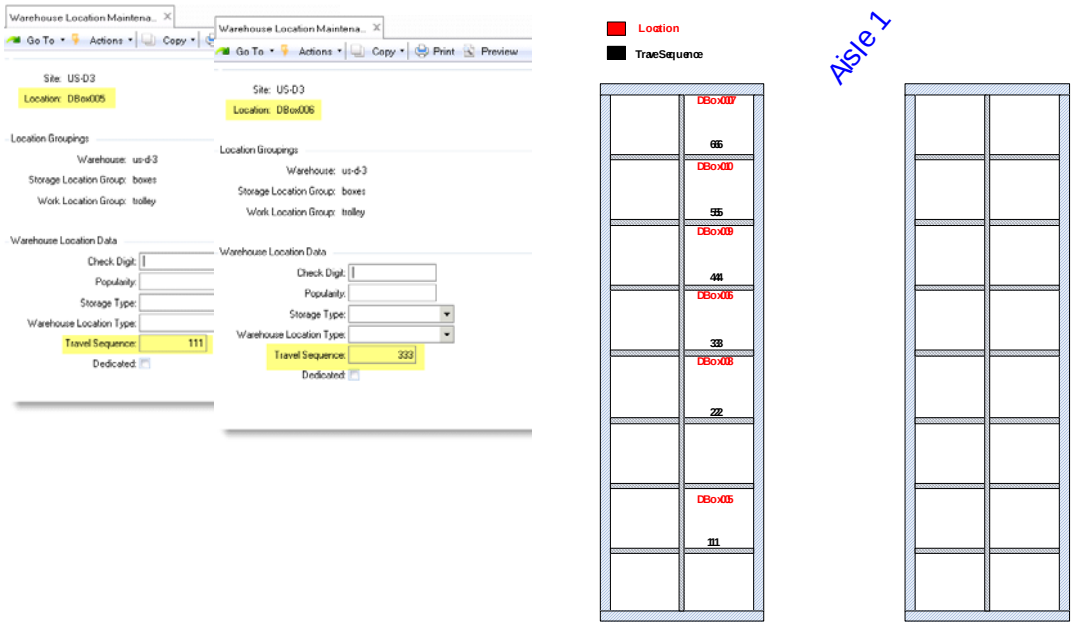
Exercise 1- Time Sequence



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Step1- Create the Order and Pre-shipper

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Exercise 1 – Items, Orders, and Qty

Order	Customer	Item	Quantity	UM
SO11035	002	D-IT005	6	EA
		D-IT006	6	EA
		D-IT007	4	EA
SO11036	0605	D-IT005	3	EA
		D-IT008	6	EA
		D-IT009	5	EA
SO11037	1011	D-IT010	7	EA
		D-IT005	6	EA
		D-IT010	3	EA
SO11038	002	D-IT006	15	EA

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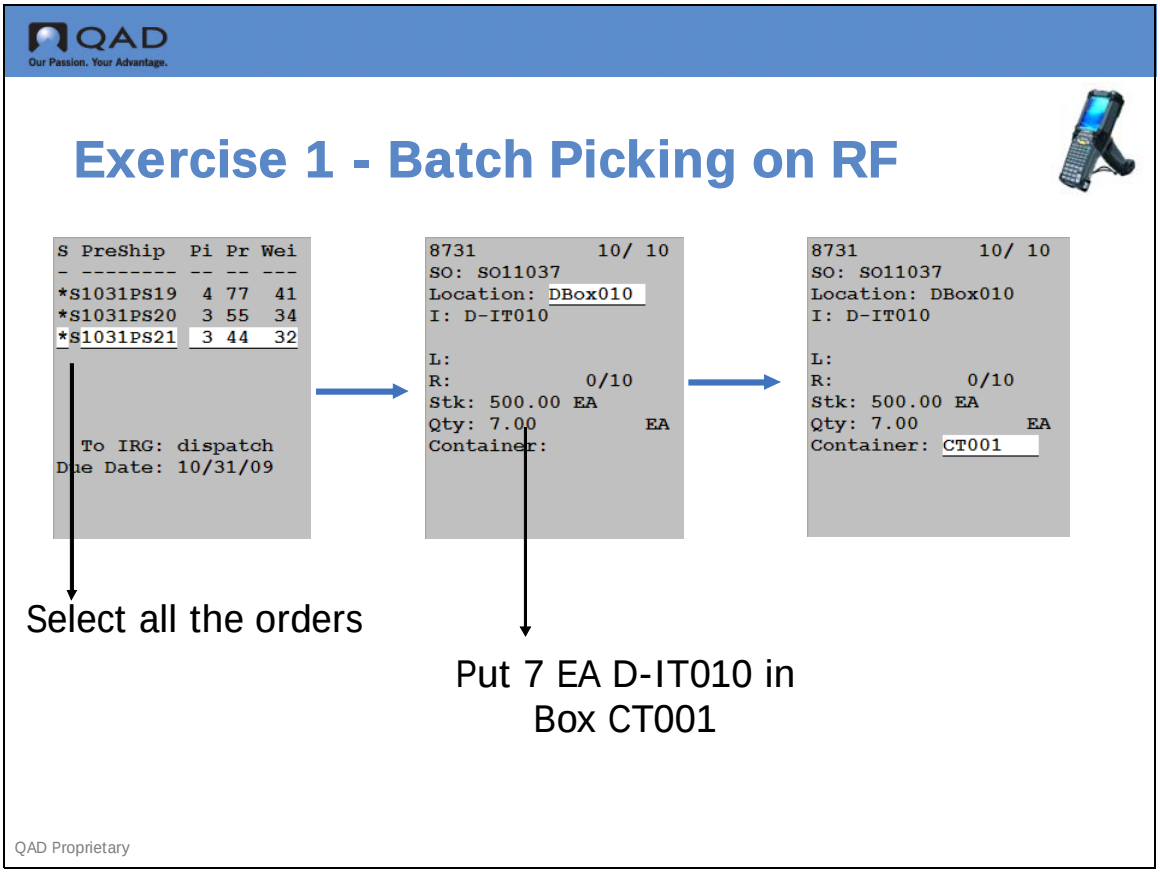
Create three sales orders for customer, items, and quantities shown above, then create the pre-shipper for them.

Use Sales Order Maintenance to create the orders and Pre-Shipper/Shipper Workbench to create the pre-shipper for the orders.

Step 2 - Batch Pick and Confirm Picking



1 Log onto the RF device. Note the location on the login screen as your current location.

2 From the main menu, select Option 3, Picking/Container.

3 Select Option 2, BP Pick All.

4 Select all orders you created.

5 Enter a quantity of seven.

6 Then enter the box container.

7 Continue putting items into boxes, as shown below.

8 Close the box when prompted.

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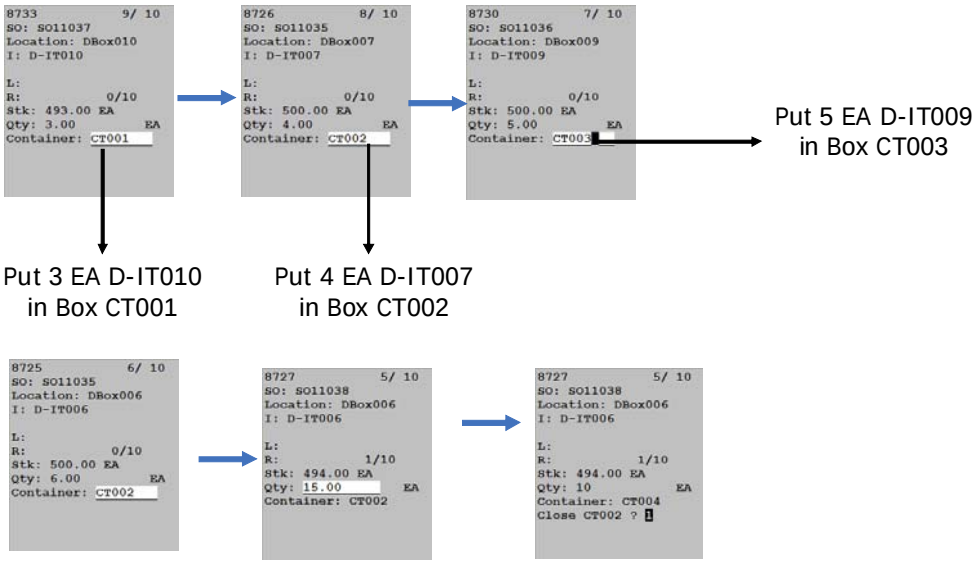
Exercise 1 -Putting Items in Boxes



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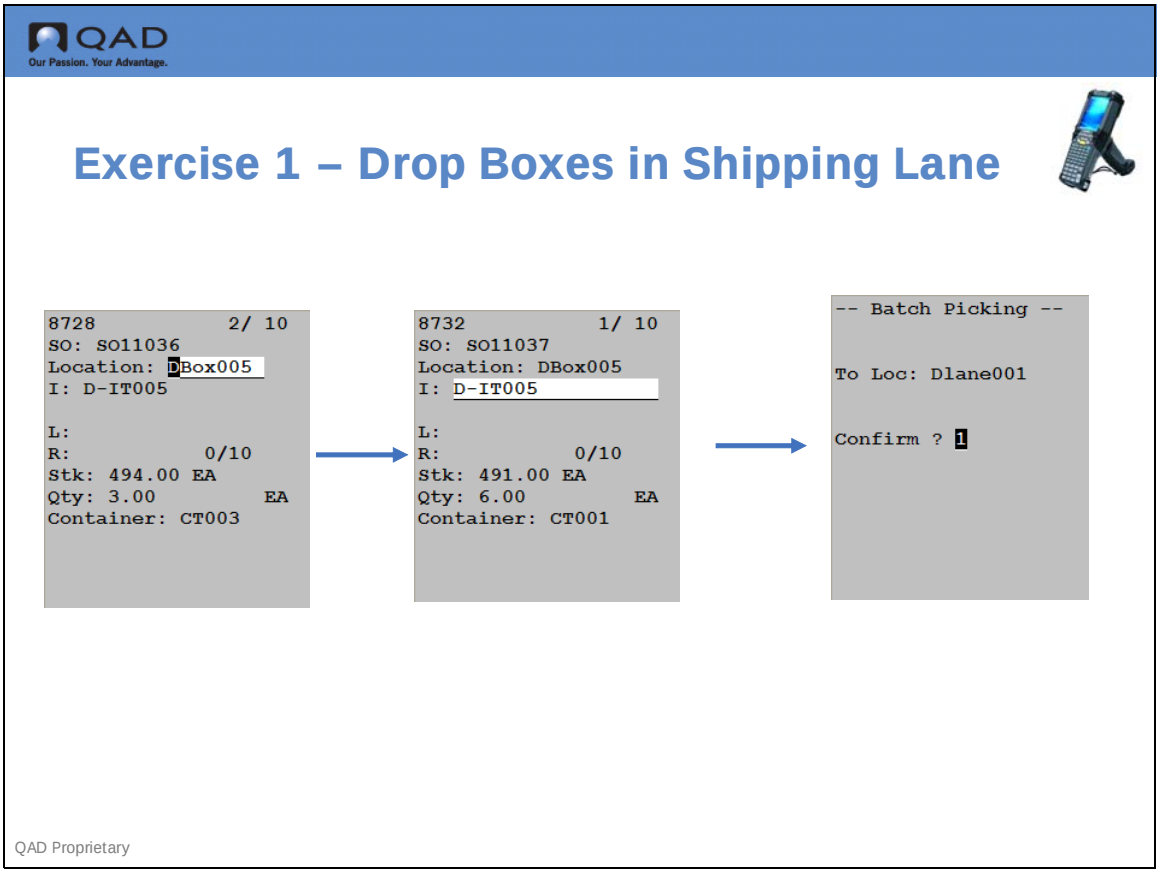
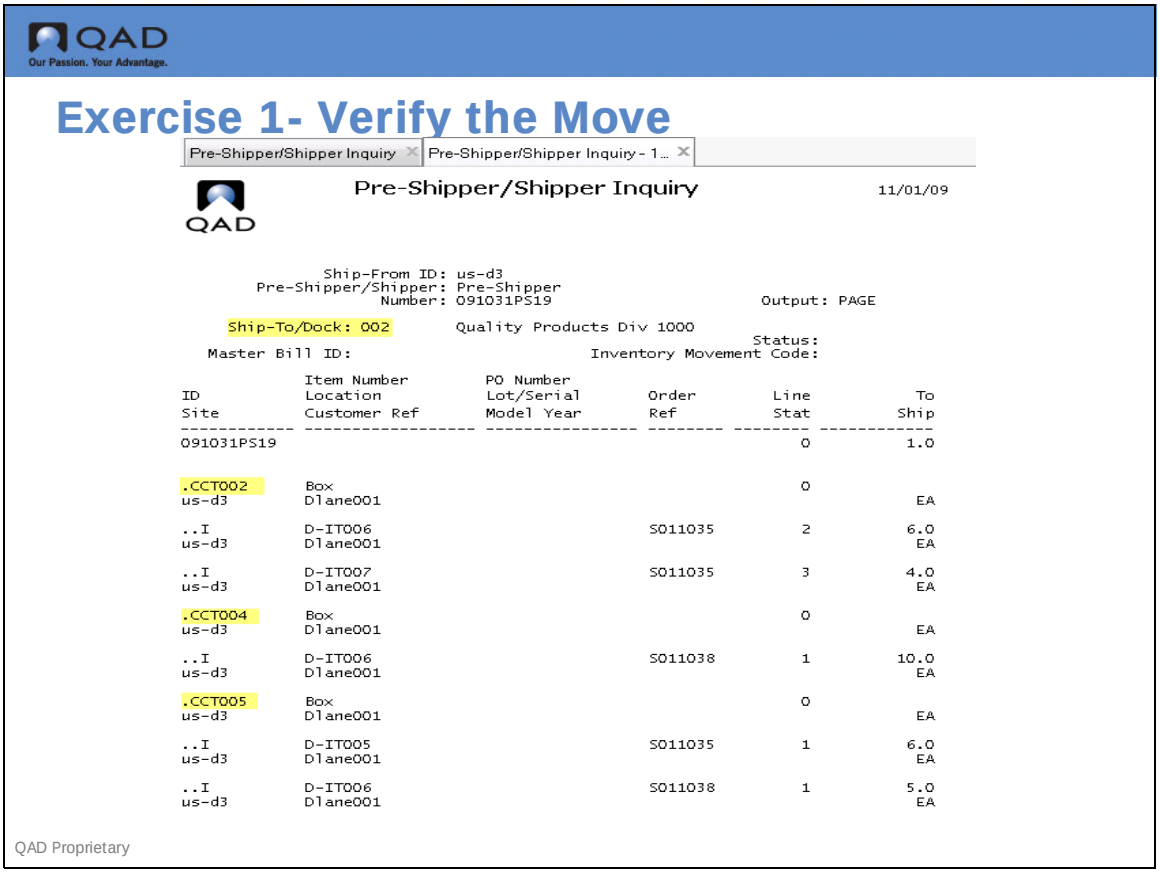
Step 3 - Drop the Boxes to the Shipping Lane



When you finished scanning items that you put into boxes and have closed all boxes, move the items to the shipping lane by entering a new location. Enter the shipping lane location in the To Loc field, then confirm the move.

Verify the Move



Use Pre-shipper/Shipper Inquiry to verify that items were moved to the shipping lane.

Study Questions

1 Name three options you can set in Batch Picking Control.

2 True or False. You can pick for sales orders and distribution orders in Warehousing, but you must use QAD EE standard picklist printing features for work orders.

3 True or False. You can combine items from different orders when batch picking.

4 What is meant by a user location?

5 True or False. When selecting order types for picking from the RF Batch Pick-All option, you must select only one order type per picking session.

6 True or False. When setting up picking for all three order types, you set the SO Batch Selection field to SO, DO, or WO in Batch Picking Control.

7 Which field in Batch Picking Control, if not set, causes an error to display prohibiting you from merging orders?

8 True or False. You set a value in the Maximum Selection field that represents the maximum number of items for you warehouse staff can pick during a single batch pick session.

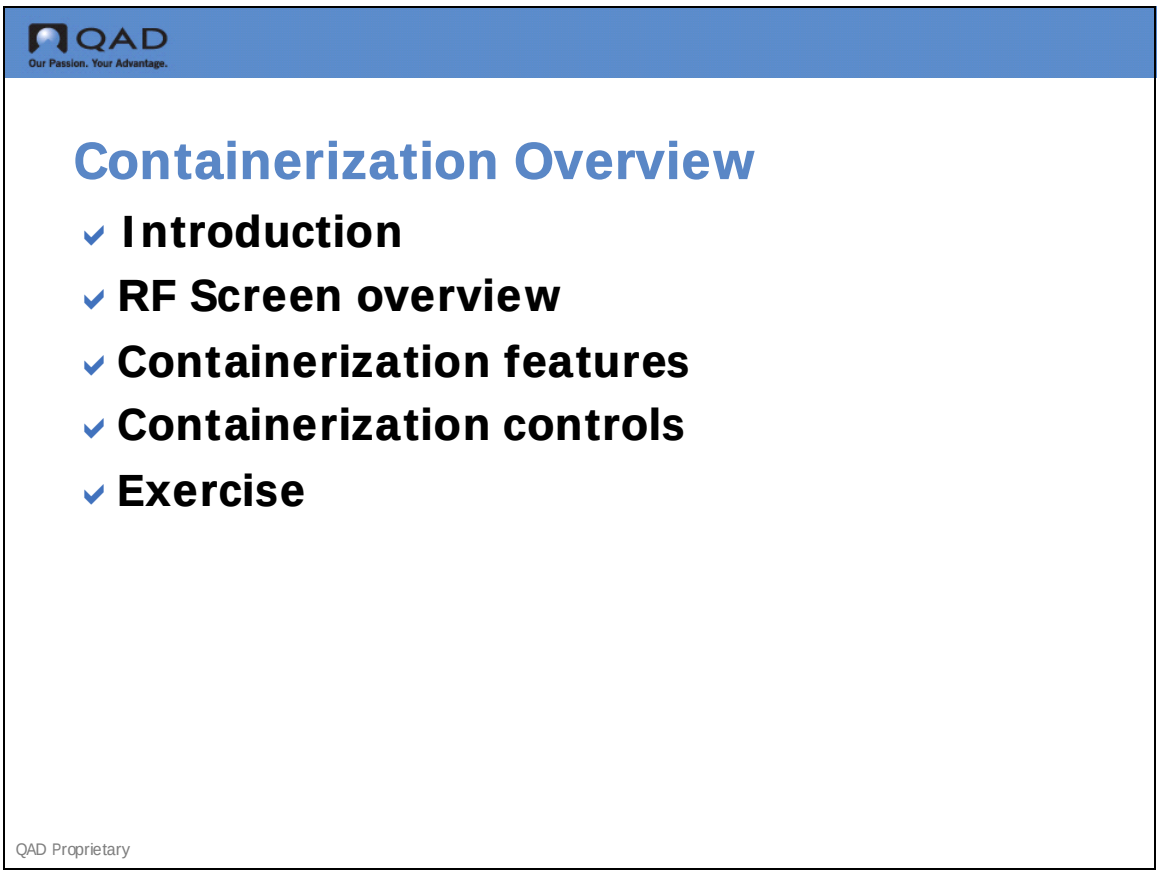
9 Name three container options you can specify in Batch Picking Control.

10 True or False. QAD Warehousing software that runs on the RF device automatically lets warehouse staff enter data in the fields on the RF

Chapter 3

Containerization

Chapter Overview



Introduction

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Introduction

- Place all boxes filled during picking into other containers for shipping.

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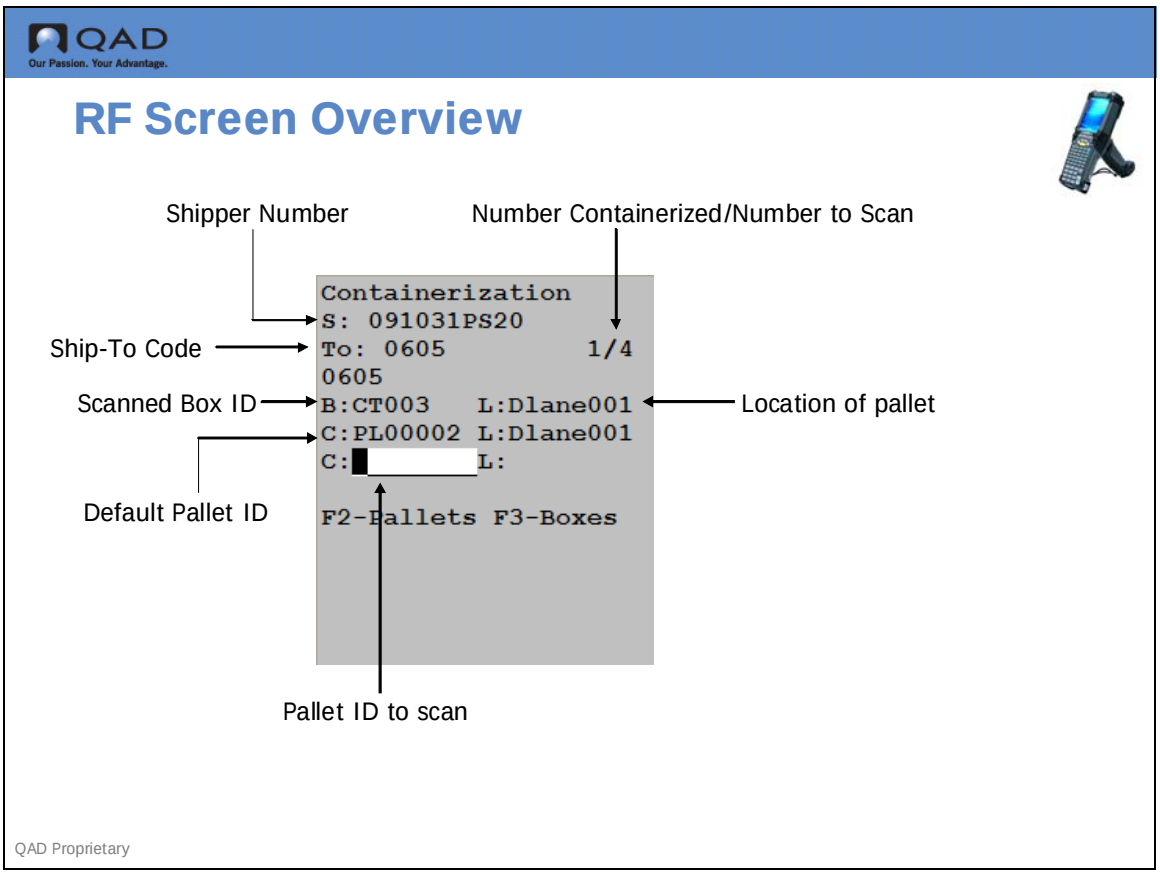
Containerization is the process of placing all boxes that were filled during picking into other containers, such as pallets, for shipping.

The RF lets staff assemble pallets for shipment until all shipments for a particular customer ship-to address are complete. The RF containerization option lets warehouse staff use the RF to place all boxes or pallets they filled during picking into other containers for shipping.

RF Screen Overview

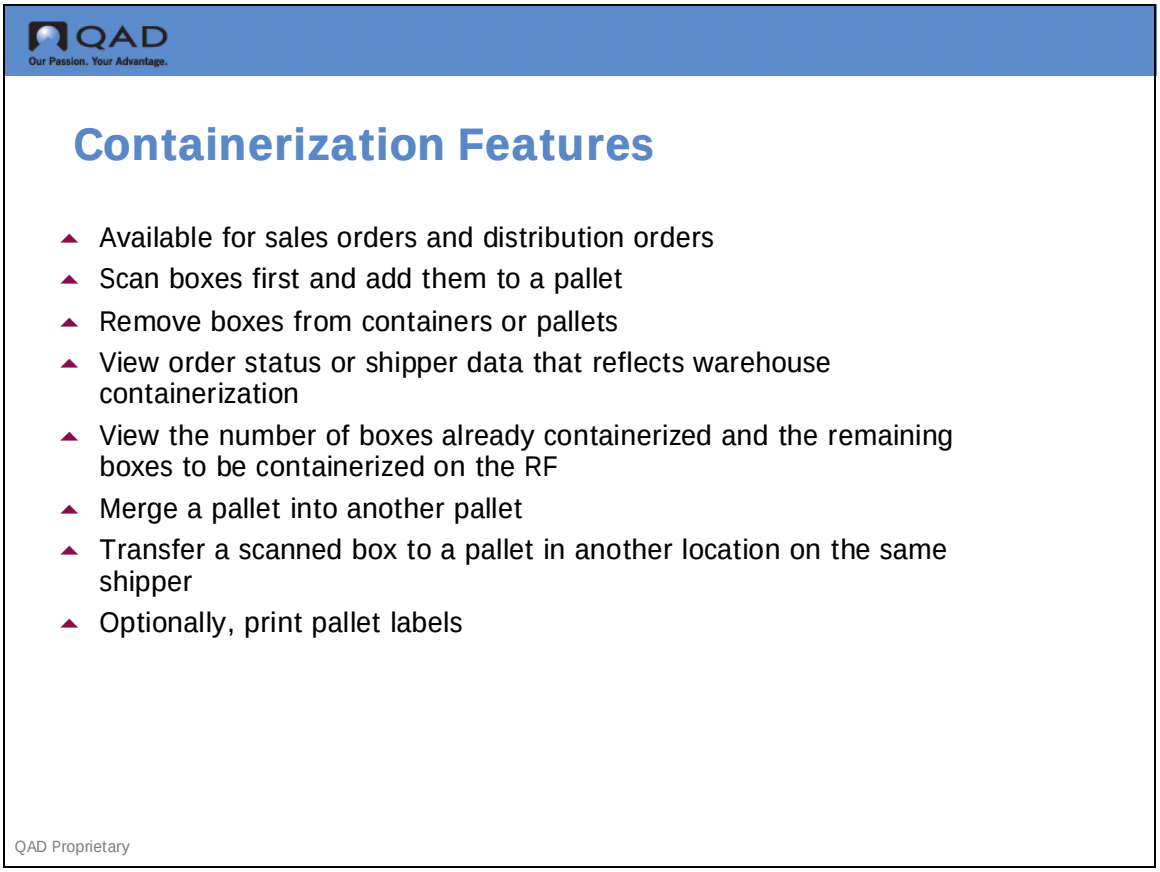


The RF Screen shows you the function at the top, followed by this information on the left side of the screen:

- Shipper number
- Ship-to code
- Scanned box ID
- Default Pallet ID
- Blank pallet ID to scan

The right side depicts the number of boxes already in the container, and the number remaining to go into the container. The ID after the L indicates the location of the pallet.

Features

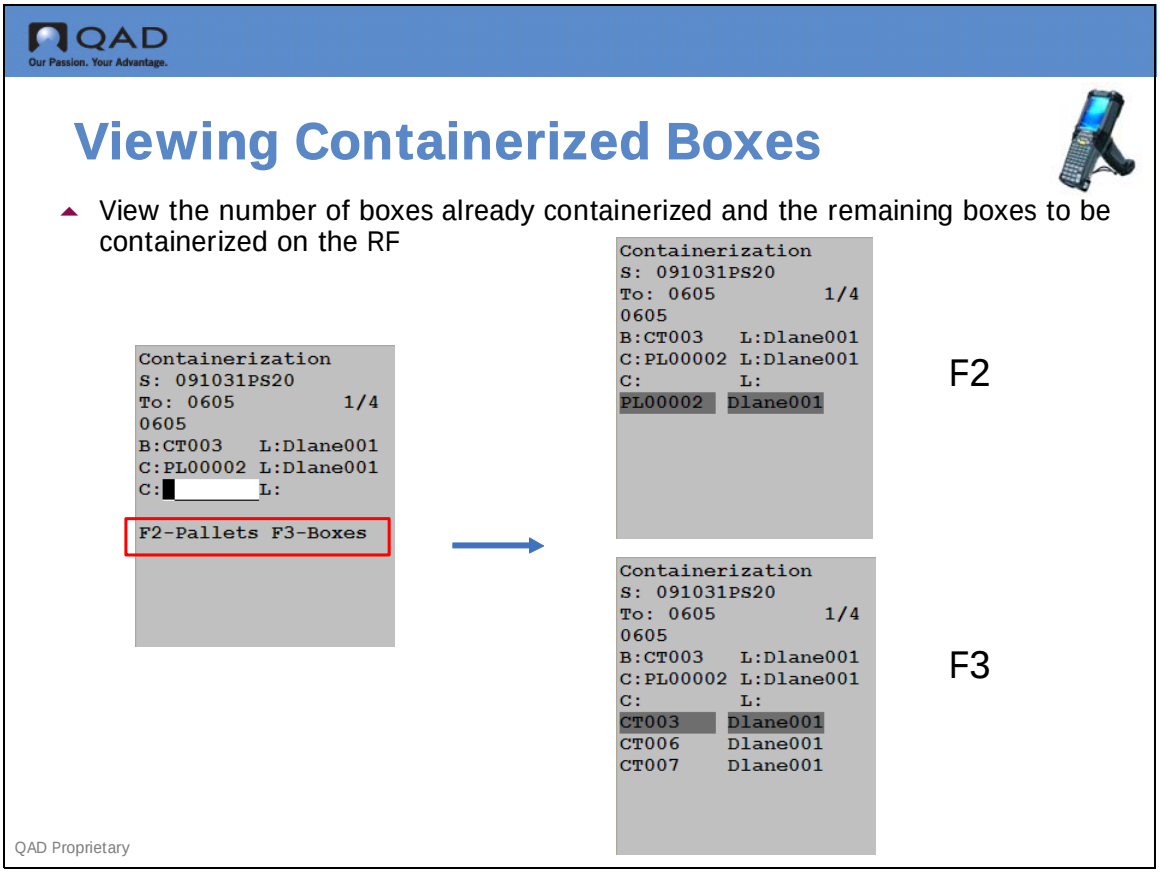


The RF containerization functionality is available for both sales orders (SOs) and distribution orders (DOs).

Warehouse staff can create a container and link it to a pre-shipper number. All boxes for a container must be on the same pre-shipper; otherwise, the RF displays an error message.

Through the RF device, warehouse staff can create a new or modify an existing pallet and attach boxes to the pallet. They can also remove boxes from a pallet. When they do, the system updates the shipper to reflect this. When all boxes have been containerized for a shipper, the RF displays a message notifying staff that the shipper is ready for shipping.

View Boxes Containerized



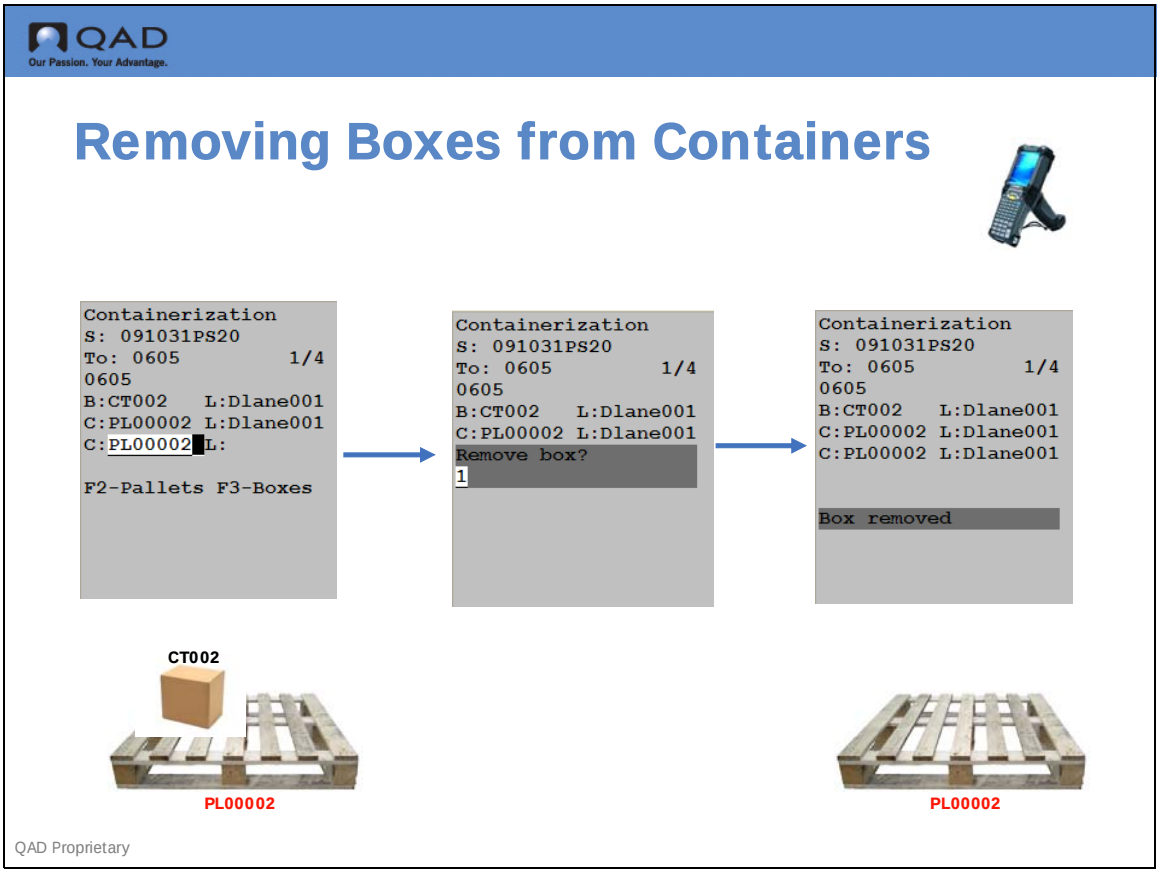
On the RF device, warehouse staff can view the number of:

- Boxes already containerized
- Remaining boxes to be containerized

Optionally, you can use function keys to view more:

- F2 to see pallet data
- F3 to see box data

Removing Boxes from Containers



You remove boxes and containers using the RF Container Build (3.3) menu option. To delete a box, warehouse staff scan the box and its container. The system knows the pallet for the box and understands this action is to remove the box from the pallet, so it prompts you to remove the box.

When staff respond with a Yes, and remove one box from a pallet, the system displays the message:

```
Box Removed
```

If staff remove all boxes from a pallet container, the pallet container is removed, too, so the pallet container level does not display under the shipper ID on the RF device.

If you remove boxes and the container at the next level up is empty, the system deletes the empty container.

When staff scan in another container, the system understands that the intent is to transfer the box to the other container, and prompts staff to transfer the box, as shown in the following graphic.

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Remove Boxes, continued

- Remove boxes from containers or pallets.

```
Containerization
S: 091031PS20
To: 0605          3/4
0605
B:CT002    L:Dlane001
C:PL00002  L:Dlane001
C:PL00003  L:
F2-Pallets F3-Boxes
```

```
Containerization
S: 091031PS20
To: 0605          3/4
0605
B:CT002    L:Dlane001
C:PL00002  L:Dlane001
C:PL00003  L:Dlane001
Transfer box?
1
```

```
Containerization
S: 091031PS20
To: 0605          3/4
0605
B:CT002    L:Dlane001
C:PL00002  L:Dlane001
C:PL00003  L:Dlane001
Box added
```

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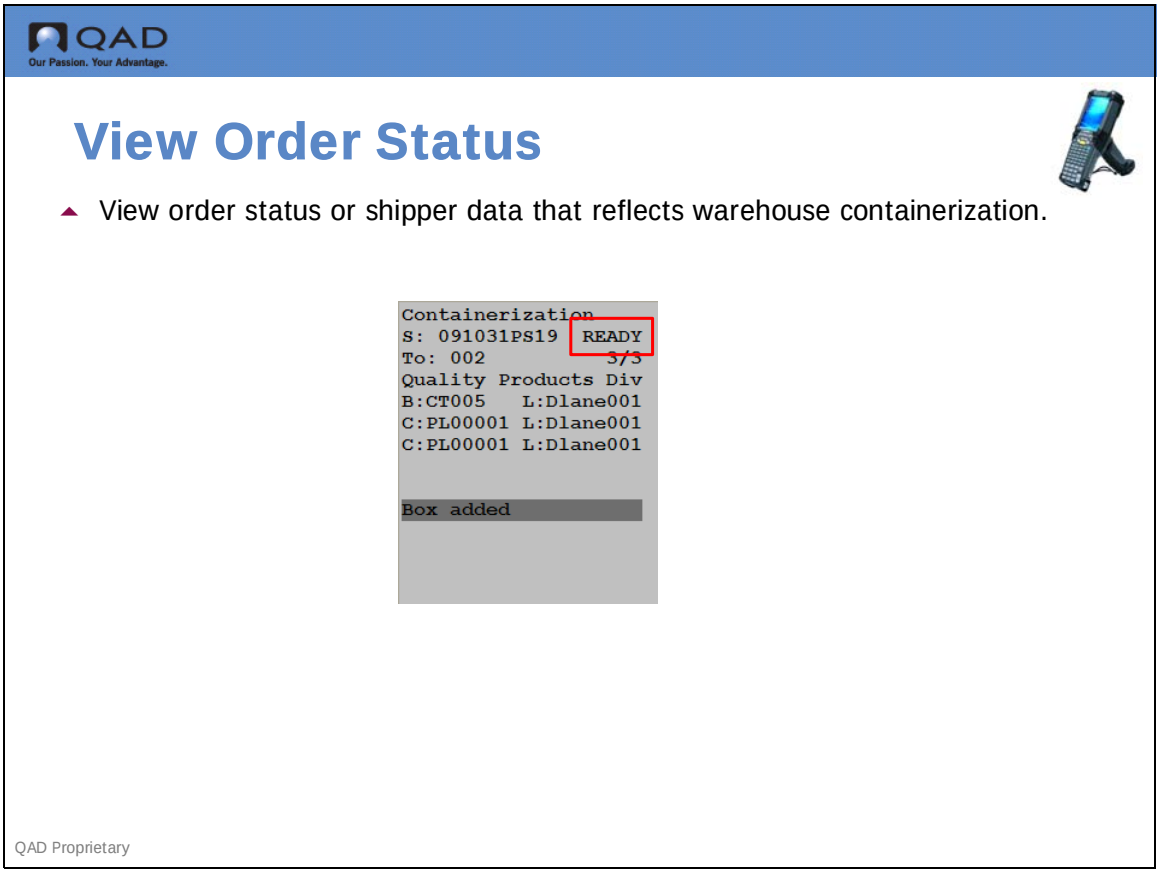
View Order Status



The RF displays the number of boxes containerized, the number of boxes to containerize, and containerization status in the upper right corner of the screen. Containerization status can be any of the following:

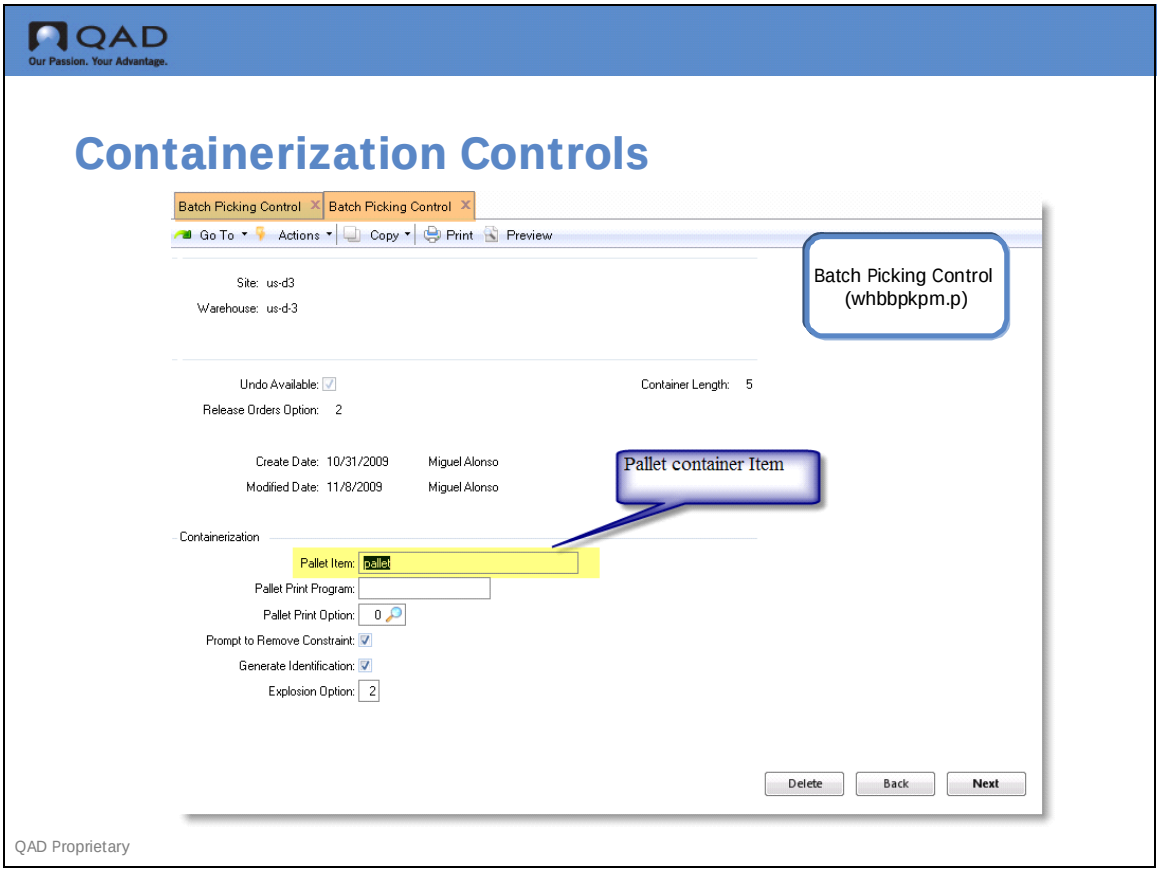
Blank: More containerization is required.

Pick: There are open pick tasks for the pre-shipper. The total number of boxes to scan does not reflect the actual number because totals are unknown at this point.

Ready: There are no more open pick tasks for the pre-shipper, and all boxes have been containerized.

Note The status displays boxes, not full pallet picking.

Containerization Controls



Containerization controls are in the Containerization frame within Batch Picking Control (4.15.24 if you use QAD Warehousing or 80.15.24 if you use AIM).

Fields

Pallet Item. Enter the default pallet container item. You must define the container item first in Item Maintenance (1.4.1).

Pallet Print Program. Enter a print program to use when printing labels for pallets. The default program is `whprtpal.p`.

Pallet Print Option. Indicate whether pallet labels print automatically, not at all, or if the system prompts to print labels. You must specify the print program in Pallet Print Program. The system prints labels for pallets that do not already have a label.

0: Never print pallet labels.

1: Always print pallet labels.

2: Prompt RF user to print pallet labels.

Prompt to Remove Container. Indicate if you want the system to prompt RF users to remove a container. If users respond to the prompt with Yes, the box is removed from the pallet. When you view the shipper structure in Order Warehouse Detail Status Inquiry (4.15.4.1), the display

shows the box below the shipper level, instead of below the pallet. When you remove all boxes in a pallet, the system automatically deletes the pallet and moves all items below the shipper level for the pallet.

No (the default): The system removes the box from the pallet without prompting warehouse staff for confirmation.

Yes: The system prompts warehouse staff to remove the box from the pallet.

Generate Identification. Specify whether the system generates a new container ID when warehouse staff use the RF Container Build menu option.

No: The system does not generate a new container ID.

Yes: The system generates a new number during RF containerization. You should set up pallet label printing if the system generates new numbers.

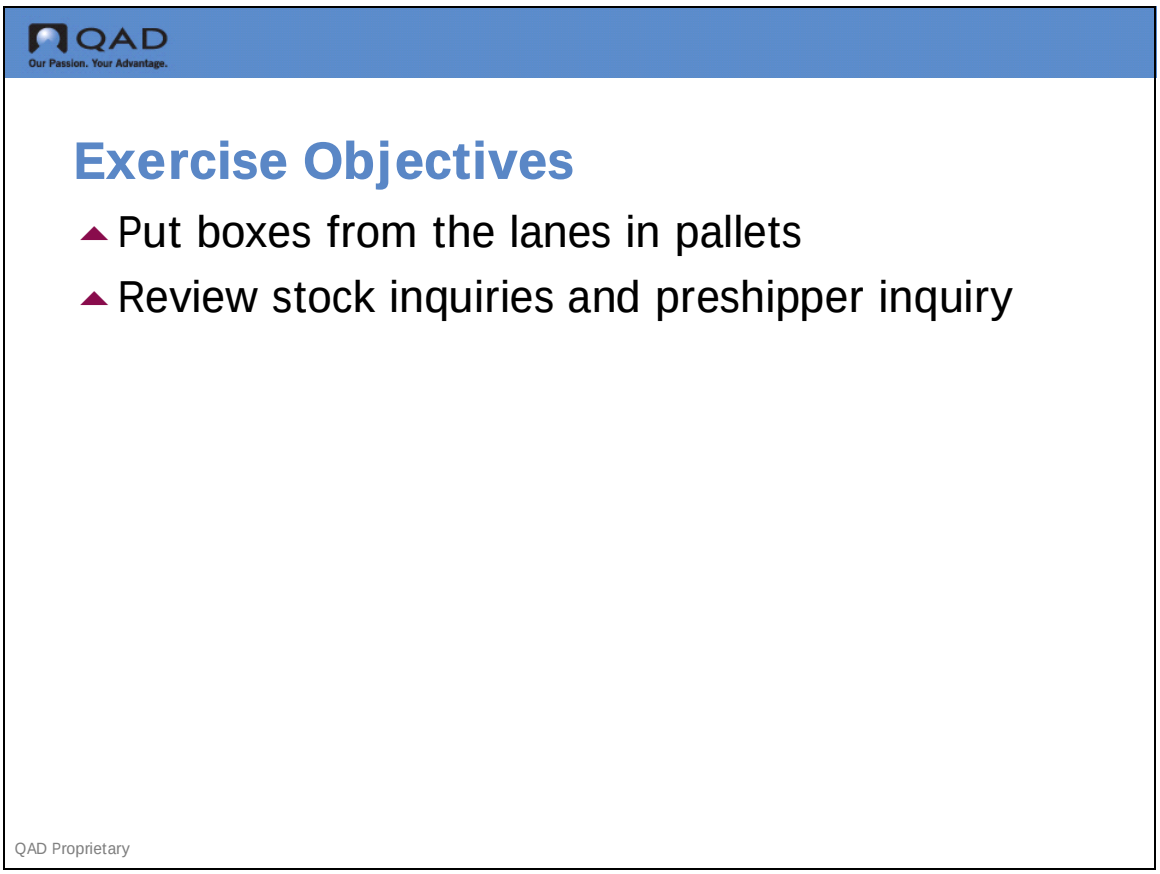
Generating a new ID can lead to errors if warehouse staff accidentally press Return in the RF containerization process and Generate Identification is set to Yes. The system considers stock to be on the newly generated pallet number while it may actually be on a different pallet ID.

Explosion Option. Specify whether the system prompts the RF user to enter the number of boxes or splits the items into boxes when you explode a pallet.

0: The RF does not prompt the user to specify the number of boxes. The system splits goods into x boxes of y items, where x and y are values that the system calculates based on the item's base UM conversion factor. You define the conversion factor in Alternate Unit of Measure Maintenance (4.5.1). If the items cannot be split into boxes equally, the last box contains the remaining items from the conversion.

1: The RF prompts the user to enter the number of boxes into which the contents of the pallet are exploded.

Exercise1: Put Boxes into Pallets and Review Stock



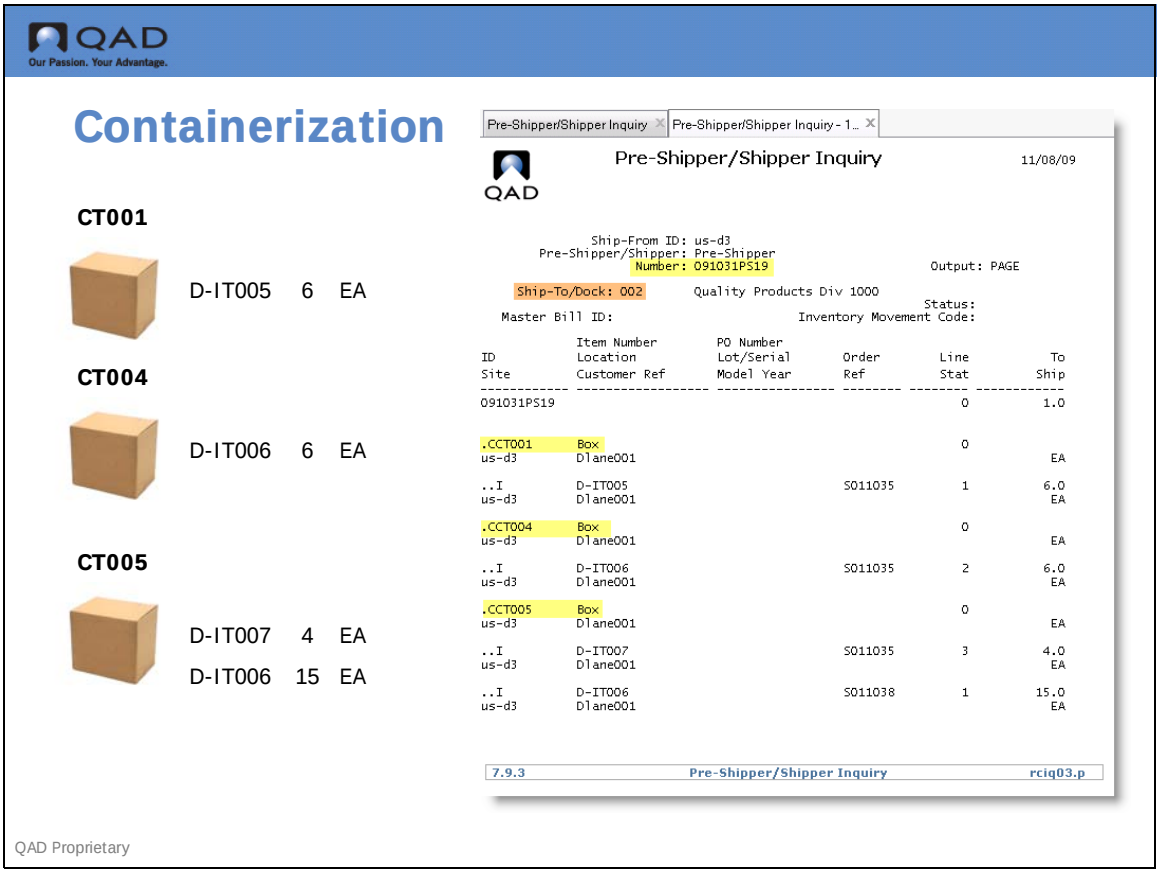
In this exercise, you will put the boxes in the shipping lanes into containers, then review the status of the containerized boxes through EE inquiry programs.

Before You Start

Before you start the exercise, ensure that you have existing sales orders with pre-shippers, items are picked through the RF device for the pre-shippers, and boxes are dropped off to shipping lanes.

Note These tasks were completed in the exercise for the Batch chapter; see “Exercise1: Use RF to Batch Pick from Box to Dispatch” on page 63.

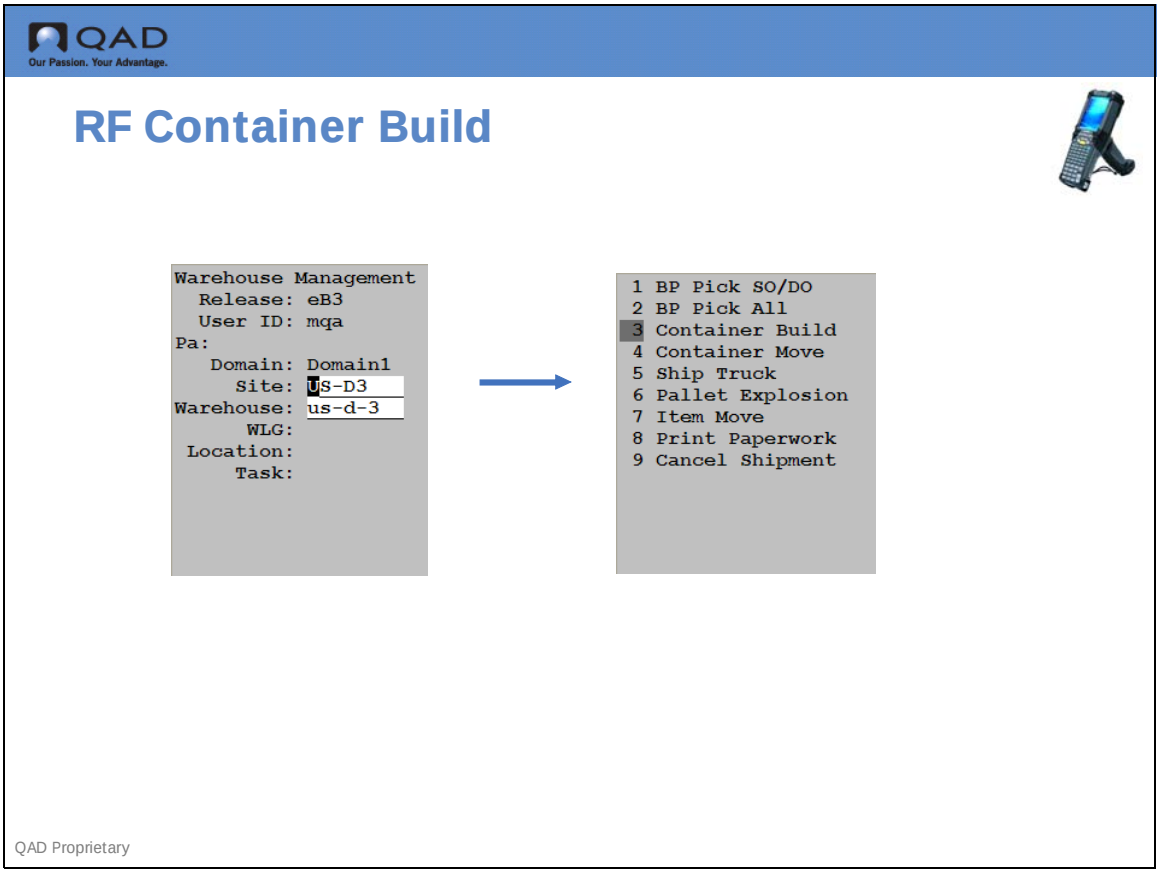
Step 1: Use Pre-Shipper/Shipper Inquiry to Review



Review the orders you set up in the exercise for Batch Picking. Review the boxes and their ID codes as well as the shipping lanes that depict the current location of the boxes.

Ensure that you have boxes CT001 through CT007, and that the boxes are in various shipping lanes.

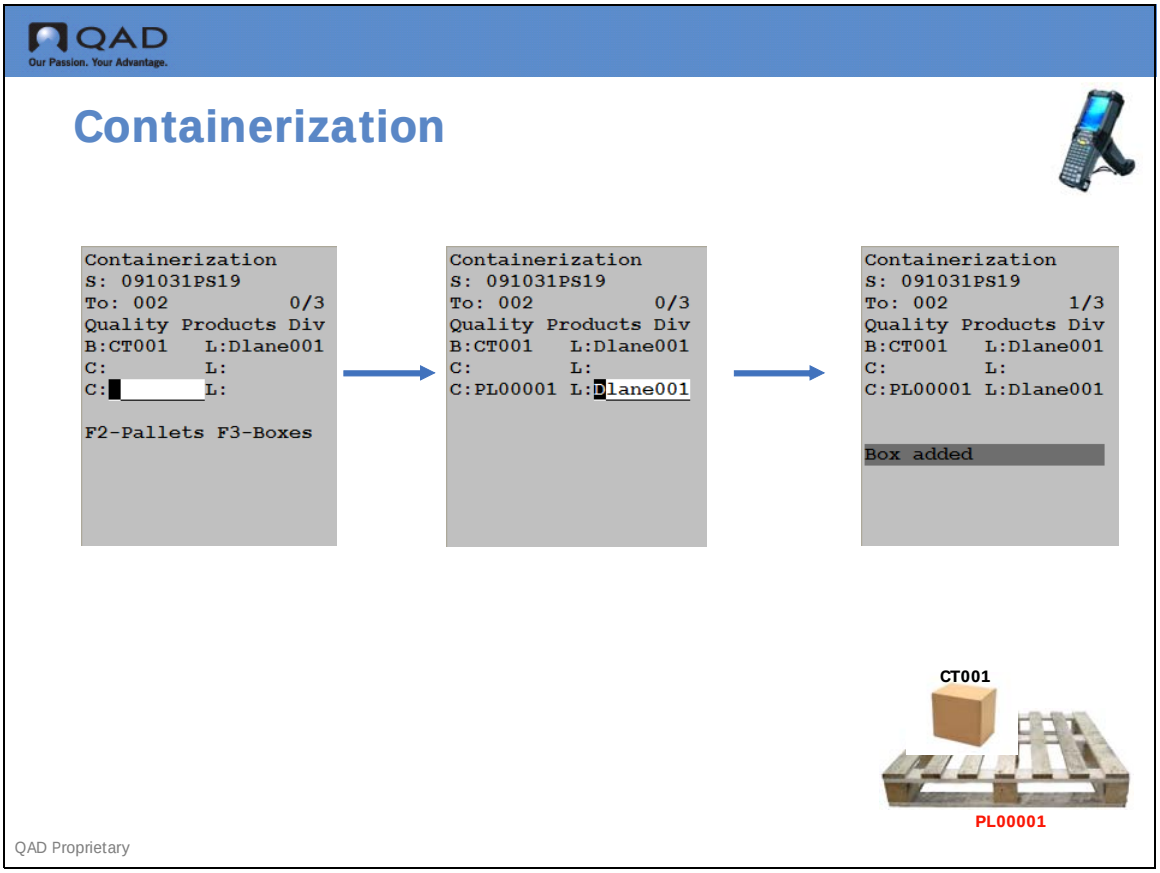
Step 3: Use the RF Container Build Menu to Put Boxes to Containers



1 Log onto the RF device version of QAD Warehousing, specifying the site, warehouse, or location.

2 From the RF main menu, select option 3, Container Build.

Step 4: Enter the Container IDs and Move Boxes to Containers



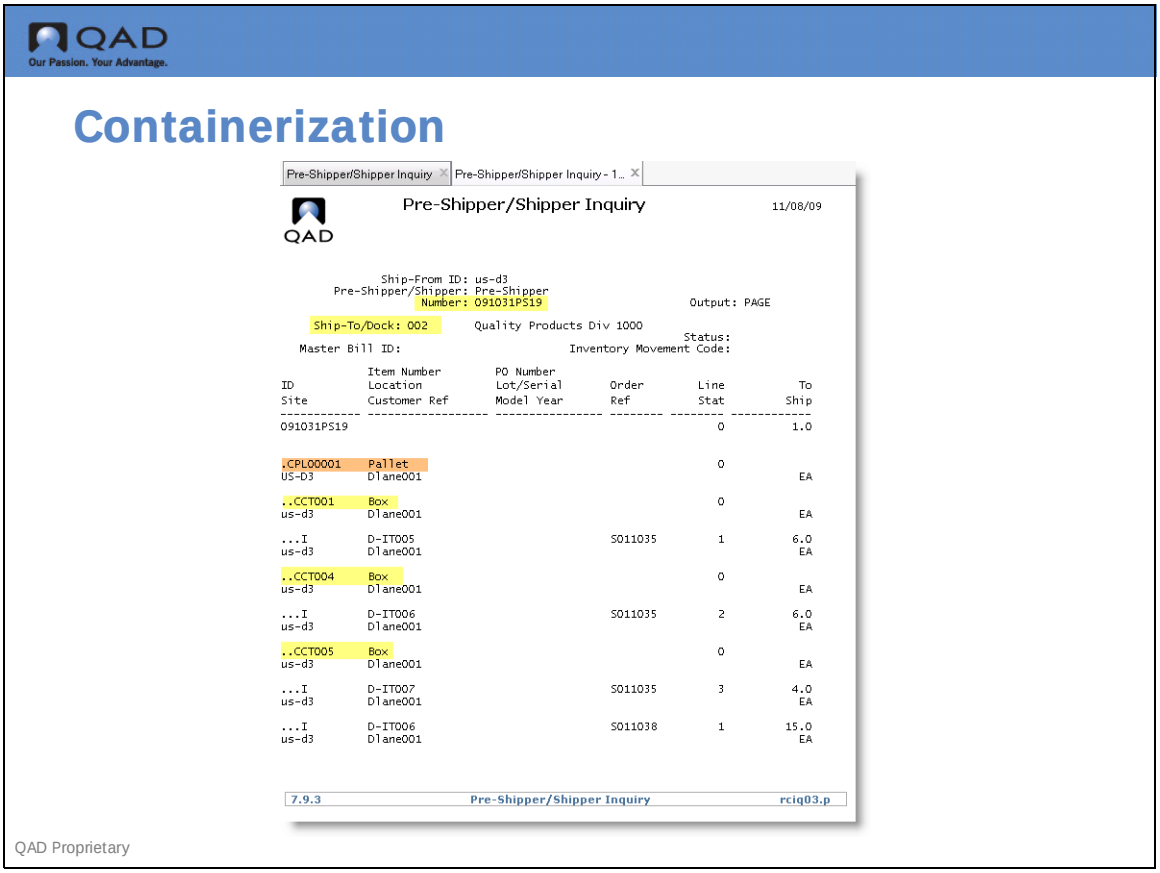
1 Enter a valid container ID (pallet ID) at the C: prompt.

2 Enter the location (the shipping lane) of the container.

The system adds the box to the container.

3 Continue adding boxes to containers until all boxes in the shipping lanes are in valid containers.

Step 5: Review the Order Status



Use Pre-Shipper/Shipper Inquiry again to view the status of the order.

Verify that boxes are depicted at levels lower than that of the container.

Study Questions

1. True or False. The RF lets staff assemble pallets for shipment until all shipments for a particular customer ship-to address are ready to move out of the forward pick area.
2. Name three things the RF screen shows you about containers.
3. True or False. Although the RF displays container information, the location only displays when picking for the containers.
4. True or False. The RF containerization feature is for all three order types, work, distribution, and sales.
5. True or False. All boxes for a container must be on the same pre-shipper; otherwise, the RF displays an error message.
6. Name two things that the function keys provide while using the containerization features on the RF device.
7. Which RF option lets you remove boxes and containers?

8 Which function keys do you use in the RF when containerizing to indicate to the system that you want to scan in another container?

9 Name the three containerization statuses.

10 Name three options you can set up for containerization in Batch Picking Control.

Chapter 4

Container Move

Container Move Chapter Overview

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Container Move Overview

- Introduction
- Container Move features
- Setting up Container Move
- Exercises

QAD Proprietary

Introduction

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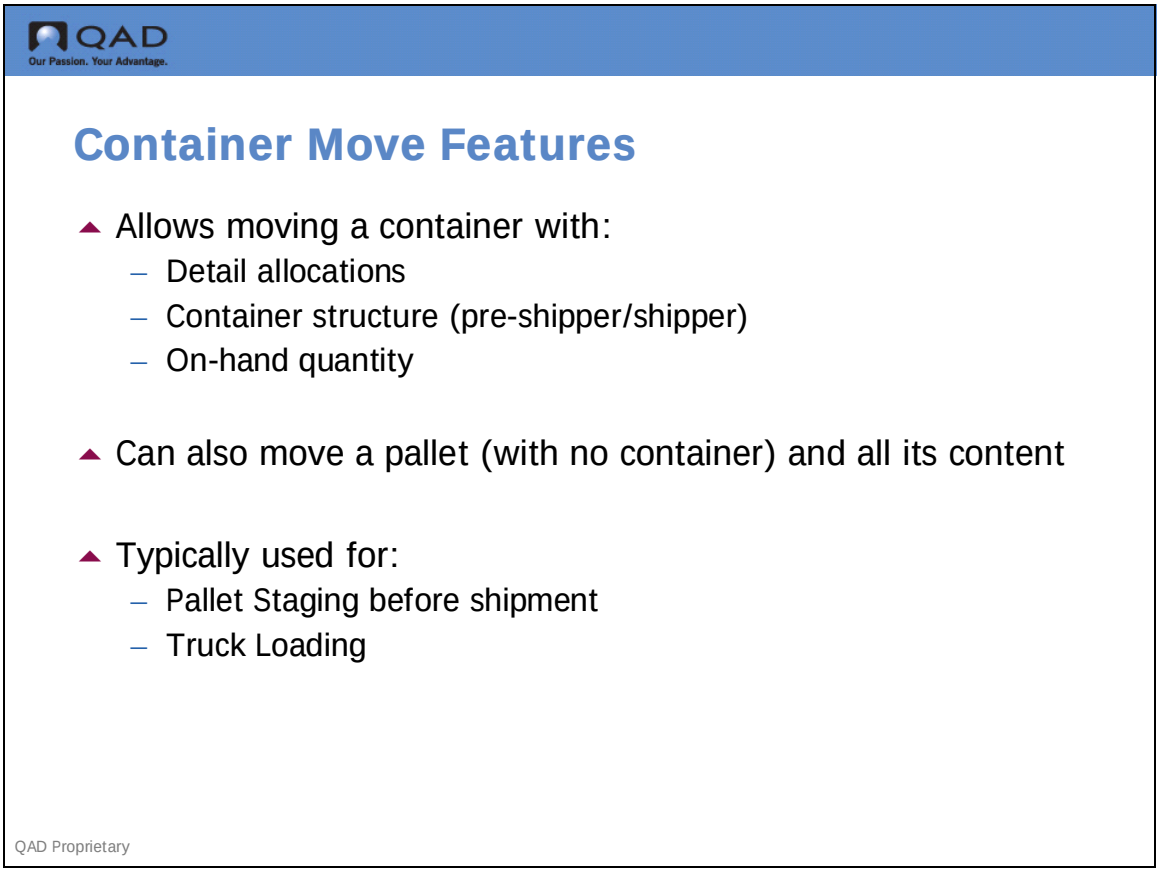
Container Move Introduction

- Move pallets with detail allocation and containerization to any other location, including trucks.

QAD Proprietary

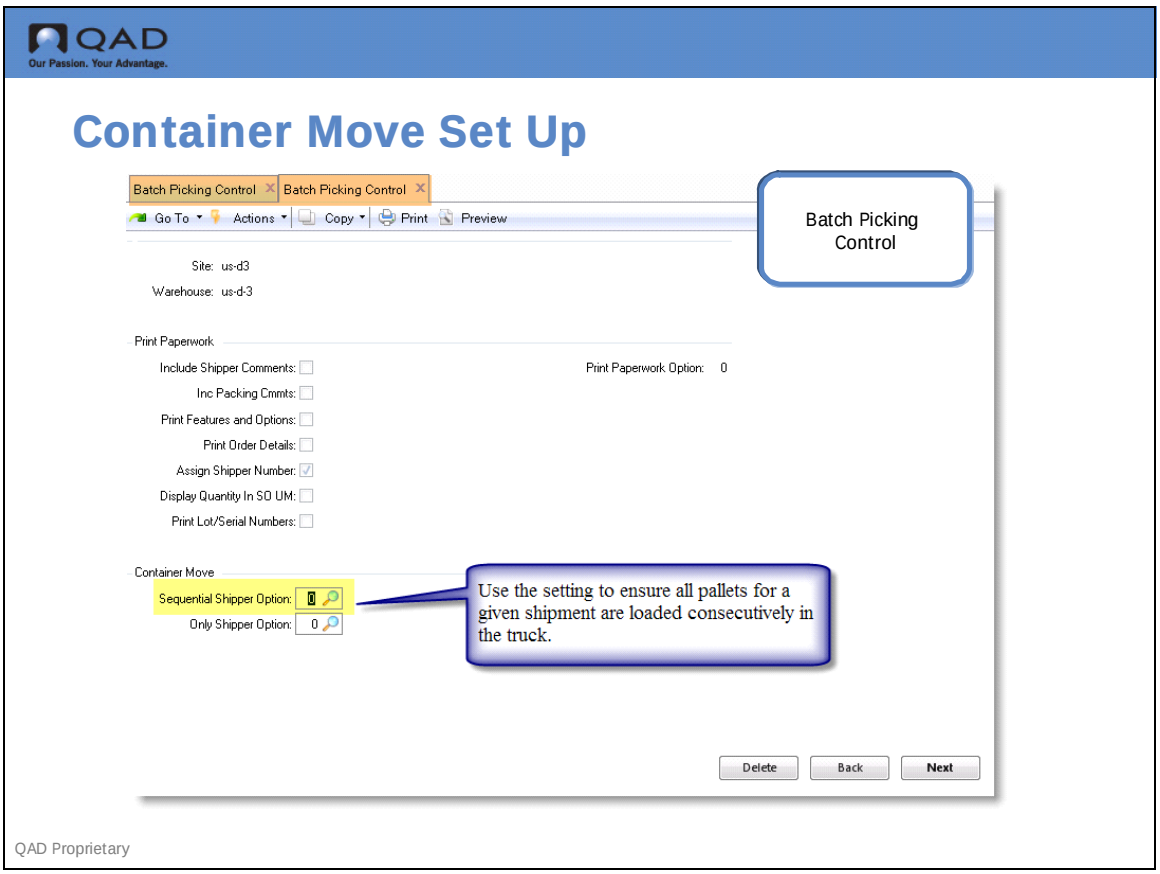
Warehouse staff need to move the containers from location to location within the warehouse, to the loading docks, and to the shipping truck. To do this, they use the RF Container Move functionality.

Features



- Let staff move any pallet with detail allocation and containerization to any other location, including another truck.
- Optionally, let you add staging or validation steps when moving containers.
- Facilitate cross-docking functionality.
- Report the position of each pallet in the truck.
- Load pallets in the appropriate reverse dropping order if a drop-off sequence has been specified in a load.

Setting Up Container Move



Use the Container Move frame of Batch Picking Control (4.15.24) to set up Container Move options.

Fields

Sequential Shipper Option. Specify the type of message the system displays when it checks for partially loaded pre-shippers or shippers; that is, pre-shippers/shippers for which the truck loading began, but pallets still remain to be loaded.

0: The system does not display messages and does not take action.

1: The system displays a warning message.

2: The system displays a message and prompts for user confirmation of the message before continuing.

3: The system displays an error message and you cannot continue.

Use the setting to ensure all pallets for a given shipment are loaded consecutively in the truck, ideally in the reverse order of unloading so that the unloading process is easier.

Example You have three shippers for which you are loading a truck: Shipper 1 has three pallets, all of which are loaded. Shipper 2 has two pallets, only one of which is loaded. Shipper 3 has two pallets, none of which are loaded. You set this option to 3. The system displays an error message when you attempt to load and scan pallets for Shipper 3 because Shipper 2 has a pallet remaining to be loaded.

Only Shipper Option. Specify the type of message the system displays when it verifies whether users can load both pre-shippers and shippers or just shippers. If you set this option so that users can continue processing despite messages before loading the truck, the system converts any selected pre-shippers to shippers.

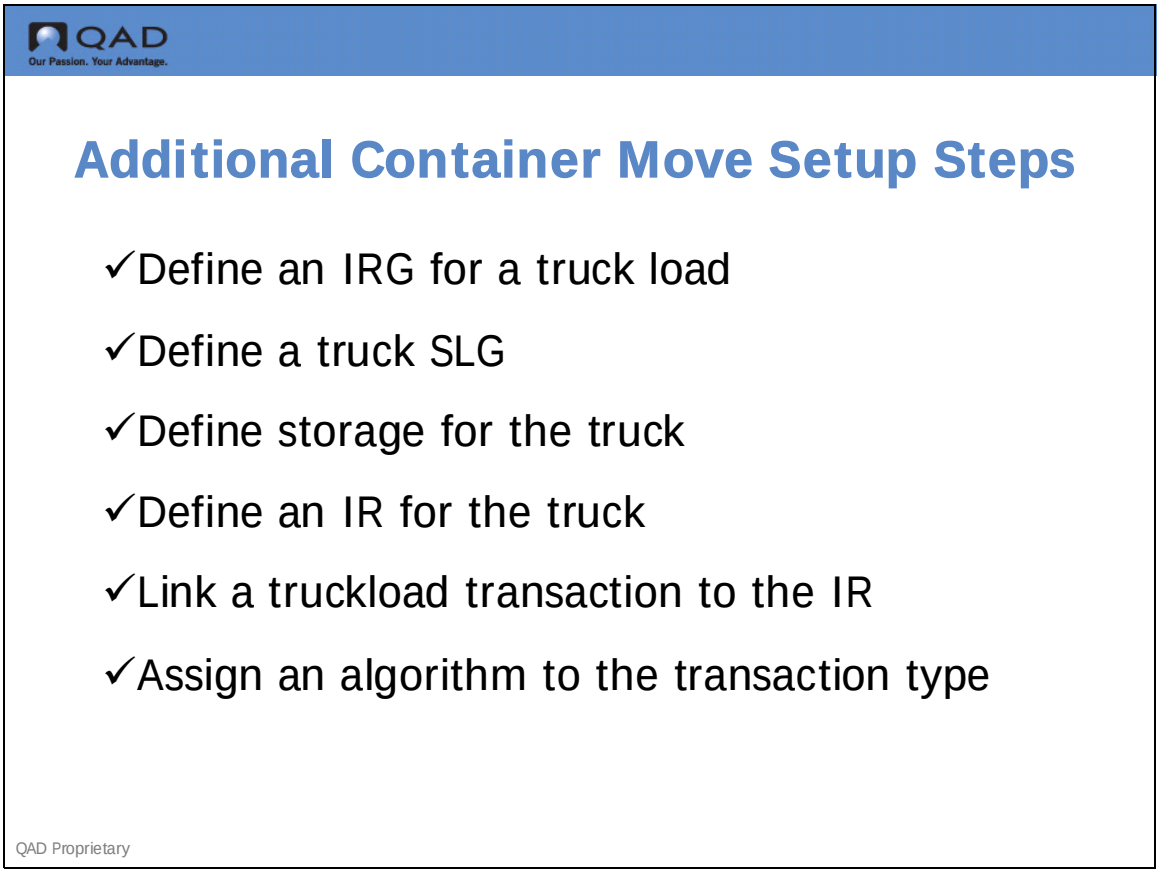
0: The system does not display messages and does not take action.

1: The system displays a warning message.

2: The system displays a message and prompts for user confirmation of the message before continuing.

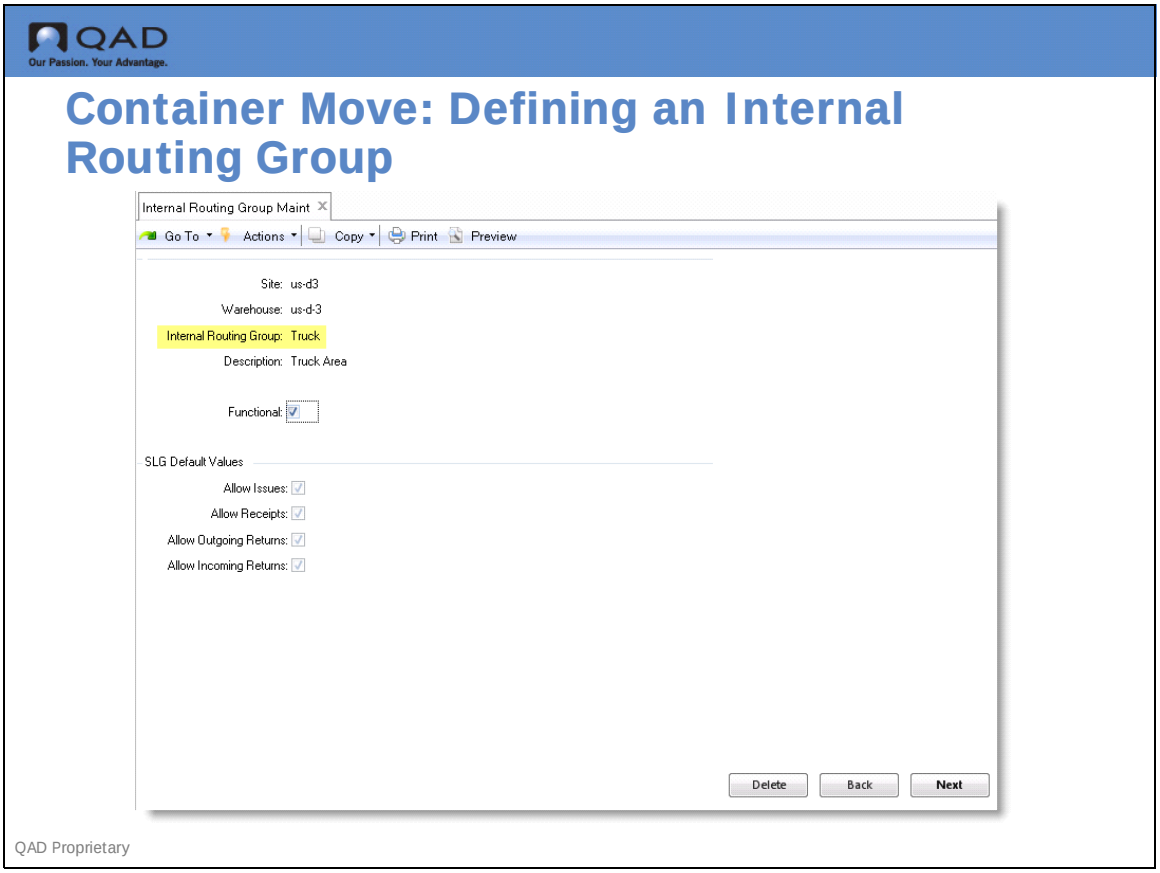
3: The system displays an error message and you cannot continue.

Additional Setup Steps



In addition to setting up options for Container Move within Batch Picking Control, you must set up QAD Warehousing so that trucks can be included as locations and routings, routing groups, and transactions exist within the system to interact with the truck location when moving containers. The flowchart shown above depicts the steps you must complete to do this.

Defining an IRG for Truck Load



You must define an internal routing group (IRG) for all truck locations in Internal Routing Group Maintenance (4.2.1). To do this:

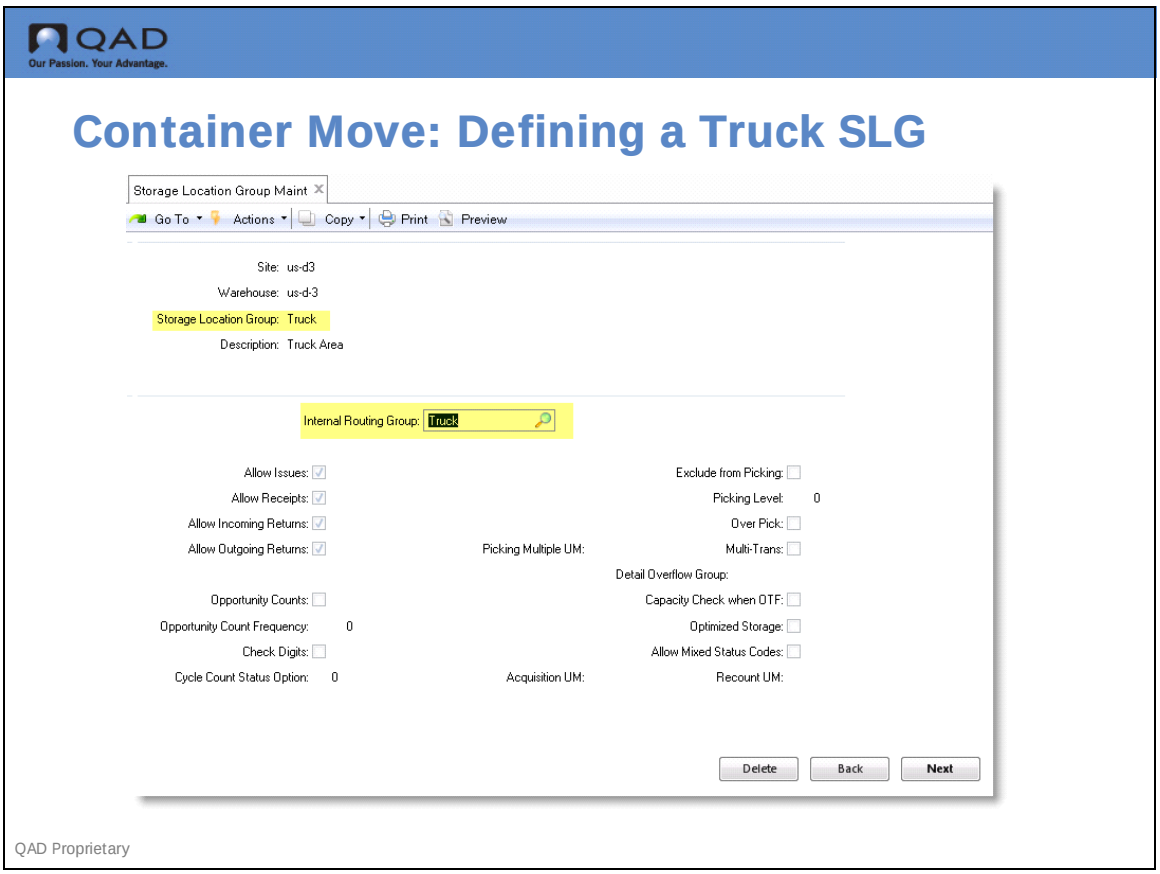
- Specify the truck as the Internal Routing Group.
- Set Functional to Yes.
- Optionally, set additional fields or accept the defaults.

If you optionally define a stage location instead of a truck location, you must define the IRG for the stage location, not the truck location. By defining an IRG for a stage location rather than a truck location, you let staff perform the following movements:

- From the shipping lane to the stage area
- Between locations in the stage area
- Between the stage area and the truck location
- Between a truck and the stage area (that is, return to a stage area from the truck location)

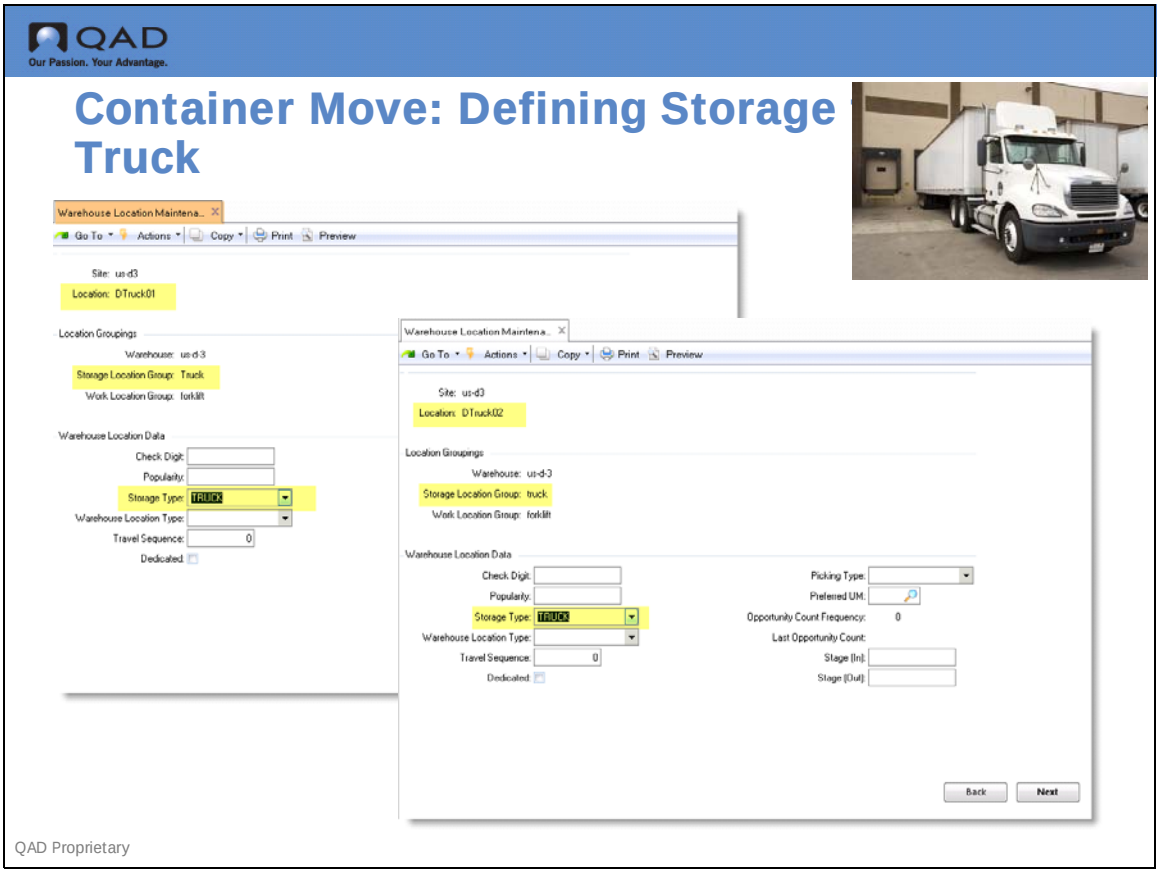
Staff cannot return to the stock area or any other IRG from the stage area.

Define a Truck SLG



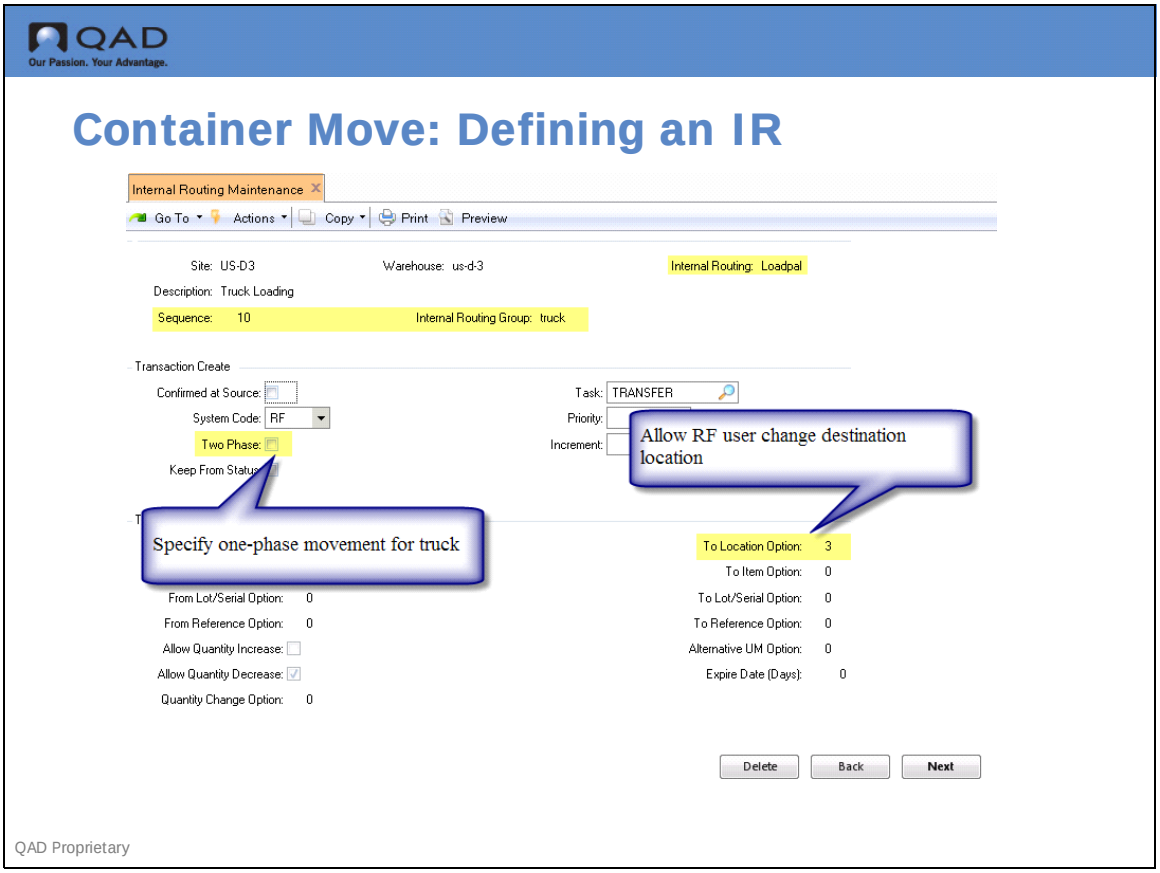
To use container move features, you must set up the truck as a location and specify its storage location group and storage type. For example, you can define a Truck location and specify the storage location group and storage type as Truck. When a truck is defined as a storage location, you can use functions to report on truck capacity and contents and the warehousing system can use the truck location for storage.

Defining Storage for the Truck



Use Warehouse Location Maintenance (4.3.13) to specify the location for the truck, the SLG for the truck, and the storage type for the truck.

Defining an IR for the Truck



You must define an internal routing (IR) for the truck load transaction type. Define the internal routing for type LOC-TR with a single step that moves to the truck IRG.

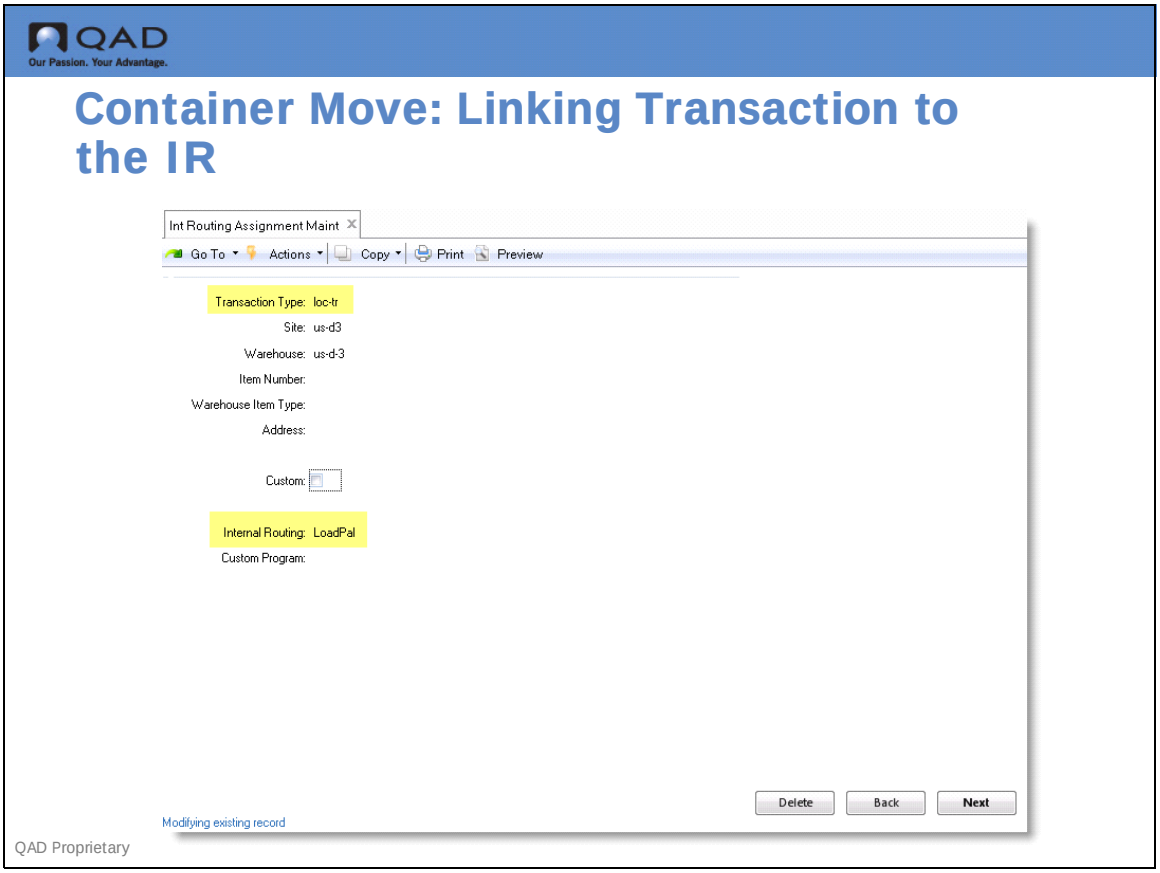
Note The location transfer transaction (LOC-TR) is included with the system data as a generalized code for field tr_type.

Define a single-step movement that lets staff move items:

- From the shipping lane IRG to the IRG truck location
- Between locations of the same IRG should you need to transfer from one truck to another

Use Internal Routing Maintenance (4.2.5) to define a one-phase movement for the truck. A one-phase internal routing represents movement within the IRG.

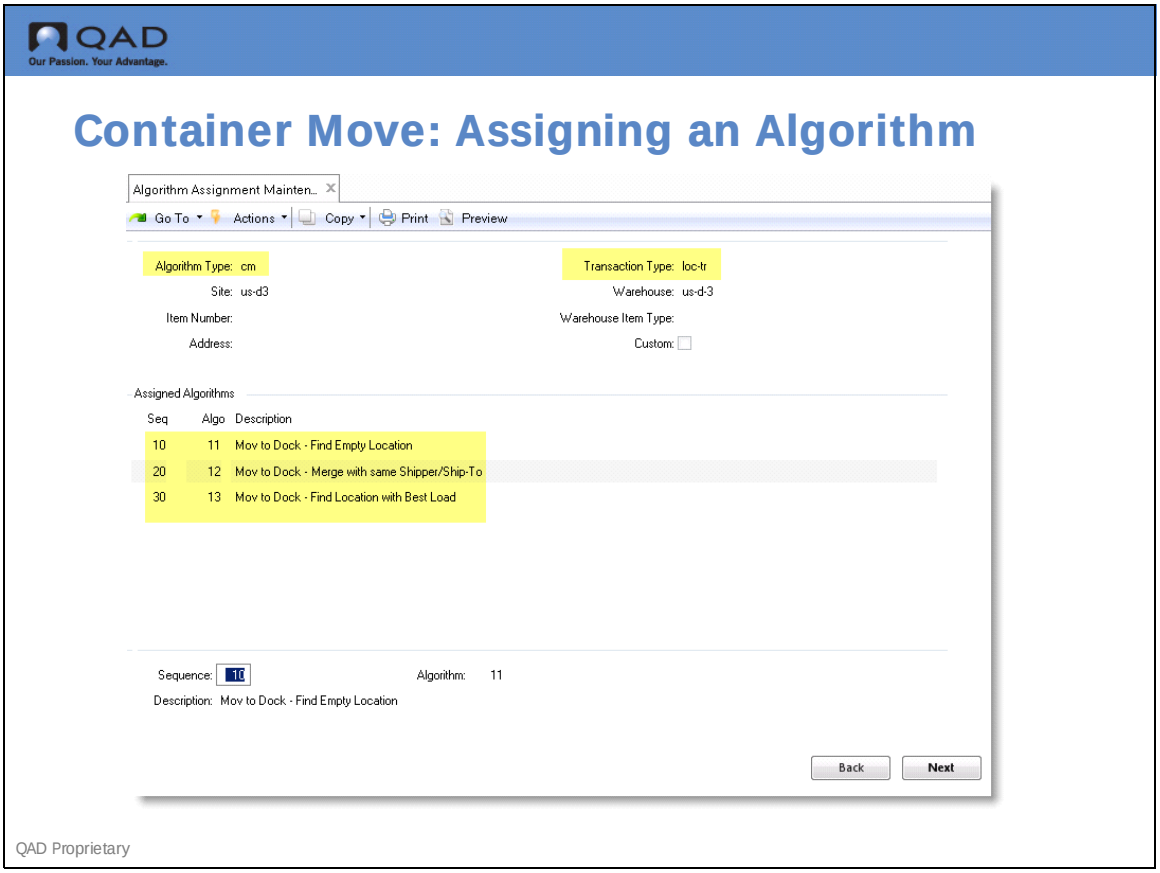
Linking a Truck Load Transaction to the IR



You must link the truck load internal routing to the truck location transfer transaction. Use Internal Routing Assignment Maintenance (4.2.9) to assign an internal routing to the LOC-TR transaction.

Define the transaction type, then specify the internal routing for the transaction type.

Assign an Algorithm to the Transaction Type



Use Algorithm Assignment Maintenance to assign a container move algorithm to the transaction type you previously created.

Fields

Algorithm Type. Use Algorithm Type to specify the two-character code for the type of algorithm you want to maintain or assign. The standard two-character codes are CM, LA, LF, PA, PK, QA, and SC.

These standard codes are supplied with the system, and you will not normally need any other algorithm types. If you should ever need to add another algorithm type code, you must create it, and its description using Generalized Code Maintenance.

Transaction Type. This field is used to specify the transaction type.

Maintain transaction types using Transaction Type Maintenance.

You specify the transaction type to link to an internal routing in Internal Routing Assignment Maintenance. You specify the transaction type to link to a sequence of algorithms in Algorithm Assignment Maintenance.

You also specify the transaction type when using the Algorithm Simulation Menu. These options simulate either location-find and put-away, or picking. The system simulates the running of the algorithms that you have assigned to the specified transaction type and displays the results of the simulated put-away or picking.

Sequence. Each algorithm assignment consists of a number of individual algorithms, in order, identified by a sequence number.

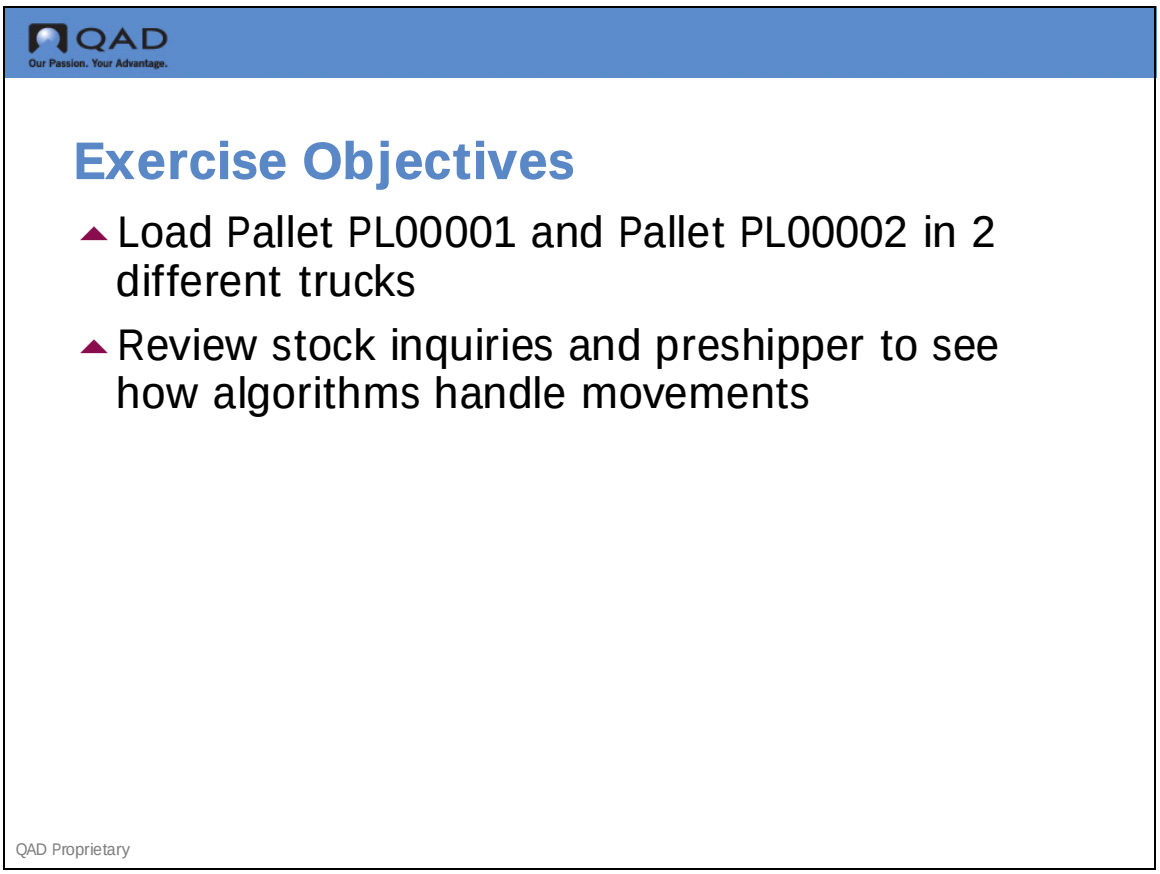
For a new assignment, Sequence defaults to 10. Number sequences by 10's (10, 20, 30, and so on) so that additional steps can be inserted easily later, if required.

Algorithm . Assign algorithms of the type you selected at the top of the frame. You can either type in the required number, or you can use the Up and Down arrow keys to move through the list of algorithms.

Use Algorithm Master Maintenance to modify the description of the algorithm you select.

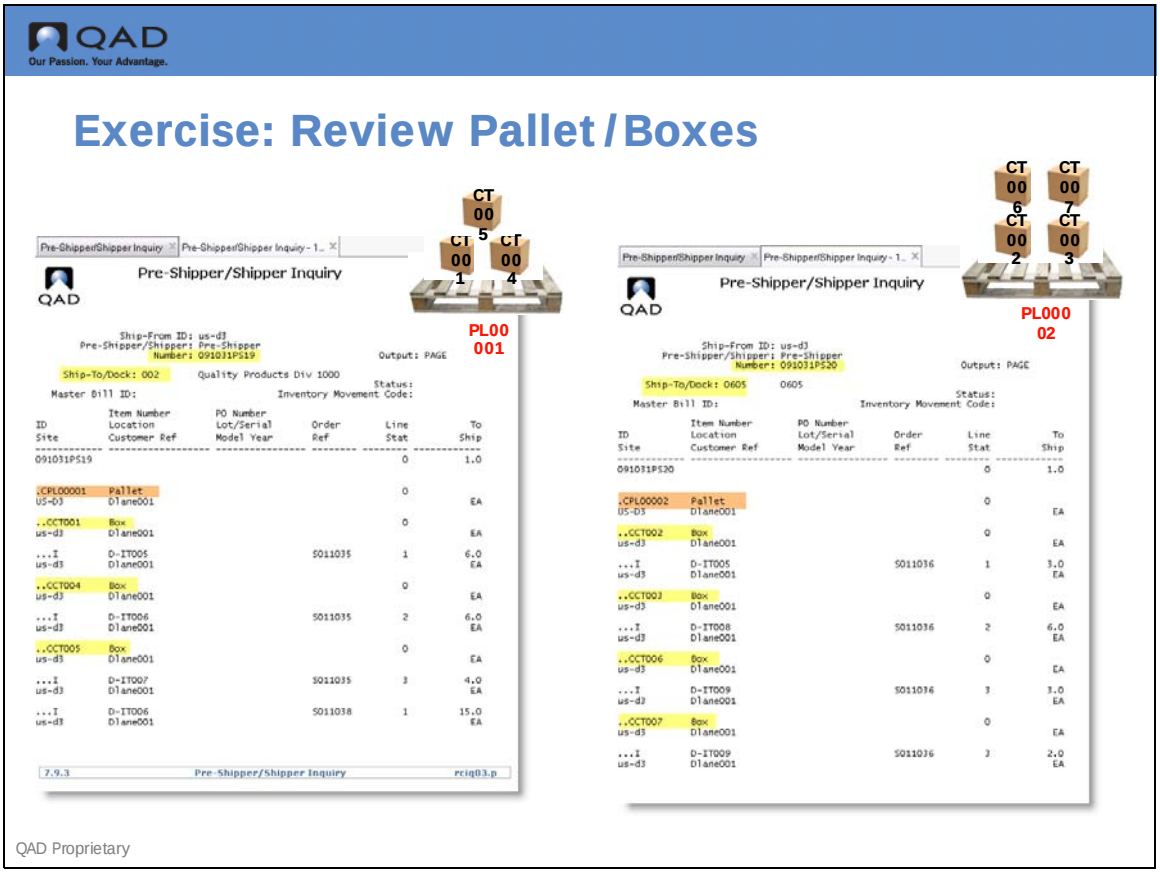
In Algorithm Assignment Maintenance, you can assign algorithms of the type you selected at the top of the screen. For example, if you selected algorithm type PA, you can assign any of the put-away algorithms.

Exercise 1: Loading Pallets into Different Trucks



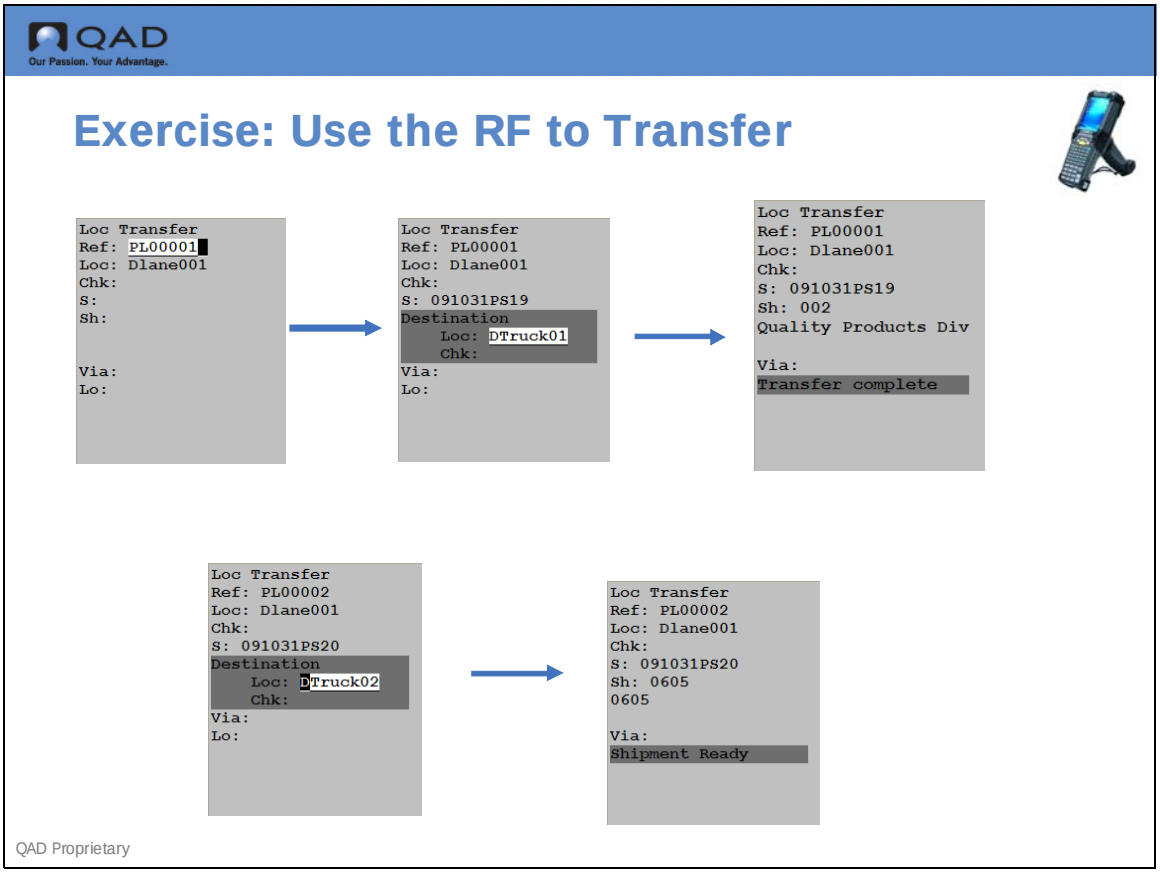
In this exercise, you will load two different pallets, then load them into two different trucks. Once the pallets are loaded, you will review stock inquiries and explore how the container move algorithms handled the movement of the pallet containers.

Step 1: Review the Boxes/Pallets to Move



Use Pre-Shipper/Shipper Inquiry (7.9.3) to review the pallets and boxes to move.

Step 2: Use the RF to Transfer the Container



11 Log onto the RF device software, then use the Container Move function to transfer the container.

12 Log onto the RF software.

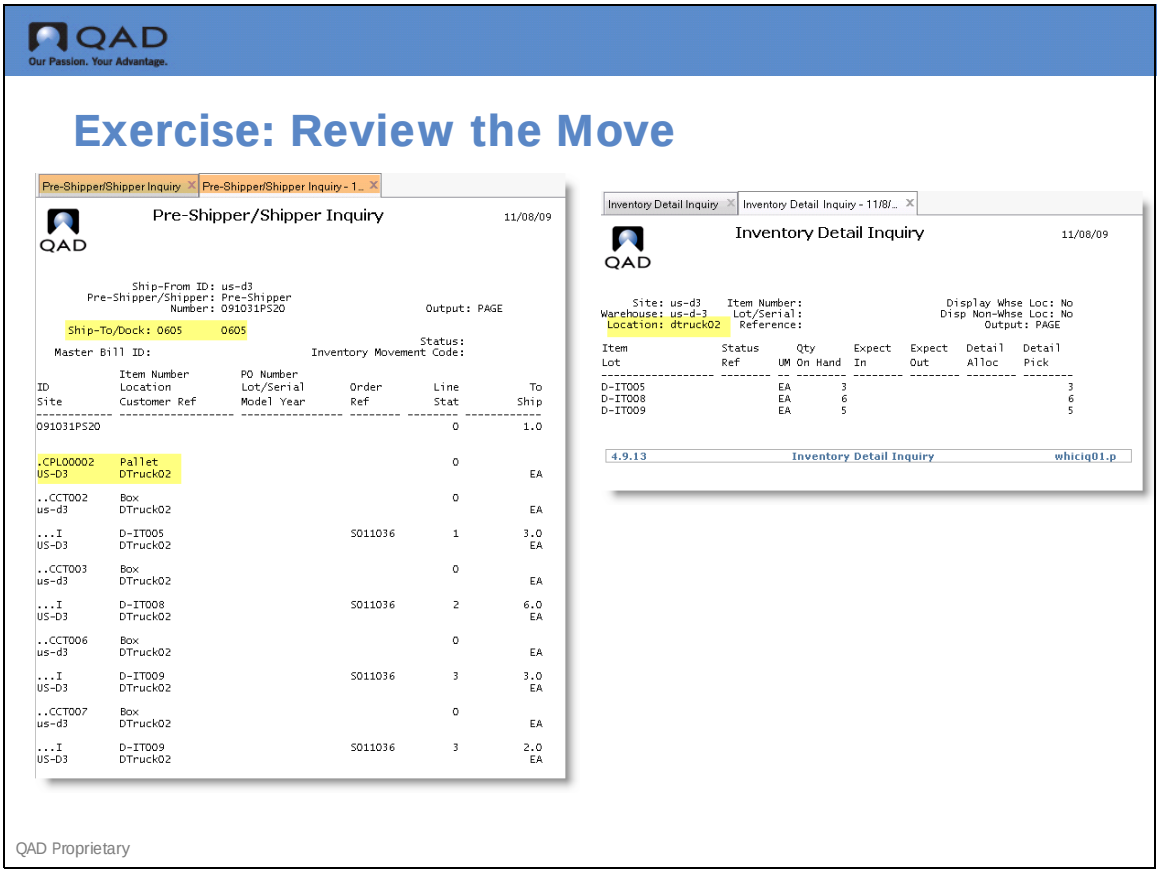
13 Select Container Move (3.4).

14 Enter the Container Reference number in the Ref field.

15 Enter the destination location (the truck) in the Loc field, under Destination.

The system informs you the shipment is ready to ship.

Step 3: Review the Move



Use Pre-Shipper/Shipper Inquiry (7.9.3) to review that the shipment moved locations to the truck and is ready to ship.

Study Questions

1 True or False. Container Move provides functions to move the containers from the picking area, to the staging area, to the loading docks.

2 True or False. You can include validation functions when moving containers.

3 In which control program and which field ensures consecutive loading for pallets?

4 Which field do you set so that users can continue processing despite messages before loading the truck?

5 What must you ensure is set up QAD Warehousing for Container Move?

6 True or False. You must specify the truck as the Internal Routing Group in Internal Routing Group Maintenance (4.2.1).

7 How do you specify the staging location?

8 To use container move features, you must set up the truck as a location and specify what else?

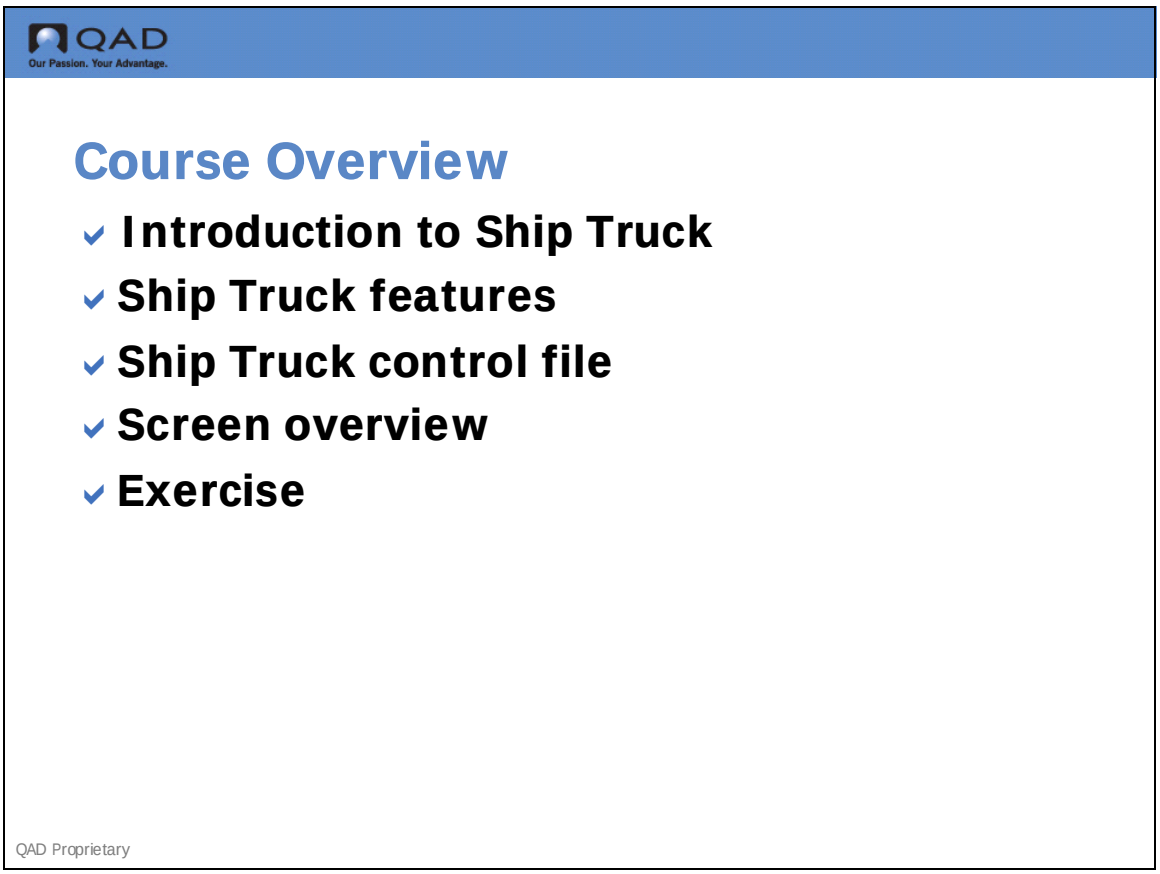
9 True or False. Use Warehouse Location Maintenance (4.3.13) to specify the location for the truck, the SLG for the truck, and the storage type for the truck.

10 What is the name of the truck load transaction type?

Chapter 5

Ship Truck

Course Overview



Ship Truck Introduction

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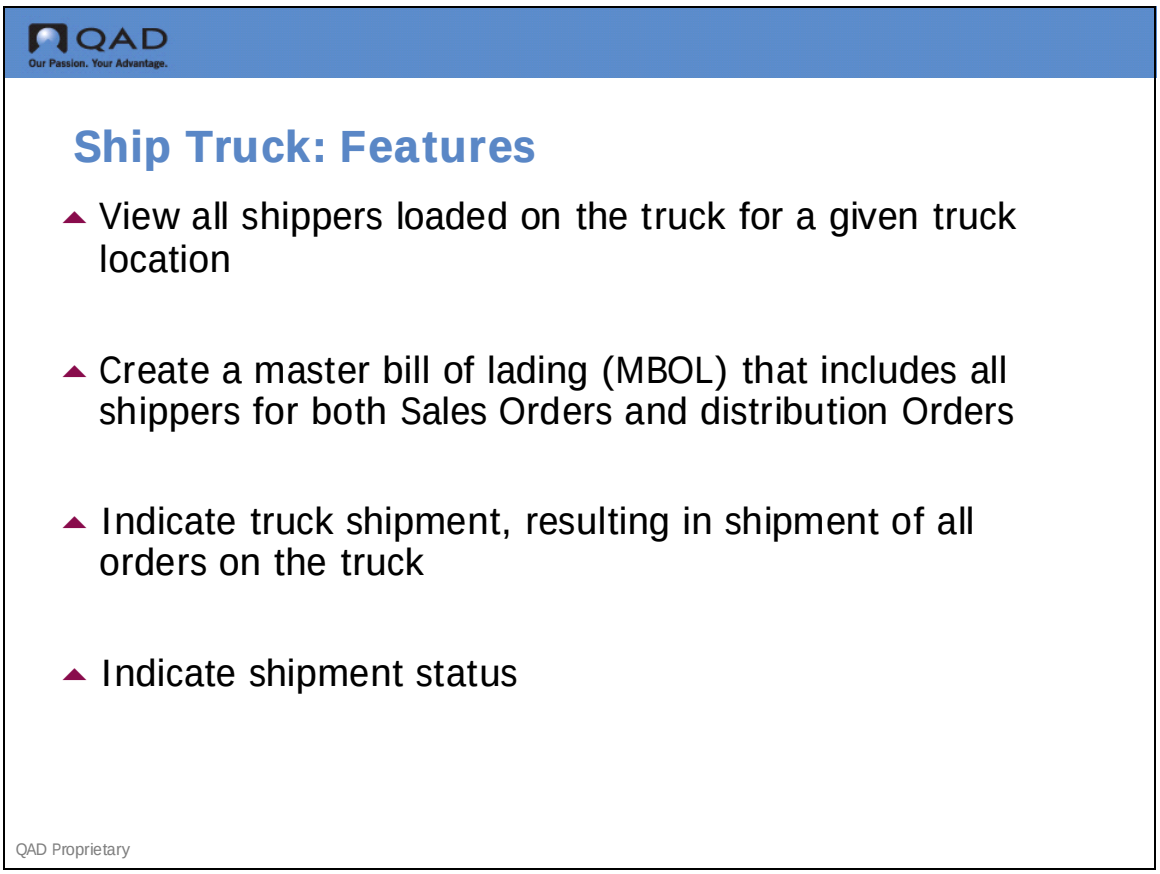
Introduction

- After the truck has been loaded and the shipment is ready, you can use a single transaction to confirm truck shipment

QAD Proprietary

After the truck has been loaded, shipment documentation has been printed, and the shipment is ready, you can use a single transaction to confirm that the truck shipped. You use the Ship Truck transaction to confirm a sales order shipper, much like you use Pre-Shipper/Shipper Confirm (7.9.5) for a sales order or DO Pre-Shipper/Shipper Confirm (12.19.13) for a distribution order.

Ship Truck Features

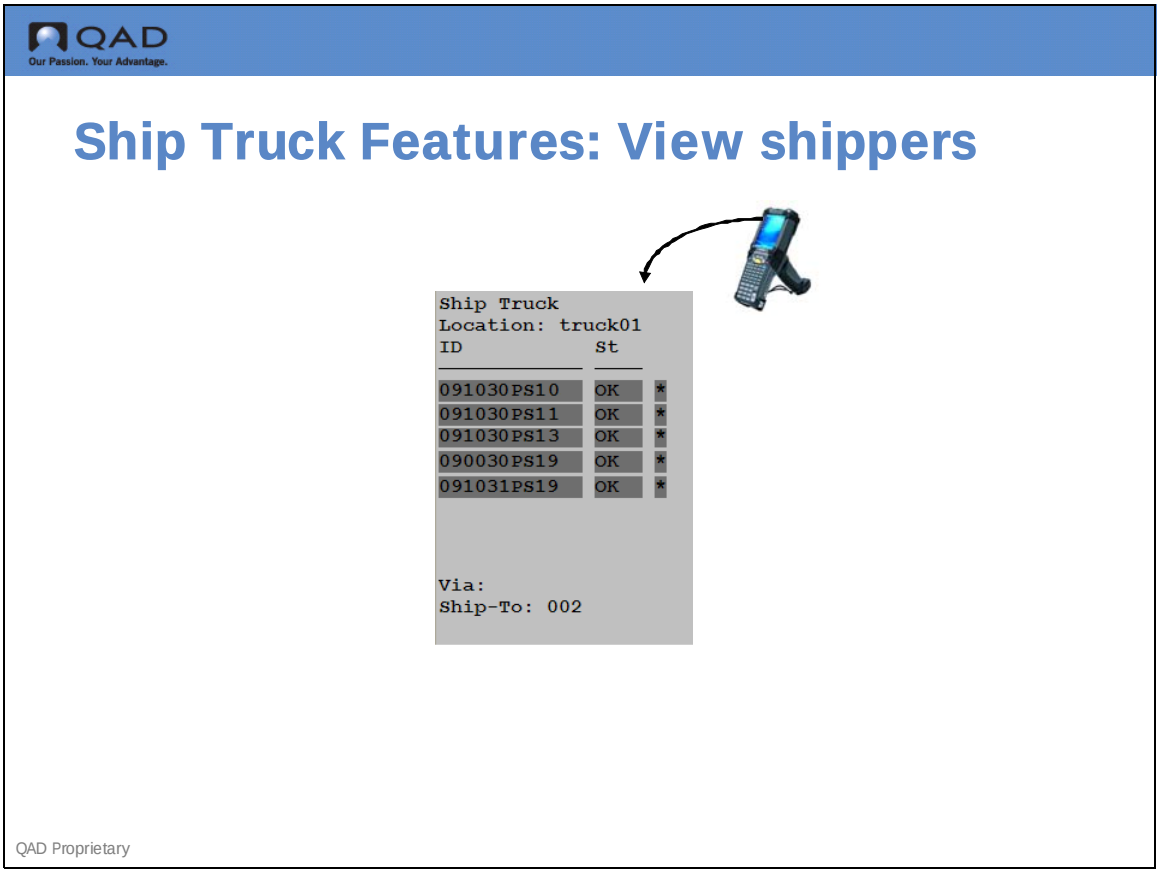


Ship Truck features let you:

- Indicate truck shipment, resulting in shipment of all orders on the truck.
- Create a master bill of lading (MBOL) that includes all shippers for both SOs and DOs.
- View all shippers loaded on the truck for a given truck location.

Additionally, If specified in the Truck Shipment (whtraxtx.p) field in Local Exit Routines Setup (4.23.10), a process end of day (PEOD) message can be produced and exported to the TMS.

View Shippers



RF Ship Truck features lets you view DOs or SO pre-shippers/shippers for items loaded on the truck. The system:

- Scans the location representing the truck or dock.
- Finds all SO and DO pre-shippers/shippers for all items loaded in the truck.
- Prompts to confirm the pre-shipper/shipper and issues all items for them.

If the pre-shipper/shipper is large and the items cannot fit in a single truck, warehouse staff can partially load another truck.

Indicate Status

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Ship Truck Features: Indicate Status

```
Ship Truck
Location: truck01
ID            St
--------------  ----
091030PS10    N/OK
091030PS11    OK   *
091030PS13    OK   *
090030PS19    TASK
091031PS19    OK   *


Via:
Ship-To: 002
```

QAD Proprietary

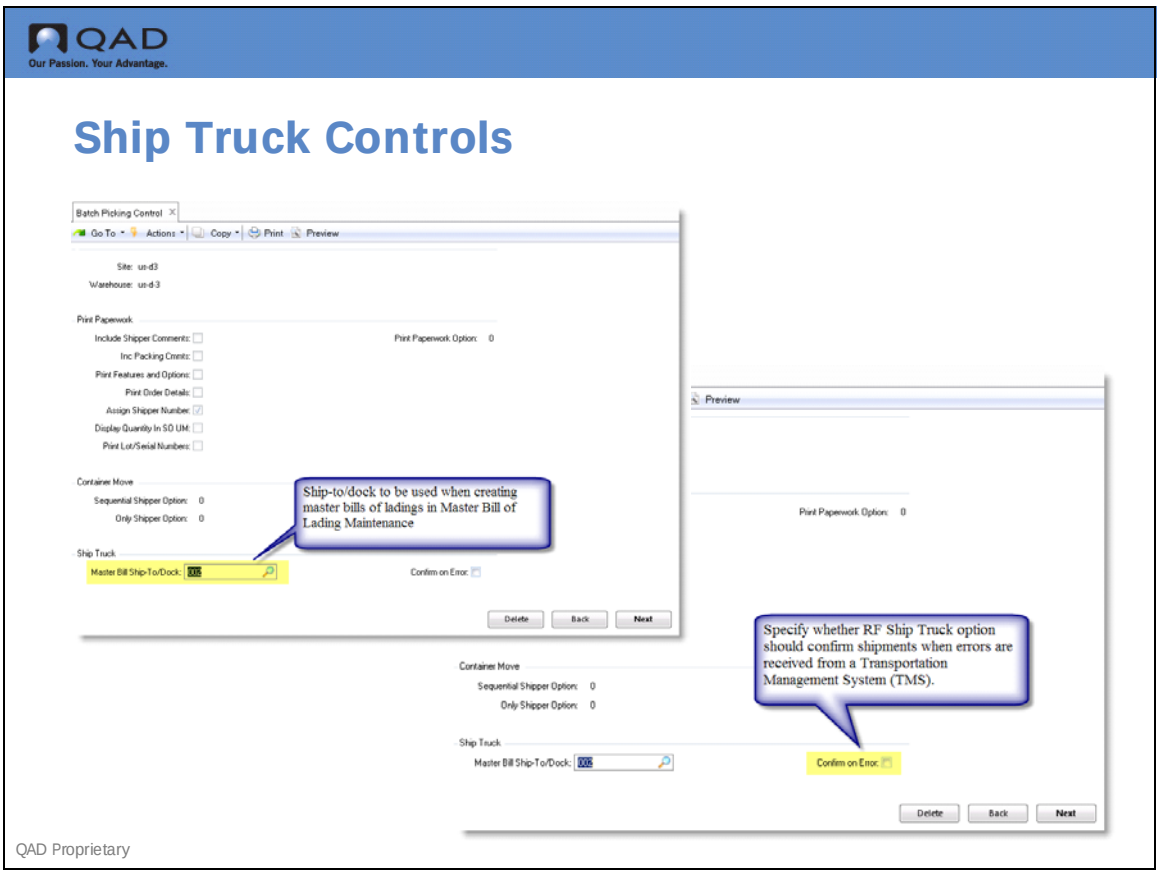
The RF Ship Truck software indicates the status of the shipment:

OK: Can be shipped

N/OK: Can be shipped; however, some items are not in the truck. If shipped, the items are shipped from their current location.

TASK: There are open pick tasks against the pre-shipper, and you cannot confirm the shipment.

Ship Truck Controls

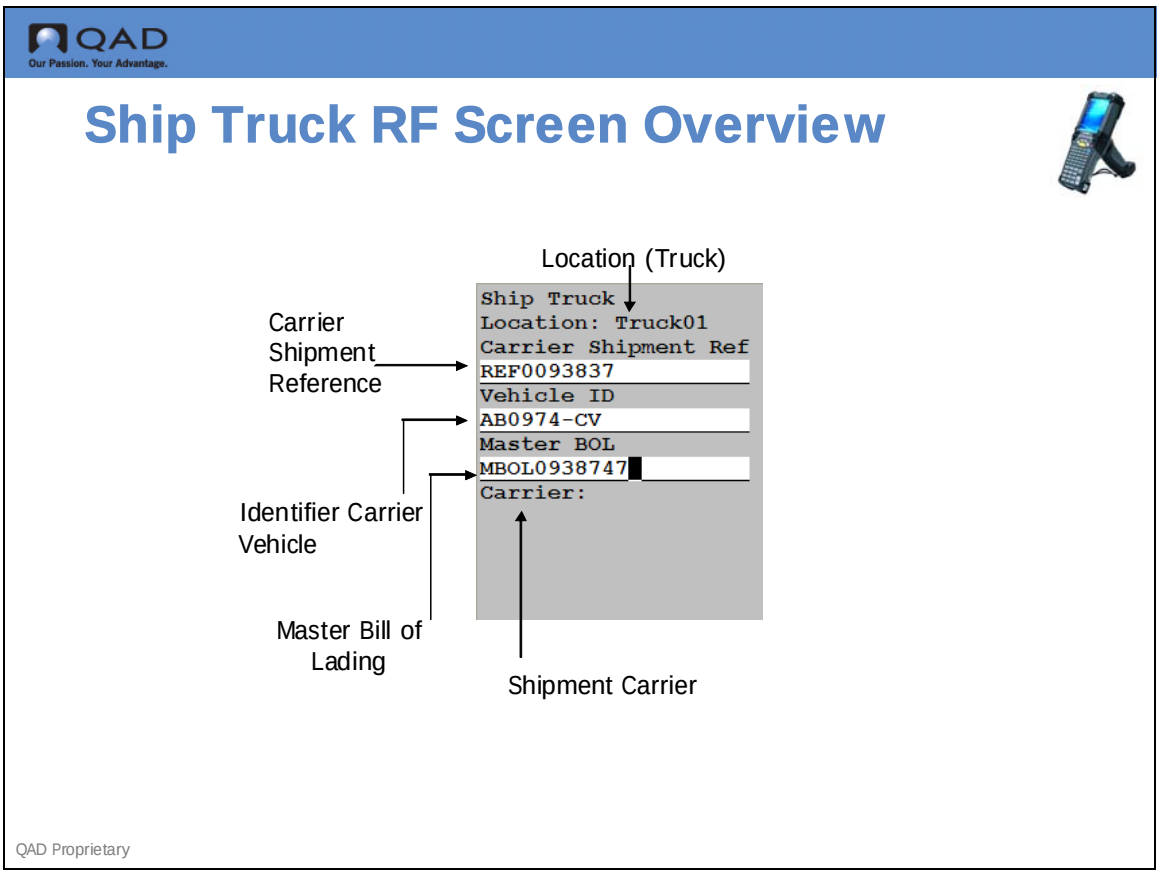


Use fields in the Ship Truck frame of Batch Picking Control (4.15.24) to set up ship truck options.

Master Bill. Enter the bill of lading ID for this load. If you use RF Ship Truck option in combination with the process end of day (EOD) message sent from the TMS, the system populates this field automatically and creates an MBOL in Master Bill of Lading Maintenance.

Confirm on Error. Specify Yes if you want to confirm shipments when errors are received from a Transportation Management System (TMS). A warning message displays but you can proceed and confirm shippers.

RF Screen Overview

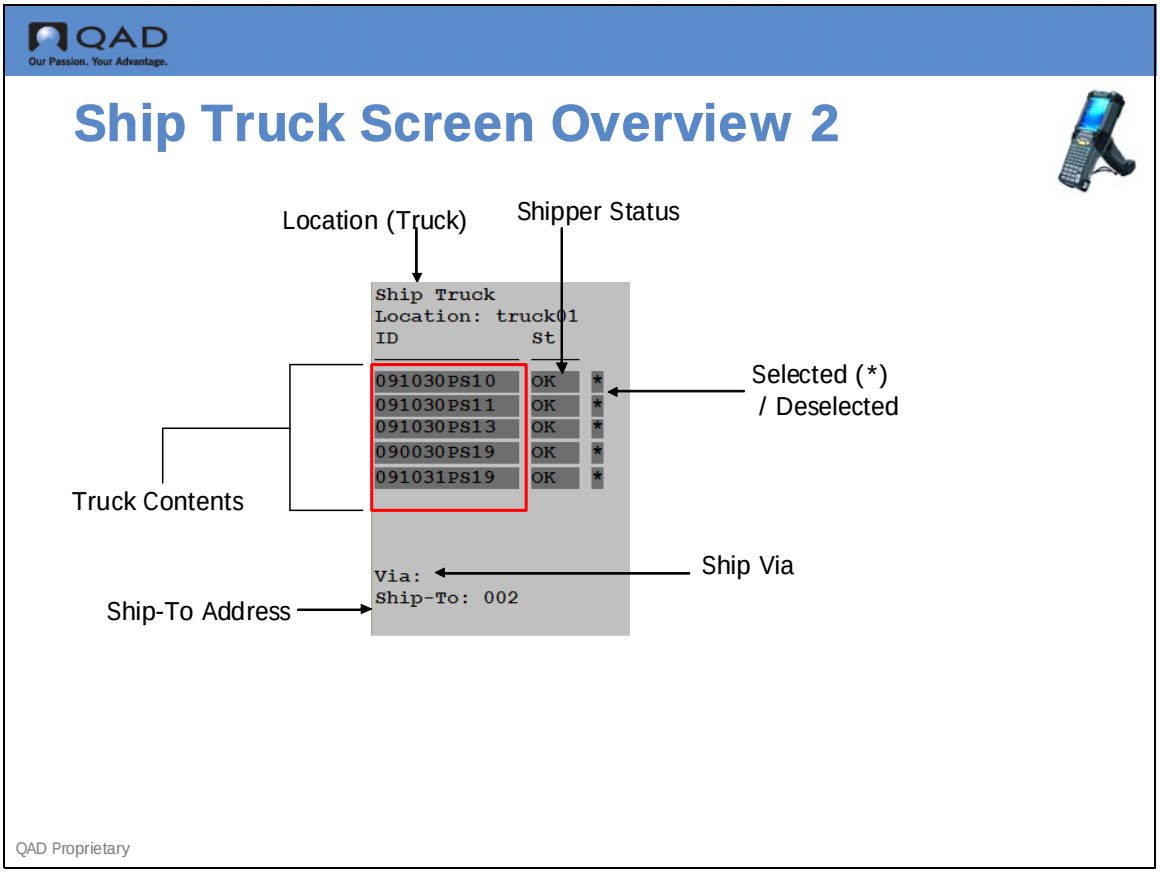


You use RF Ship Truck options (3.5) to enter shipment data. You enter the truck location, and optionally, vehicle ID, or master bill of lading (MBOL).

> ***Note*** If you do not enter an MBOL, the system generates one and assigns shippers that are being confirmed to it. Print the MBOL using the RF Print Paperwork option. If you enter an MBOL, the system adds the shippers that are being confirmed to the existing MBOL.

You can specify a valid carrier as defined in Carrier/Service Assignment Maintenance (4.15.2.13). When you enter a carrier, the system validates that all shippers being confirmed belong to a service of the carrier. The RF displays shipper IDs with varying shipper status.

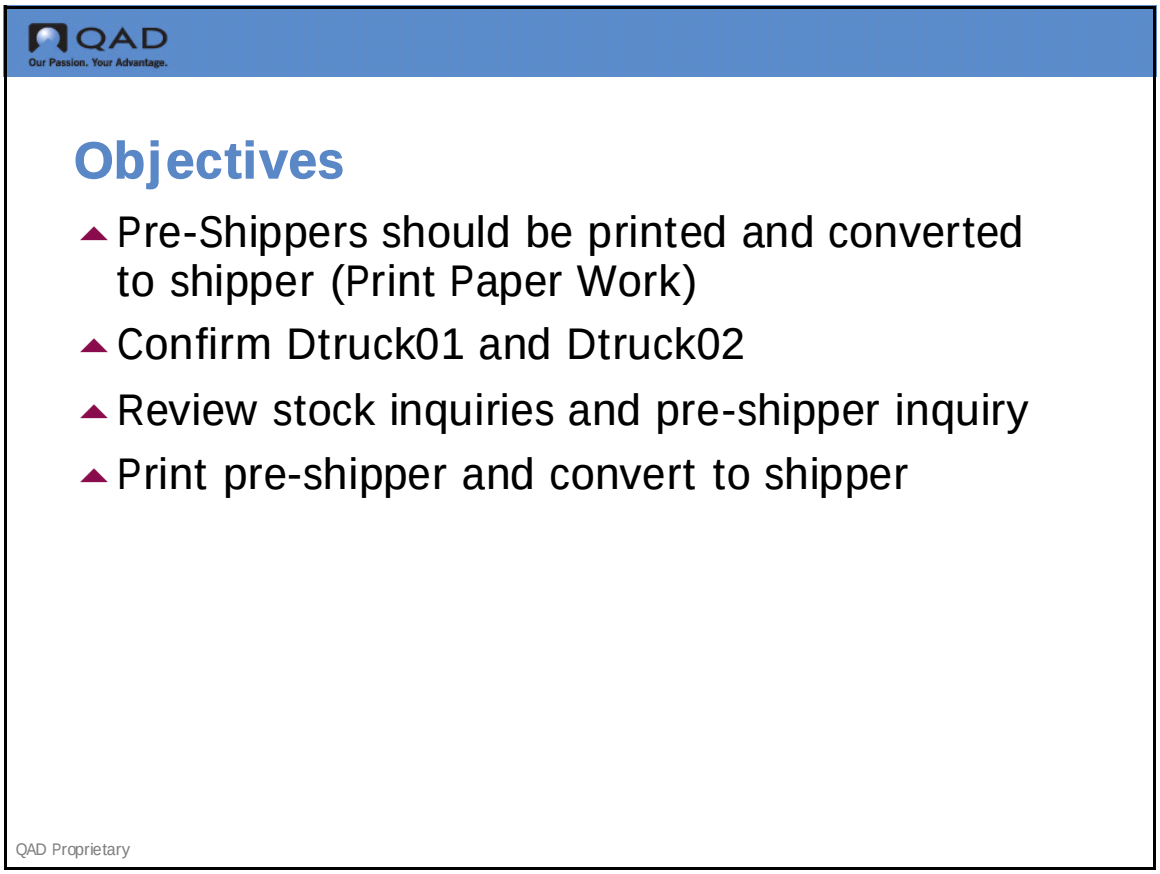
RF Screen Overview (continued)



When you press Enter, the system shows you the shippers that are for items loaded on the truck; this constitutes the truck contents.

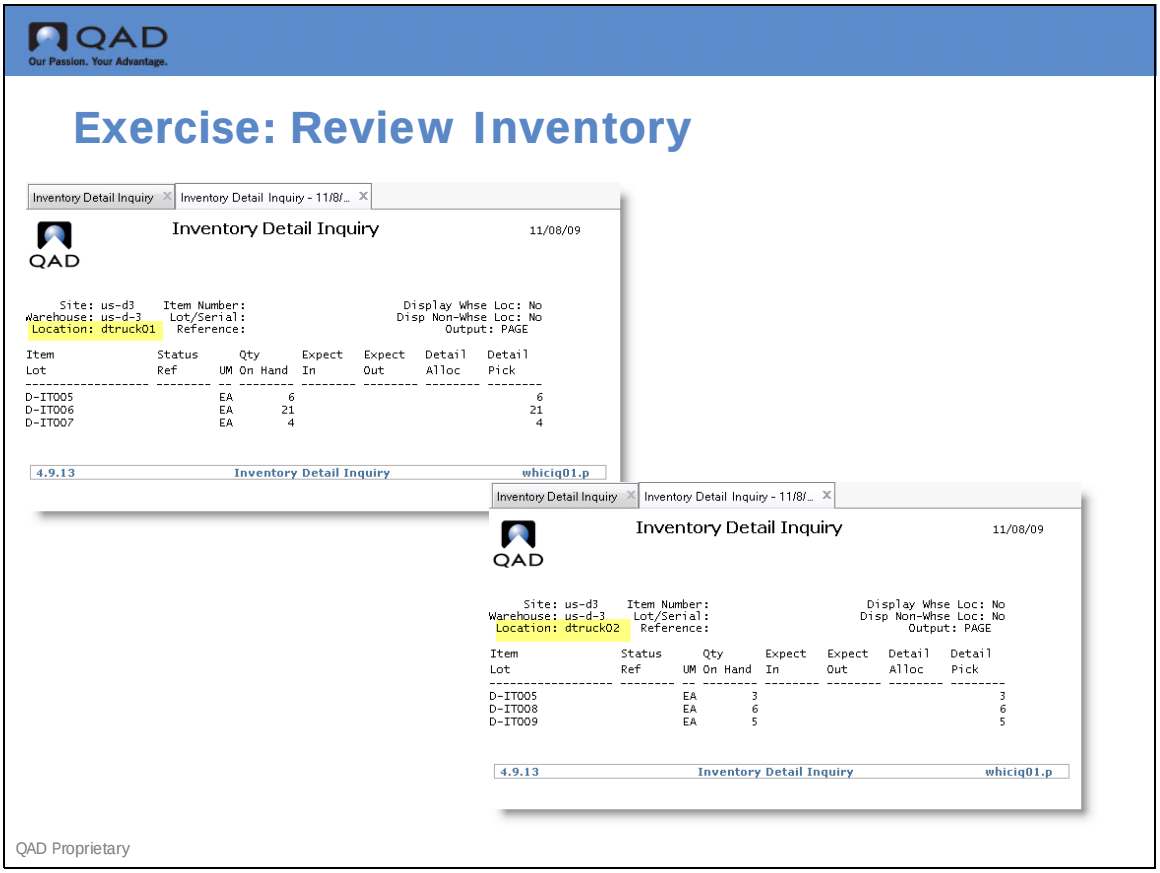
An asterisk displays if the shipper is selected. You can press Enter while the cursor is on the shipper number to deselect the shipper.

Exercise: Print Pre-Shipper, Confirm Truck Ship, and Review



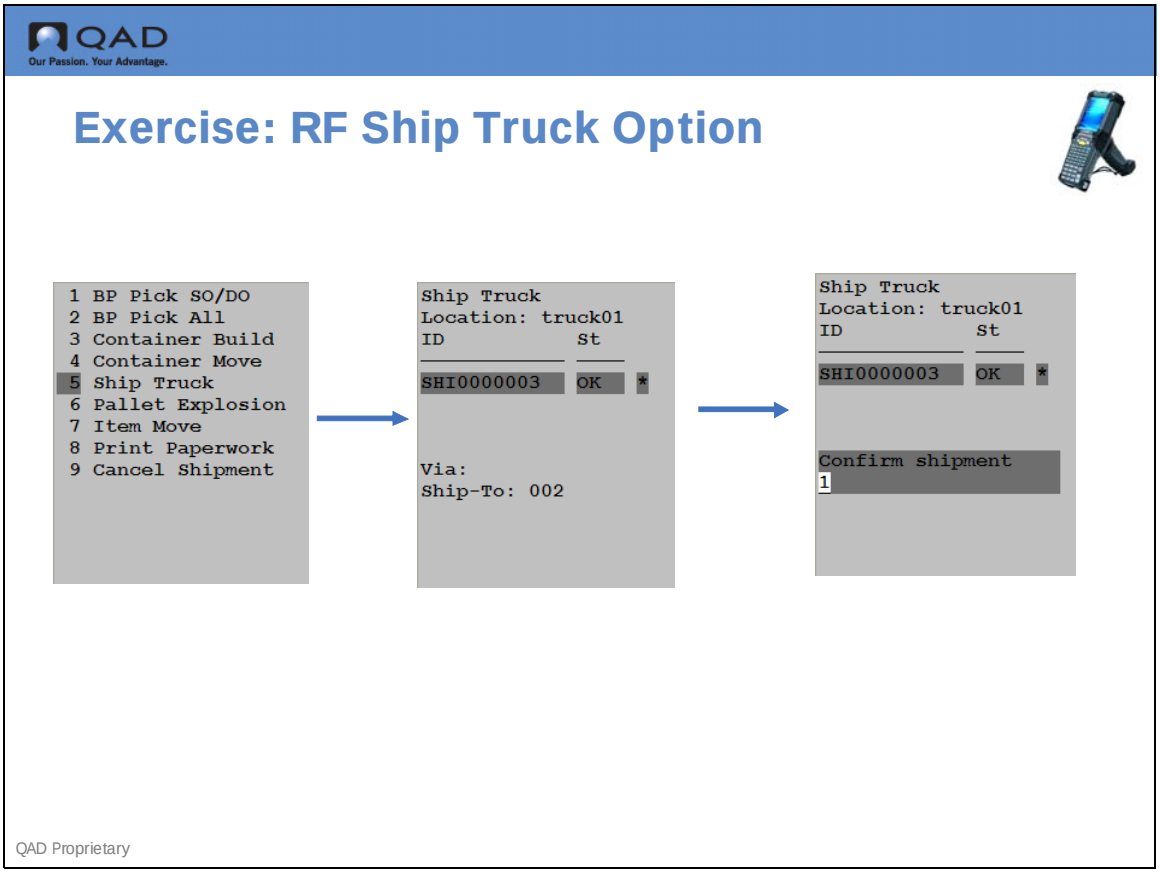
In this exercise, you will ensure that the pre-shipper is converted to a shipper and shipper contents are printed. You will also confirm that goods are on two trucks (truck locations) and the shipment is ready to ship; then you will review the stock and pre-shipper status through system inquiries.

Step 1: Review the Inventory on the Truck



Use Inventory Detail Inquiry (4.9.13) to review the inventory on the truck (truck location).

Step 2: Use the RF Ship Truck Option



1 Log onto the RF device software.

2 Select Ship Truck (3.5).

3 Enter the Container Reference number in the Ref field.

4 Enter the destination location (the truck) in the Loc field, under Destination.

5 Enter the Truck Location.

The system informs you the shipment is ready to ship.

Step 3: Review the Move

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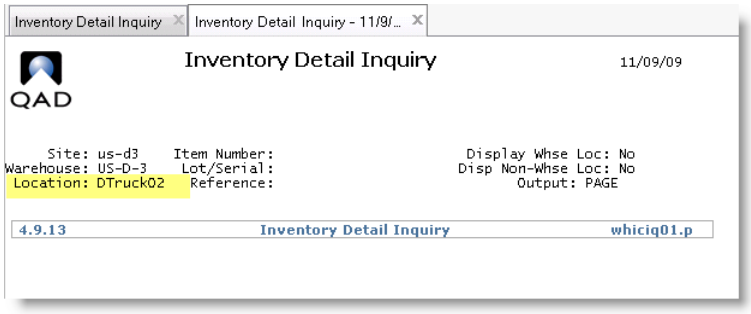
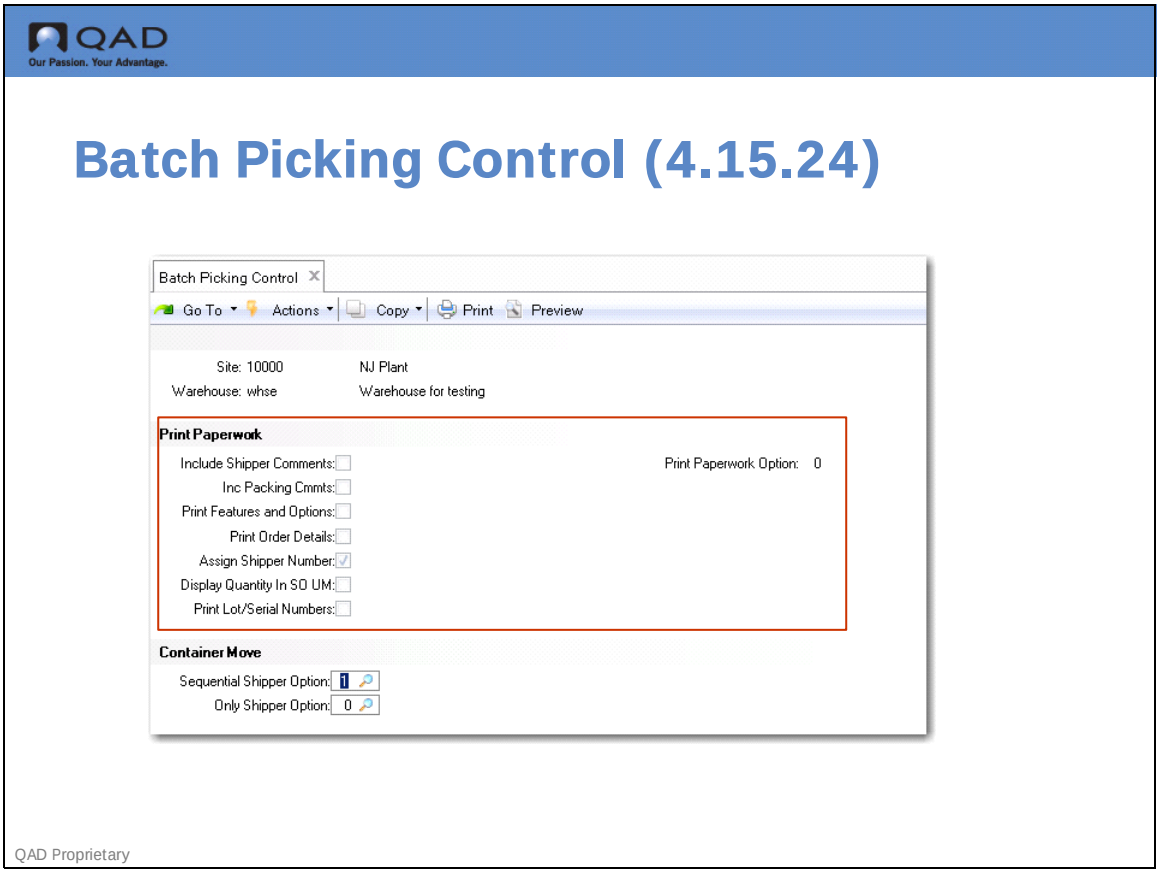
Ship Truck



QAD Proprietary

Use Inventory Detail Inquiry to check that the location of the inventory is the truck location.

Step 4: Print and Convert Pre-Shipper to Shipper



Use the RF Print Paperwork (3.8) option to print the pre-shipper and convert it to a shipper. You can set options in the Print Paperwork frame of Batch Picking Control (4.15.24) to set defaults for shipper printing when using the RF Print Paperwork function.

Field Descriptions

Print Paperwork Option. Indicate the type of message the RF displays when the system finds pending tasks (unconfirmed tasks) or finds that inventory is not on the truck when staff attempt to print shipper paperwork to ship items.

0: The system does not display messages and does not take action when either condition exists.

1: The system displays a warning message when either condition exists.

2: The system displays a message when either condition exists and prompts for user confirmation of the message before continuing.

3: The system displays an error message when either condition exists.

Parcel Manifest

A manifest is a list of goods carried on a truck, train, or ship. Before starting the container move and truck load process, RF users can produce the necessary shipment manifest by using the RF Print Paperwork (3.8) function. Print Paperwork allows RF users to:

- Print pre-shipper/shippers by scanning the document number in the RF device.

- Convert pre-shippers to shippers by assigning a shipper number.
- If the Send Shipment (whtraxsx.p) routine is specified in Local Exit Routines Setup (4.23.10), the system produces a ship shipment (SHIP) message and exports it to the TMS for rating.

Study Questions

1 True or False. You can use a single transaction to confirm that the truck shipped.

2 Name three Ship Truck features.

3 True or False. You can view only converted shippers from the RF Ship Truck option.

4 What can warehouse staff do if the pre-shipper/shipper is large and the items cannot fit in a single truck?

5 Name the three statuses available for a shipment:

6 In which program can you find Ship Truck controls?

7 When does the system automatically supply the bill of lading?

8 Name three types of data that you enter about the shipment using the RF Ship Truck options (3.5).

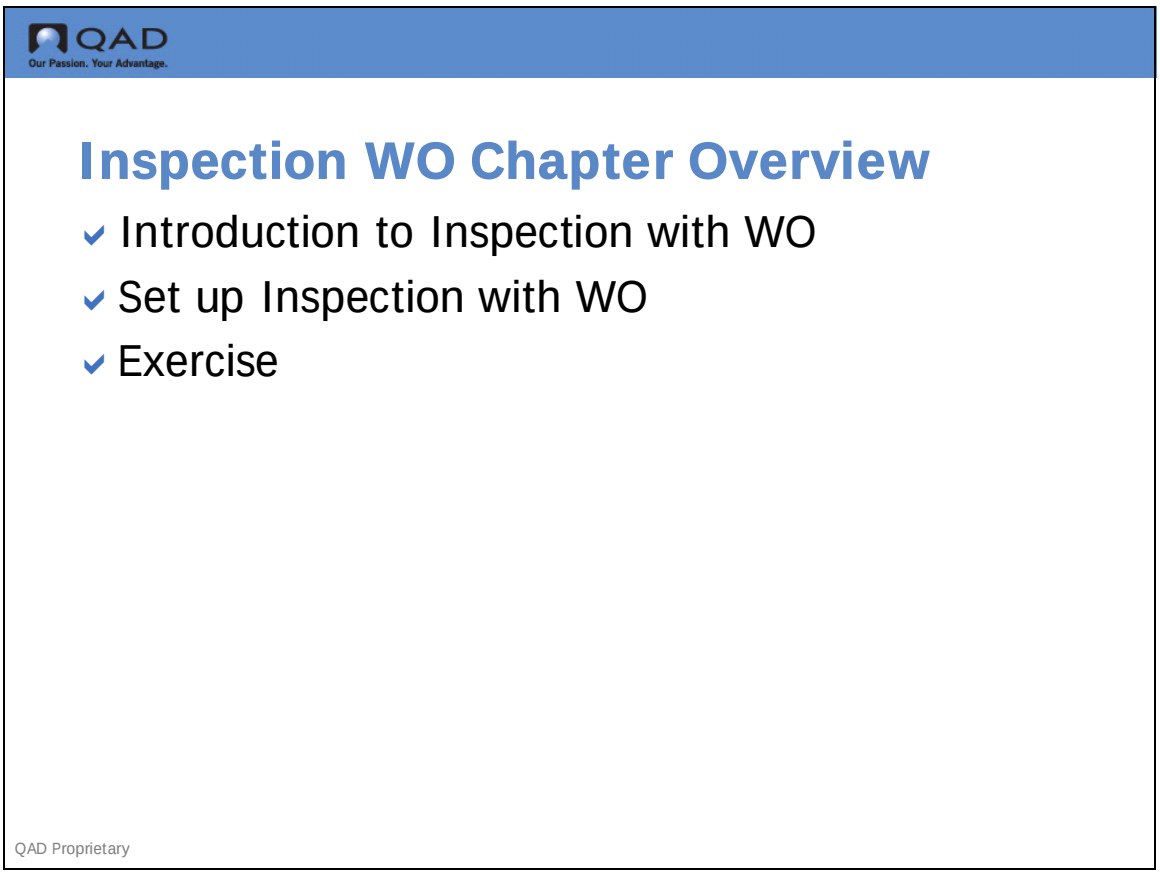
9 True or False. Once you select a shipper for truck loading and the system uses the shipper as part of the truck's contents, you cannot deselect the shipper.

10 True or False. Because the truck is a warehouse location, you cannot use QAD EE inquiries to check loaded truck inventory.

Chapter 6

Inspection (Work Orders)

Chapter Overview



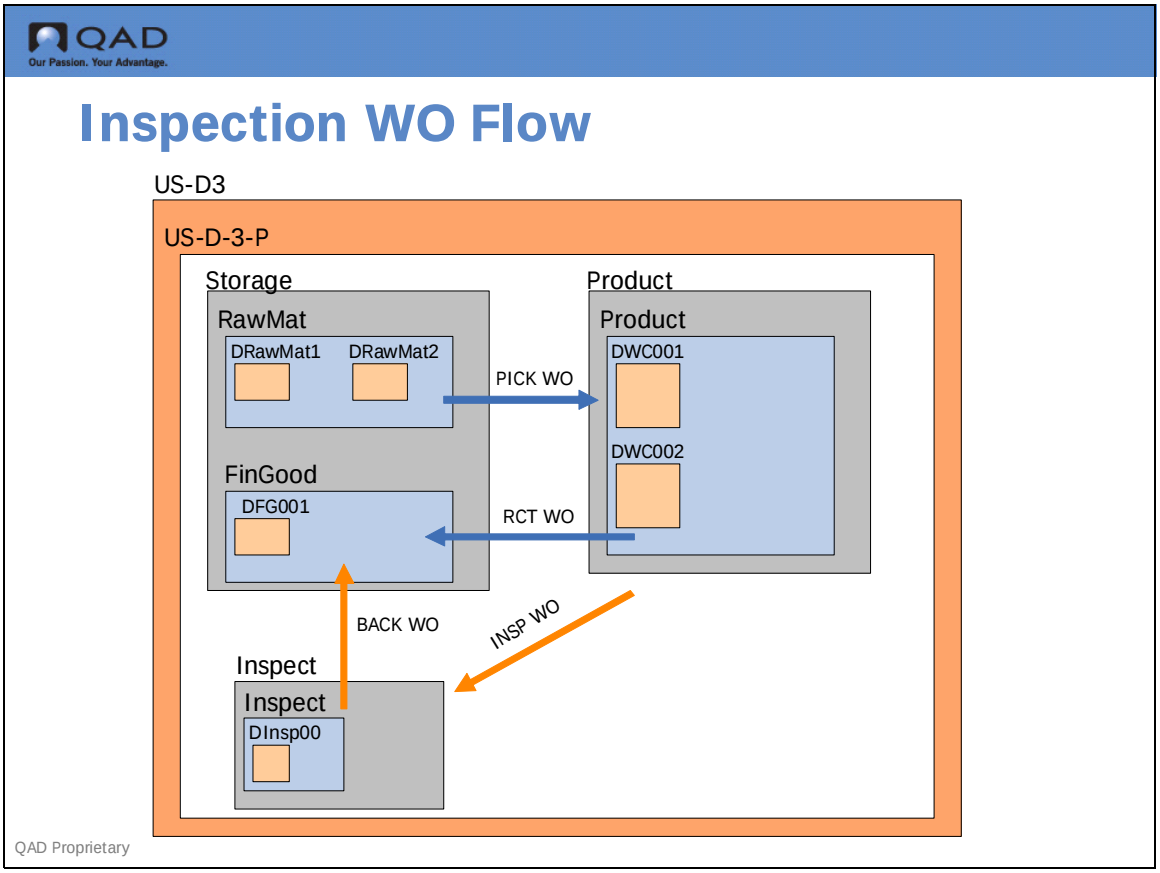
Introduction

QAD Warehousing supports quality inspection with sample control, change of inventory status, and creation of warehouse transaction.

For work orders, inspection typically takes place once warehouse staff pick raw materials and put away finished goods within a manufacturing process.

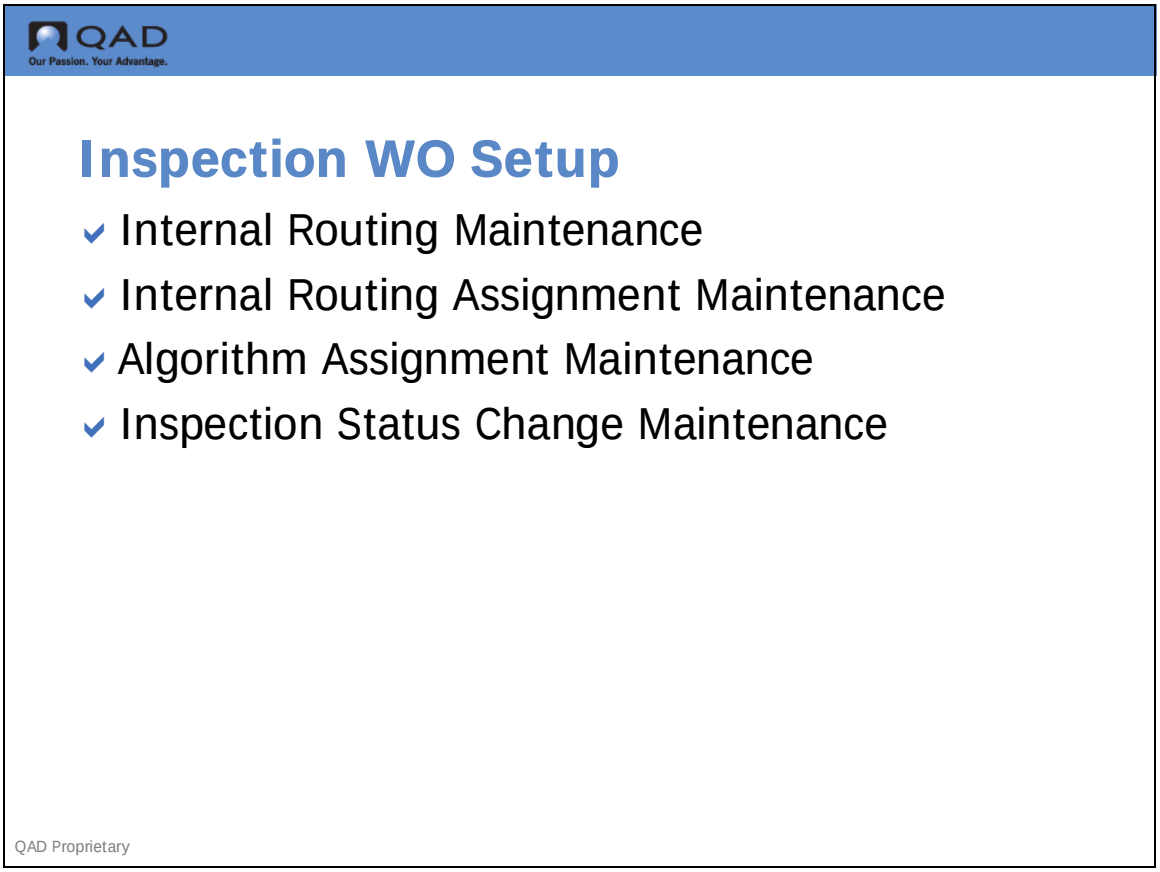
Note You should review the Inspection chapter and Work Order chapter of *User Guide: QAD Warehousing* or complete the Inspection chapter and Work Order Chapter in *Training Guide: QAD Warehousing Fundamentals* before you read the material in this chapter.

Inspection WO Flow



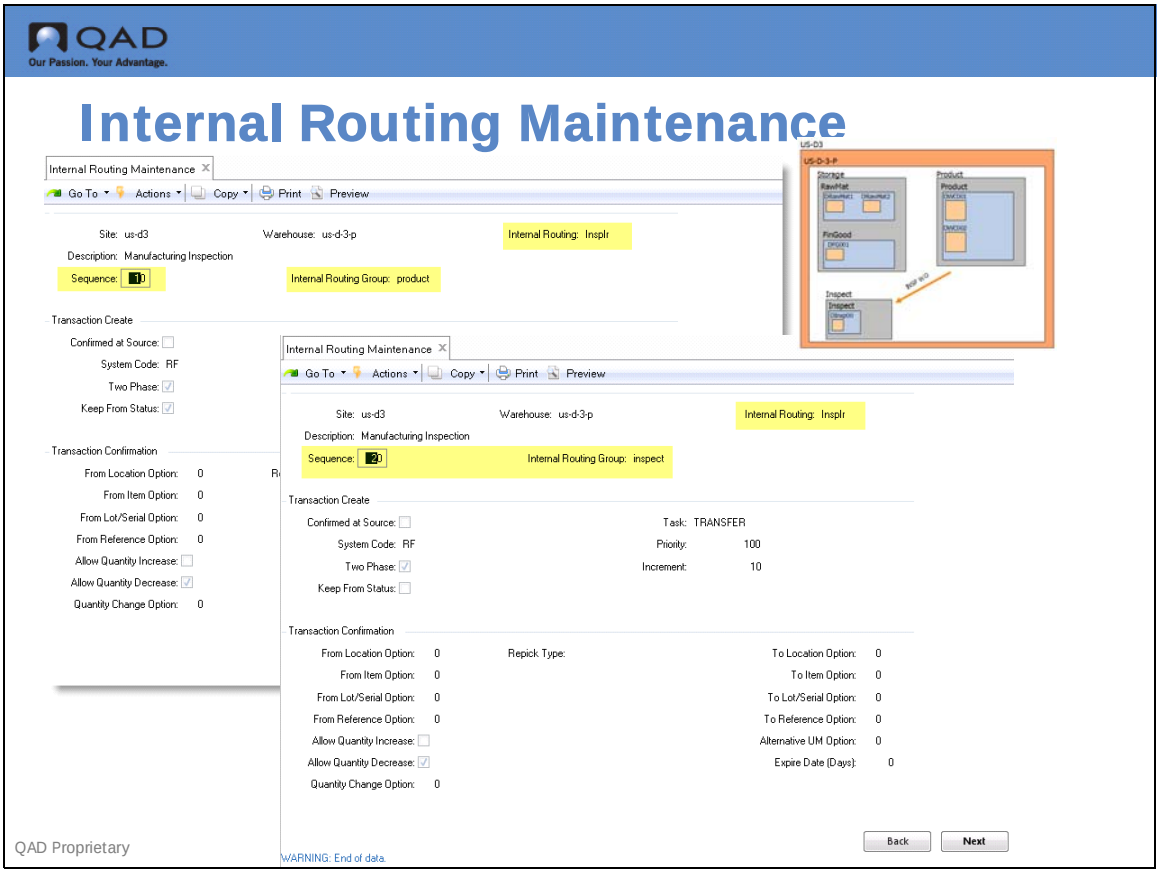
Raw material and finished goods are stored within the warehouse. Within a manufacturing environment, a PICK WO transaction lets staff pick the components of the assembled item. They assemble the item in another location, then when finished, return the item to storage. A RCT WO (receipt- work order) transaction signifies the receipt of the finished good in storage. Once returned, finished goods are inspected in a separate inspection location. BACK WO is the transaction type for a sample return after inspection.

Inspection WO Setup



You must set up internal routing, assign the internal routing, and assign algorithms for each of the areas involved in the WO inspection flow. The following topics discuss the setup of these areas.

Internal Routing Maintenance



Use Internal Routing Maintenance (4.2.5) to set up an internal routing so that a sequence can be established that identifies each step along the route.

Fields

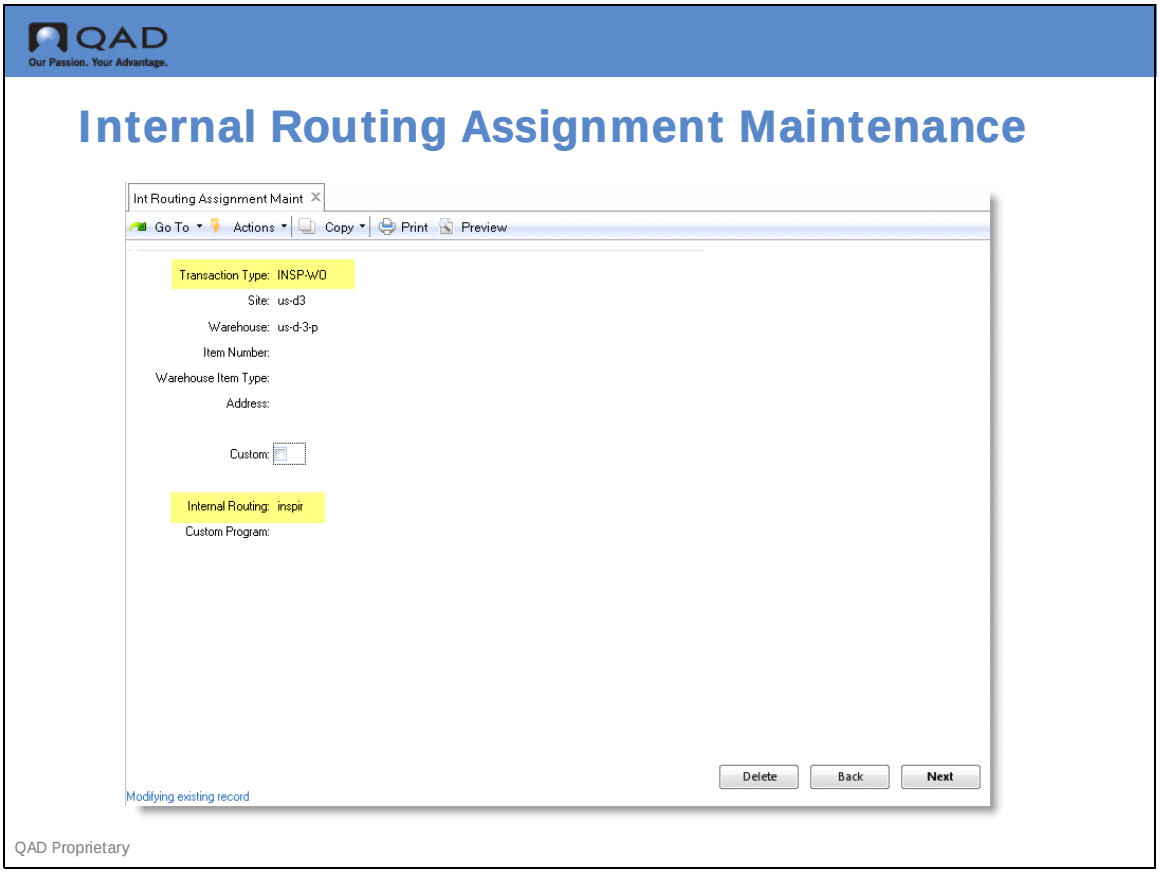
Internal Routing. Specify the code that identifies the internal routing you want to maintain or assign to a particular transaction type.

In the training example, you have three areas for storage of both raw and finished goods, a product area to build the finished product, and an inspection area.

Sequence. Enter the number that identifies the order of this routing step. Each internal routing consists of a number of steps, identified by a sequence number. To make it easier to add steps within the sequence later, number the sequences as 10, 20, 30 rather than 1, 2, 3.

Internal Routing Group. Specify for this sequence step of the routing the next IRG to which the inventory should move.

Internal Routing Assignment Maintenance



Use Internal Routing Assignment Maintenance (4.2.9 if using QAD Warehousing and 80.2.9 if using AIM) to link transaction types to internal routings. You can also specify a combination of a transaction type with an item, an item type, or an address relating to a supplier or customer so that the internal routing is used when that particular combination occurs.

In the training example, you need the following transaction types for transactions that take place in the storage, product, and inspection areas:

PICK WO: Pick raw materials for the work order.

RCT WO: Receive newly built finished goods into storage.

INSP WO: Inspect the work order goods.

BACK WO: Send inspected work order goods back to storage.

Fields

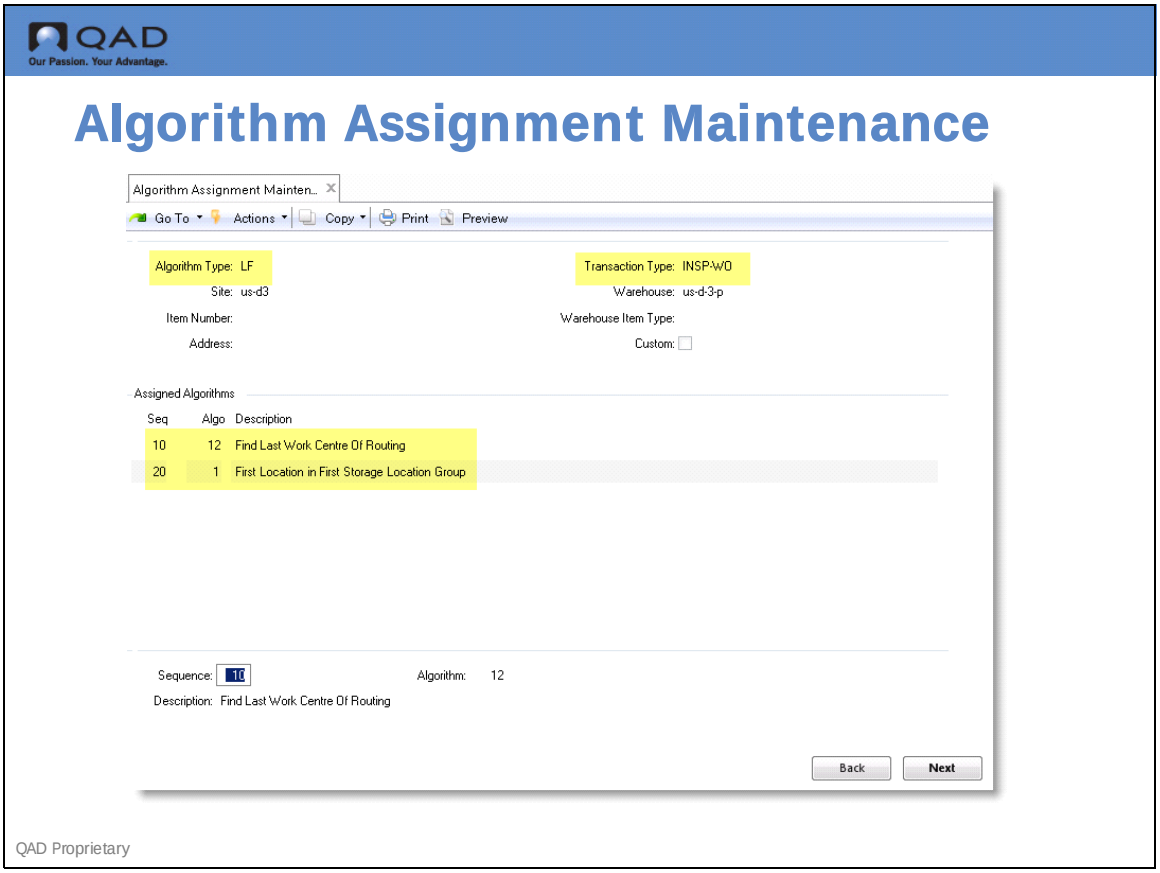
Transaction Type. This field is used to specify the transaction type. You maintain transaction types using Transaction Type Maintenance.

You specify the transaction type to link to an internal routing in Internal Routing Assignment Maintenance. You specify the transaction type to link to a sequence of algorithms in Algorithm Assignment Maintenance.

You also specify the transaction type when using the Algorithm Simulation Menu. These options simulate either location-find and put-away, or picking. The system simulates the running of the algorithms that you have assigned to the specified transaction type and displays the results of the simulated put-away or picking.

Internal Routing. Specify the IR that you set up in the previous step for the transactions; see “Internal Routing Maintenance” on page 134.

Algorithm Assignment Maintenance



Use Algorithm Assignment Maintenance (4.6.9 if using QAD Warehousing and 80.6.9 if using AIM) to specify the algorithm to use for the transaction types you set up in the previous step.

Fields

Algorithm Type. Use Algorithm Type to specify the two-character code for the type of algorithm you want to maintain or assign. The standard two-character codes are CM, LA, LF, PA, PK, QA, and SC.

Set up a Location Find (LF) algorithm for an INSP WO transaction type.

Sequence. Each algorithm assignment consists of a number of individual algorithms, in order, identified by a sequence number.

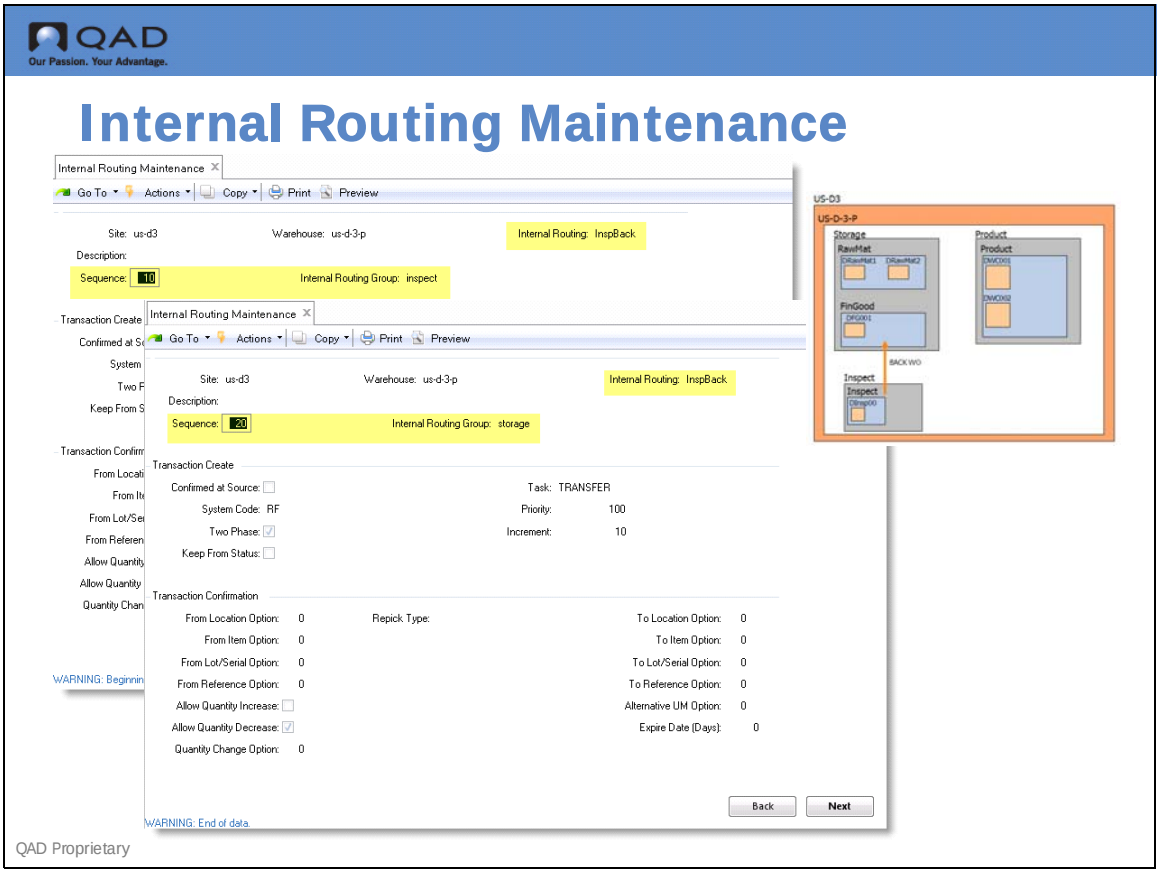
For a new assignment, Sequence defaults to 10. Number sequences by 10's (10, 20, 30, and so on) so that additional steps can be inserted easily later, if required.

Algorithm. Assign algorithms of the type you selected at the top of the frame. You can either type in the required number, or you can use the Up and Down arrow keys to move through the list of algorithms.

Use Algorithm Master Maintenance to modify the description of the algorithm you select. You can also assign algorithms of the type you selected at the top of the screen. For example, if you selected algorithm type PA, you can assign any of the put-away algorithms.

Transaction Type. Specify the transaction type you set up in the previous step.

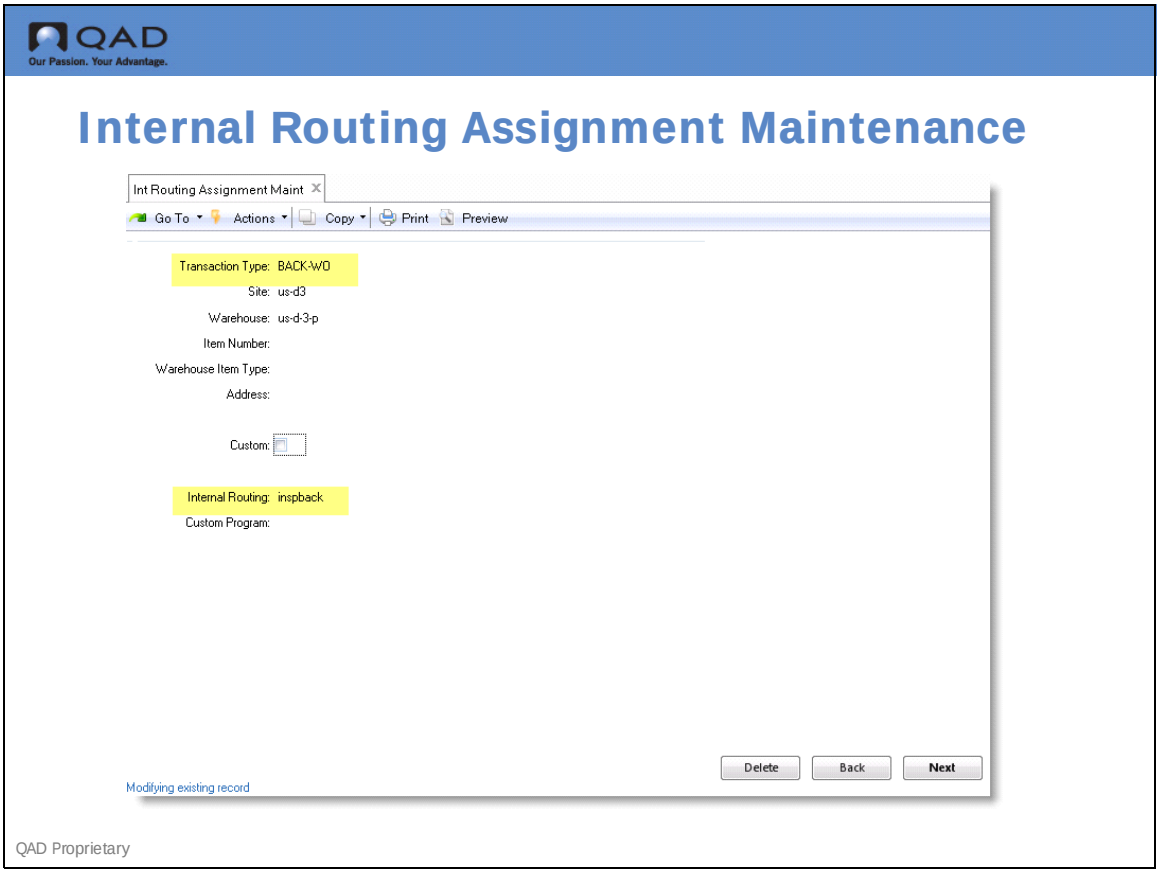
Internal Routing Maintenance



Return to Internal Routing Maintenance and set up an IR for the inspected goods to return to the storage area.

For field descriptions, see “Internal Routing Maintenance” on page 130.

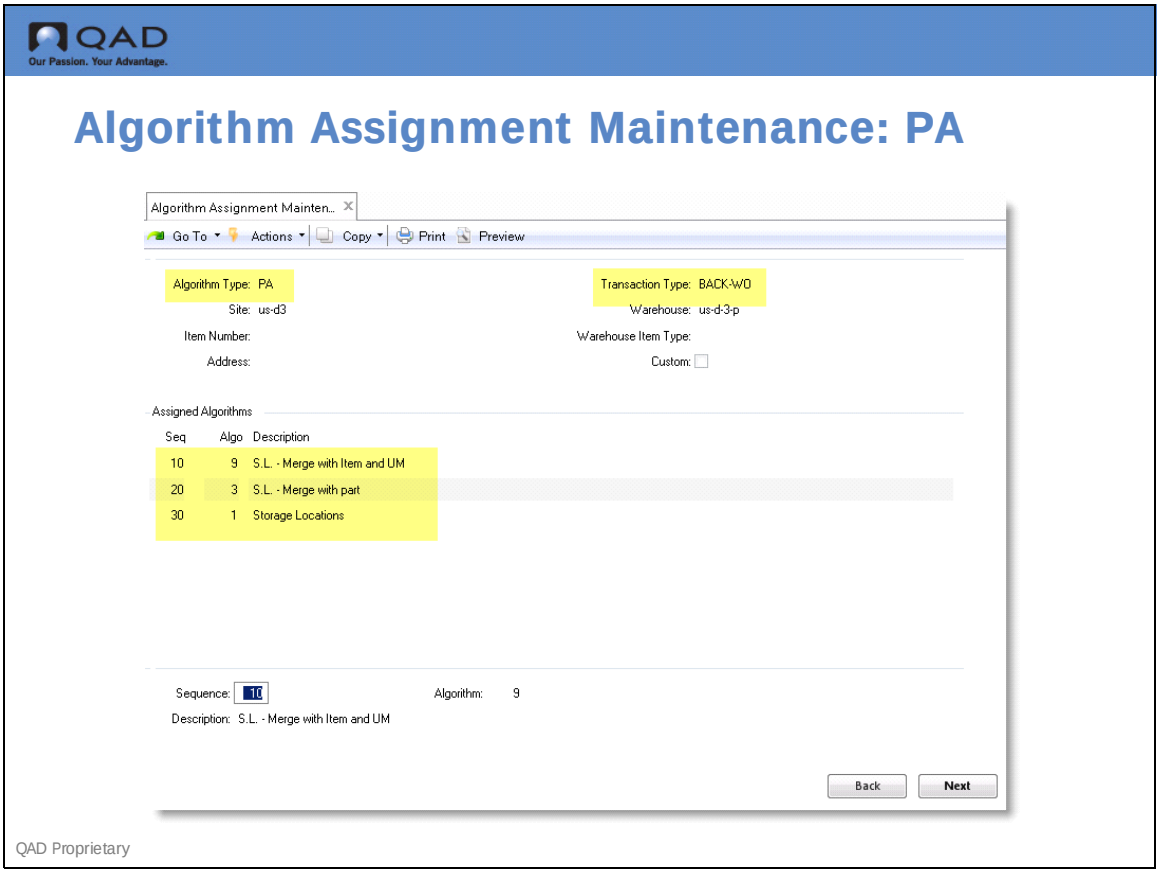
Internal Routing Assignment Maintenance



Return to Internal Routing Assignment Maintenance and specify a BACK WO transaction type for the internal routing step that lets you return inspected goods to the storage area.

For field descriptions, see “Internal Routing Assignment Maintenance” on page 135.

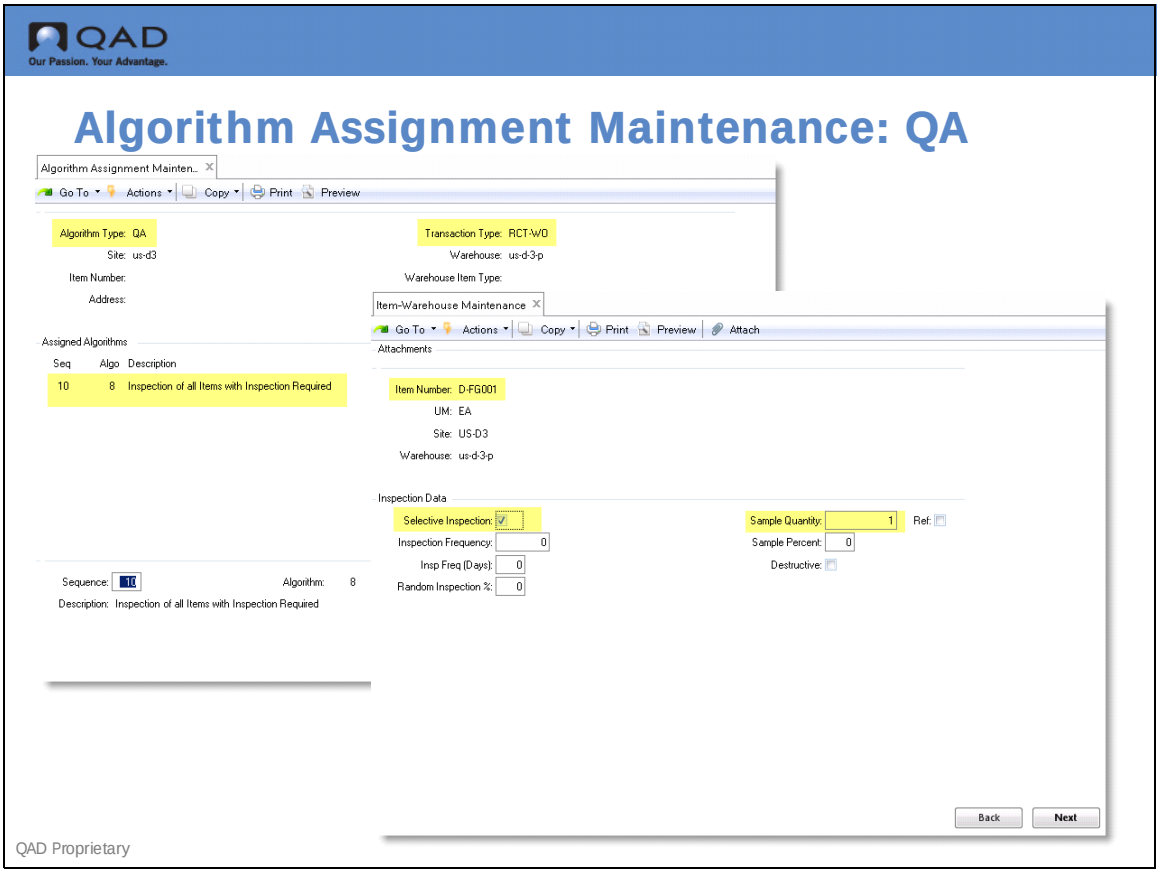
Algorithm Assignment Maintenance-Put Away Algorithm



Return to Algorithm Assignment Maintenance to specify a Put Away (PA) algorithm for the BACK WO transaction type. The system uses the algorithm to put inspected goods back into the storage area.

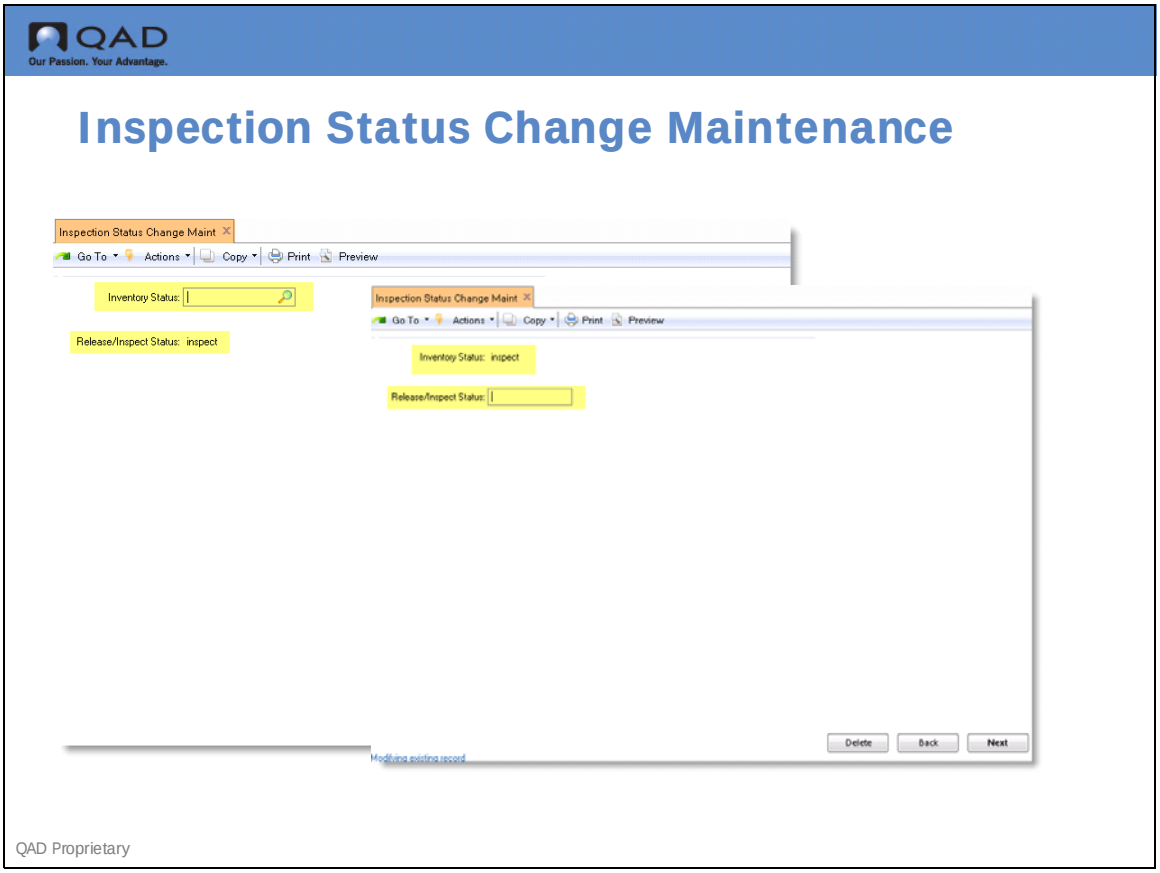
For field descriptions, see “Algorithm Assignment Maintenance” on page 133.

Algorithm Assignment Maintenance - Quality Assurance Algorithm



Specify a Quality Assurance (QA) algorithm for the RCT WO transaction type.

Inspection Status Change Maintenance



Use Inspection Status Change Maintenance (4.19.13 if using Warehousing and 80.22.13 if using AIM) to modify the status associated with inventory being inspected, based on its original status. You can use this in two situations.

- While a sample is in the inspection area waiting inspection results, you can prevent any transactions with the inventory the inventory by changing its status. Change Inspection Status Maintenance lets you define the new status of this inventory, based on its original status.
- Similarly, after a successful inspection is performed, you can release the inventory by changing its status again.

Fields

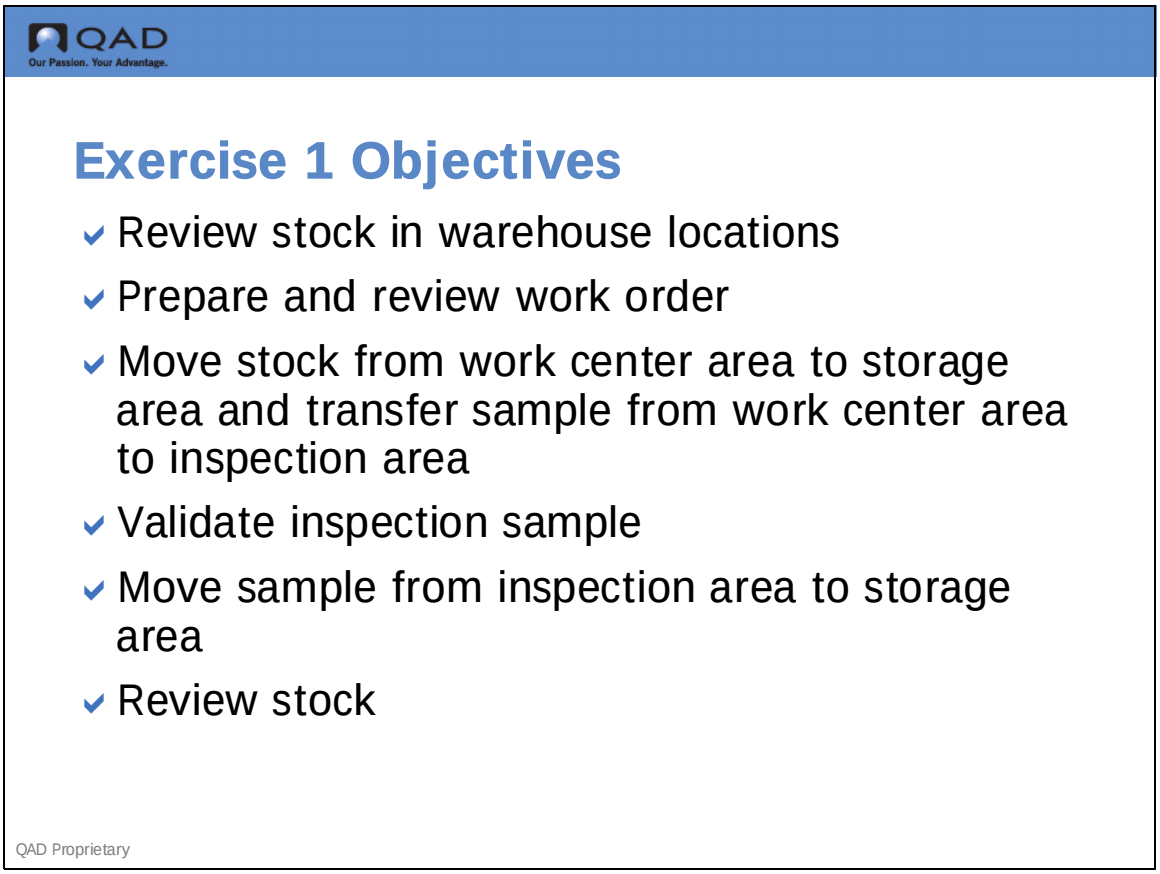
Inventory Status. Inventory status codes identify the status of inventory at a specific site and location with a specific lot/serial number and lot reference.

Inventory status codes determine whether specific inventory balances on hand are available for allocation to sales orders or work orders, are considered available by MRP, and are allowed to go negative.

Inventory status codes also restrict particular transactions at specific locations -- you can restrict issues from an inspection location.

Release/Inspect Status. Enter a valid inventory status code defined in Inventory Status Code Maint. The system changes the sample ID to the status code you specify when the sample is moved to the inspection area. Release/Inspect Status needs to be a valid status code defined in

Exercise1: Move Stock throughout Warehouse for Inspection

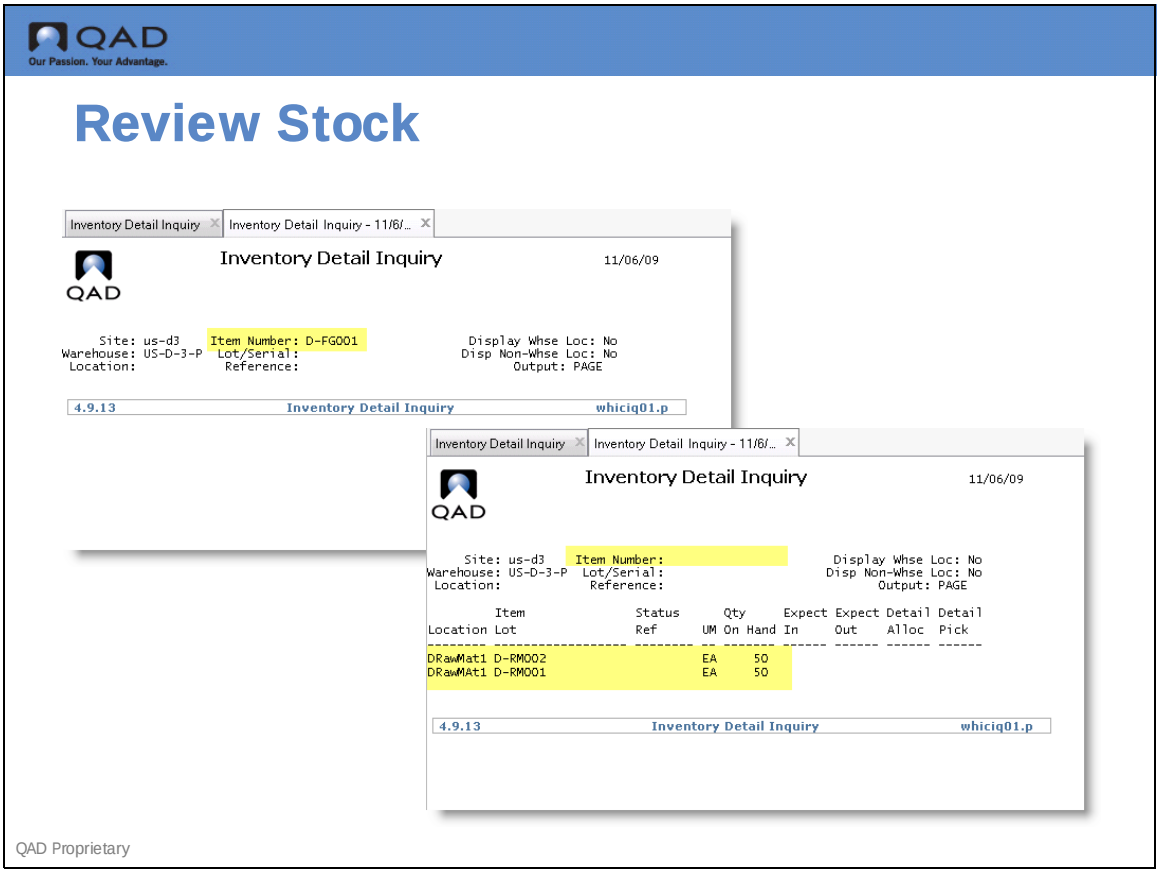


Before You Begin

You must review information on work orders in QAD EE user documentation and on processing orders and inspecting stock in both the QAD Warehousing user documentation and QAD Warehousing Fundamentals Training Guide. Once you are fully familiar with processing orders in a warehouse using Warehousing features, you can complete the training in this section.

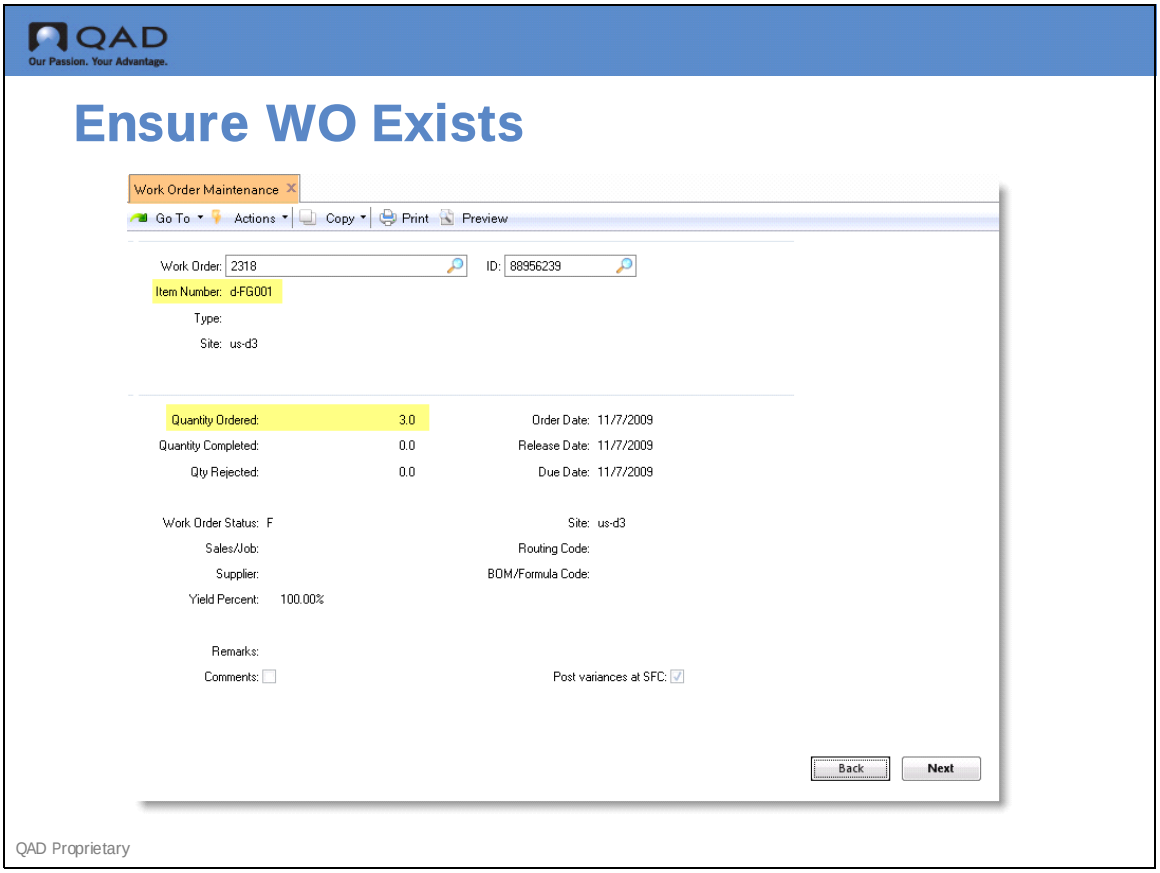
For the exercise, you will use QAD Warehousing on the RF Device and EE standard programs and inquiries.

Step 1: Review Stock



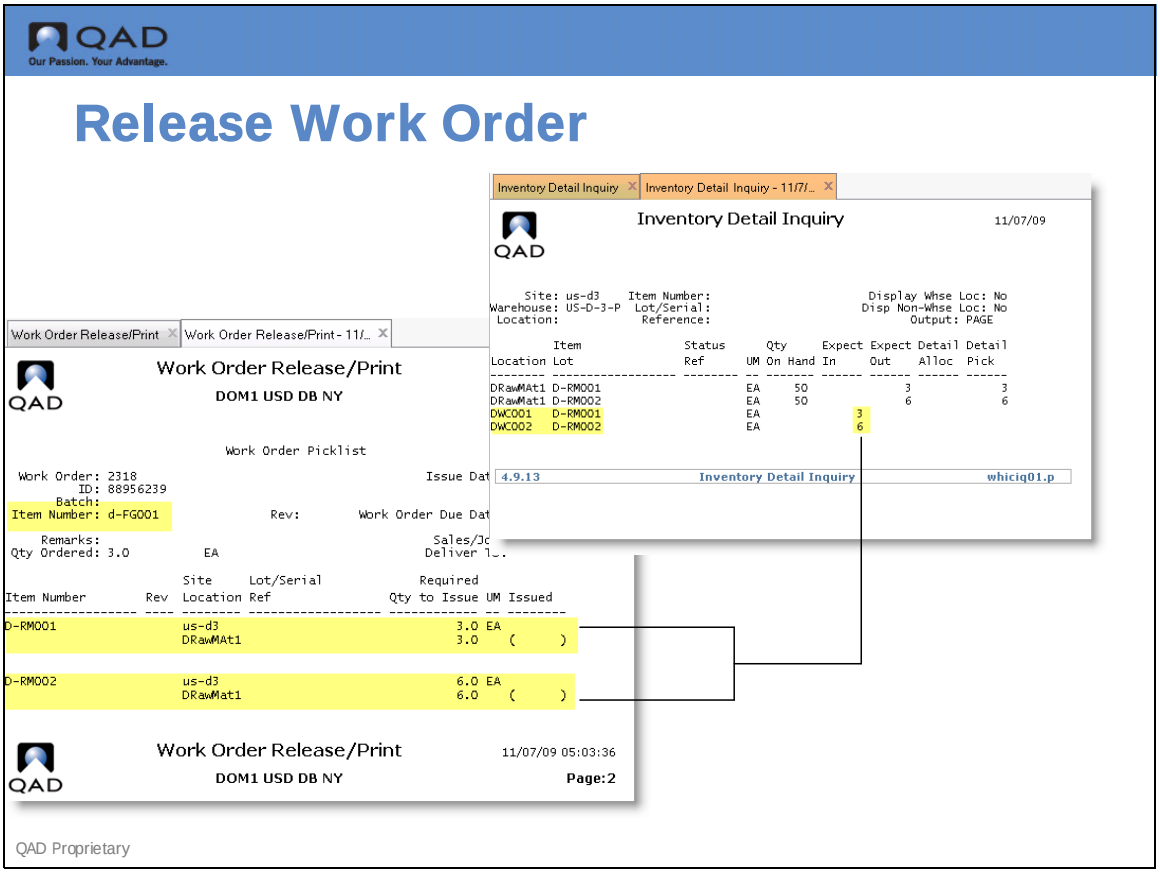
Use Inventory Detail Inquiry (4.8.17) to check that items exist at the warehouse location. Check the quantity of the items.

Step 2: Create or Verify a Work Order Exists



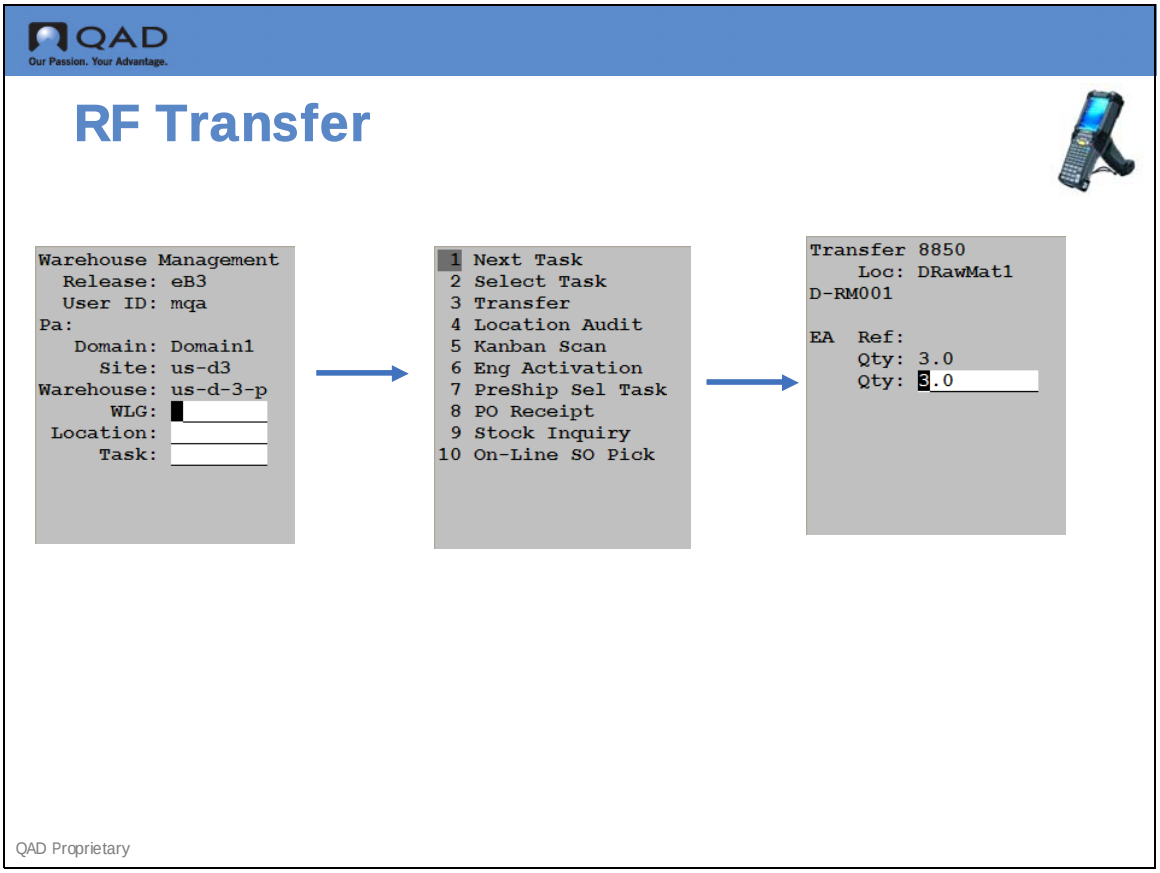
Use Work Order Maintenance (16.1) to ensure that you have a work order for the item at the location. Check the quantity ordered of the item.

Step 3: Release the Work Order



Use Work Order Release Print to release the work order, ensuring that you issue the quantities required to match the Expected In quantities shown for the storage location in the warehouse. Use the Expected In field of Inventory Detail Inquiry to check.

Step 4: Transfer Stock Using the RF



1 Log onto the RF, using Warehousing.

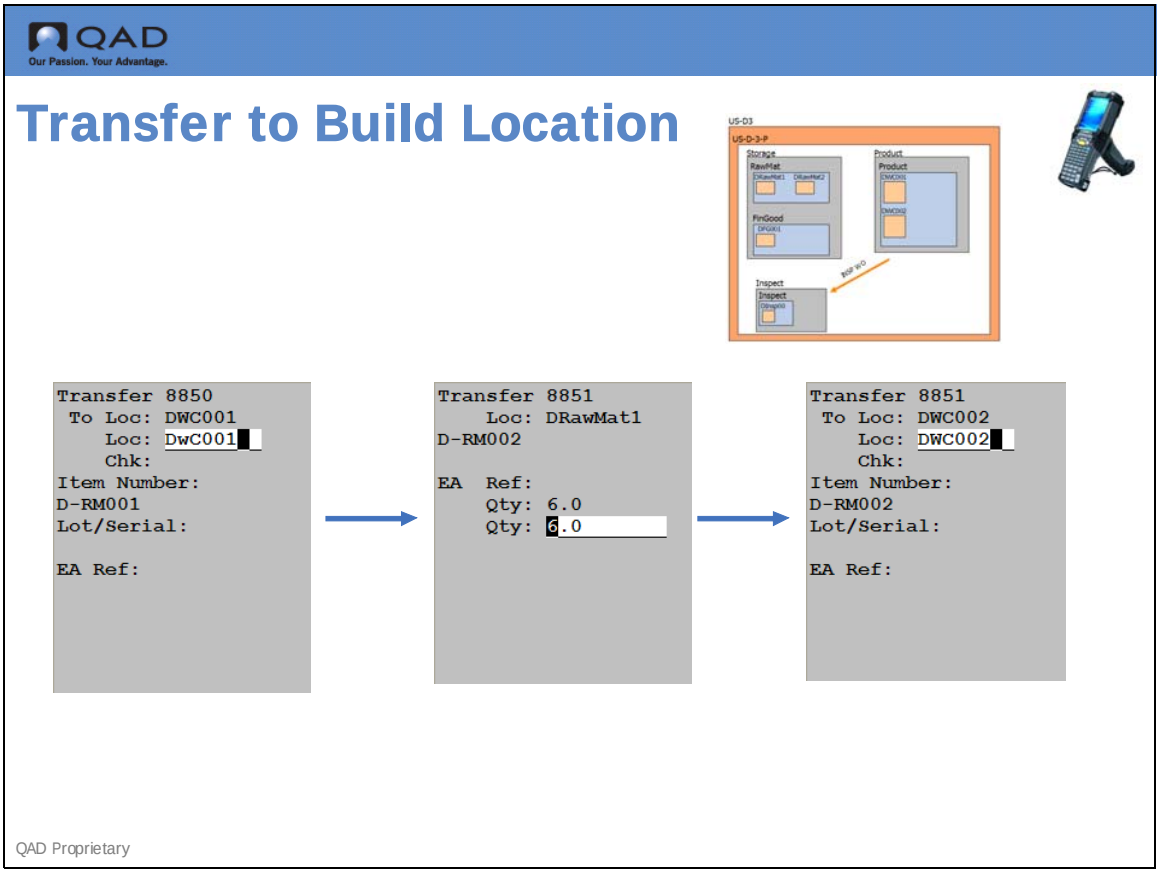
2 Enter the warehouse, work location group (WLG) and location.

3 Select the Next Task option (1.).

4 The system prompts you to transfer stock from the raw material location.

5 Enter the quantity, then press Go.

Step 5: Transfer Stock to Build Location

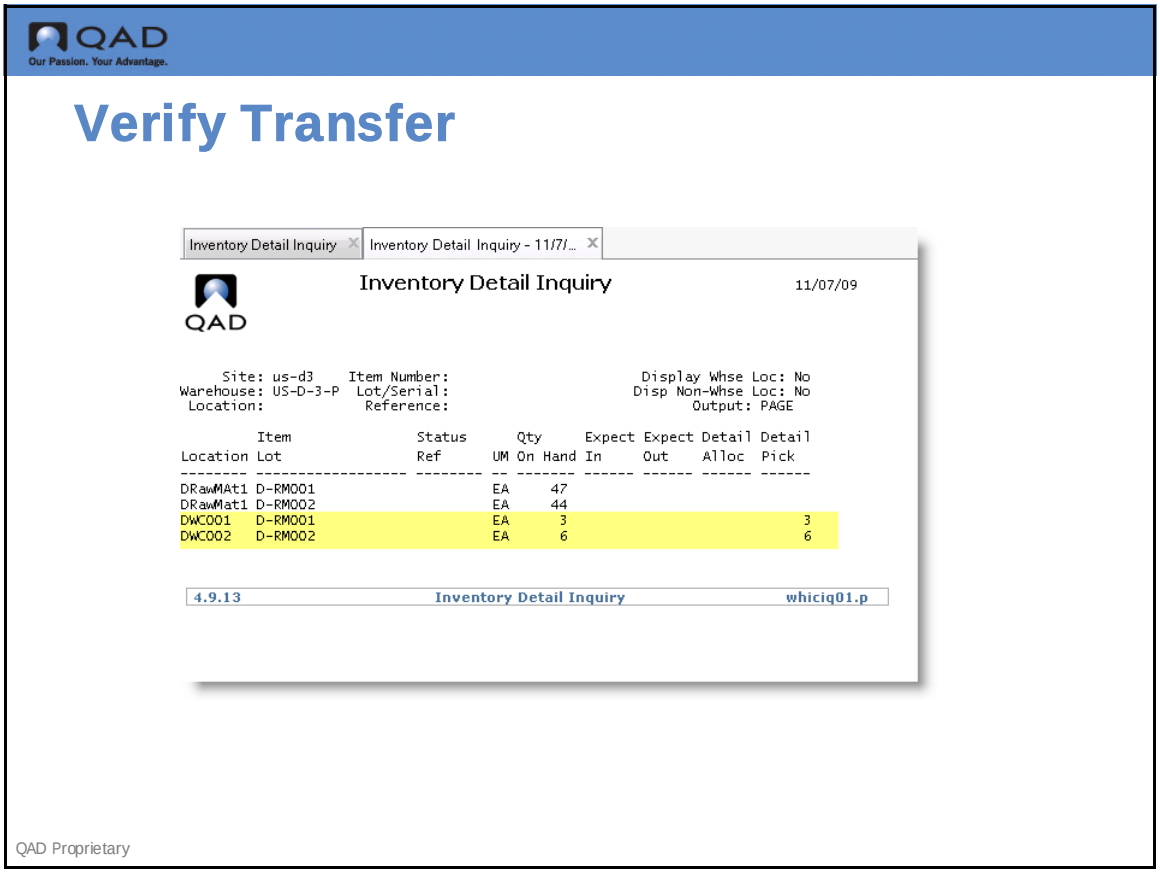


1 Enter the build location to which you are transferring stock.

2 Repeat the transfer process, transferring a second quantity of stock to the second build area.

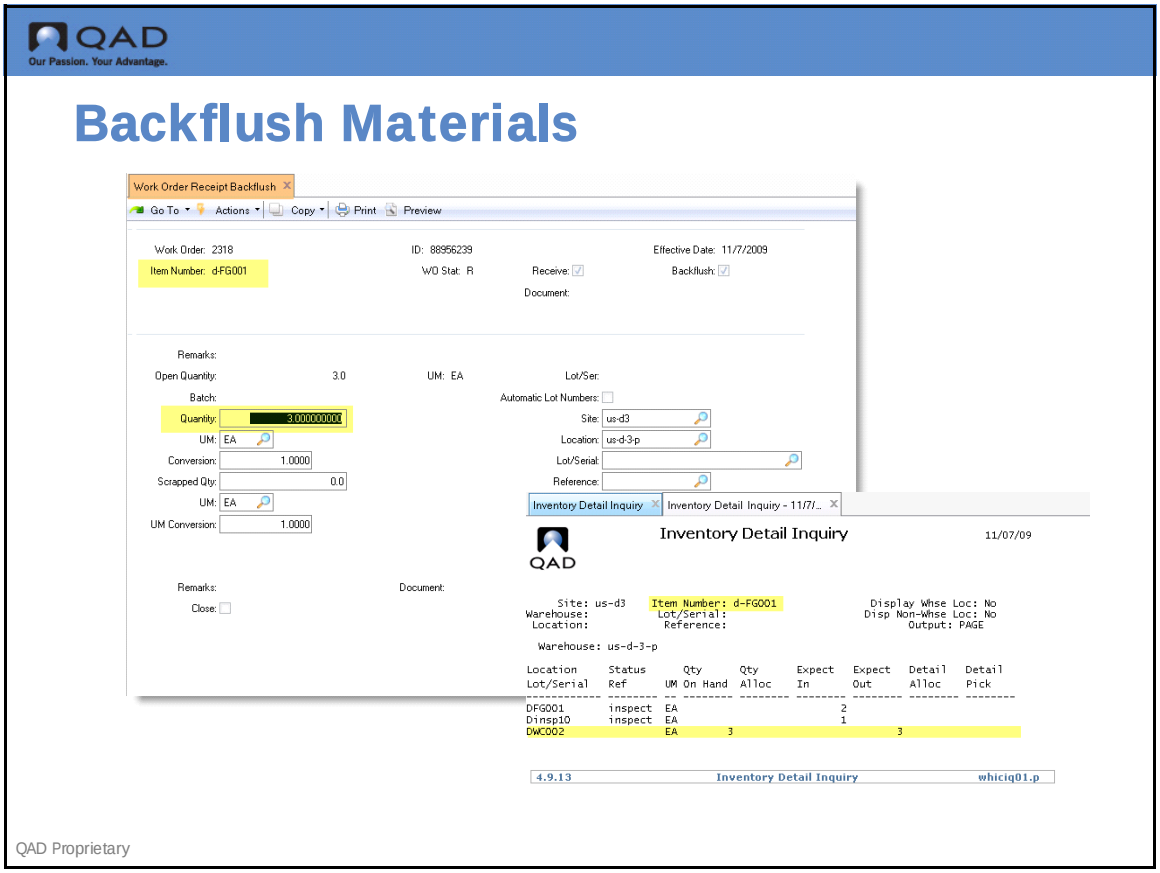
3 Press Go.

Step 6: Verify the Transfer



Use Inventory Detail Inquiry to verify that the quantities (3, 6) were transferred to the build location.

Step 7: Backflush/Issue Items



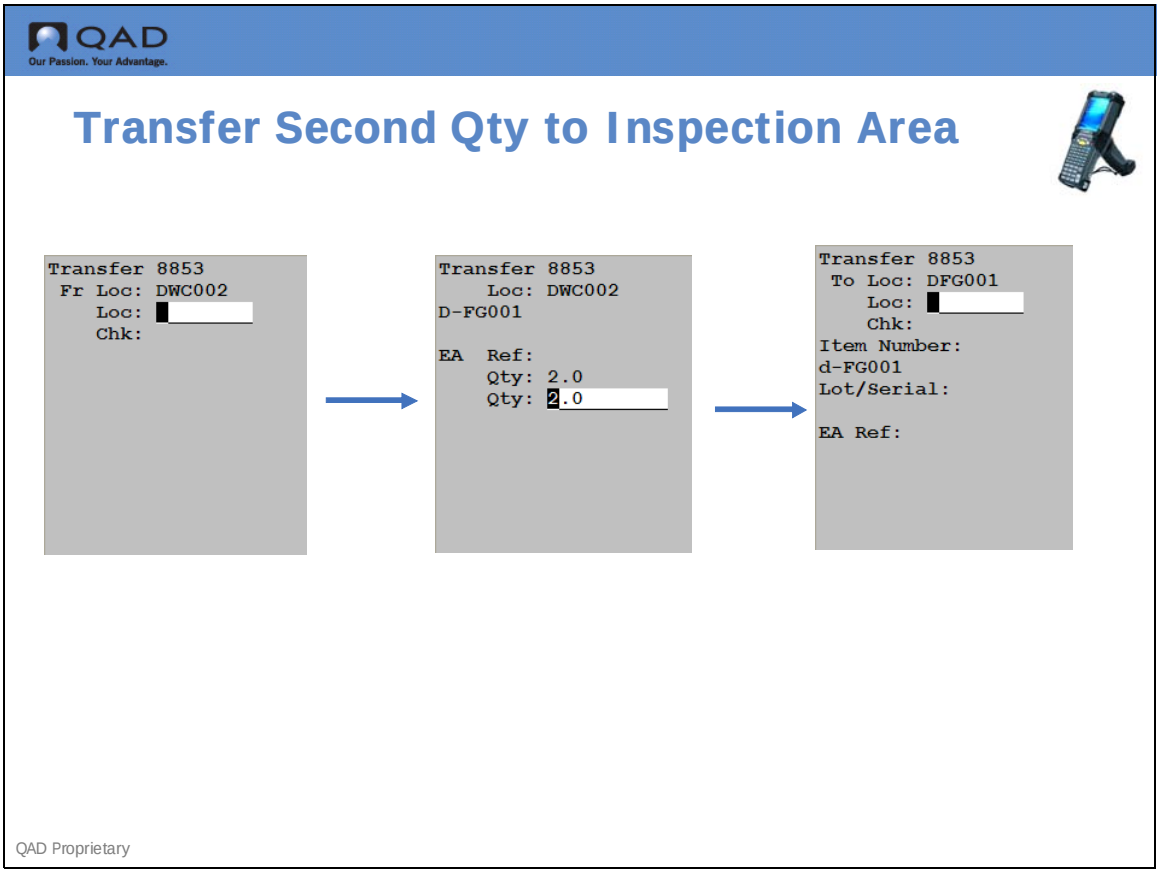
1 Use Work Order Receipt Backflush to receive completed products and issue the items used to make them at the same time.

   A receipt with backflush increases end-item inventory quantities at the designated location and decreases component inventory. It also updates the work order to reflect quantities completed.

2 Enter the quantity; then press Go.

3 Use Inventory Detail Inquiry to verity that the system allocated the quantity you entered for the correct location.

Step 8: Transfer Stock to Inspection Location



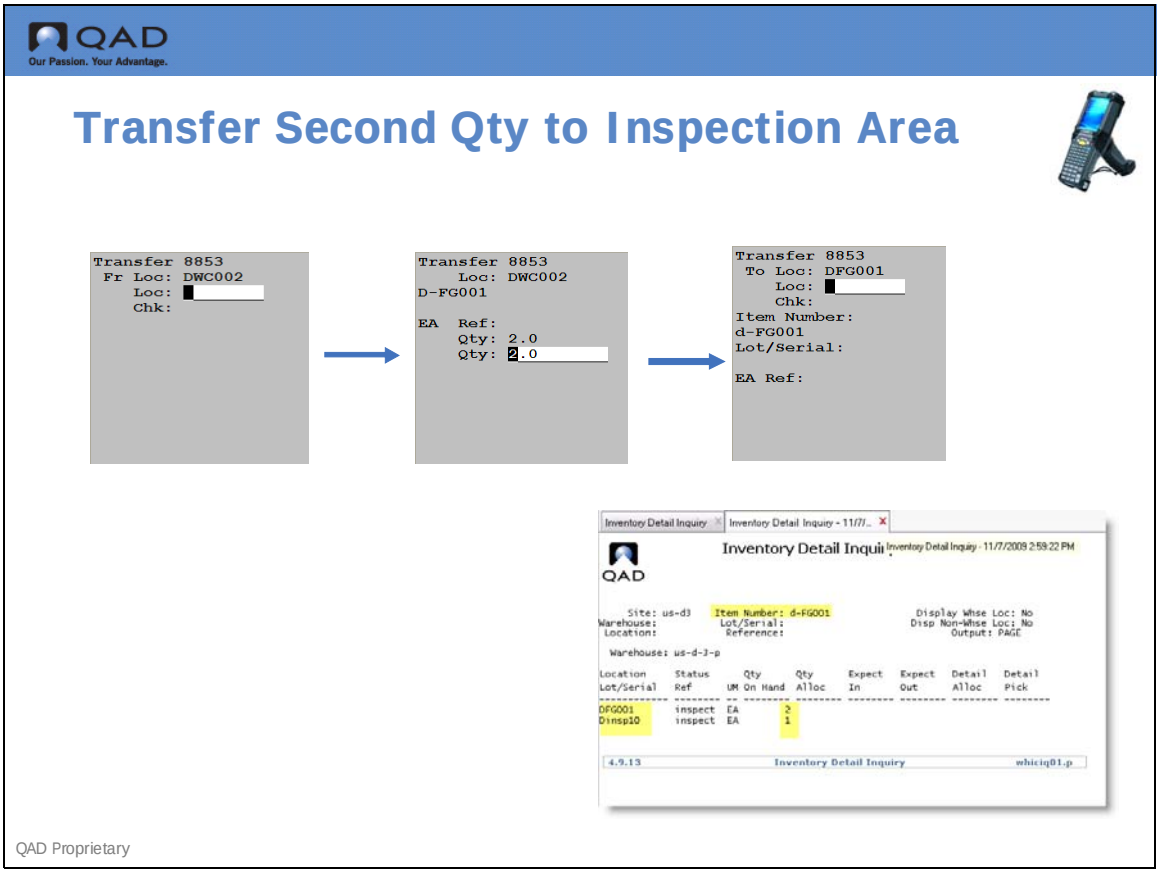
1 Use the RF Next Task function to transfer stock to the inspection area.

2 The system defaults a quantity; accept or change the default, then press Go.

3 Enter the inspection location; then press Go.

4 Use Inventory Detail Inquiry to verify that stock was moved to the inspection area.

Step 9: Transfer Second Qty to Inspection Location



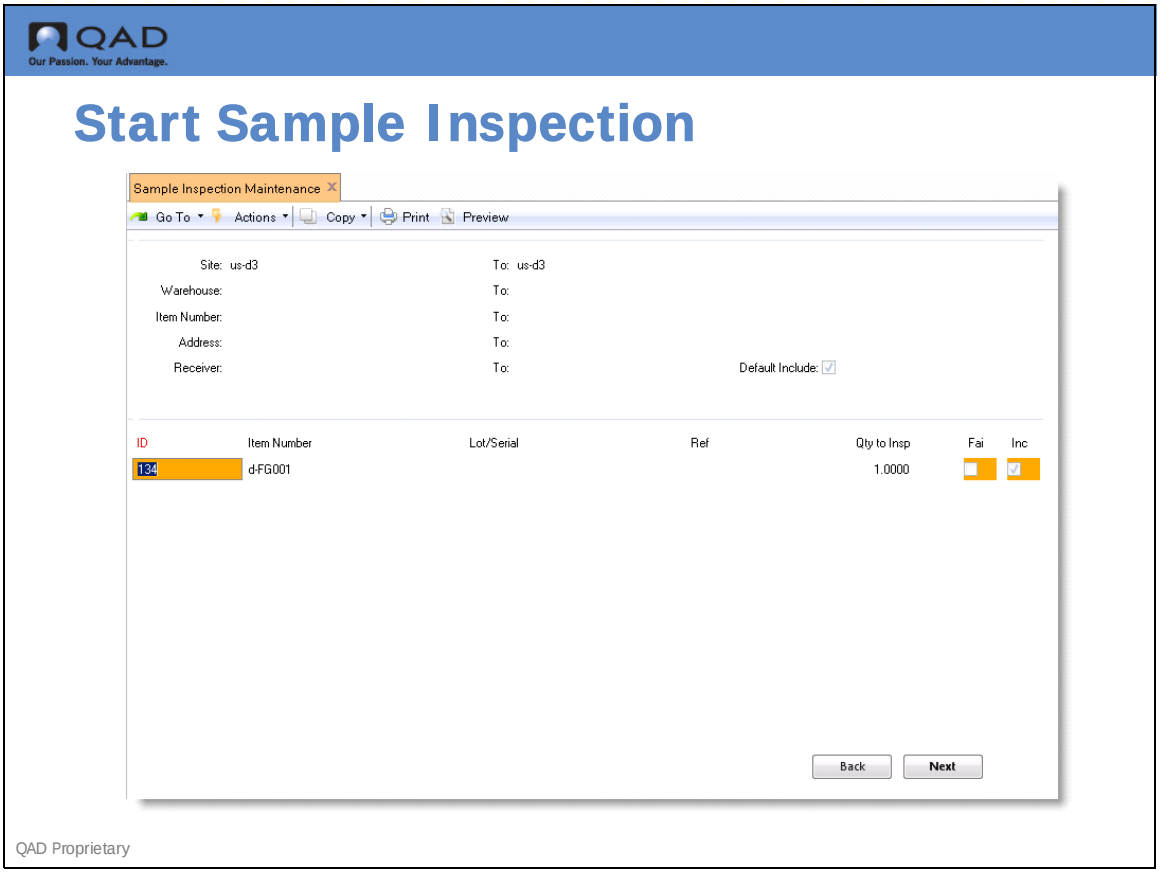
1 Use the RF Next Task function to transfer the second quantity of stock to the inspection area.

2 The system defaults a quantity; accept or change the default, then press Go.

3 Enter the inspection location; then press Go.

4 Use Inventory Detail Inquiry to verity the transfer.

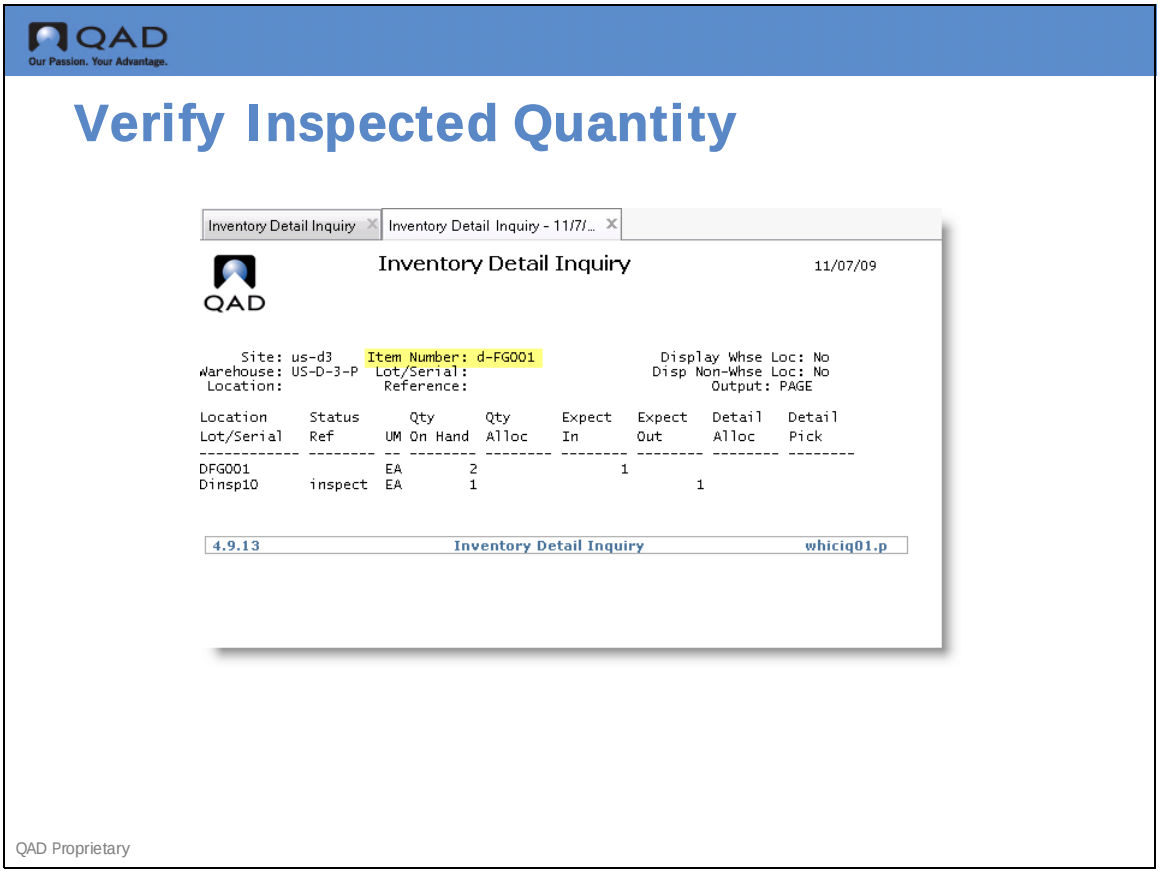
Step 10: Start the Sample Inspection



1 Use the Sample Inspection Maintenance (4.19.1 if using QAD Warehousing and 4.22.1 if using AIM) to start the inspection.

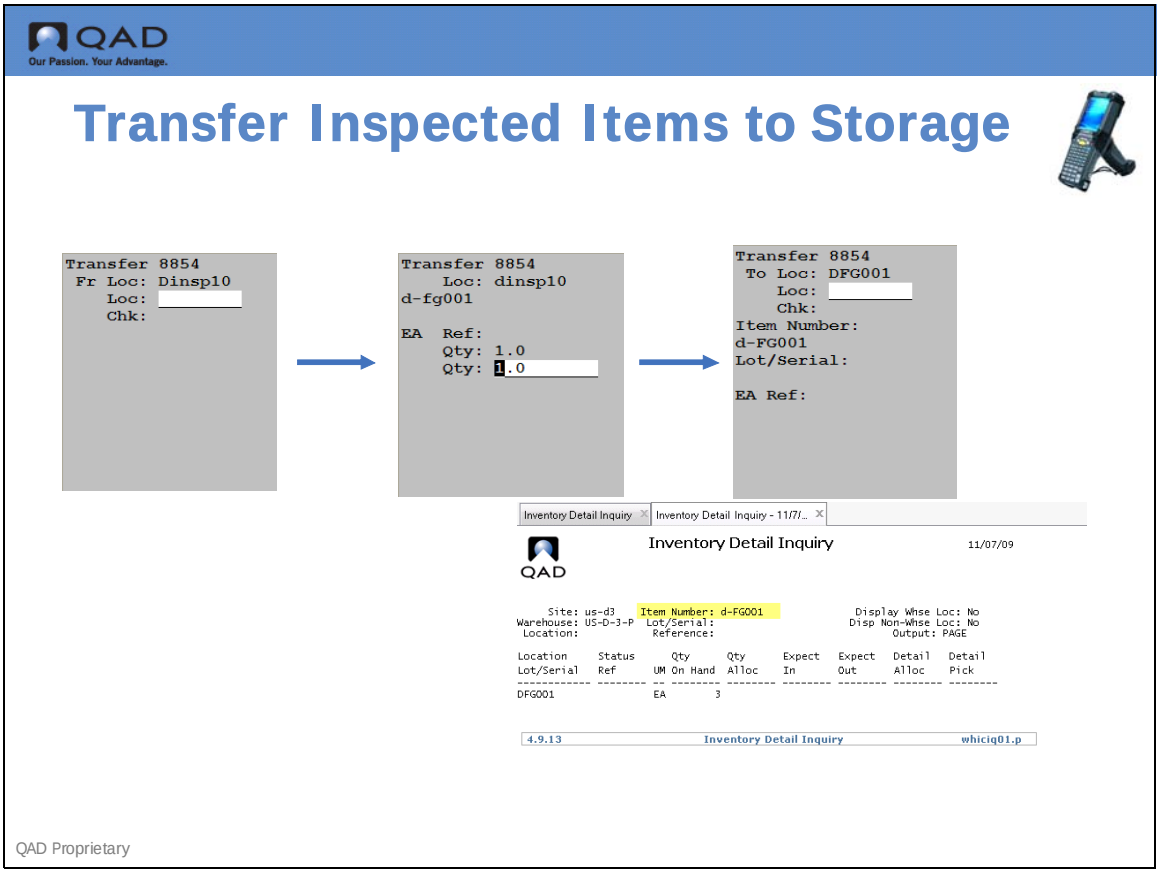
2 Select the item to be inspected, ensuring that Inc is selected.

Step 11: Verify Inspected Items



Use Inventory Detail Inquiry to verify that the system indicates the status of the items in the inspection location are inspected.

Step 12: Transfer Inspected Items to Storage



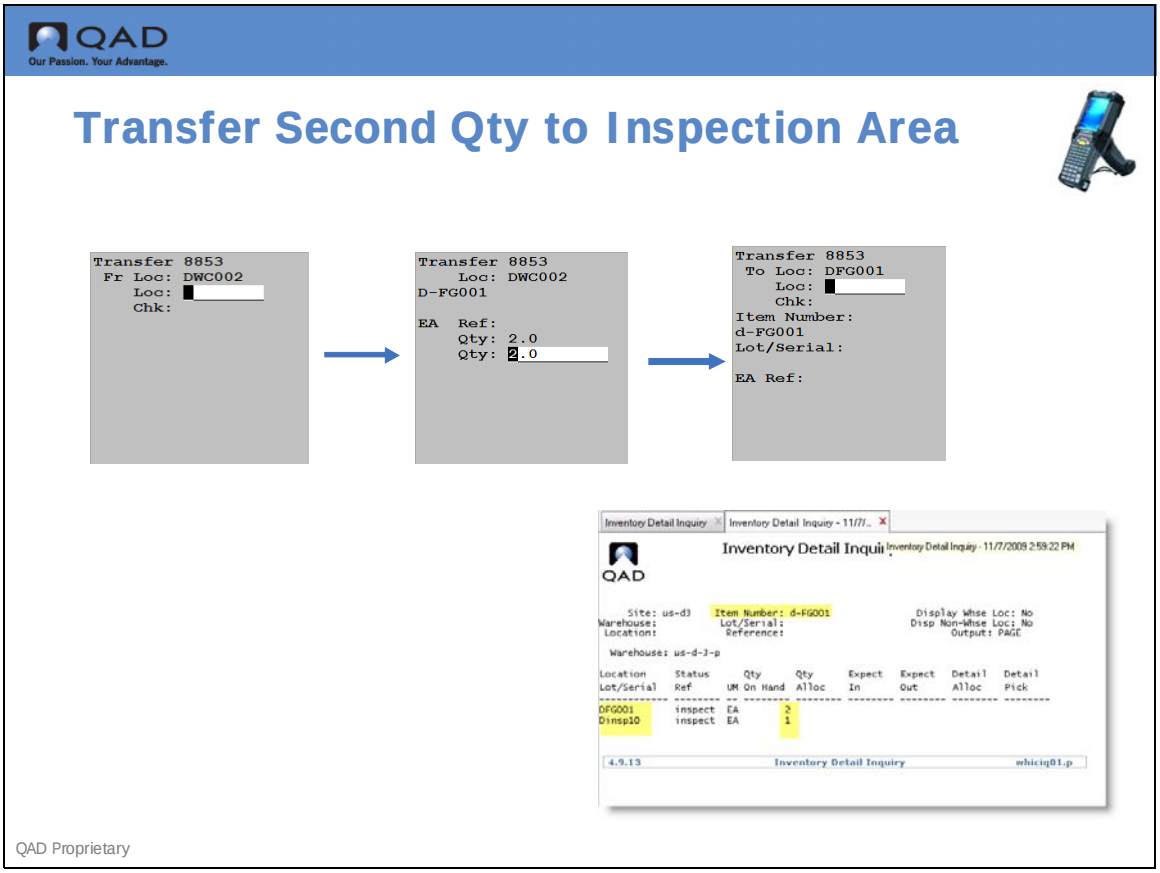
1 Use the RF Select Task to transfer inspected stock to the storage area.

2 Enter the inspected quantity to transfer.

3 Enter the storage location; then press Go.

4 Use Inventory Detail Inquiry to verity the transfer.

Step 9: Transfer Second Qty to Inspection Location



1 Use the RF Select Task to transfer the second quantity of stock to the inspection area.

2 Enter a sample to inspection; for example, enter 2; then press Go.

3 Enter the inspection location; then press Go.

4 Use Inventory Detail Inquiry to verity the transfer.

Study Questions

1 For work orders, when does inspection typically occur?

2 Why is the BACK WO transaction used in the inspection process?

3 Briefly describe the setup process for work order inspection.

4 Name the three areas you set up in Internal Routing Maintenance for inspection. Hint: You set up the areas in the exercise.

5 Name at least two of the transaction types that you use in inspection.

6 True or False. You set up a Quality Assurance (QA) algorithm for an INSP WO transaction type.

7 What is the purpose of the Put Away (PA) algorithm for the BACK WO?

8 You specify a Quality Assurance (QA) algorithm for which transaction type?

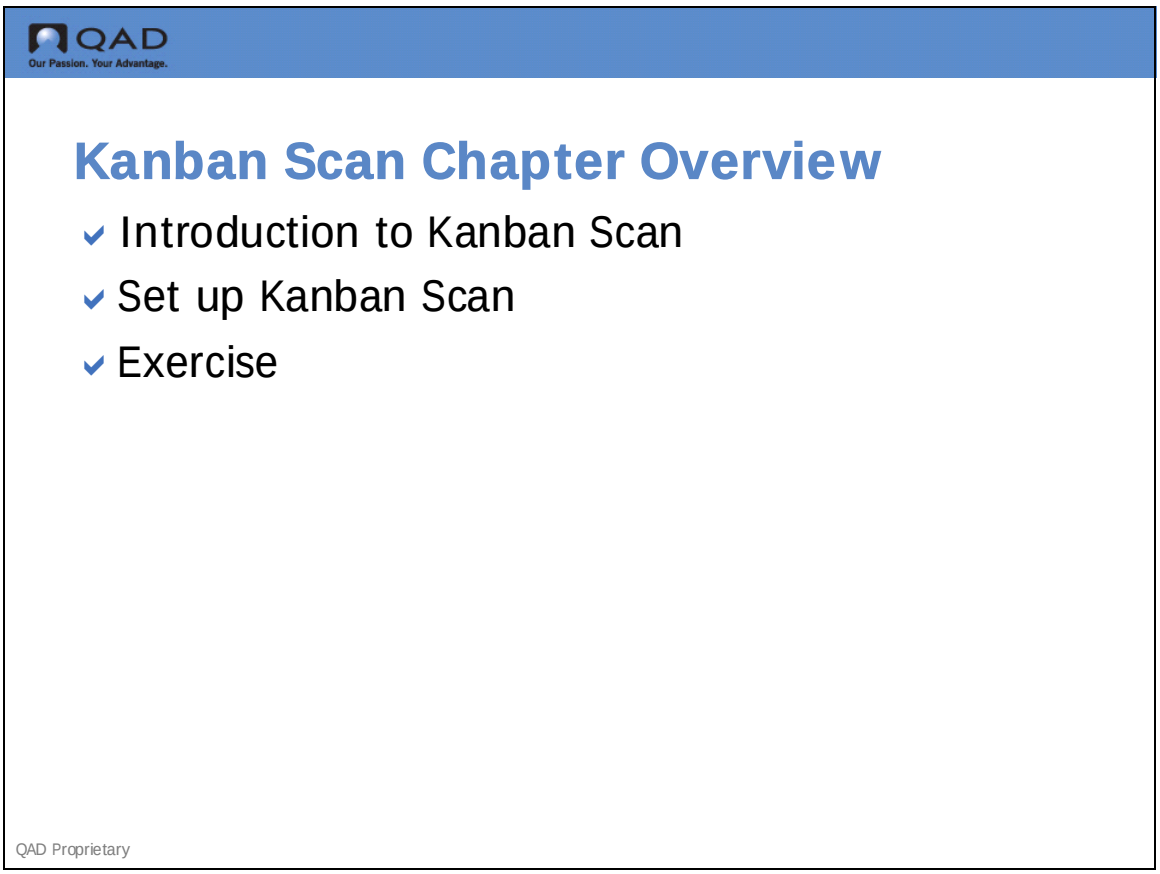
9 Describe one situation in which you need to modify the status associated with inventory being inspected in Inspection Status Change Maintenance.

10 True or False. Inventory status codes also restrict particular transactions at specific locations.

Chapter 7

Kanban Scan

Chapter Overview



Introduction TO Kanban Scan

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Kanban Scan

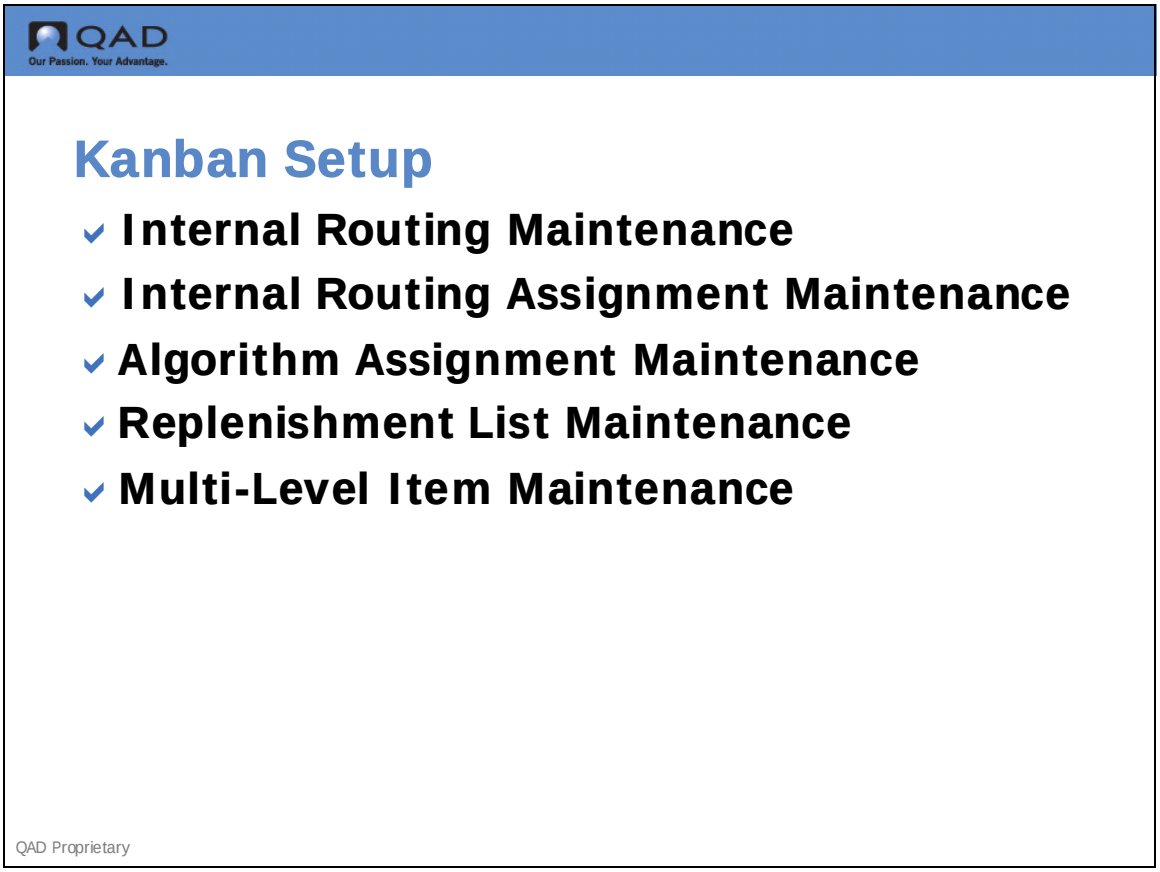
- Manually request replenishment for a given location of a specified quantity of an item.

QAD Proprietary

With replenishment functionality, warehouse staff define a minimum level of inventory for an item in a location. As soon as the system issues inventory and stock drops below the minimum level, a replenishment task is created for staff to move inventory from the main storage area to the location to be replenished. Inventory is successfully replenished in this way except during a work order backflush. During a backflush, the system does not issue inventory until the receipt of the quantity of end items. Because time can lapse between when items are actually issued from inventory and when the system backflushes items, it is possible to run out of stock before the system is aware of the actual level.

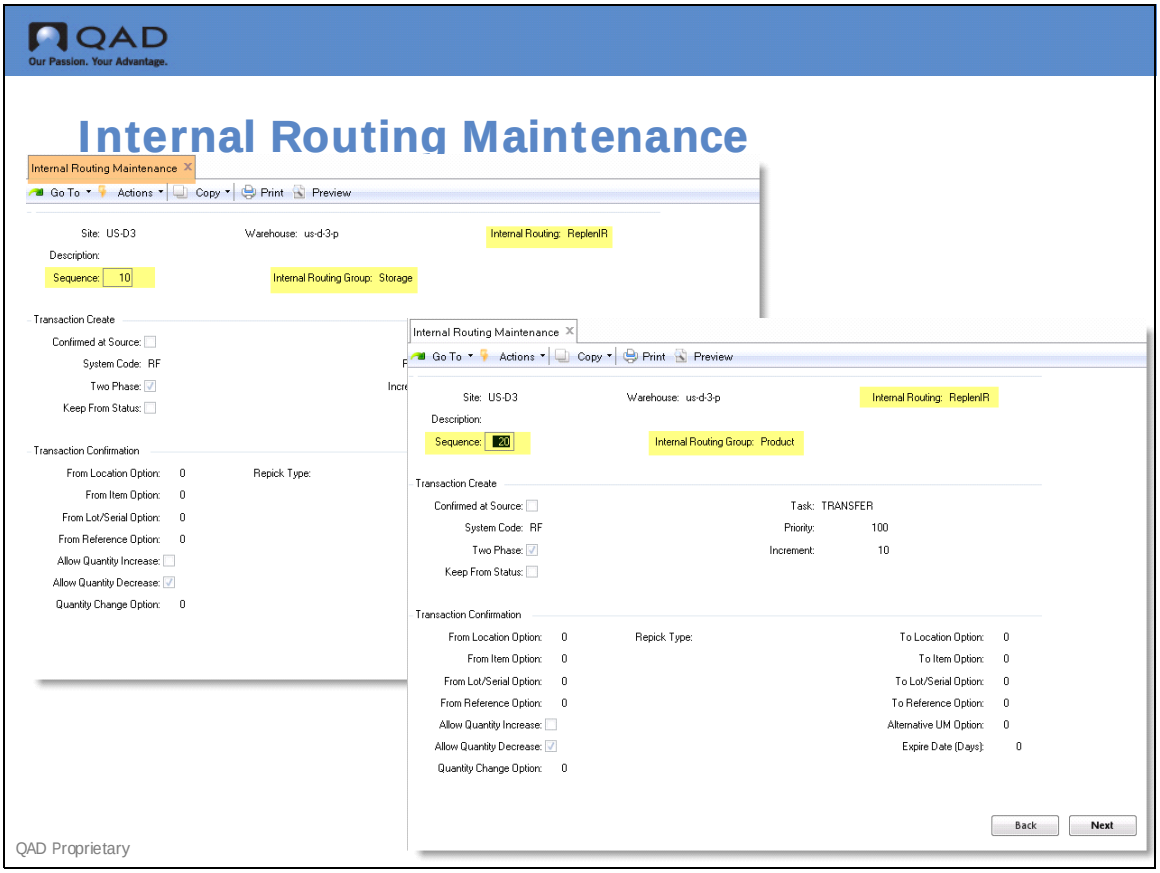
Warehouse staff can use the RF Kanban Scan (1.5) to correct this and manually request replenishment of a specified quantity of an item. They can also use RF Kanban Scan when they need an item in the production area but warehouse staff are not picking the item.

Kanban Setup



You must set up kanban scanning by creating and assigning the internal routing, assigning algorithms, setting up replenishment lists, and setting up multi-items. The following topics discuss the setup of these areas.

Internal Routing Maintenance



Use Internal Routing Maintenance (4.2.5) to set up an internal routing so that a sequence can be established that identifies each step along the route.

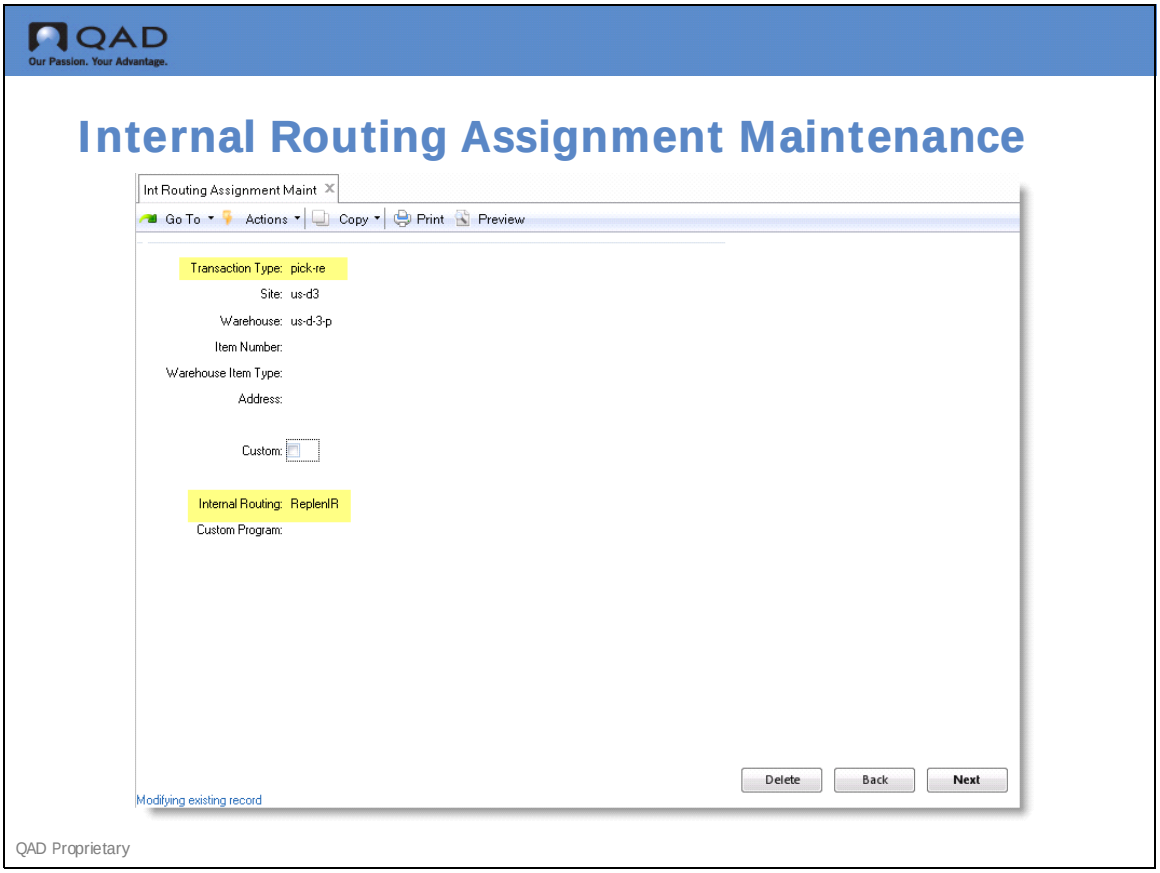
Fields

Internal Routing. Specify the code that identifies the internal routing you want to maintain or assign to a particular transaction type.

Sequence. Enter the number that identifies the order of this routing step. Each internal routing consists of a number of steps, identified by a sequence number. To make it easier to add steps within the sequence later, number the sequences as 10, 20, 30 rather than 1, 2, 3.

Internal Routing Group. Specify for this sequence step of the routing the next IRG to which the inventory should move.

Internal Routing Assignment Maintenance



Use Internal Routing Assignment Maintenance (4.2.9 if using QAD Warehousing and 80.2.9 if using AIM) to link transaction types to internal routings. You can also specify a combination of a transaction type with an item, an item type, or an address relating to a supplier or customer so that the internal routing is used when that particular combination occurs.

In the training example, you need the PICK-RE transaction types for kanban scan transactions.

Fields

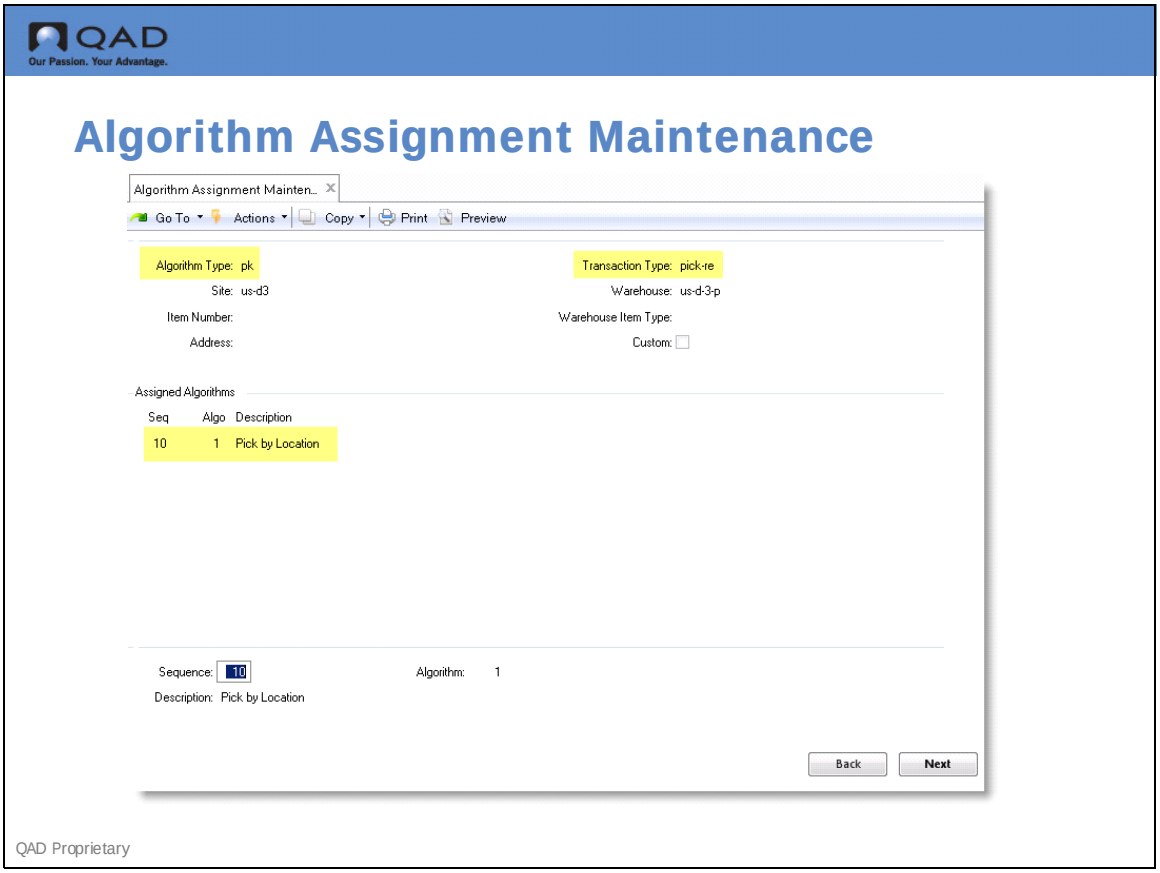
Transaction Type. This field is used to specify the transaction type. You maintain transaction types using Transaction Type Maintenance.

You specify the transaction type to link to an internal routing in Internal Routing Assignment Maintenance. You specify the transaction type to link to a sequence of algorithms in Algorithm Assignment Maintenance.

You also specify the transaction type when using the Algorithm Simulation Menu. These options simulate either location-find and put-away, or picking. The system simulates the running of the algorithms that you have assigned to the specified transaction type and displays the results of the simulated put-away or picking.

Internal Routing. Specify the IR that you set up in the previous step for the transactions.

Algorithm Assignment Maintenance



Use Algorithm Assignment Maintenance (4.6.9 if using QAD Warehousing and 80.6.9 if using AIM) to specify the algorithm to use for the transaction types you set up in the previous step.

Fields

Algorithm Type. Use Algorithm Type to specify the two-character code for the type of algorithm you want to maintain or assign. The standard two-character codes are CM, LA, LF, PA, PK, QA, and SC.

Set up a pick (PK) algorithm for kanban scanning.

Sequence. Each algorithm assignment consists of a number of individual algorithms, in order, identified by a sequence number.

For a new assignment, Sequence defaults to 10. Number sequences by 10's (10, 20, 30, and so on) so that additional steps can be inserted easily later, if required.

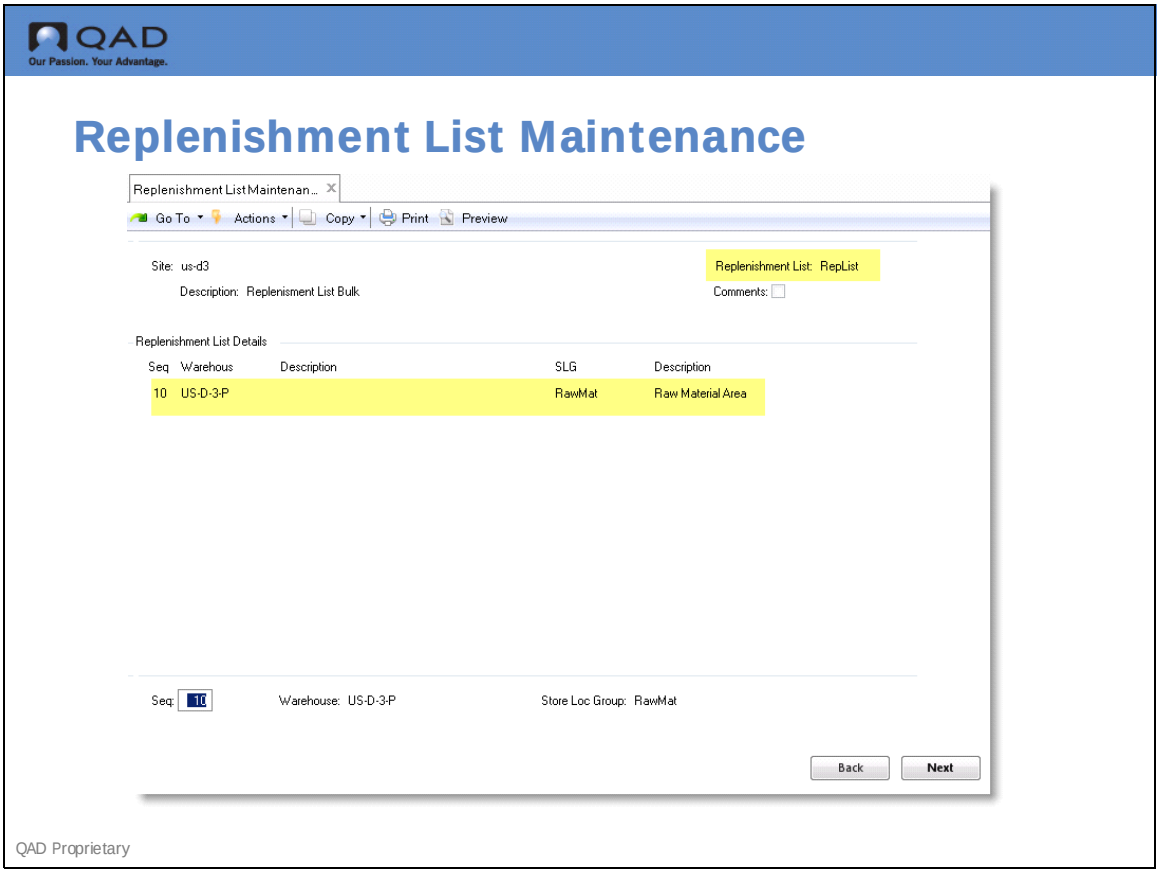
Algorithm. Assign algorithms of the type you selected at the top of the frame. You can either type in the required number, or you can use the Up and Down arrow keys to move through the list of algorithms.

Use Algorithm Master Maintenance to modify the description of the algorithm you select.

In Algorithm Assignment Maintenance, you can assign algorithms of the type you selected at the top of the screen.

Transaction Type. Specify the transaction type you set up in the previous step.

Replenishment List Maintenance



Use Replenishment List Maintenance (4.16.1 if using QAD Warehousing and80.16.1 if using AIM). The replenishment list contains SLGs you want to consider for picking the scanned item.

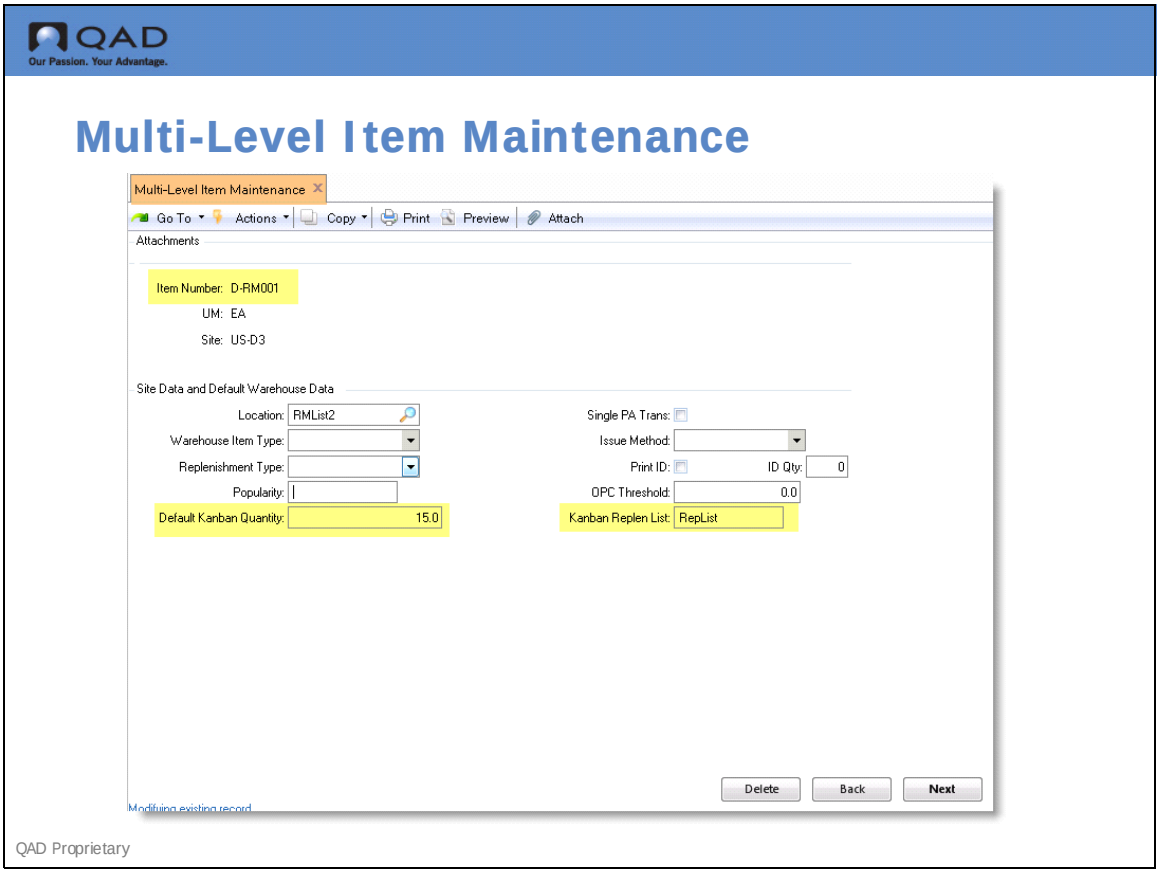
Fields

Seq. Enter the sequence number for the SLG. The sequence number indicates the order that the system will use at the SLGs in order to pick inventory for the replenishment-step 10 first, step 20 second, and so on.

Store Loc Group. Enter the storage location group code, or choose a code from the drop-down list.

Warehouse. Enter the warehouse code, or choose a code from the drop-down list.

Multi-Item Level Maintenance



Use Multi-Level Item Maintenance (4.4.5 if using QAD Warehousing and 80.4.5 if using AIM) to specify the following in the Site Data and Default Warehouse Data frame:

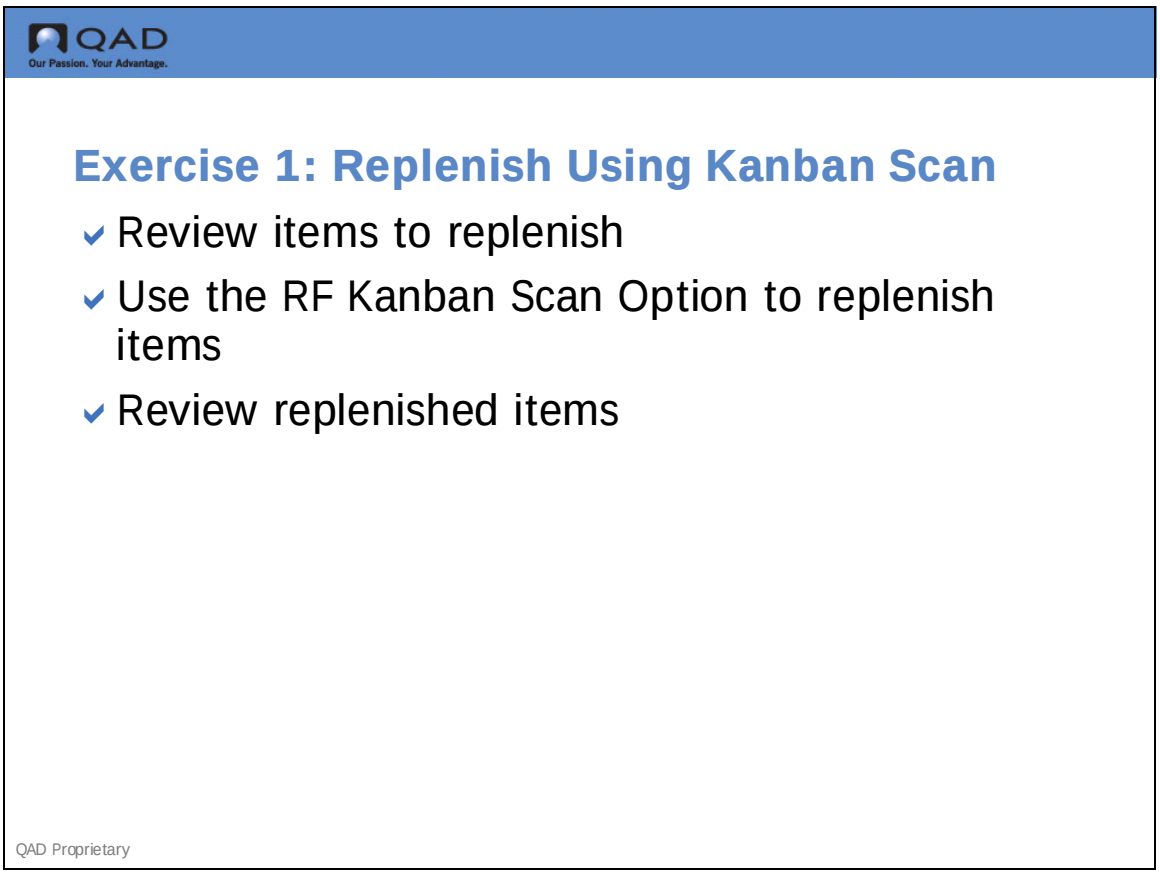
- Replenishment list
- Default quantity to replenish

Fields

Default Kanban Quantity. Enter the default quantity to replenish.

Replenishment List. Enter the replenishment list that contains SLGs you want to consider for picking the scanned item. You create the list in Replenishment List Maintenance (4.16.1).

Exercise1: Replenish using Kanban Scan

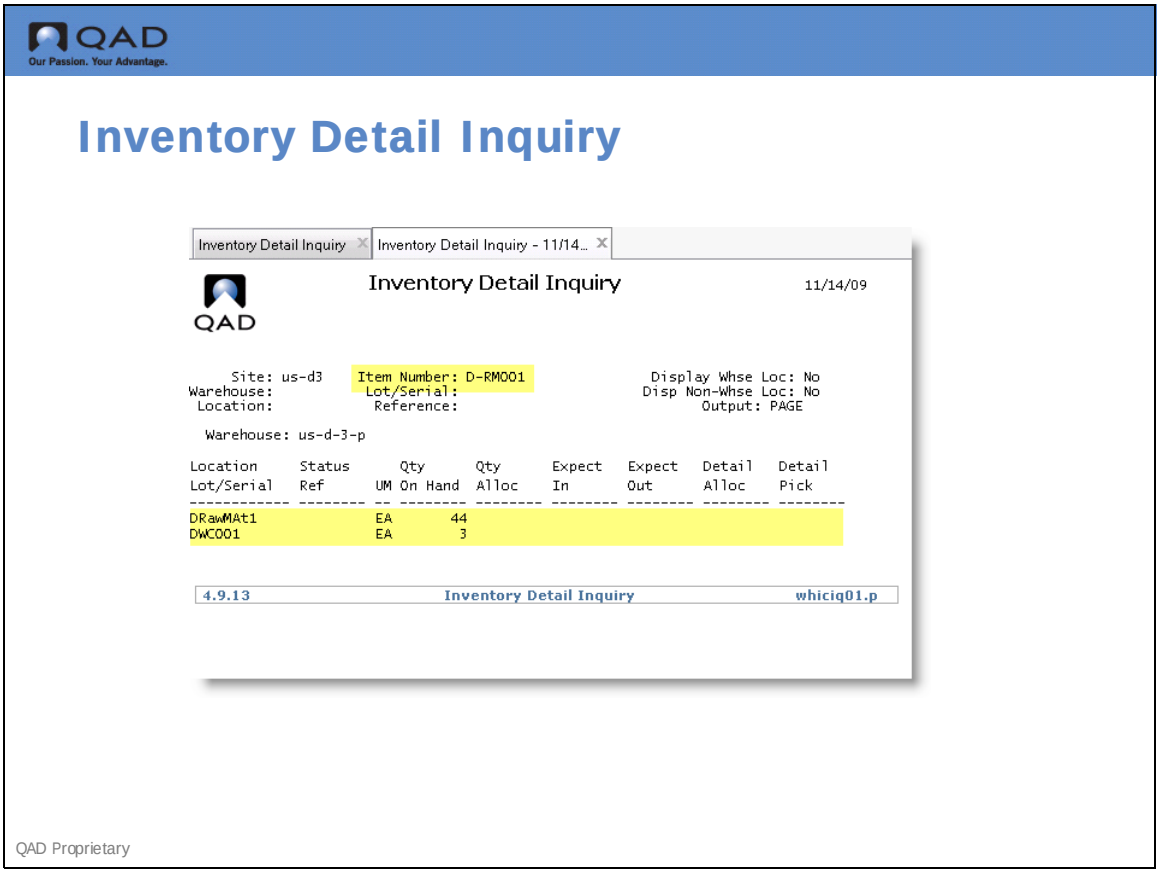


For the exercise, you will use QAD Warehousing on the RF Device and EE standard programs and inquiries.

To run the RF Kanban Scan, warehouse staff scan the item, enter the quantity required, and scan the destination location. You will use QAD Warehousing for the RF device to do this. When you enter RF Kanban scan, it notifies the system that an item requires replenishment and creates a replenishment task for it at the correct time. A default quantity displays in the Kanban Qty field if you specified a default quantity in Multi-Level Item Maintenance (4.4.5). You enter the actual quantity in the Qty field.

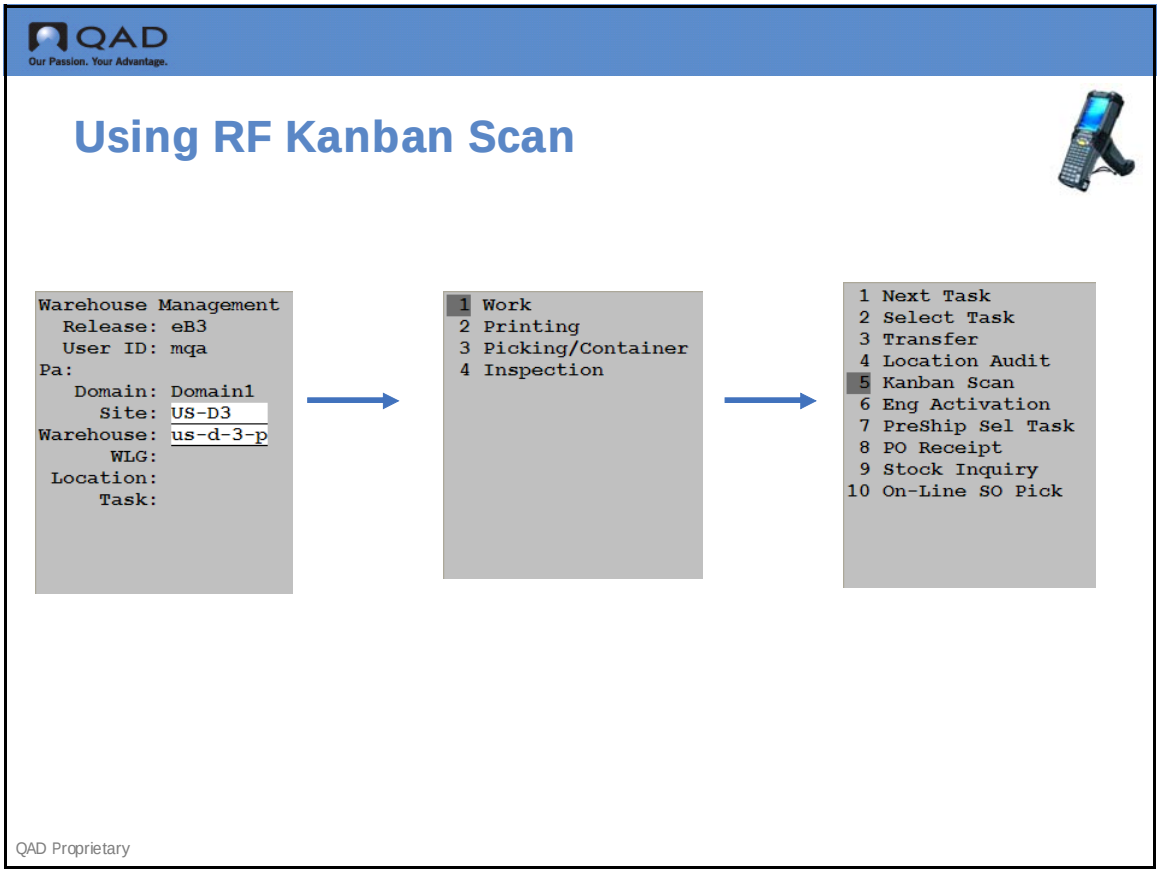
The system dynamically creates an item-location replenishment definition for the duration of the scan and a replenishment task for the quantity required, and then removes the definition from the system.

Step 1: Review Stock



Use Inventory Detail Inquiry (4.8.17) to check the quantity on hand for the locations you want to replenish.

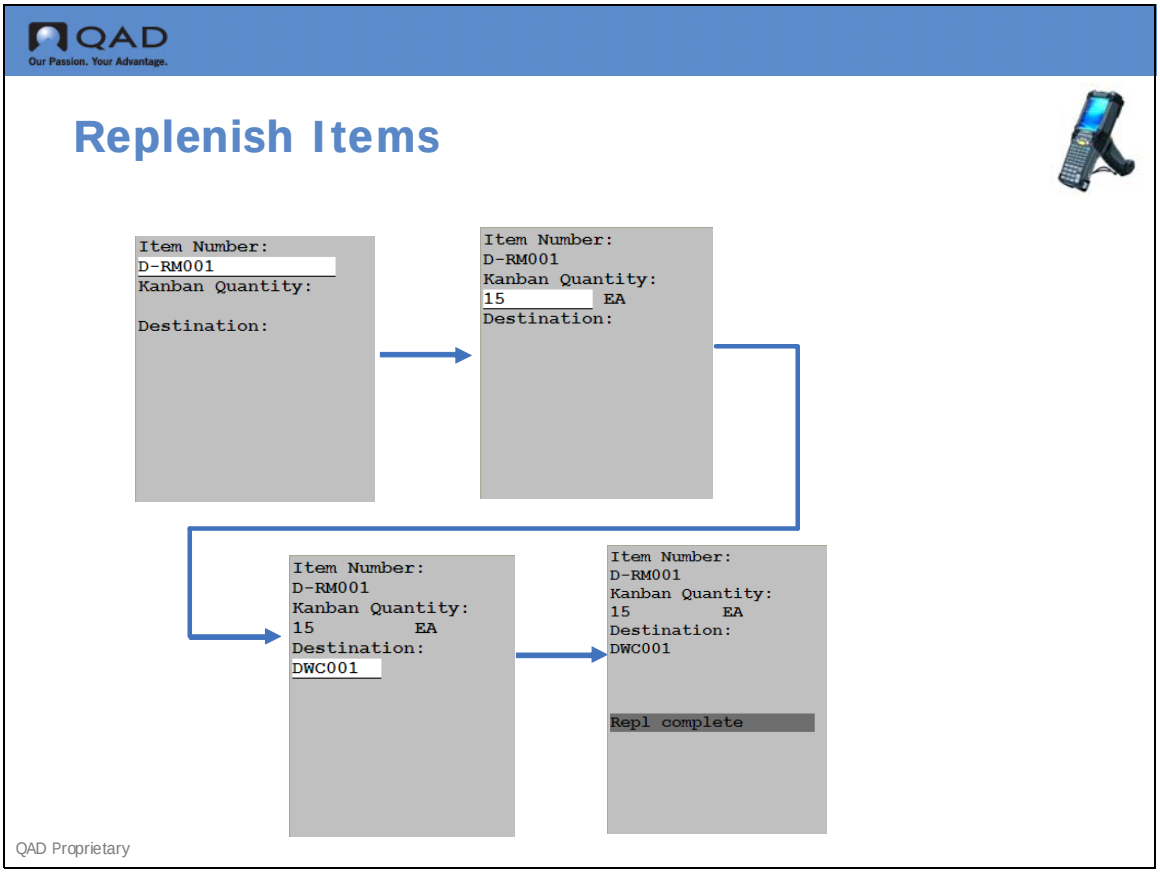
Step 2: Use the RF Kanban Scan Function



1 Log onto the RF device software, entering the site and warehouse.

2 Select Work (1.), then Kanban Scan (5.).

Step 3: Scan Items to Replenish



1 Scan (Enter) the item number.

2 Enter the kanban quantity to replenish.

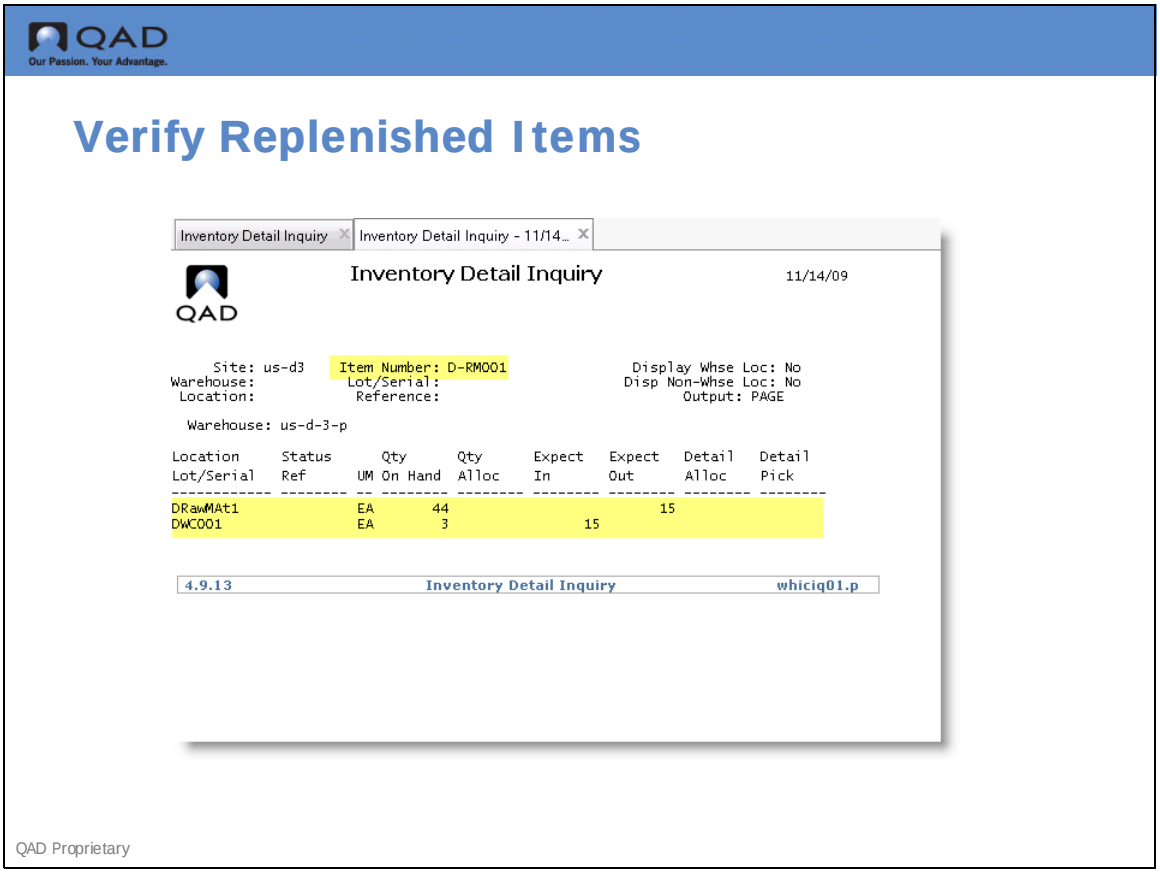
Note You set the default for the quantity in Multi-Item Level Maintenance; see “Multi-Item Level Maintenance” on page 163

3 Enter the destination location for the replenishment.

4 Press Go.

The system informs you that the replenishment is complete.

Step 4: Verify Replenished Items



Use Inventory Detail Inquiry to verify items were replenished in the location.

Study Questions

1 Describe a warehouse scenario in which you need kanban scan features.

2 Briefly describe the kanban scan setup process.

3 True or False. You use the PICK-RE transaction types for kanban scan transactions.

4 In Algorithm Assignment Maintenance, which algorithm type do you specify for kanban scan?

5 Why is a replenishment list used in kanban scan?

6 Where do you specify the replenishment list?

7 Briefly describe what happens when you enter the Kanban Scan option on the RF device.

8 When does the system display a default quantity displays in the Kanban Qty field on the RF in Kanban Scan options?

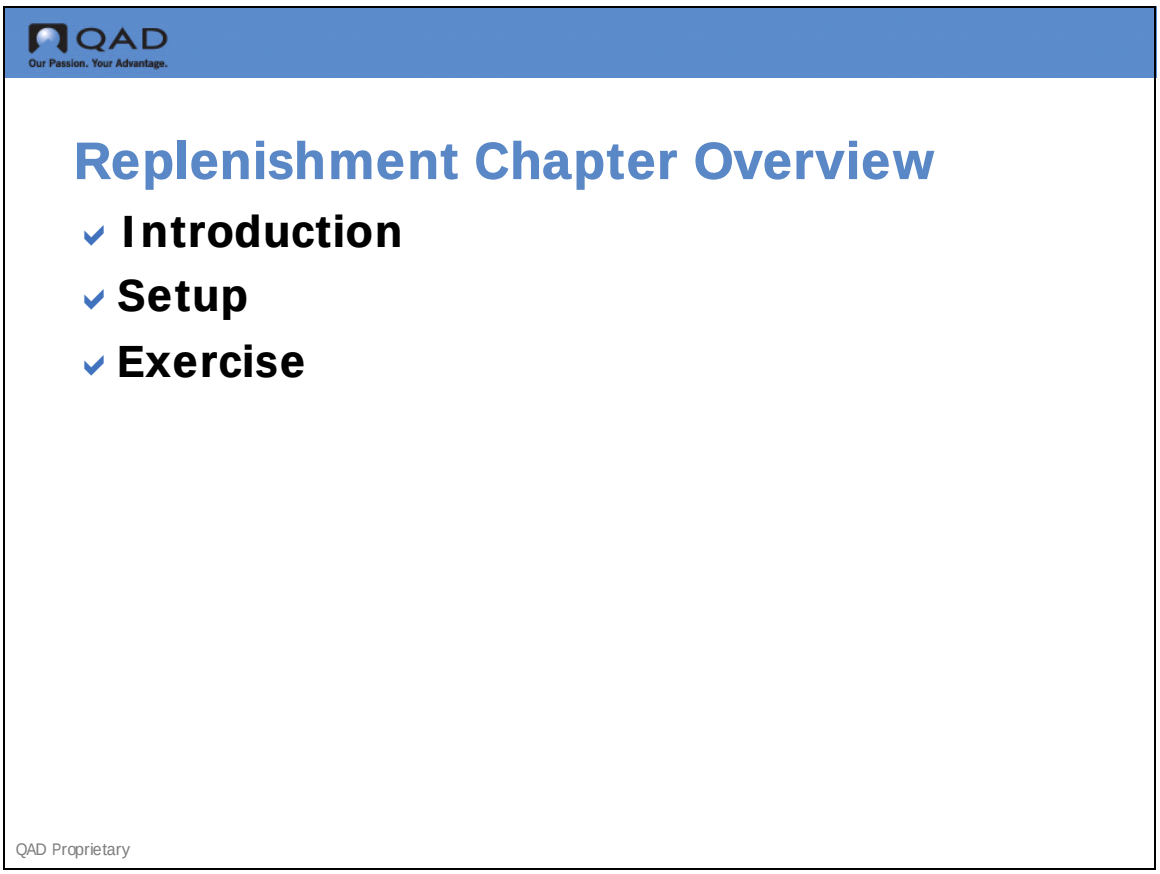
9 True or False. True. The system dynamically creates an item-location replenishment definition for the duration of the scan and later removes the definition from the system.

10 What happens after you enter the destination location on the RF device during kanban scanning?

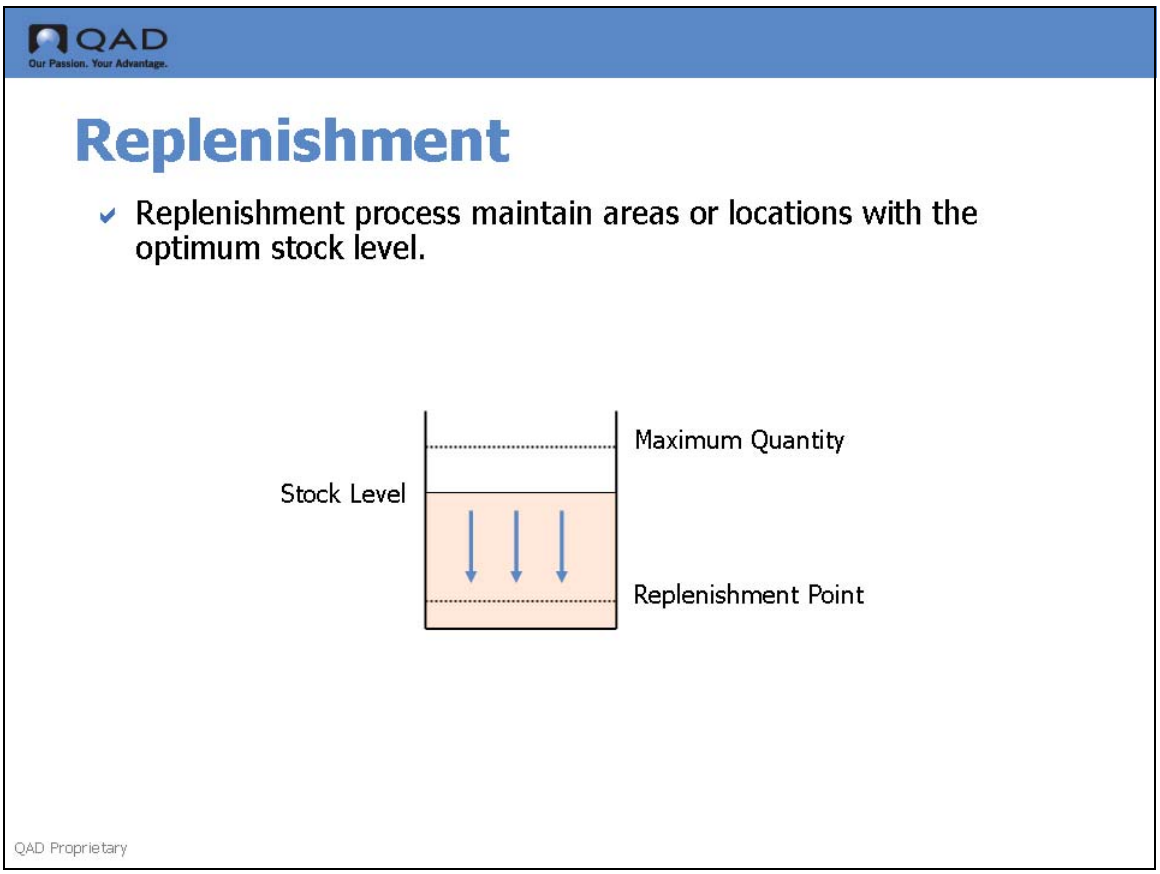
Chapter 8

Replenishment

Chapter Overview



Introduction



QAD Warehousing lets you define areas in the warehouse where the main picking activity occurs. In order for this area to be maintained at the optimum stock levels, the system uses a process called *replenishment*. The area in which stock is stored prior to picking is generally called the primary picking area. This area would typically contain the stock required for picking first and in quantities and locations that are easy to maintain.

You define the types of items and the quantities that can be stored in the replenishment, or primary picking, locations. Picking functions look in these locations first before searching the rest of the warehouse.

In warehousing, you can define:

- Replenishment for a given item and a given location.
- Replenishment for a given item in a storage location group. This means that a put-away is performed in the storage location group in order to place the items at the best suitable location inside this storage location group.
- Replenishment lists. A series of storage location groups in which the system looks for the item to replenish. Sequences allow searching some storage location groups first and then others by order corresponding to the sequence.
- Replenishment in real-time on the RF device.

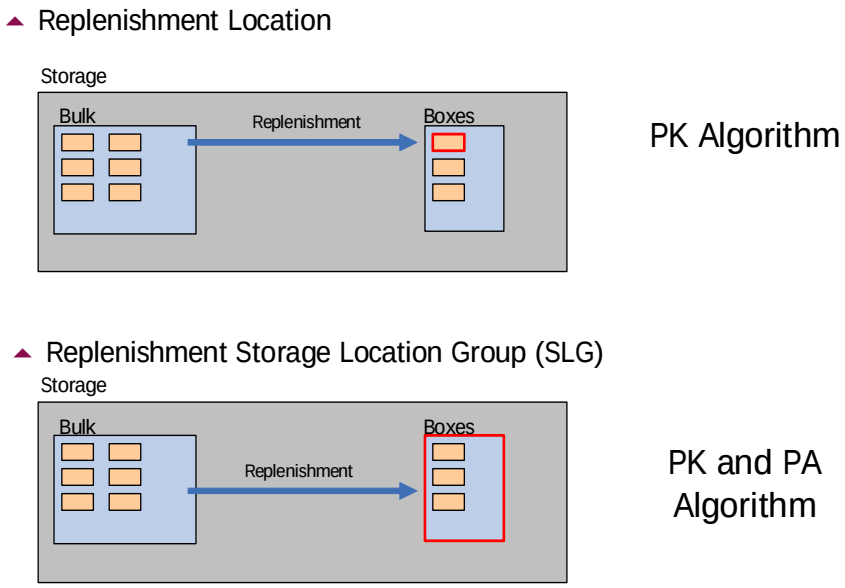
- Overpick Replenishment. Warehouse staff can select a multi- or single-item pallet from the reserve area and replenish one or multiple locations from the pallet in the picking area. After staff replenish, they can return the remainder on the pallet to the reserve area.

Replenishment and SLGs

In warehousing, you can define replenishment for a given item and a given location. More commonly, though, you can define replenishment for a given item in a storage location group. This means that a put-away is performed in the storage location group in order to place the items at the best suitable location inside this storage location group. The system typically uses the

- Pick (PK) algorithm for locations
- PK and put away (PA) algorithms for SLGs

Fig. 8.1
Replenishment and Locations



You can also create a replenishment list. This is a series of storage location groups in which the system looks for the item to replenish. Sequences allow searching some storage location groups first and then others by order corresponding to the sequence.

Replenishment Requests

When you have warehousing set up for replenishment, you can run a Replenishment Request (4.16.13).

This function lets you:

- Run a simulation of the replenishment. By default, the Create Transactions field is set to No. You can then run a report to look at all the replenishments to be done, simulate a picking, and generate a list of all potential transactions, without actually creating the transactions. You can run this report several times using different percentages each time, until you select a quantity of work that can be handled by the current staffing levels.

- When you are satisfied that the replenishment report contains a manageable workload, change the Create Transactions field to Yes, and then run the report again.

The field Include Area Below Replenishment Point enables you to adjust the value of the replenishment point defined in Replenishment-Location Maintenance or Replenishment-SLG Maintenance.

When the inventory for a given item in a given location stays above the replenishment point, running the replenishment has no effect. When an inventory movement makes the inventory in that location drop below the replenishment point, running the replenishment request with Create Transactions set to No tries to find available stock for the replenishment. The Include Area Below Replenishment Point field enables you to change the value of the replenishment point. This is a way to have fewer transactions to carry out if the load is too high.

Automatic Replenishment

Replenishment can happen automatically, without running Replenishment Request. As soon as the system issues inventory and stock drops below the minimum level, the system automatically creates a replenishment task.

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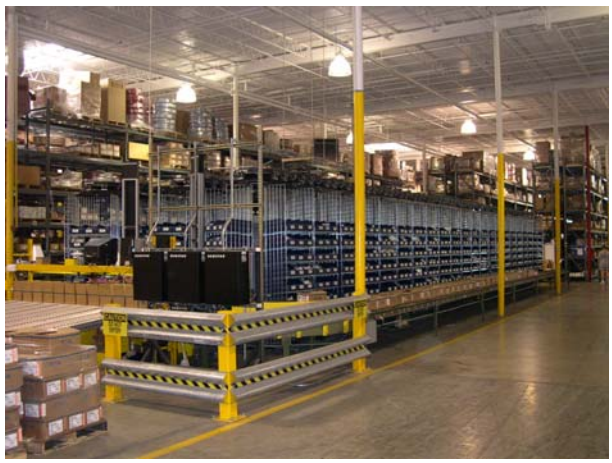
Replenishment

- Replenishment request
  Activated by menu option.
- Automatic Replenishment:
  As soon as the system issues inventory and stock drops below the minimum level, a replenishment task is created.



QAD Proprietary

Replenishment Objectives

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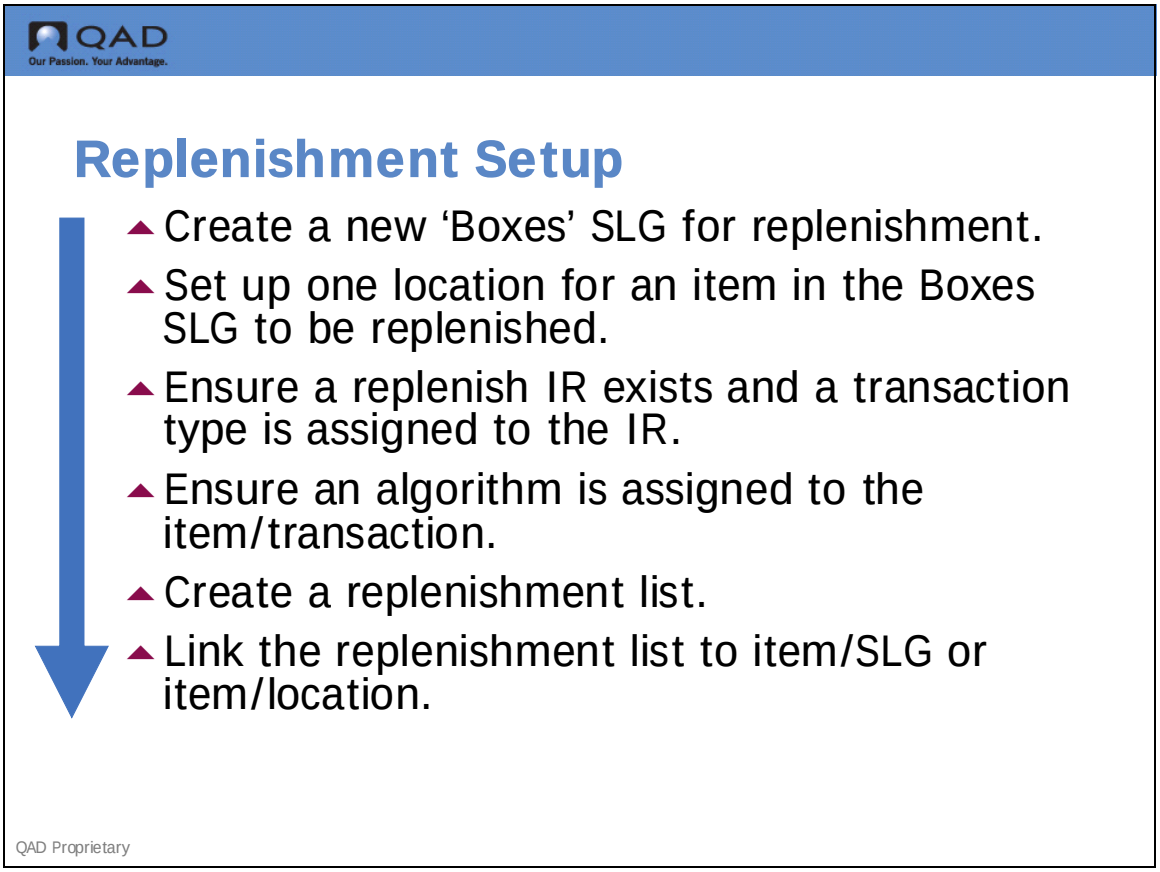
Objectives

- **Create a Boxes SLG within a Storage area**
- **Set up one location (DBox000) for item D-IT000 in the Boxes area.**
  - This location is the one that should be replenished. Replenishment point will be 20 EA and Maximum quantity to replenish 100 EA.

QAD Proprietary

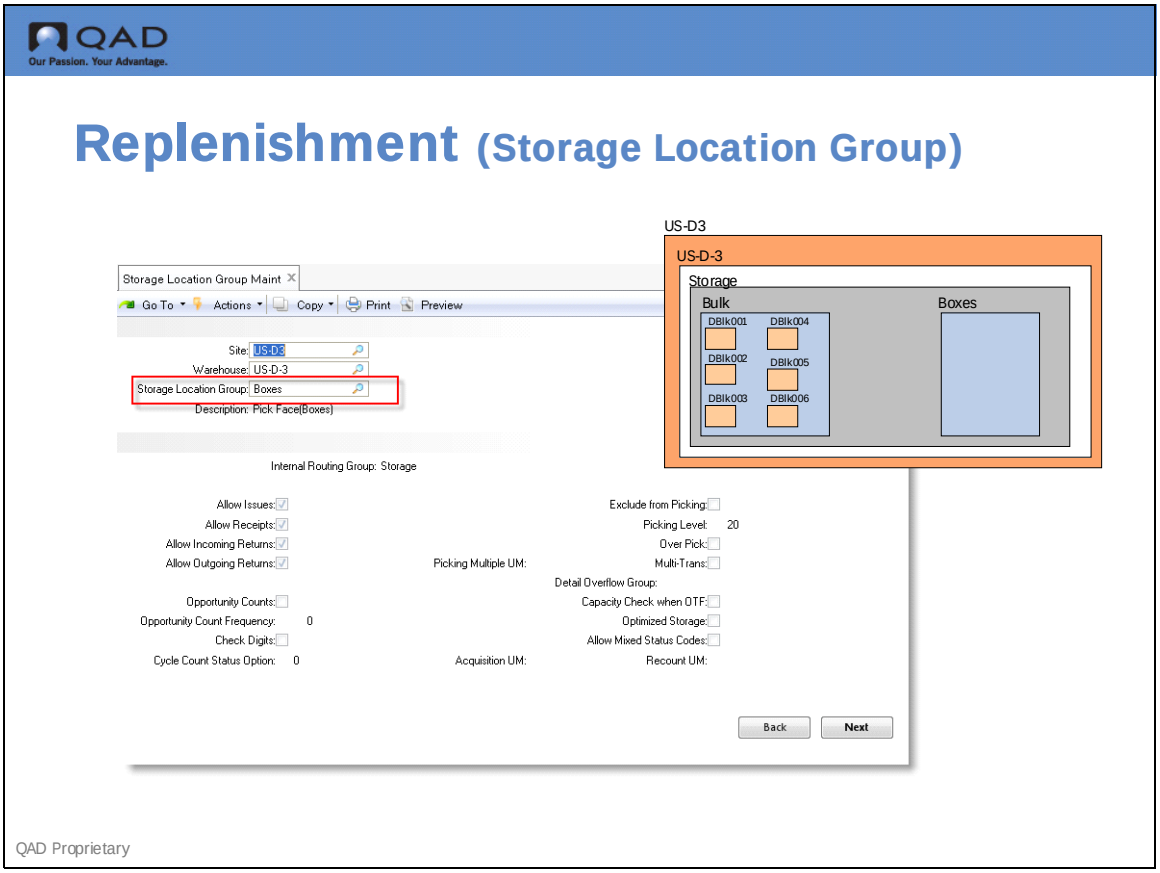
Replenishment Setup



A typical setup based on the receipt of a purchase order includes the following steps:

- Use Storage Location Group Maintenance to create a new area for replenishment.
- Use Warehouse Location Maintenance to set up a location for an item within the new SLG area to be replenished.
- Use Internal Routing Maintenance to ensure a replenishment routing and sequence exist.
- Use Internal Routing Assignment to ensure a transaction type is assigned to the IR.
- Use Algorithm Assignment Maintenance to ensure an algorithm is assigned to the transaction type.
- Use Replenishment List Maintenance to create a replenishment list.
- Use Replenishment Location Maintenance to link the replenishment list to the item/SLG.

Storage Location Group Maintenance

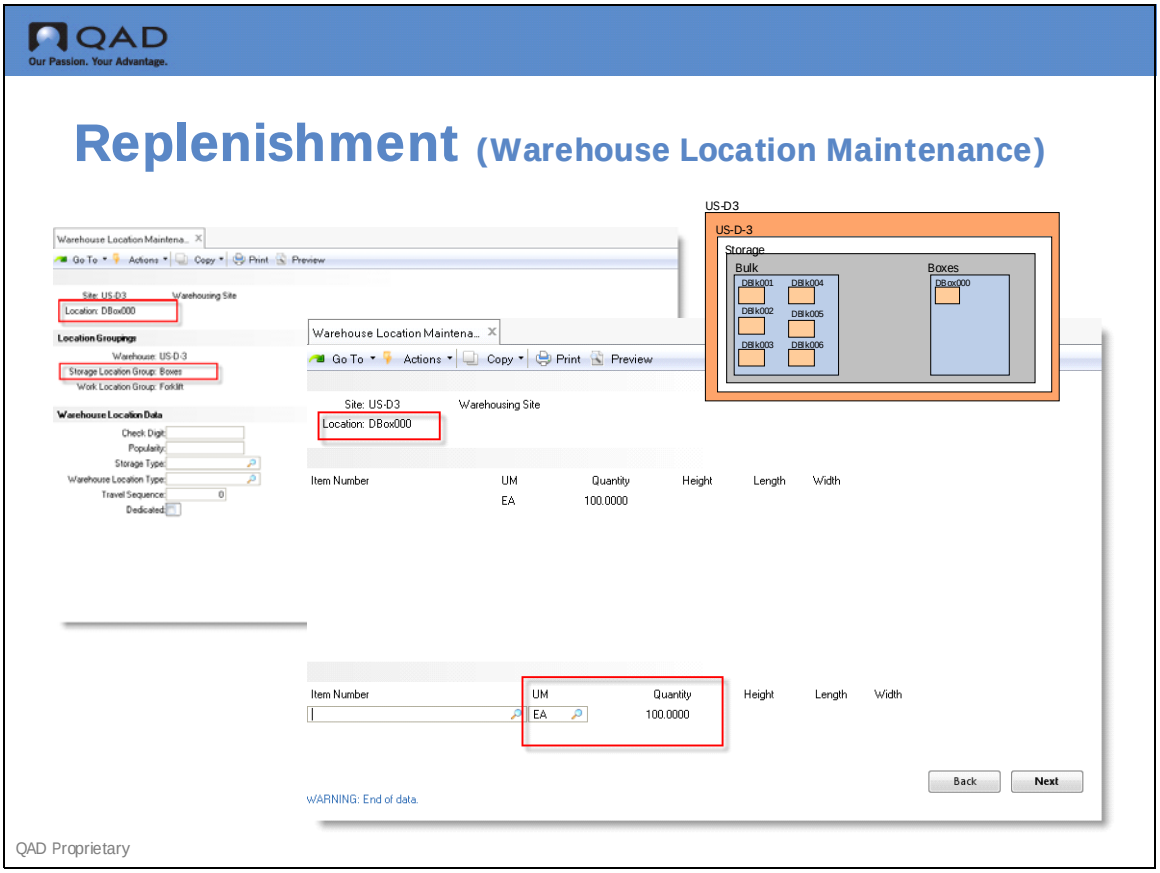


Use Storage Location Group Maintenance (4.3.1) to create a new SLG area for items to be replenished.

Field Definitions

Storage Location Group . Enter the code that identifies the storage location group you want to create or modify.

Warehouse Location Maintenance



Use Warehouse Location Maintenance (4.3.13.1) to set up all locations within a warehouse.

Field Definitions

Location. Enter the name of the warehouse location you are creating.

Storage Location Group. Enter the SLG to which this location belongs.

Item Number . The fields on the third Warehouse Location Maintenance screen are used to specify the quantities of a particular unit of measure that will fit in the location. You can enter multiple lines for different items and different units of measure.

Enter the item number for the inventory item to which this quantity definition relates.

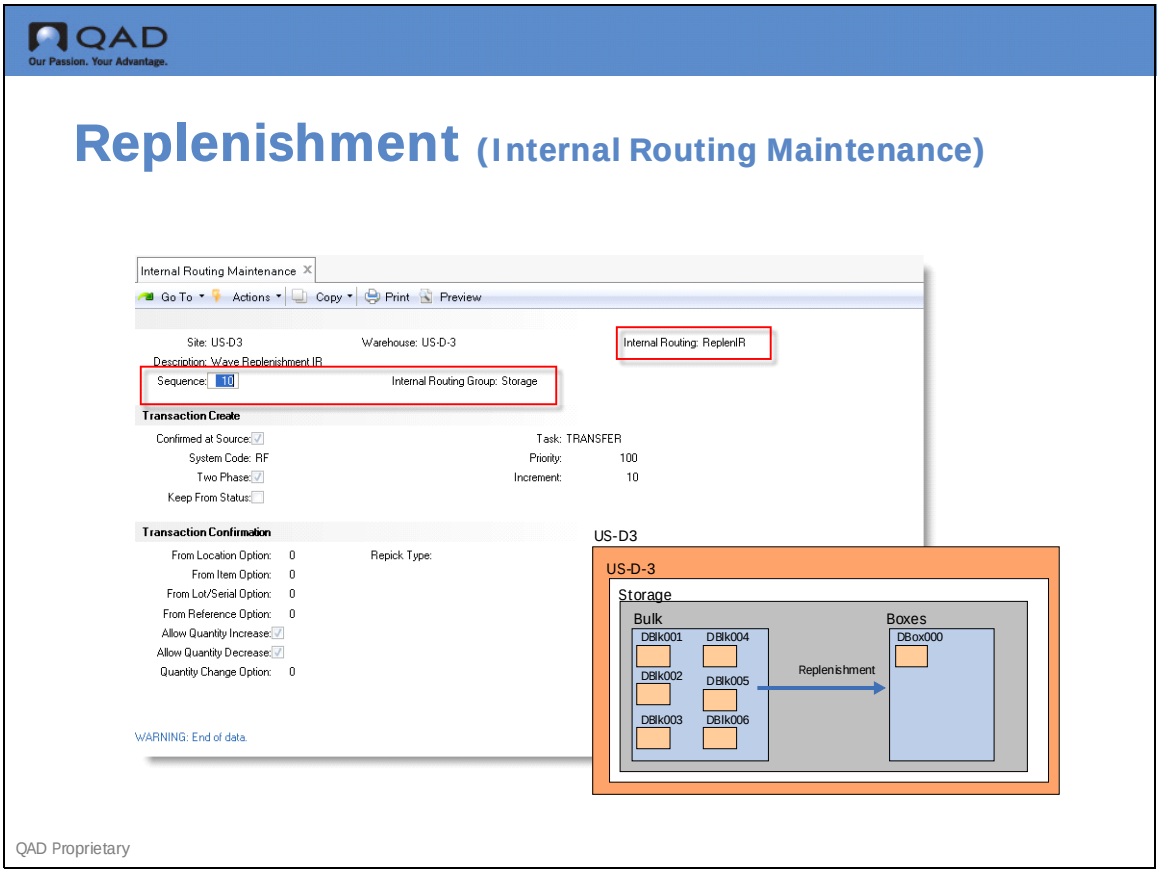
If you entered Yes in the Dedicated field on the previous screen, you must also specify the item to which this location is dedicated.

UM . The fields on the third Warehouse Location Maintenance screen are used to specify the quantities of a particular unit of measure that will fit in the location. You can enter multiple lines for different items and different units of measure.

Enter the unit of measure in which this quantity definition is specified.

Quantity . Enter the quantity of the selected UM that will fit in this location. You can enter multiple lines for different items and different units of measure.

Internal Routing Maintenance



Use Internal Routing Maintenance (4.2.5) to define the pathways through your warehouse that you want your inventory to take.

For each sequence step within an internal routing, you can also specify a number of parameters that control how the inventory is processed as it reaches that point in the sequence. The system displays default values for these processing parameters that are defined in Warehouse Maintenance. You can accept the default values, or override them with new values.

Field Definitions

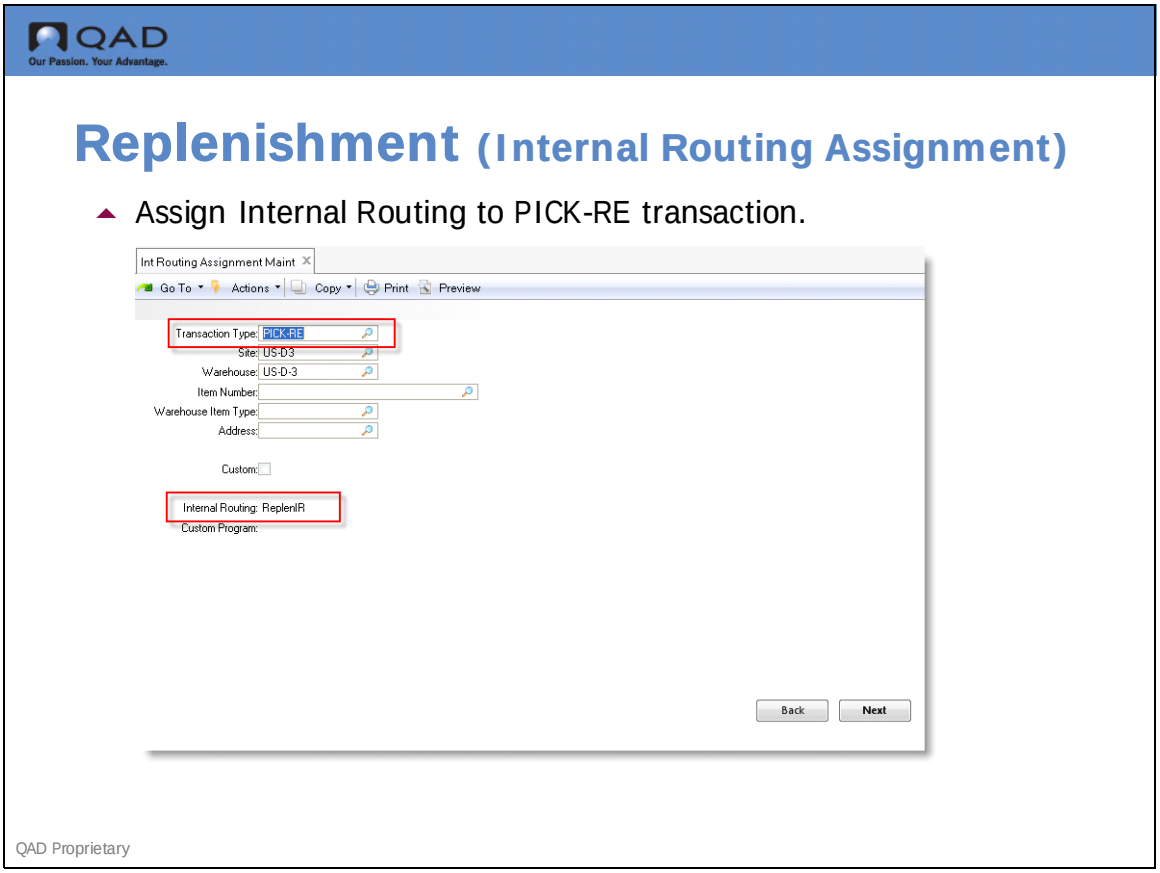
Internal Routing . Specify the code that identifies the internal routing you want to maintain or assign to a particular transaction type.

Sequence . Enter the number that identifies the order of this routing step.

Each internal routing consists of a number of steps, identified by a sequence number. To make it easier to add steps within the sequence later, number the sequences as 10, 20, 30 rather than 1, 2, 3.

Internal Routing Group. Specify for this sequence step of the routing the next IRG to which the inventory should move.

Internal Routing Assignment



Use Internal Routing Assignment Maintenance (4.2.9) to link transaction types to internal routings. For this training, assign the Internal Routing to the PICK-RE transaction.

Field Definitions

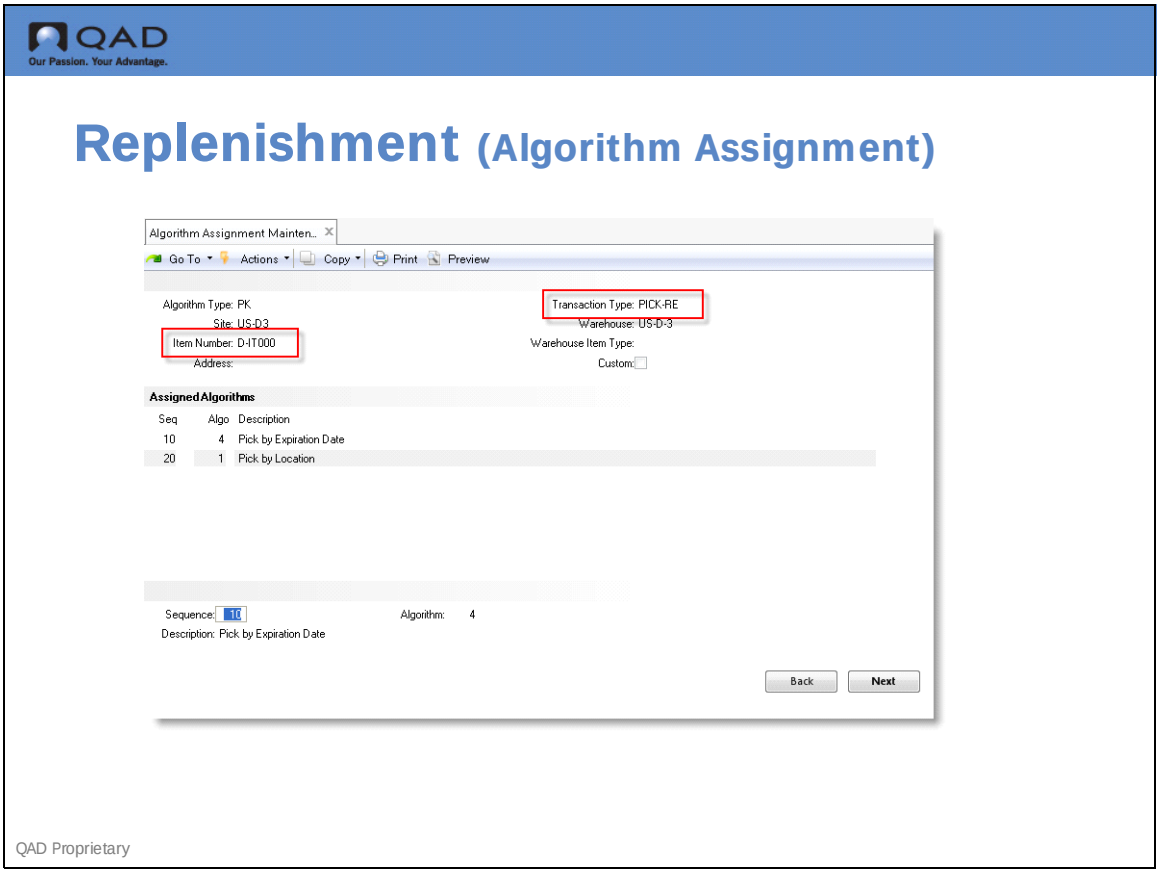
Transaction Type. This field is used to specify the transaction type.

Maintain transaction types using Transaction Type Maintenance.

You specify the transaction type to link to an internal routing in Internal Routing Assignment Maintenance. You specify the transaction type to link to a sequence of algorithms in Algorithm Assignment Maintenance

Internal Routing. Specify the code that identifies the internal routing you want to maintain or assign to a particular transaction type.

Algorithm Assignment Maintenance



Use Algorithm Assignment Maintenance (4.6.9) to link a specified sequence of algorithms (of one type per sequence) to a defined combination transaction type, site, warehouse, item number, or address.

Field Definitions

Transaction Type. This field is used to specify the transaction type.

Maintain transaction types using Transaction Type Maintenance.

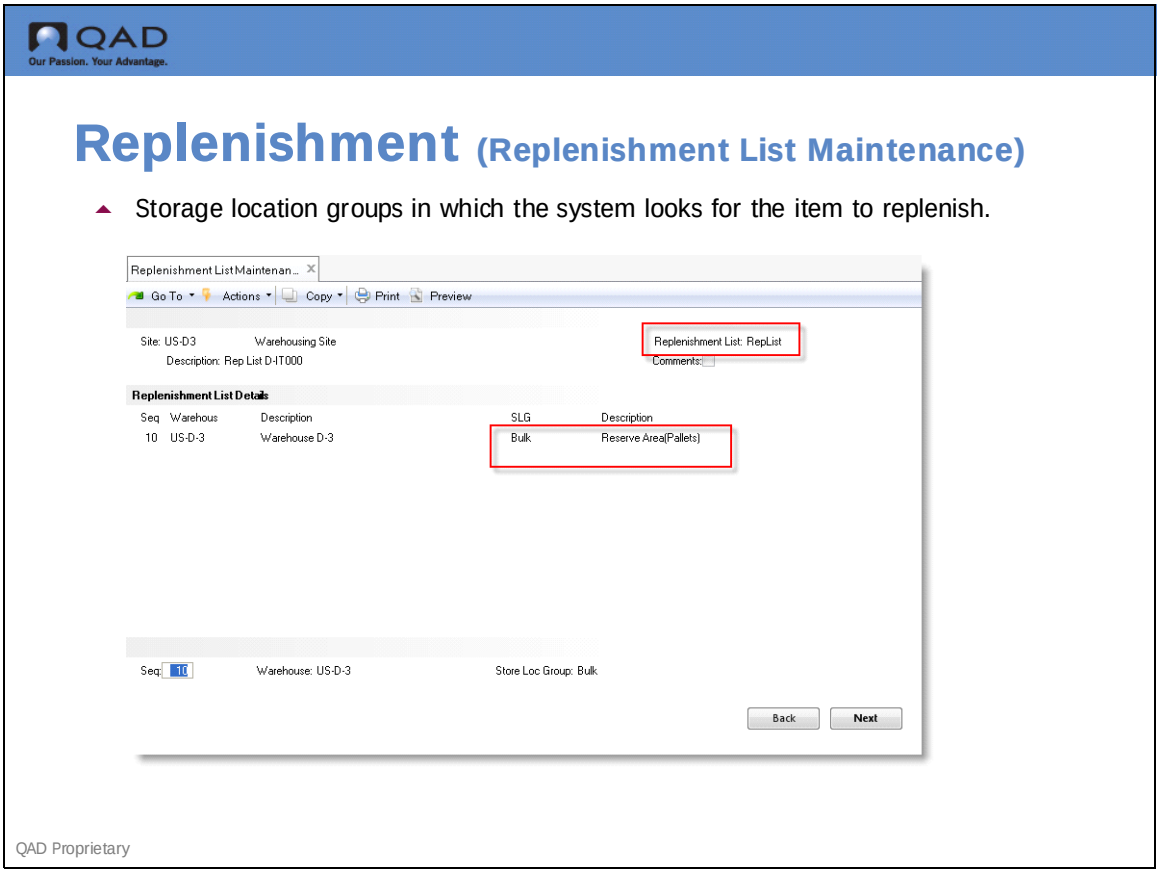
You specify the transaction type to link to an internal routing in Internal Routing Assignment Maintenance. You specify the transaction type to link to a sequence of algorithms in Algorithm Assignment Maintenance.

You also specify the transaction type when using the Algorithm Simulation Menu. These options simulate either location-find and put-away, or picking. The system simulates the running of the algorithms that you have assigned to the specified transaction type and displays the results of the simulated put-away or picking.

Warehouse Item Type. If you want to assign a sequence of algorithms to a combination of transaction type and warehouse item type, enter the item type code here. If you leave this field blank, the assignment will be valid for all item types.

The warehouse item type codes are a way of grouping together items that have similar properties. You assign the codes to items using the any of the warehouse item Maintenance functions.

Replenishment List Maintenance

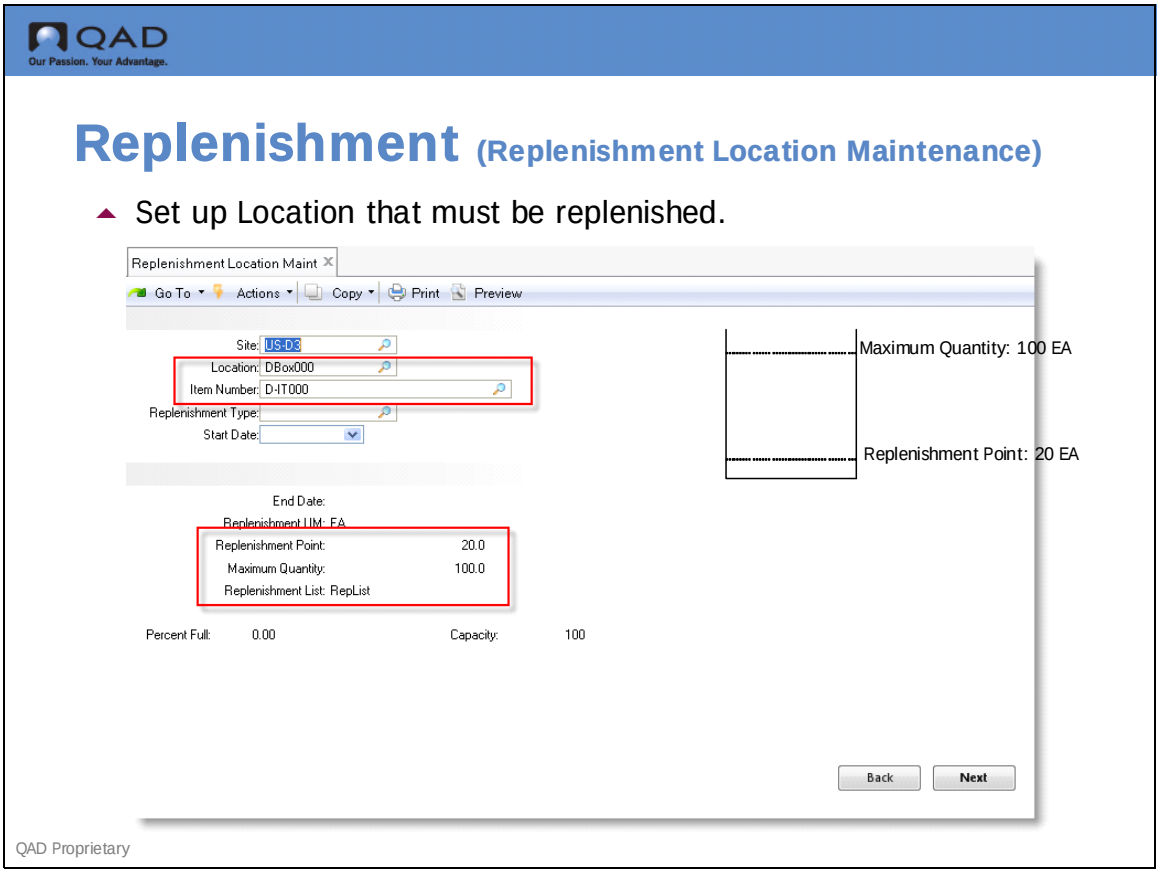


Use Replenishment List Maintenance (4.16.1)to define a replenishment list. This is a series of storage location groups in which the system looks in sequence for items in order to replenish a specified location or set of locations. You link the list to a location or SLG to replenish.

Field Definitions

Replenishment List. Enter the name of the Replenishment List, for example, List A, to be used by Replenishment functions.

Replenishment Location Maintenance



Use Replenishment Location Maintenance (4.1.6.5) to link the replenishment list to the location you want to replenish. You can also set additional parameters.

Field Definitions

Location. Indicate the location.to replenish.

Item Number. Enter the code for the item to replenish.

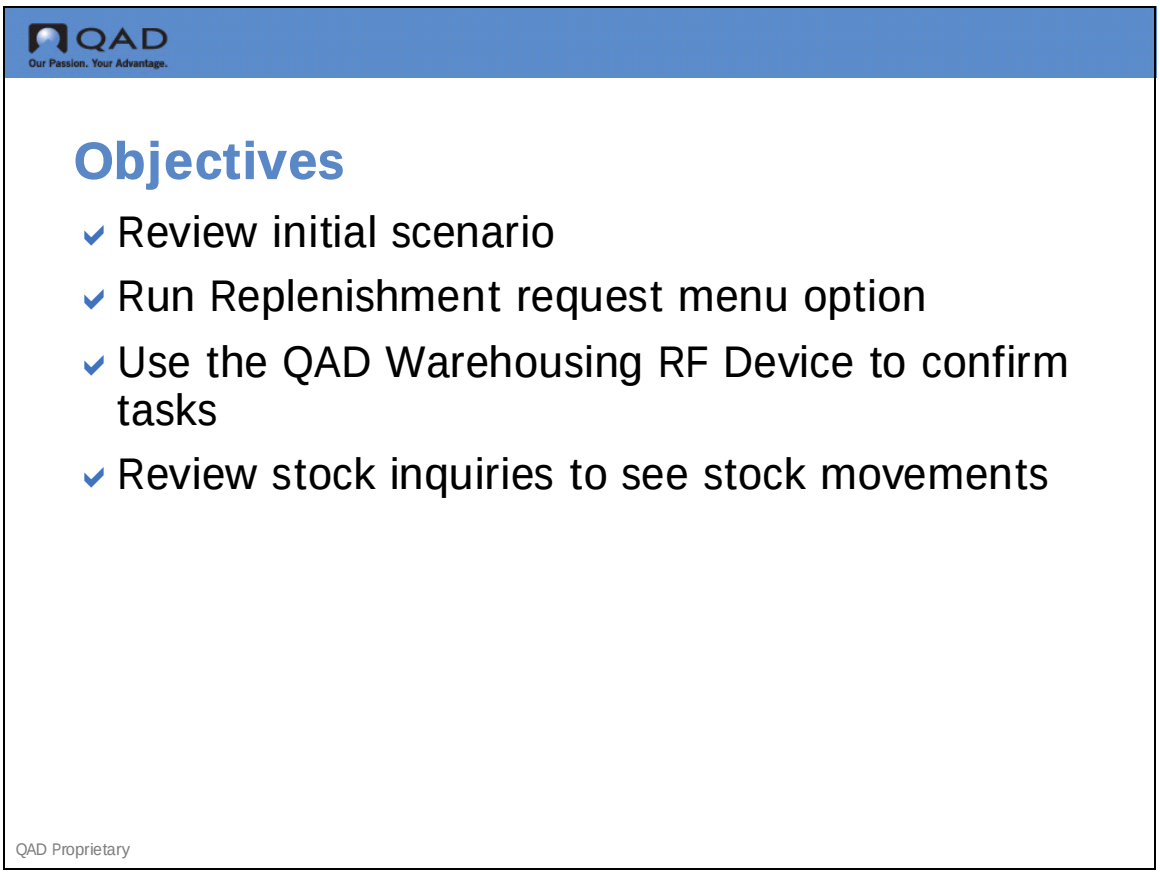
Replenishment UM . Enter the UM to use for replenishment.

Replenishment Point. Enter the quantity of stock at which the location should be replenished.

Maximum Quantity. Specify the maximum quantity by which the location or SLG may be replenished. Leave this field blank to allow any quantity.

Replenishment List . Enter the name of the Replenishment List, for example, List A, to be used by Replenishment functions.

Exercise 1: Run a Replenishment Request



In this section, you will create and process a replenishment request.To do this, you will:

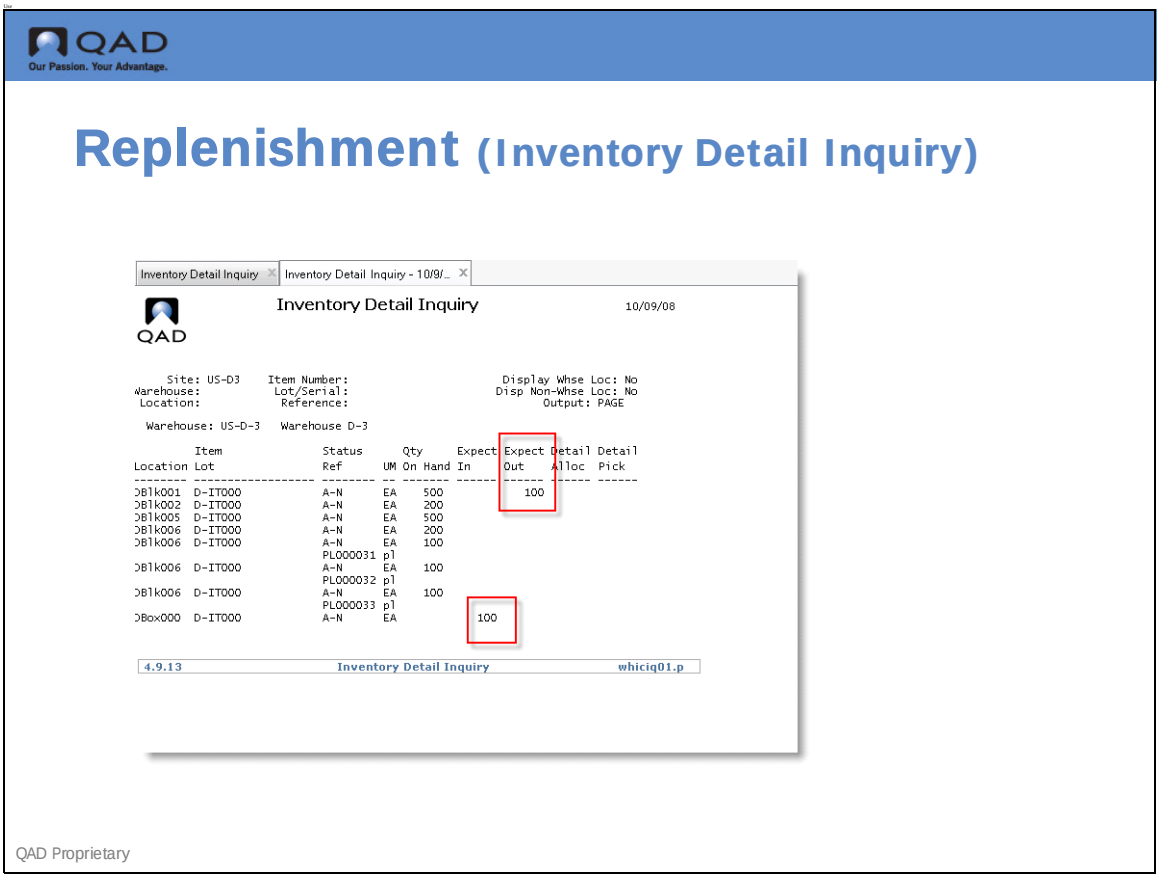
1 Review the initial scenario.

2 Create a replenishment request.

3 Confirm a receipt task using the RF.

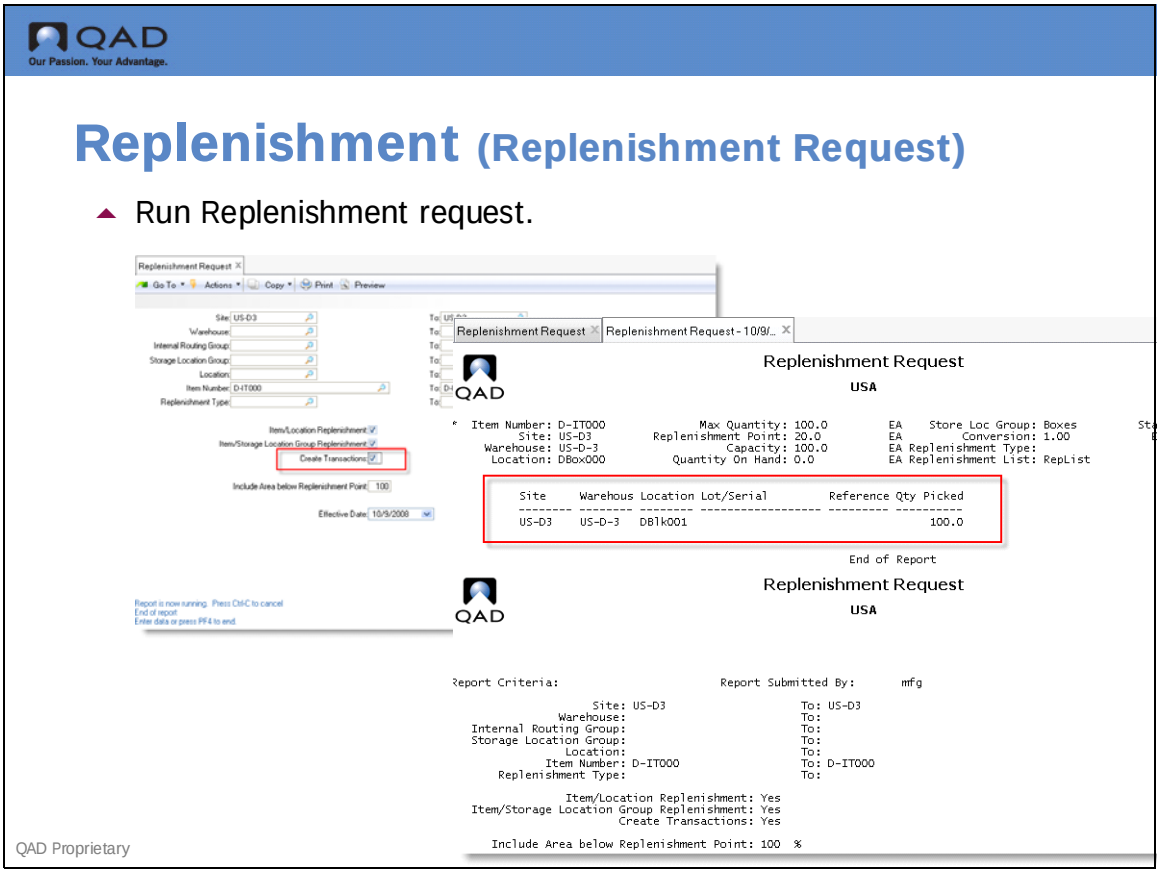
4 Review stock inquiries.

Step 1: Review Initial Scenario



Use Inventory Detail Inquiry (4.9.13) to review stock Expected In and Expected Out quantitates for the location.

Step 2: Run a Replenishment Request



When you have created a replenishment list and linked it to a location or storage location group, you can start a Replenishment Request.

By default, the Create Transactions field is set to No. This lets you generate a report listing the replenishments to be done, simulate a picking, and have a list of all potential transactions, without actually creating the transactions. You can run this report several times using different percentages each time, until you select a quantity of work that can be handled by the current staffing levels.

When you are satisfied that the replenishment report contains a manageable workload, change the Create Transactions field to Yes, and then run the report again.

Field Descriptions

Create Transactions. Indicate whether to run a simulation of replenishment using the parameters you input. Entering default No in the fields allows simulation. To create transactions and carry out a replenishment request, change this field to Yes.

Effective Date . Indicate the date you want to run the replenishment request.

Include Area below Replenishment Point . This field enables you to adjust the value of the replenishment point defined in the Replenishment Location Maint or Replenishment-SLG Maintenance.

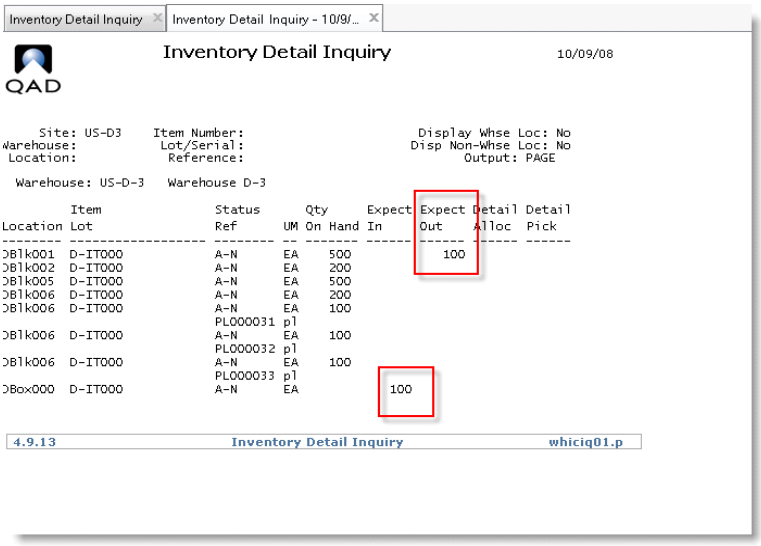
On-line Replenishment. You use this screen to carry out replenishment for one or more locations on-line.

End Date . Enter the last date the replenishment should be carried out.

Internal Routing Group . Enter the first internal routing group in a range for selecting items for replenishment.

Once you run the request, you can recheck Inventory Detail Inquiry to see changes in the Expected In/Out quantities; see the following figure.

Fig. 8.2
Recheck Quantity in Inventory Detail Inquiry



RF Task Confirmation

The following procedure illustrates how to replenish from the RF. Although you can perform this task with the RF Select Task function (1.2), the following procedure uses the Next Task (1.1) function.

1. Log in to the RF and enter your ID, password, site, warehouse, and if applicable, your work location group.
2. Select Work (1), then Next Task (1.1).

   The RF displays the Overpick screen.

   Note If the system displays other tasks, cancel the Next Task program, return to the RF login screen, and enter REPLEN in the Login screen's Task field; then select Work (1), then Next Task (1.1).
3. To pick for the replenishment, scan the source location, then scan the pallet number.

   The RF displays the number of replenishment tasks to perform for the pallet in the counter at the top.
4. To replenish a bin, scan the destination location, then scan the items.

   The system prompts for the quantity in the base UM.

Exercise2: Automatically Replenish

QAD
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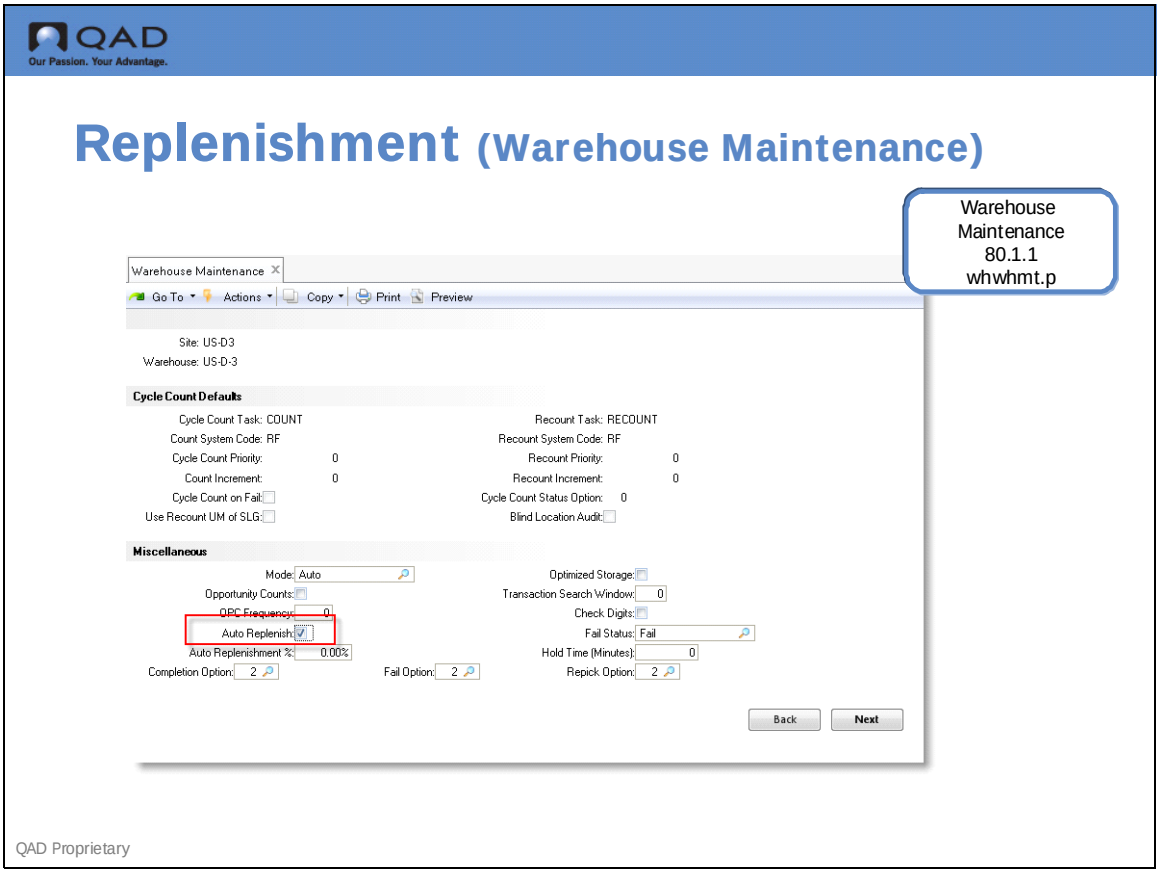
Objectives

- Set up item D-IT000 to be replenished automatically.
- Issue inventory (90 EA) with Unplanned Issue menu option.
- Use the QAD Warehousing RF Device to confirm tasks
- Review stock inquiries to see stock movements

QAD Proprietary

Step 1: Enable Auto Replenish



Use Warehouse Location Maintenance (4.1.1) to enable an automatic replenishment. Check Auto Replenish the field in the Miscellaneous frame.

Fields

Auto Replenish. Enter Yes to enable auto replenishment. If an existing replenishment definition for a location/item or an SLG/item is present when the inventory level falls below the replenishment point, the system automatically starts a replenishment process. This process picks the missing items and transfers them to the location/SLG to be replenished. With auto replenishment, you do not need to start a manual replenishment since the process is triggered automatically.

Note You can specify a the tolerance percentage for the replenishment point by entering a value in Auto Replenishment %. which is the quantity of stock below which an automatic replenishment is triggered. A value of 0% has the same effect as a value of 100%.

Step2: Enable Auto Replenish for the Item-Warehouse

QAD
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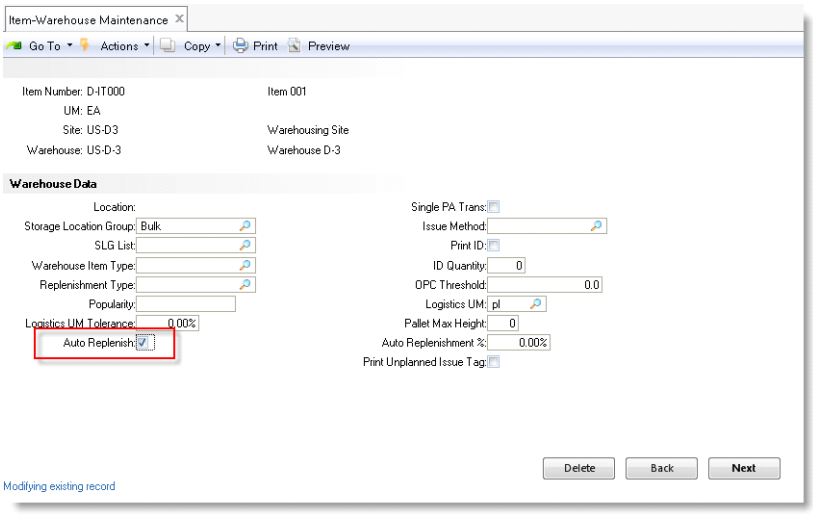
Replenishment (Item-Warehouse Maintenance)



QAD Proprietary

Use Item-Warehouse Maintenance (4.4.11) to check the Auto Replenish field for an item-warehouse combination.

Step 3: Check Processing

QAD
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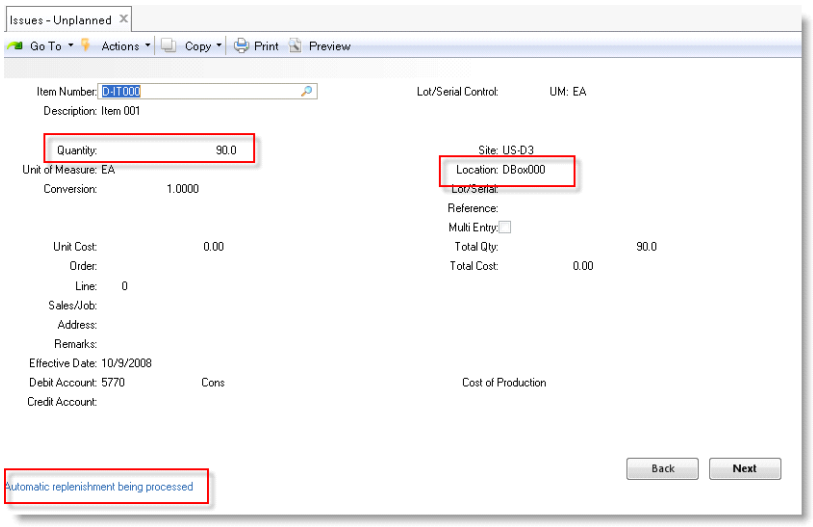
Replenishment (Unplanned Issue)

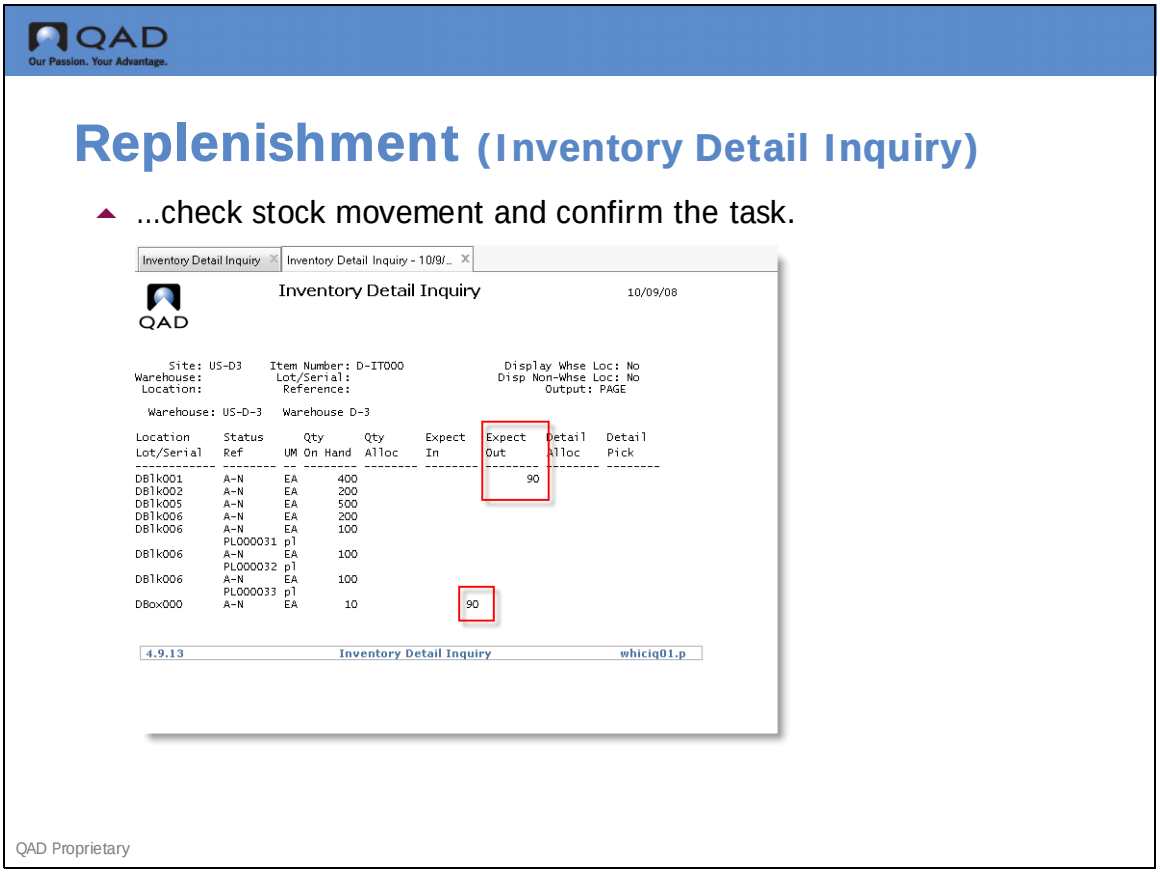
- See message on the bottom.



QAD Proprietary

Check Issues-Unplanned (3.7) in QAD EE to see the system message that an automatic replenishment is in process.

Step 4: Check the Stock Movement



Verify the replenishment by revisiting Inventory Detail Inquiry and checking quantities in the Expected In/Out columns.

Study Questions

1. Briefly describe the concept of replenishment in the warehouse.
2. What is the area called in which stock is stored prior to picking?
3. Describe at least two specifications you can set up for replenishment in QAD Warehousing.
4. Describe overpick replenishment.
5. True or False. In warehousing, you can define replenishment for a given item and a given location. More commonly, though, you can define replenishment for a given item in a warehouse location group.
6. What does the replenishment request do?
7. In which field and program can you adjust the value of the replenishment point defined in Replenishment-Location Maintenance or Replenishment-SLG Maintenance?
8. True or False. When the inventory for a given item in a given location stays above the replenishment point, running the replenishment has no effect.

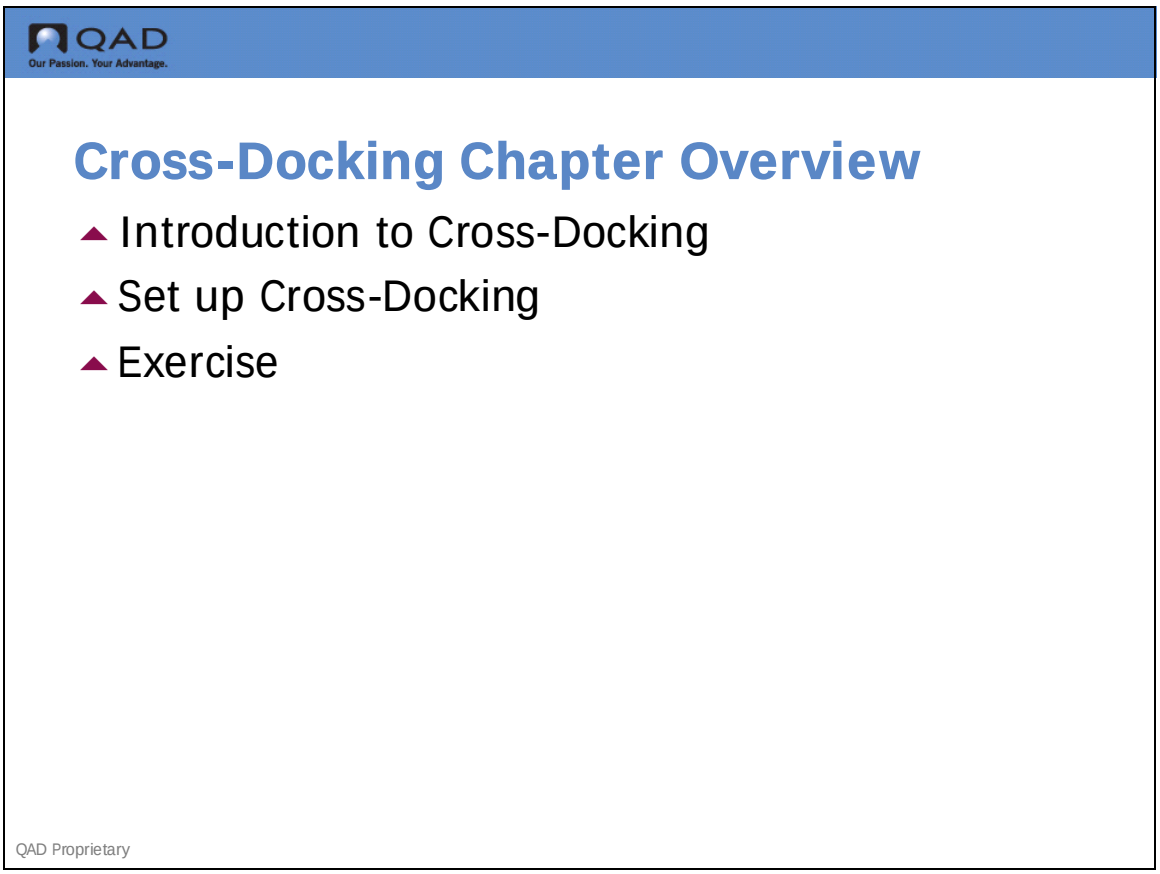
9 What is the condition that triggers an automatic creation of a replenishment task?

10 Which two algorithms are typically used in a replenishment?

Chapter 9

Cross-Docking

Chapter Overview



Introduction

QAD
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Cross-Docking

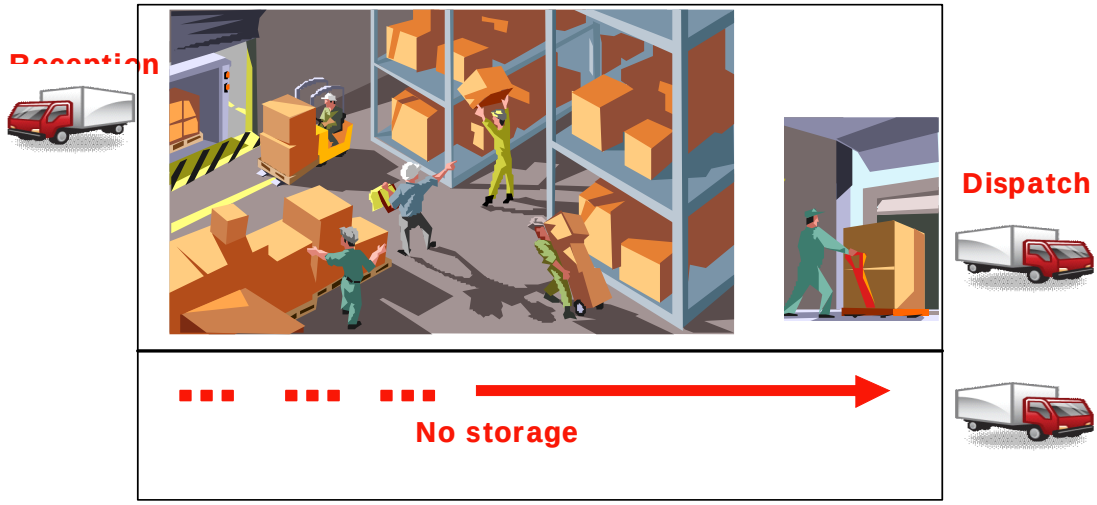
- Consider this scenario:
  - Warehouse contains a certain number of an item, but a sales order requires more of that item. The sales order creates a shortage.
  - Staff receive more of the items with an unplanned receipt.
  - Staff can move stock from the receipt area to the storage area, and from there, move it directly to the dispatch area where the truck is waiting....

QAD Proprietary

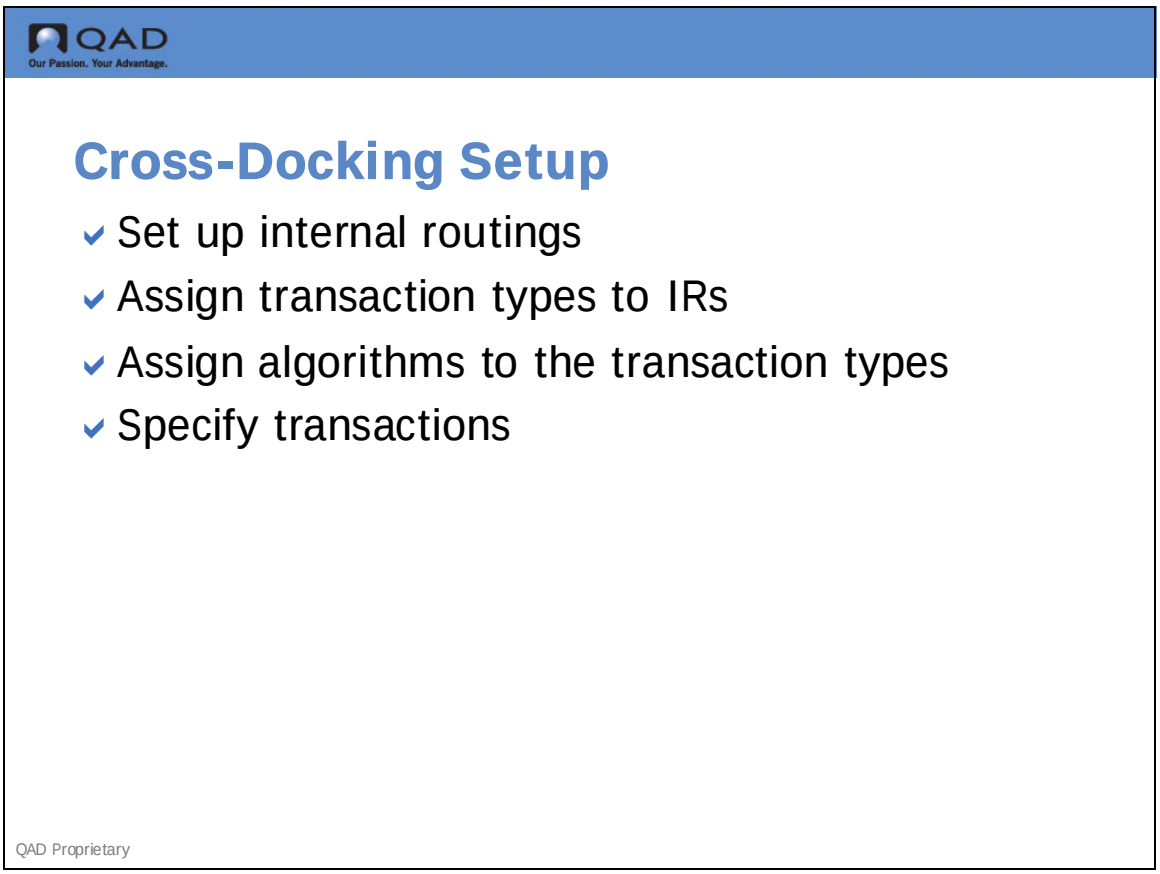
In situations where insufficient stock prevents the complete filling of an order, the system keeps track of the order shortage quantities, item by item. To help you to fill the back orders with a minimum of inventory movements, you can use shortage clearance algorithms. When you link these algorithms to inventory receipt transactions, the system automatically checks to see if the received stock can be used to fill back orders. The inventory is moved from receipt to dispatch, being stored in between. This type of movement is also known as *cross-docking*.

By linking the appropriate internal routings to the transaction types, you can route the relevant stock directly from the receipt dock to the shipping dock, thus removing the need for additional put-away and picking activities. The remaining received stock that is not required for shortage clearance is put away using the normal routine. See Figure 9.1.

Fig. 9.1
Route Stock From Receipt to Shipping Dock



Cross-Docking Setup



For setup, you define the sequences for internal routings. You need to define shortages; to do this, you create a shortage transaction type using Transaction Type Maintenance (4.7.1). You link the transaction in Internal Routing Assignment (4.2.9). Set the Clear Shortages field to Yes in Internal Routing Assignment. Then, you assign the shortage clearance algorithms to the appropriate transaction types using Algorithm Assignment Maintenance (4.6.9).

You can specify cross-docking details for the shortage clearance using the following four shortage fields defined for distribution order (SHRT-DO), sales order (SHRT-SO), and work order (SHRT-WO) transactions in Transaction Type Maintenance:

Shortage Definition. Specify what constitutes a shortage.

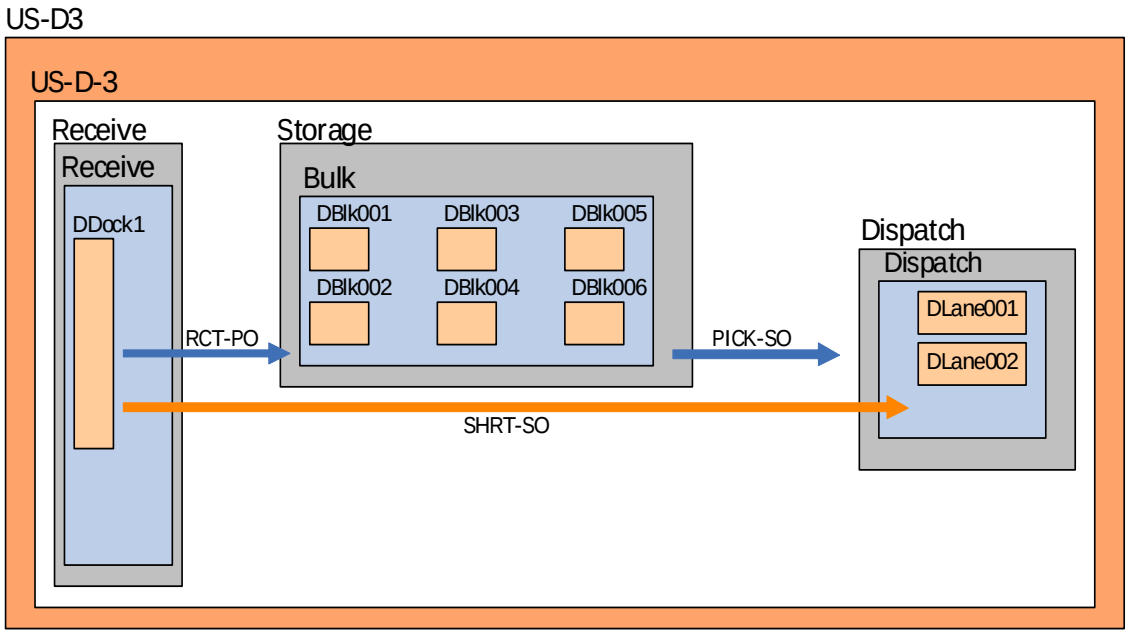
Shortage Quantity Definition. Specify how the system calculates a shortage quantity.

Shortage Action. Specify the action to take for a shortage.

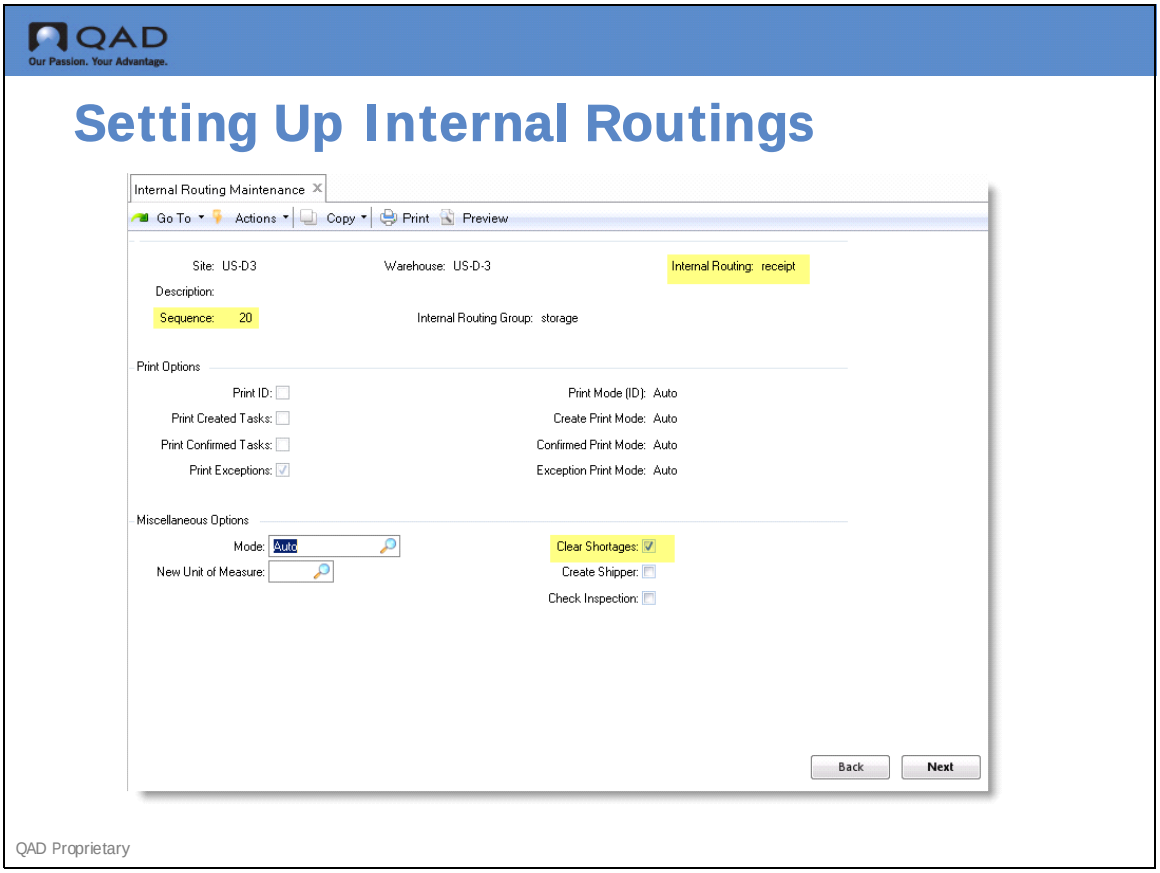
Shortage Window. Specify a window of time to fulfill the order in terms of days.

The following graphic depicts the setup.

Fig. 9.2
Setup Environment



Setting Up Internal Routing



Use Internal Routing Maintenance to set up IRs for three different internal routing groups:

Internal Routing Field	Internal Routing Group Field	Additional Fields to Set
Receipt	Storage	Sequence=20 Clear Shortages=Yes
Shortpk	Receive	Sequence=10 Task=Transfer
Shortpk	Dispatch	Sequence=20

Fields

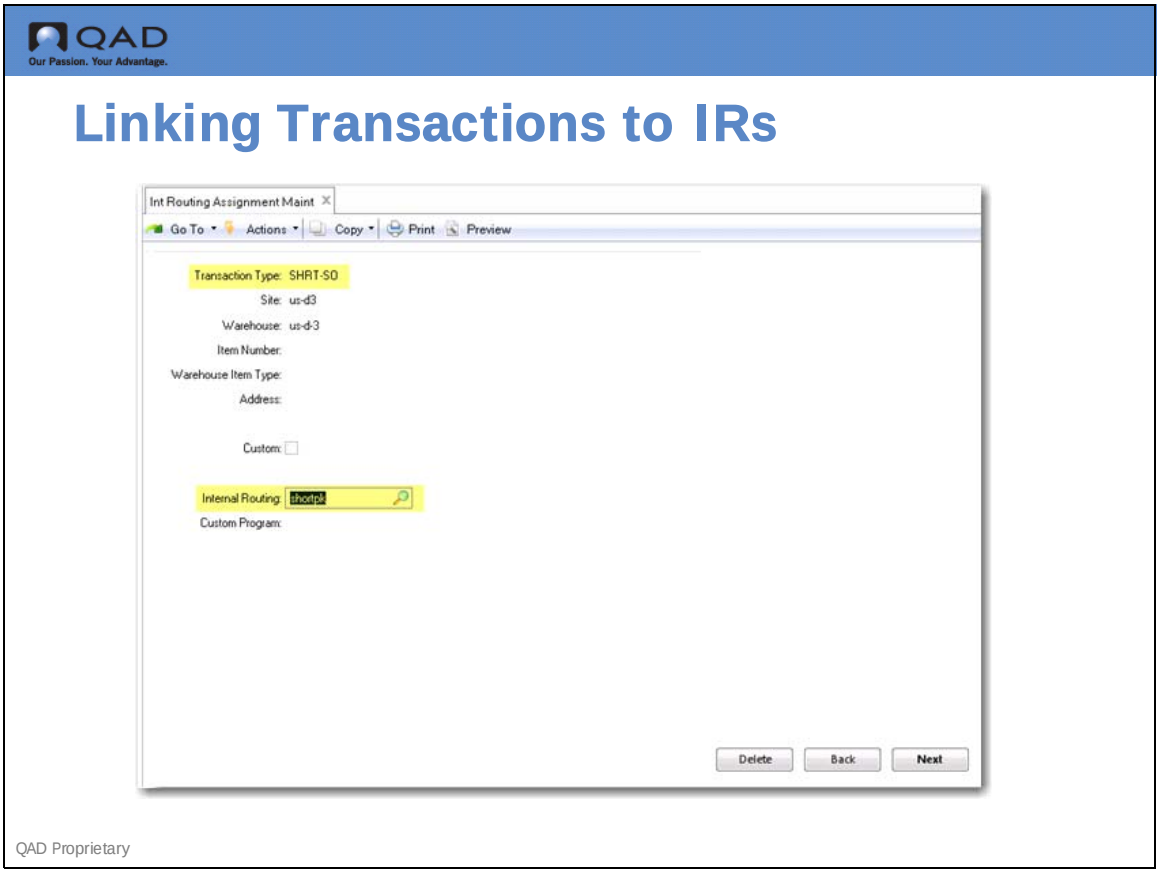
Internal *Routing.* To modify the fields for an existing internal routing, enter its name. To create a new internal routing, enter a new name for the routing.

Sequence. Each internal routing consists of a number of steps, identified by a sequence number. The process of setting up an internal routing consists of entering a sequence number in the Sequence field, entering the relevant internal routing group in the next field, and then specifying the processing required for this sequence step.

Internal Routing Group. Enter the name of an existing IRG.

Clear Shortages. Enter Yes to cause the shortage clearance algorithms to be run before a location is identified to receive the inventory. These algorithms look for orders that were not fully satisfied in the original picking because of insufficient inventory levels.

Linking Transactions to IRs



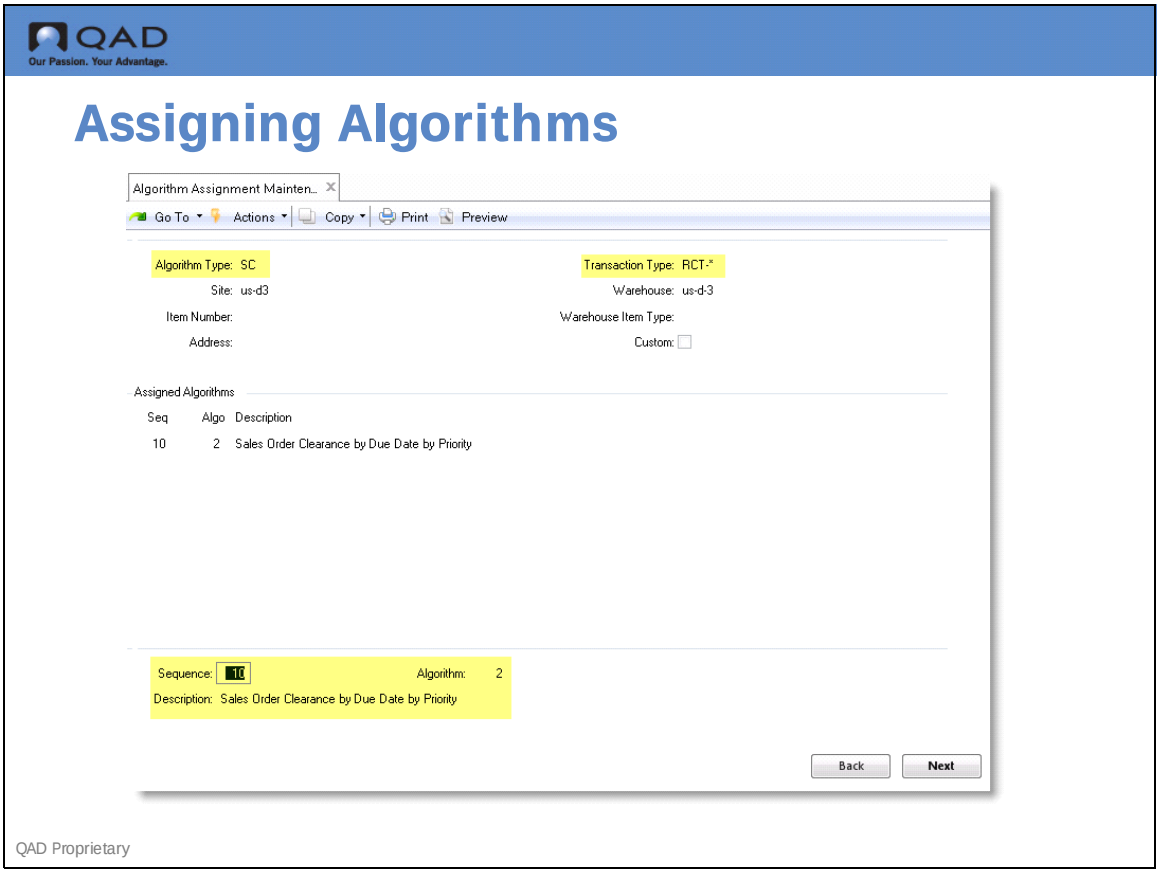
Use Internal Routing Assignment Maintenance to link transaction types to the IRs you create for cross-docking.

Fields

Transaction Type. Enter the transaction type to which you want to assign an internal routing. You can maintain transaction types using Transaction Type Maintenance (4.7.1).

Internal Routing. Enter the name of the internal routing you want to assign to this transaction type.

Assigning Algorithms to Transactions



Use Algorithm Assignment Maintenance (4.6.9) to assign algorithms to transactions that the system uses in cross docking.

The reason for setting up a sequence of algorithms is so that you can specify the ideal method for selecting locations as the first step in the sequence. If the system cannot meet the full requirements either of put-away or picking by running the first choice algorithm, it then runs the second algorithm in the sequence, and so on until the requirement has been met.

Algorithm Type	Transaction Type	Additional Fields
SC (shortage clearance)	RCT-*	Sequence=10 Description=Sales order clearance by due date by priority Algorithm=2
PK	SHRT-SO	Sequence=10 Description= Pick by location Algorithm=3
LF	SHRT-SO	Sequence=10 Description=Merge with same order Algorithm=3 Sequence=20 Description=First location in first storage location group Algorithm=1

Fields

Algorithm Type. Enter the two-character code for the type of algorithm you want to assign. The standard codes are LF, PA, PK, SC and QA.

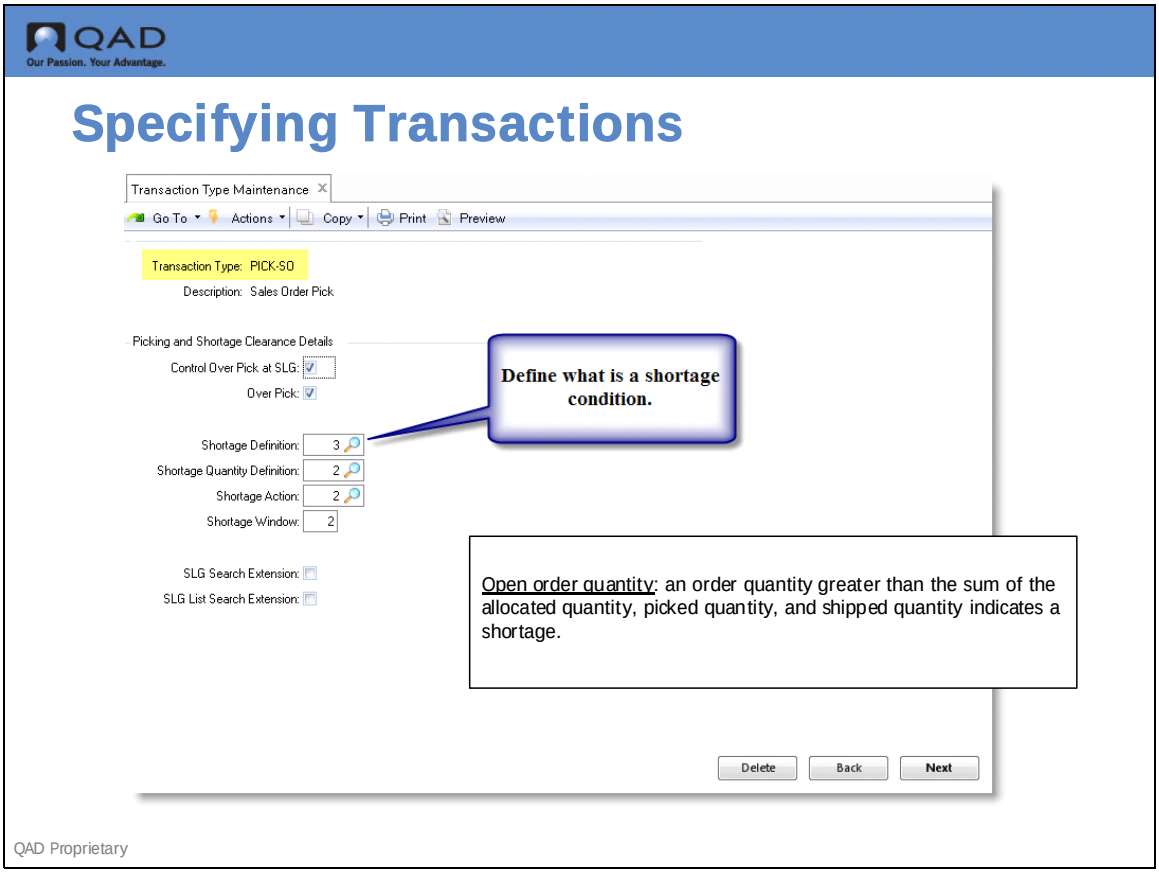
Transaction Type. Enter the transaction type to which you want to assign algorithms. You can use an asterisk as a wild card if you want to assign the same algorithm to a range of transaction types.

Example The transaction type RCT-* covers all receipt transaction types, such as RCT-PO, RCT-UNP, RCT-WO, and so on.

Sequence. For a new assignment, Sequence defaults to 10. Number sequences by 10's (10, 20, 30, and so on) so that additional steps can be inserted easily later, if required.

Algorithm. Assign algorithms of the type you selected at the top of the frame.

Specifying Transactions



Use Transaction Type Maintenance to modify or create transaction types. Each type of inventory transaction is identified by a transaction type code. Examples are a purchase order receipt (RCT-PO) or a sales order pick (PICK-SO). All standard transaction types are already set up within the system.

Fields

Transaction Type. Set this field to Yes so that t.

Shortage Definition. For picking transaction types, enter a code from 0 to 10 to specify what constitutes a shortage. The options are as follows:

Code	Definition
0	A field is available on each order detail record that can be manually set to Yes to indicate a shortage.
1	A field is available on each order detail record that is automatically set to Yes when picking is attempted. This constitutes a shortage.
2	General allocation: an allocated quantity greater than zero that is not detail allocated indicates a shortage.
3	Open order quantity: an order quantity greater than the sum of the allocated quantity, picked quantity, and shipped quantity indicates a shortage.

Code	Definition
4	Non-detail allocated quantity: an order quantity greater than the sum of any detail allocations and the picked quantity and shipped quantity indicates a shortage.
5	General allocation previously picked: as 2 except that the sum of the quantity picked and quantity shipped must be greater than zero.
6	Open order quantity previously picked: as 3 except that the sum of the quantity picked and quantity shipped must be greater than zero.
7	Non-detail allocated quantity previously picked: as 4 except that the sum of the quantity picked and quantity shipped must be greater than zero.
8	General allocation, other line previously picked: as 2 except that sum of the quantity picked and quantity shipped of a different line on the same order must be greater than zero.
9	Open order quantity, other line previously picked: as 3 except that sum of the quantity picked and quantity shipped of a different line on the same order must be greater than zero.
10	Non-detail allocated, other line previously picked: as 4 except that sum of the quantity picked and quantity shipped of a different line on the same order must be greater than zero.

Shortage Quantity Definition. For picking transaction types, enter a code from 0 to 2 to specify how the shortage quantity is calculated. The options are as follows:

Code	Definition
0	General allocated quantity
1	Open order quantity (ordered, less allocated, less picked, less shipped)
2	Non-detail allocated quantity (ordered, less total detail allocations, less picked, less shipped)

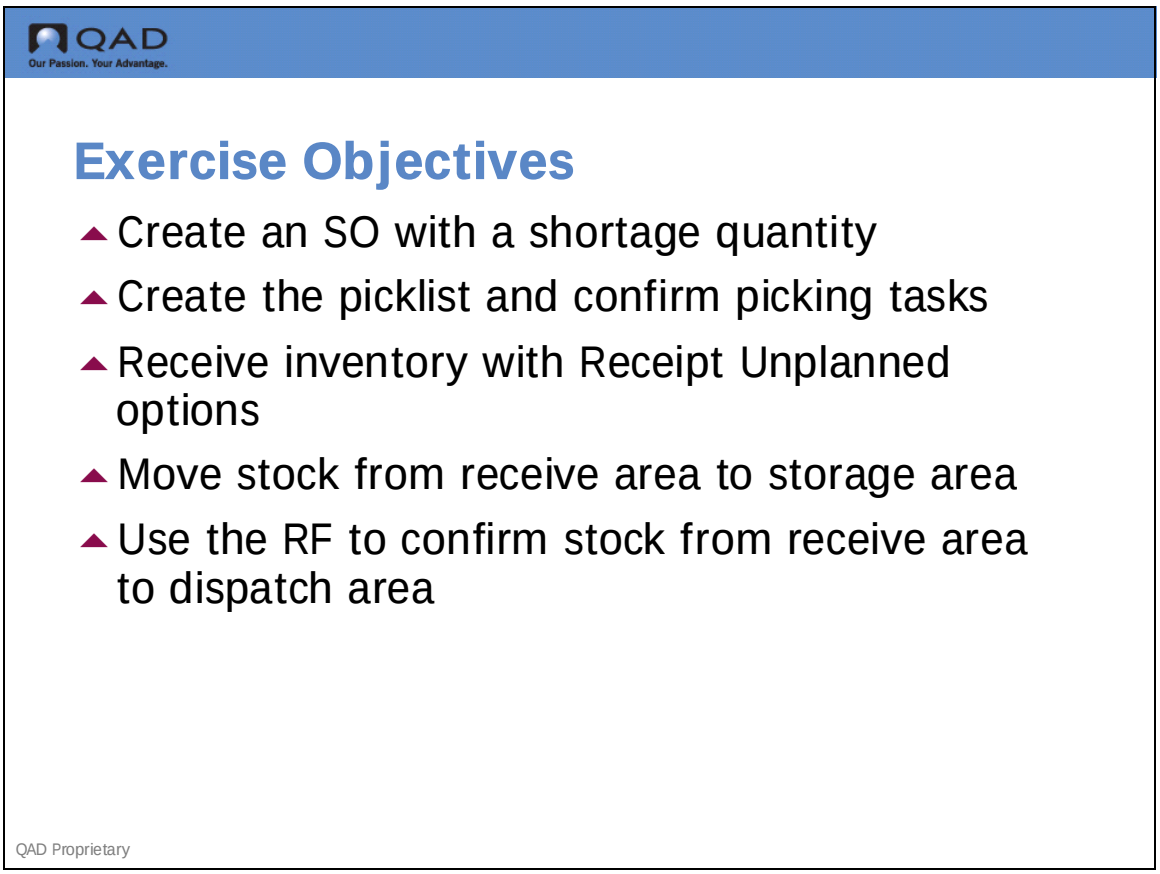
Shortage Action. For picking transaction types, enter a code from 0 to 3 to specify the action that the system should take when a shortage is detected. The options are as follows:

Code	Definition
0	No action: Warehouse transactions are created.
1	Order line is general allocated; warehouse transactions are created.
2	Order line is detail allocated. These allocations are converted to detail picks that create warehouse transactions.
3	Order Line is detail allocated—not detail picked, and warehouse transactions are created.

Shortage Window. Enter a number indicating the number of days before an order line due date that it can be considered short.

Example 1 indicates that an order line due tomorrow is short, but that one due the day after—2 days away—is not.

Exercise 1: Receive Inventory and Move



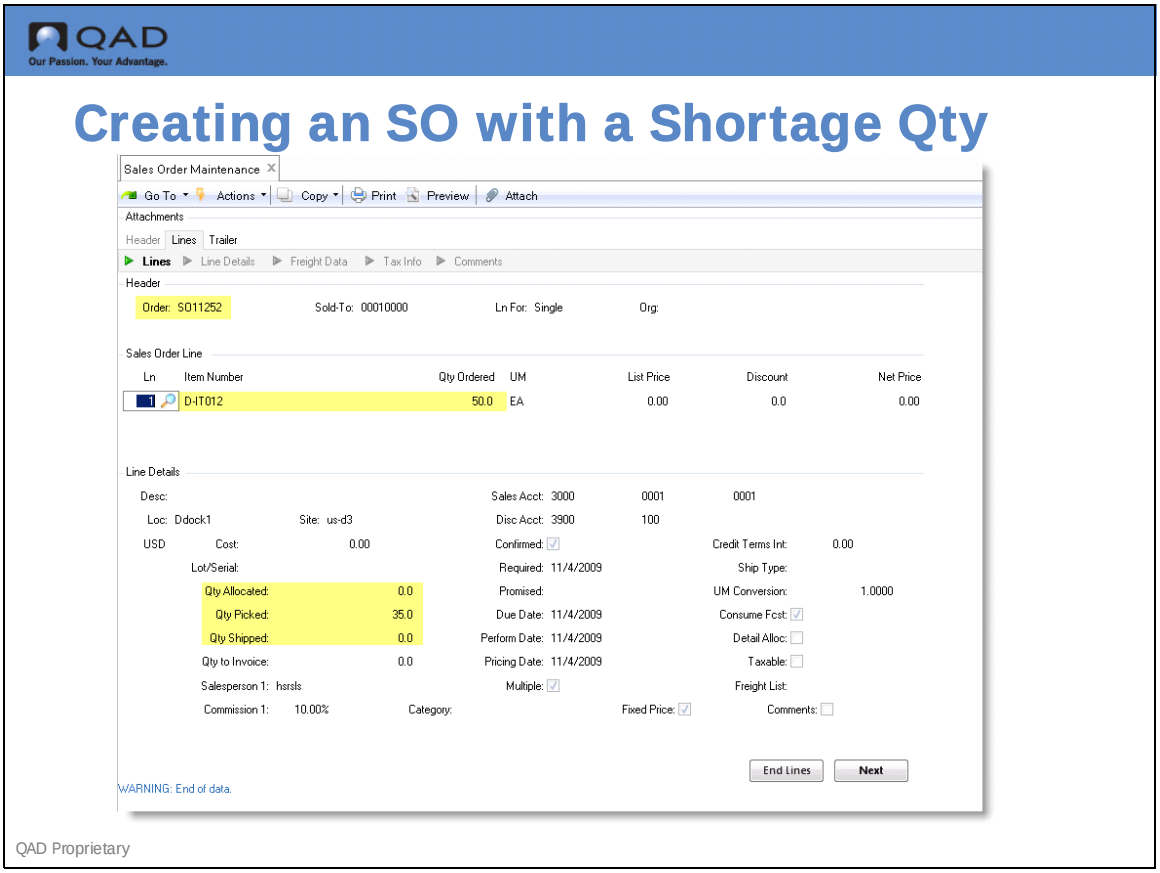
For this exercise, you:

- Create an SO for a quantity of 50 items.
- Pick the items through creation of a picklist in Picklist/Pre-Shipper-Automatic (7.9.1), but only pick a quantity of 35 because there are not enough available.

  Note The picking step is not included in this exercise.
- Use the QAD EE Receipts-Unplanned (3.9) to receive more quantities of the same item.

  If cross-docking is set up correctly, when you receive, the system creates a new task of 15 EA from receiving area to the shipping area. The system adds the 15 EA to the 35 EA already picked.
- Use the RF device to transfer the received items from the receiving dock to the shipping dock.

Step 1: Creating an SO with a Shortage Quantity



Use Sales Order Maintenance (7.1.1) to create a sales order with a shortage quantity. Create a new order, then add a line item for the order; for example, for item D-IT012.

Fields

Qty Allocated. Enter the number of items to allocate for this order line. There are two allocations:

- General allocations allocate the required quantity of the item.
- Detail allocations specify the site, locations, lot/serial numbers, and lot references for the allocated quantity.

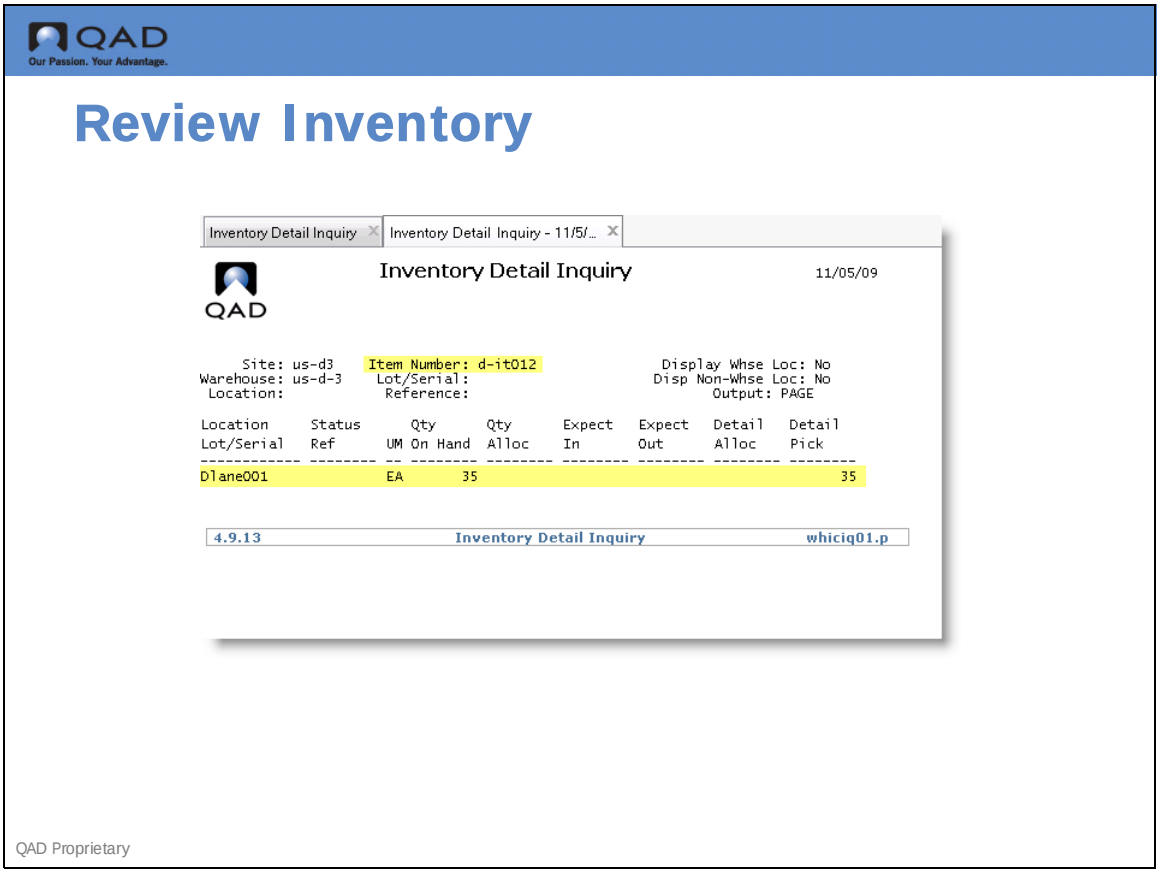
Allocations reserve inventory for this order so it is not available for other orders in the system. Allocations also control shipment quantities when there are not enough items to fill all orders. You can choose to ship the quantity allocated or the quantity picked.

The total of quantity allocated, plus quantity shipped, plus quantity picked cannot be greater than the quantity open on the line item.

Qty Shipped. Read only.

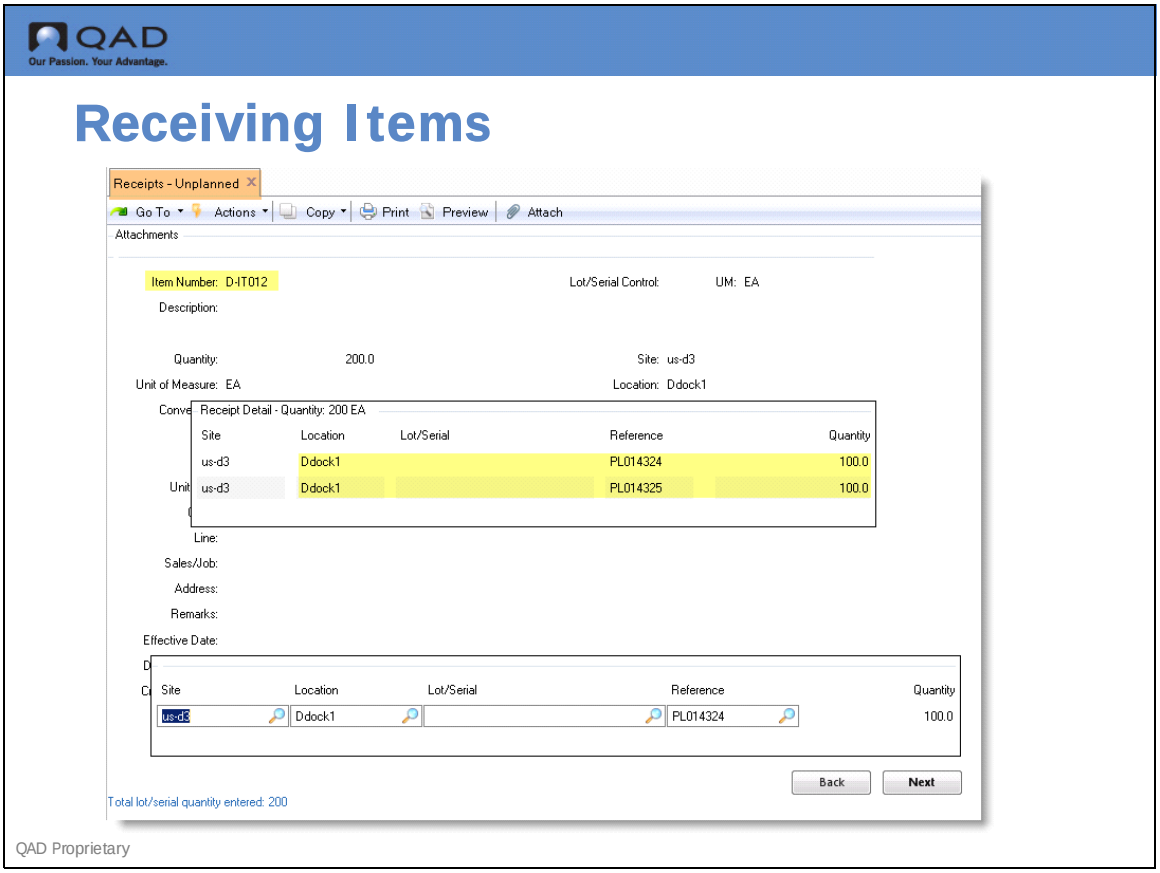
Qty Picked. Read only.

Step 2: Review Inventory



Use Inventory Detail Inquiry (4.9.13) to review the quantities allocated and picked.

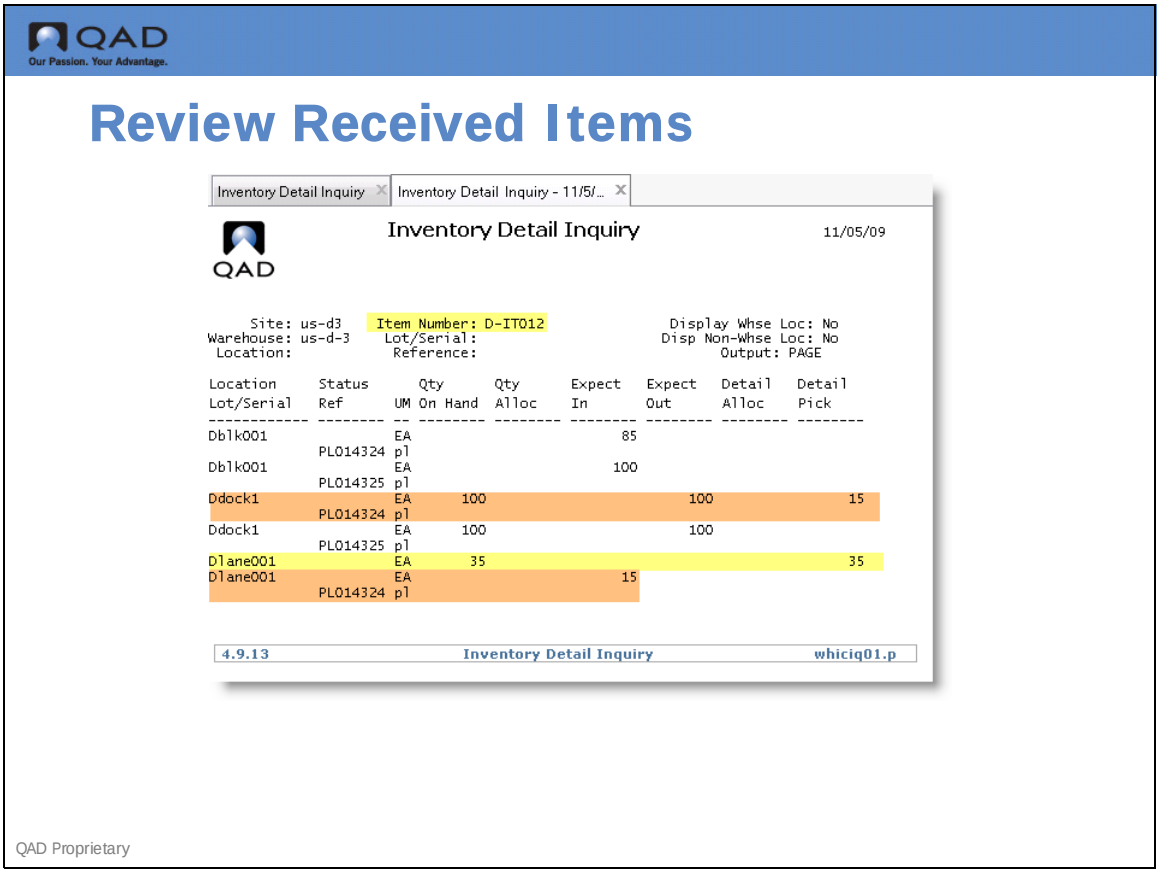
Step 3: Receive Items



Use Receipts-Unplanned (3.9) to receive the items into the warehouse from the sales order. You typically use this program to receive miscellaneous inventory such as floor stock items sent back from production, or materials from a manufacturing order that has been closed from an accounting standpoint.

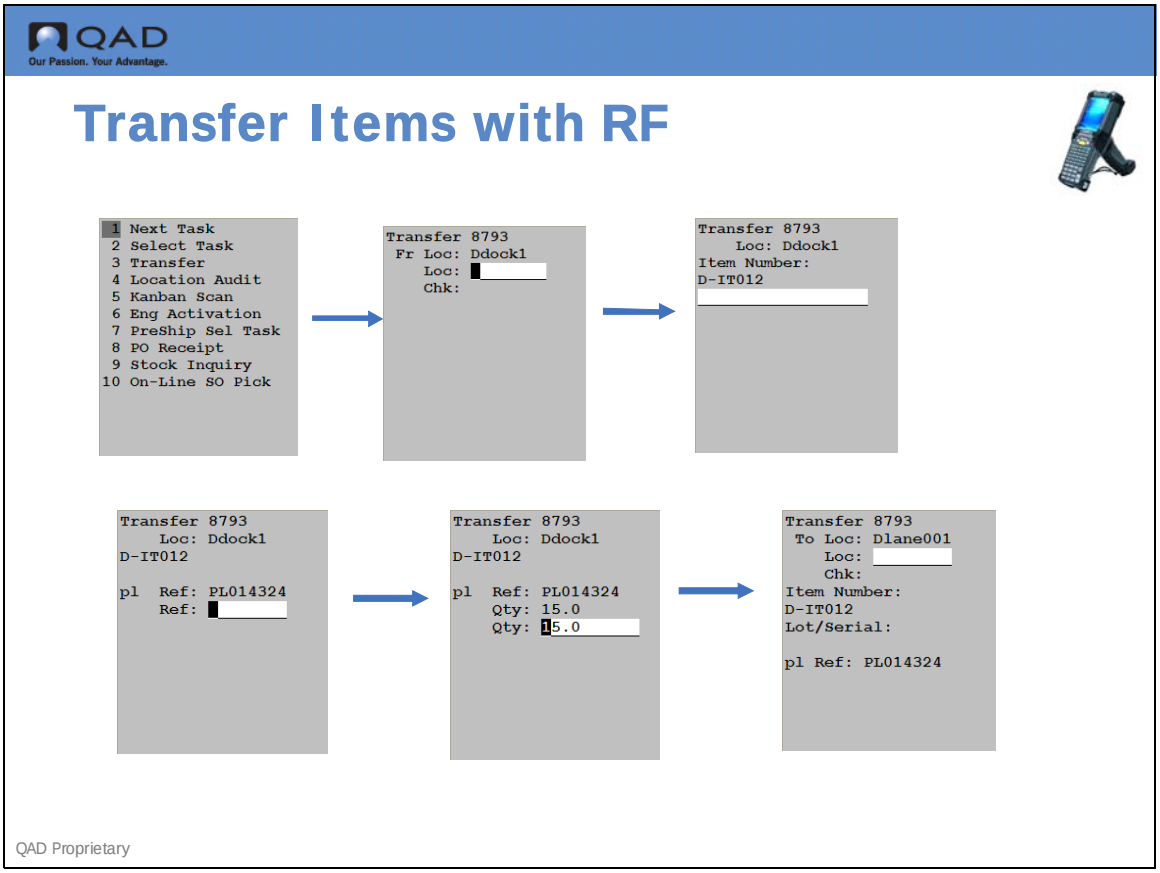
Specify the item number; then, enter the site. Ensure that the location is the receiving dock of the warehouse.

Step 4: Review Received Items



Use Inventory Detail Inquiry to review received items.

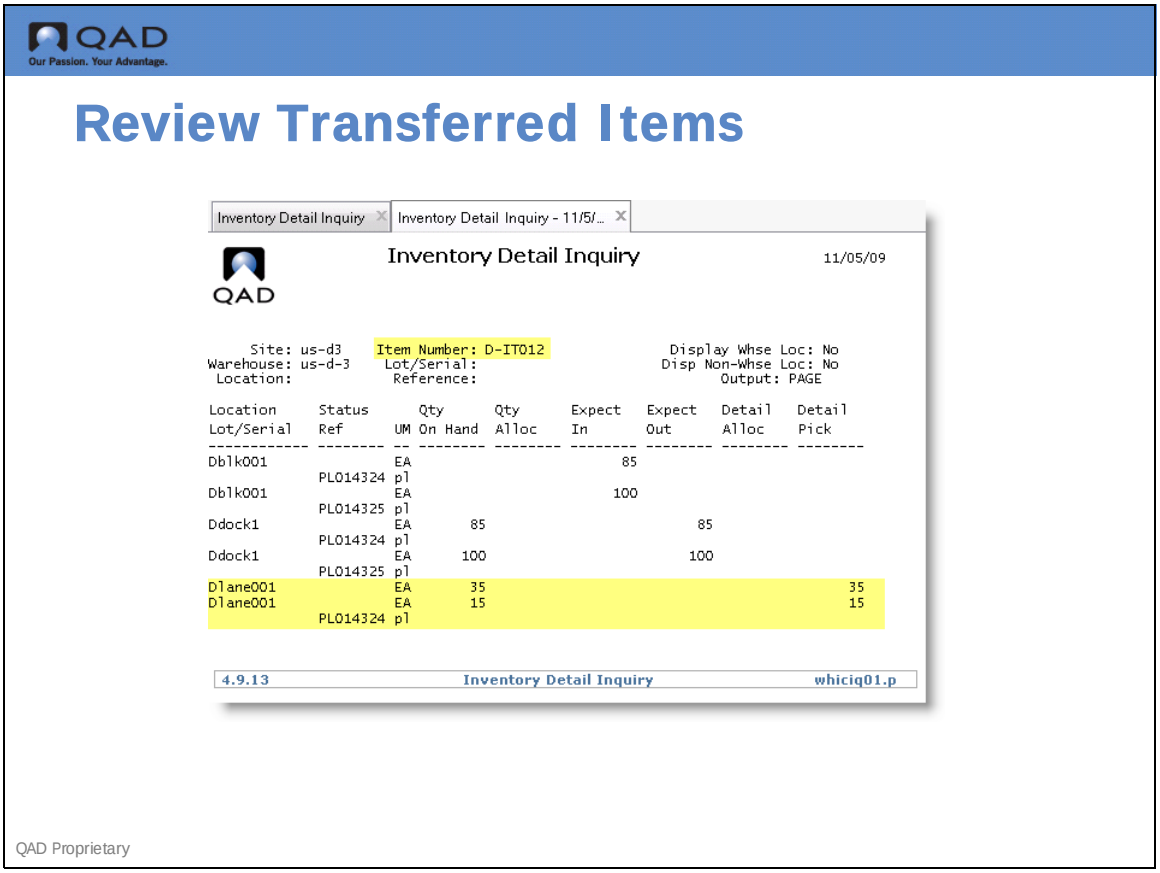
Step 5: Transfer Items with RF Device



Use the RF Next Task (1.1) option to transfer items from the receipt area to the dispatch area, which typically are the shipping lane locations.

1. Log onto the RF device, entering the site, warehouse, and other login data.
2. Select Next Task (1.1).
3. Enter the location of the receipt area.
4. Enter the item number, then the pallet reference number.
5. Enter the quantity to transfer to the dispatch area.
6. Enter the dispatch area location (shipping lane).

Review Transferred Items

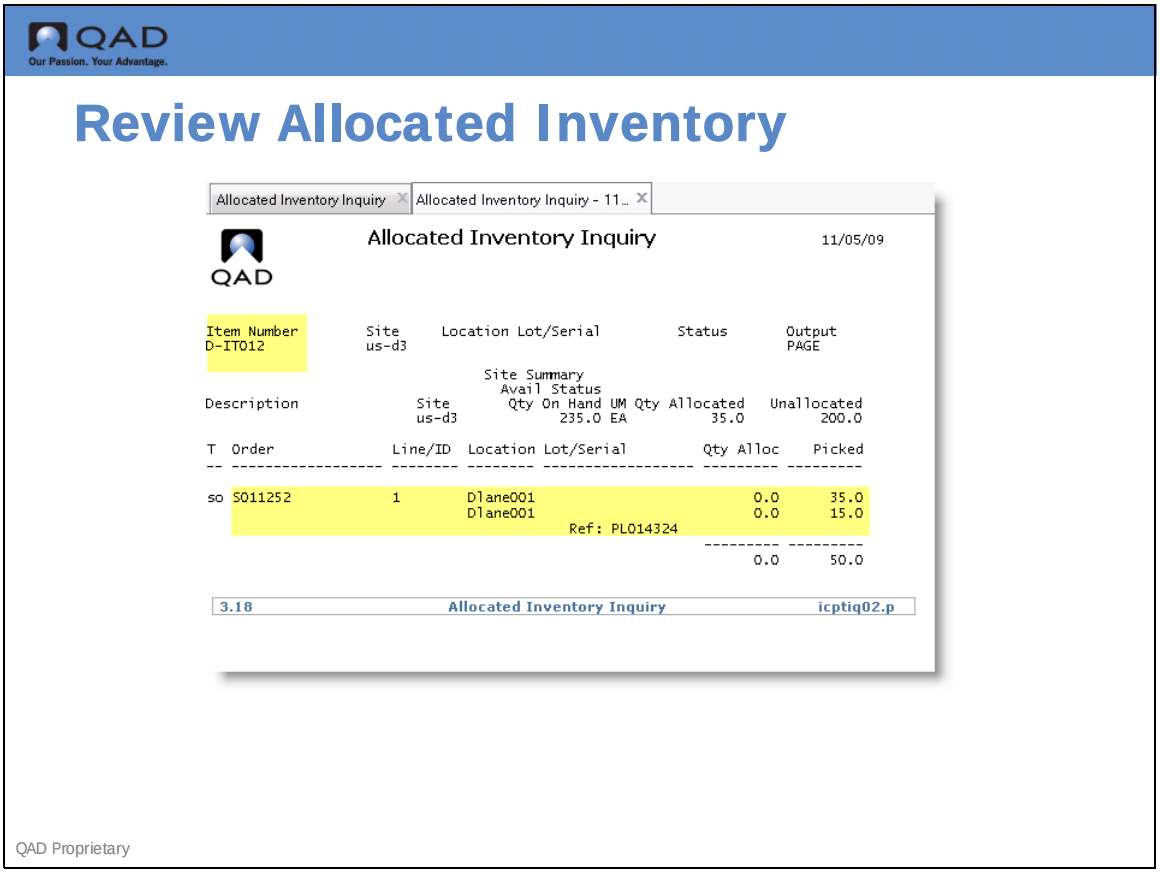


Use Inventory Detail Inquiry to check if inventory was moved to the location.

Field Descriptions

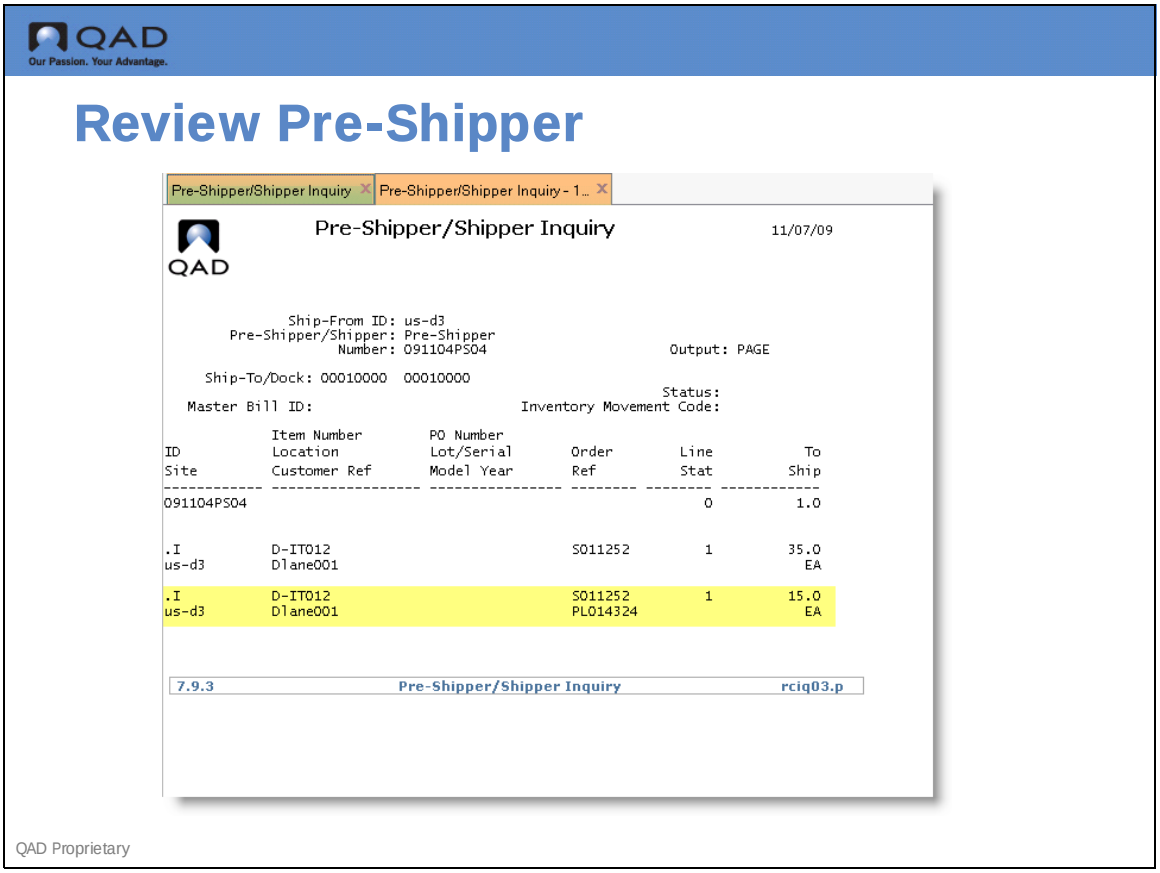
Expect In/Expect Out. Expected out/ expected in quantities indicate that tasks were created properly but must be confirmed.

Step 7: Review Allocated Inventory



Use Allocated Inventory Inquiry (3.18) to verify the allocated quantities and picked quantities in the dispatch area.

Step 7: Review Pre-Shipper



Use Pre-Shipper/Shipper Inquiry (7.9.3) to review shipper for items in the dispatch area, ready to ship.

Study Questions

1 Describe a situation in which cross-docking is used in a warehouse.

2 True or False. When you route the relevant stock directly from the receipt dock to the shipping dock, you can remove additional put-away and picking activities.

3 How do you define a shortage?

4 How do you specify cross-docking details for the shortage clearance?

5 How do you specify that the system runs shortage-clearance algorithms?

6 What is the significance of setting up algorithms for clear shortage (SC)?

7 In which field and program do you specify a shortage condition?

8 True or False. You can set up shortages so that a field is available on each order detail record that can be manually set to Yes to indicate a shortage.

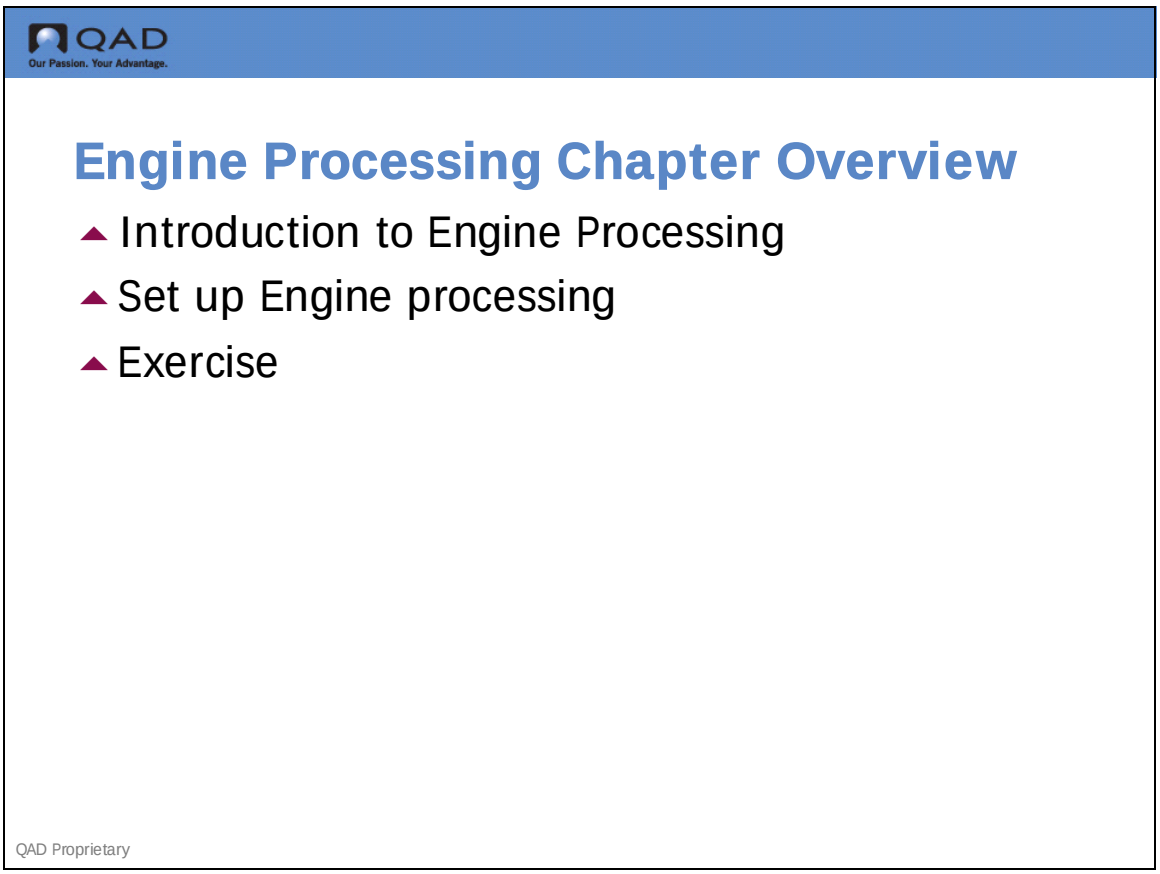
9 True or False. You can set shortage conditions based on open order quantities but only for previously picked amounts.

10 What are setting when you set the Shortage Window?

Chapter 10

Engine Processing

Chapter Overview



Introduction

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Introduction

Consider this scenario:

- Storage area in the warehouse is blocked.
- Pallets should be unloaded from the truck and labels printed.
- Put away task must not be created until storage area is clear.

Blocked Storage Area

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QAD Warehousing lets you use software routines, or *engines*, to process transactions within a warehouse. The system creates *engine workfiles*—requests for a transaction—when processing warehouse tasks, such as picking and put-away. You can use the engines to process engine workfiles in the Engine menu (4.7). The engine workfiles are always in use, though, in QAD Warehousing, whether you choose not to process them with the engines.

Programs in the Engine menu let you process different time-consuming functions and decrease user waiting by running the processes in the background. You can use the programs to delay the creation of warehouse transactions, select and modify engine workfiles, and process engine workfiles singularly or in batch mode.

Use engines to create automatically warehouse tasks or delay the creation of tasks.

- AUTO mode: system processes engine workfiles automatically without user intervention. This is the most common use.
- MANUAL mode: system processes engine workfiles as you need them processed. This is useful when you need to delay processing of a warehouse task.

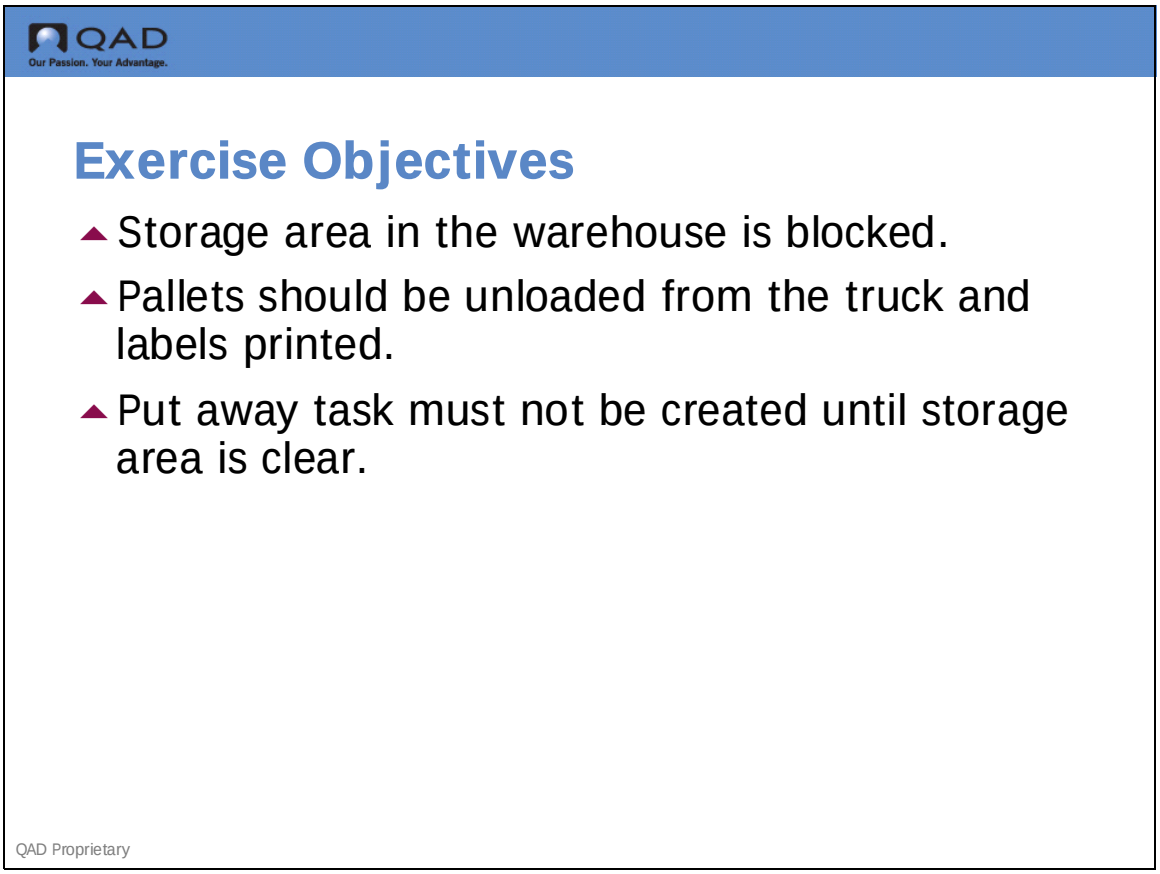
When in MANUAL mode, you must start one of the engine processor programs in the Engine menu to process an engine workfile request. Engine workfiles can be any of the following requests:

- Create a task, including the put-away logic when applicable.
- Start the picking logic and create a picking task.

- Confirm a task.
- Print a tag.

Note Warehouse staff typically print tags during task creation, confirmation, exception processing, or when they need an ID tag.

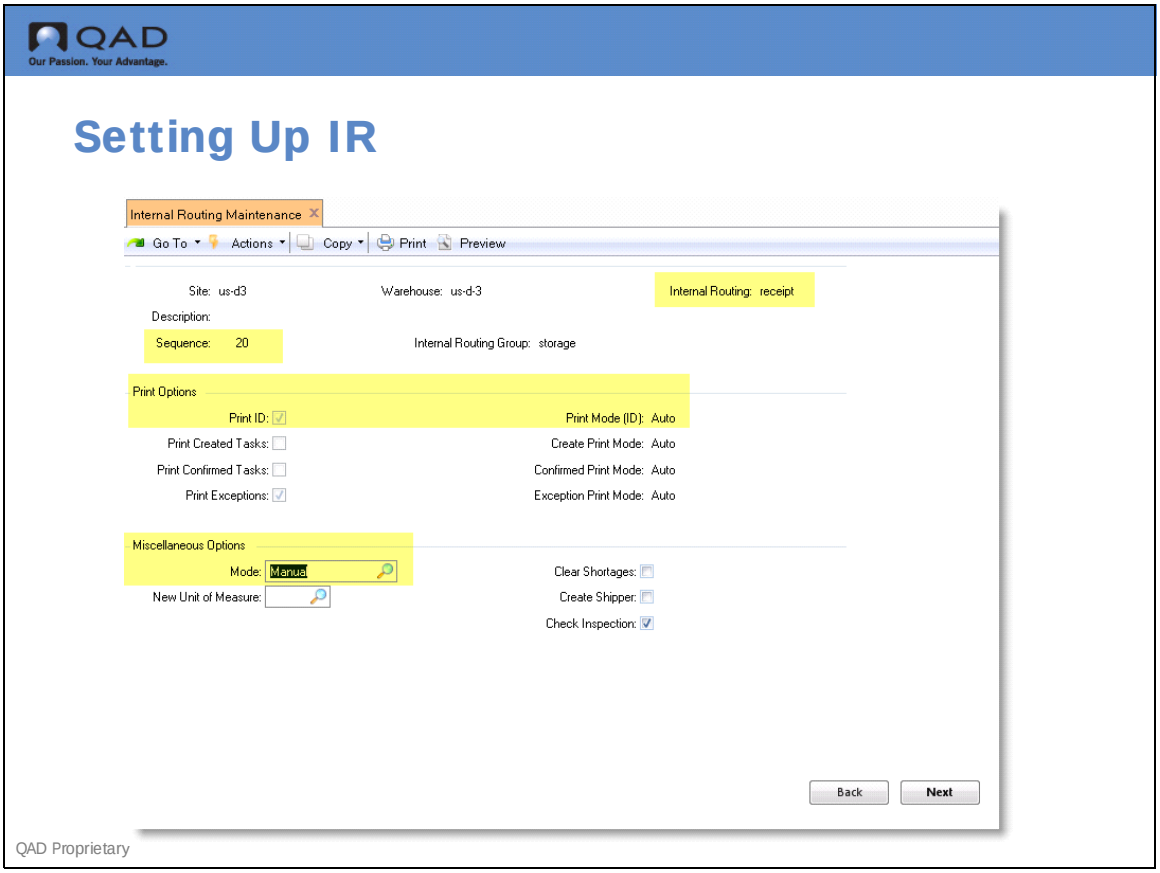
Exercise 1: Receive Items, Set Up Engine Processor, Print Labels



For this exercise, you:

- Ensure Internal Routings are set up for the situation described in the objectives.
- Receive items using QAD EE Receipts-Unplanned.
- Review inventory.
- Set up the engine processor.
- Review inventory.
- Print tags.

Step 1: Ensuring IRs are Set Up



Use Internal Routing Maintenance (4.2.6) to ensure that options are set for printing labels and that the mode is set for manual for the IR for the sequence (the step) within the IR you want to deactivate automatic processing.

Example You set up the picking process to include a packing step. You want warehouse staff to go from inventory to a packing area and when packing is complete, to a dispatch area. To do this, you define a three-step process that includes:

1. Step 10: storage
2. Step 20: packing
3. Step 30: dispatch

Normally, you want the system to use the AUTO mode for step 20 and step 30; however, you set up step 30 as a MANUAL mode because the shipment is large and the packing staff is short-handed. This lets the packing department take more time.

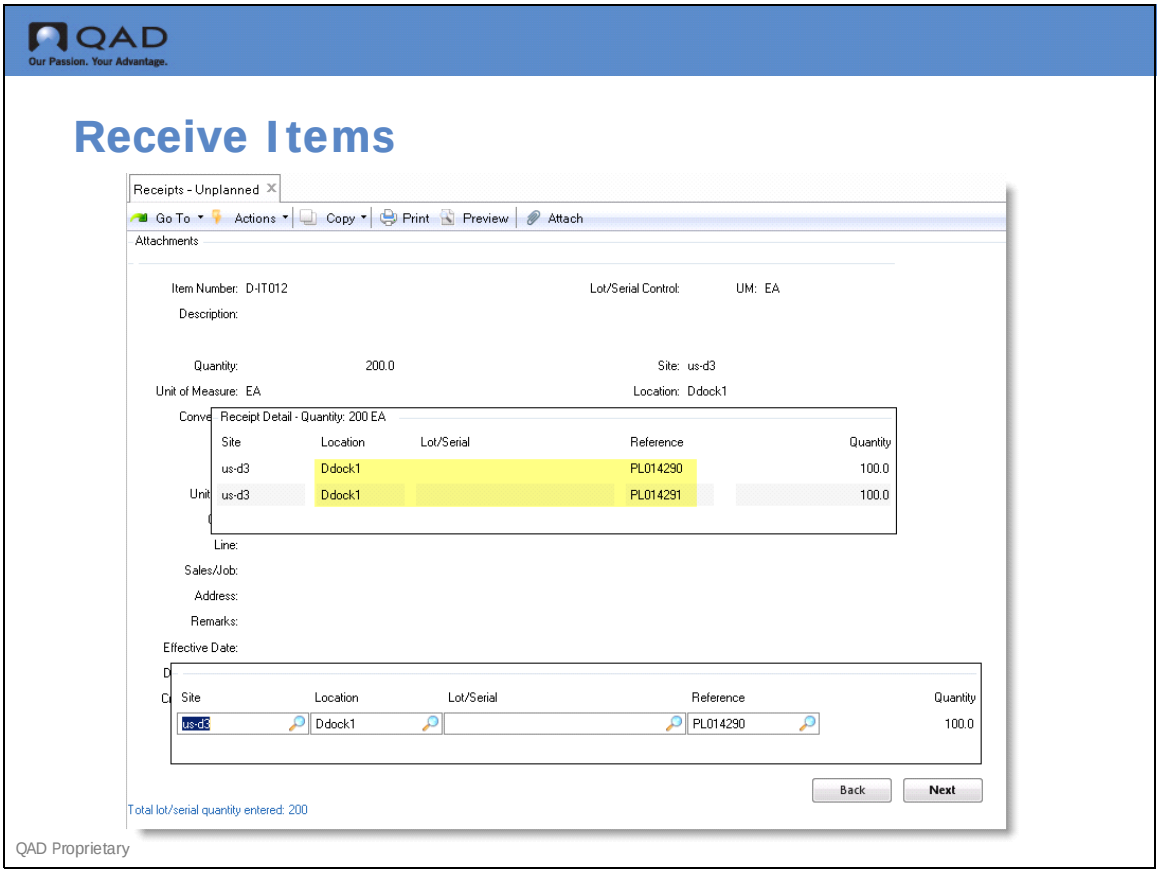
Since step 30 is in MANUAL mode, the system does not create the task from the packing area to the dispatch area when staff confirm that goods are moved from the storage area to the packing area. Instead, it creates a request for movement in the form of an engine workfile. The dispatch staff use the Engine Activation (1.6) menu option on the RF device to process the engine workfile. When the engine is activated, the system creates the movement from the packing area to the dispatch area. As an alternative to the RF Engine Activation function, you can also use one of the engine processor programs in Engine Menu (4.7).

Fields

Print ID. Enter the ID of the printer to use for label printing.

Mode. Ensure the mode is set for manual.

Step 2: Receive Items



Use Receipts-Unplanned (3.9) to receive the items into the warehouse. You typically use this program to receive miscellaneous inventory such as floor stock items sent back from production, or materials from a manufacturing order that has been closed from an accounting standpoint.

Specify the item number; then, enter the site. Ensure that the location is the receiving dock of the warehouse. Specify the pallet (reference ID).

Step 3: Review Inventory

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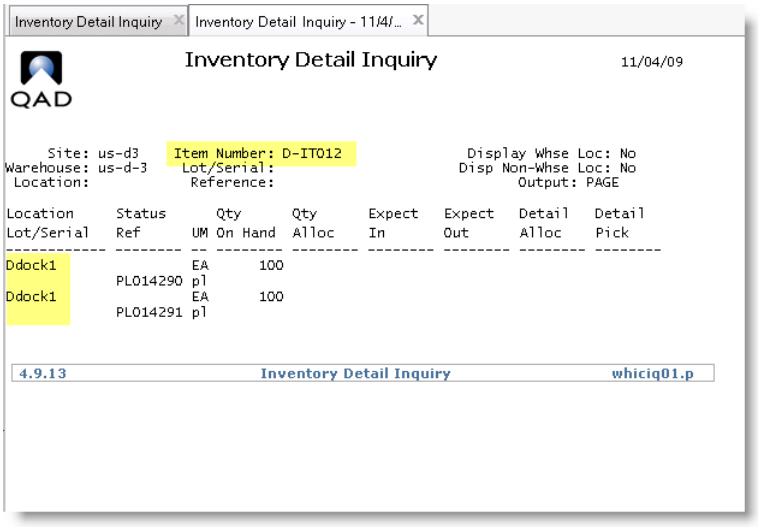
Review Inventory



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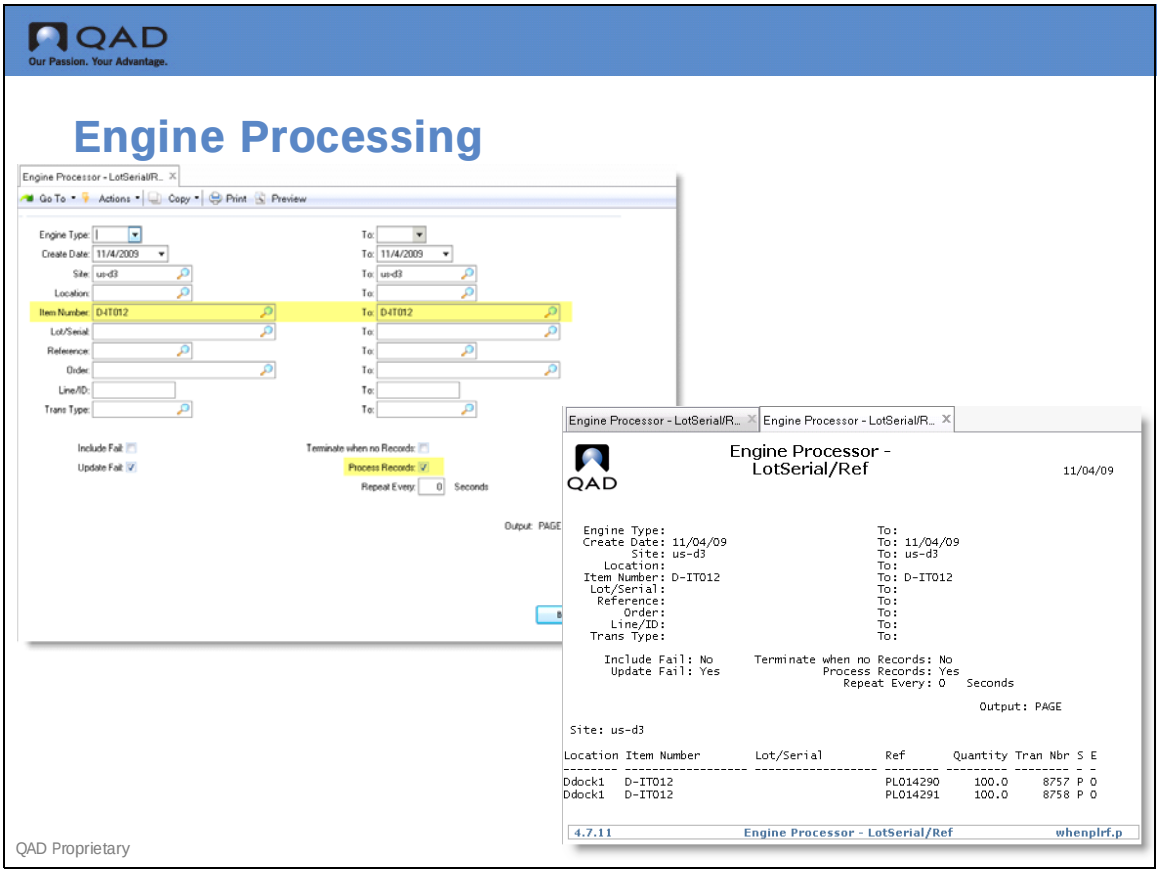
Use Inventory Detail Inquiry (4.9.13) to ensure that inventory was received.

Step 4: Set Up Engine Processor



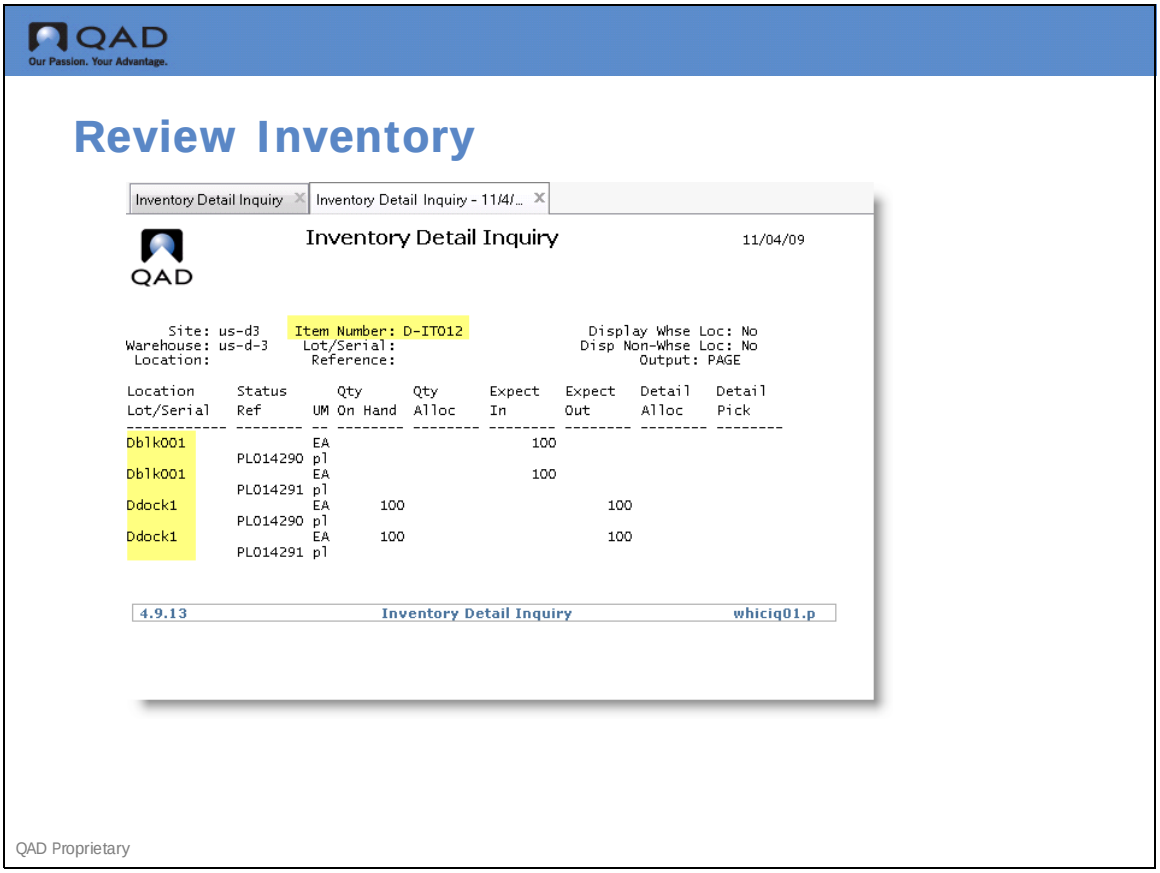
Use Engine Processor-Lot/Serial/Ref (4.7.11) to process MANUAL engine workfiles. You can run the engine processors to process engine workfiles singularly or in batch mode. You can process engine workfiles by engine type, site, date, order, item, transaction number, and so on, and process at a later time.

You can run the processor programs in simulation mode first to view transaction processing by setting Process Records to No. The system displays the engine workfiles to process that meet your selection criteria. Optionally, specify the time in seconds at which you want to repeat engine processing.

After you specify engine workfiles for processing, the system locks the engine workfiles to prevent further processing by other engines. If an engine workfile is already locked and you specified a range, the system skips that engine workfile and continues with the next engine workfile in the range. Once the engine completes processing, it deletes the engine workfiles if you set control options to delete the files.

Specify the item number you received.

Step 5: Review Inventory



Use Inventory Detail Inquiry to review the quantities on hand in the warehouse locations.

Step 6: Print Labels

Print the labels. Ensure that you have a printer specifications set up for the WLG in Work Location Group Maintenance (4.3.9).

Study Questions

1 What is an engine workfile?

2 True or False. Engine workfiles are not in use until you choose to process them with the engines.

3 True or False. Programs in the Engine menu are set to run manually by you, so they always run as foreground programs.

4 Name three things that you can using the programs in the Engine menu.

5 Which of the following is NOT an engine workfile requests:

- Create a task.
- Create a picking task.
- Confirm a task.
- Create a wave.
- Print a tag.

6 Describe a typical scenario in which warehouse staff need to process a workfile manually.

7 True or False. When in MANUAL mode, once you create the workfile request, the system reads and initiates the request.

8 Name at least three ways to process engine workfiles.

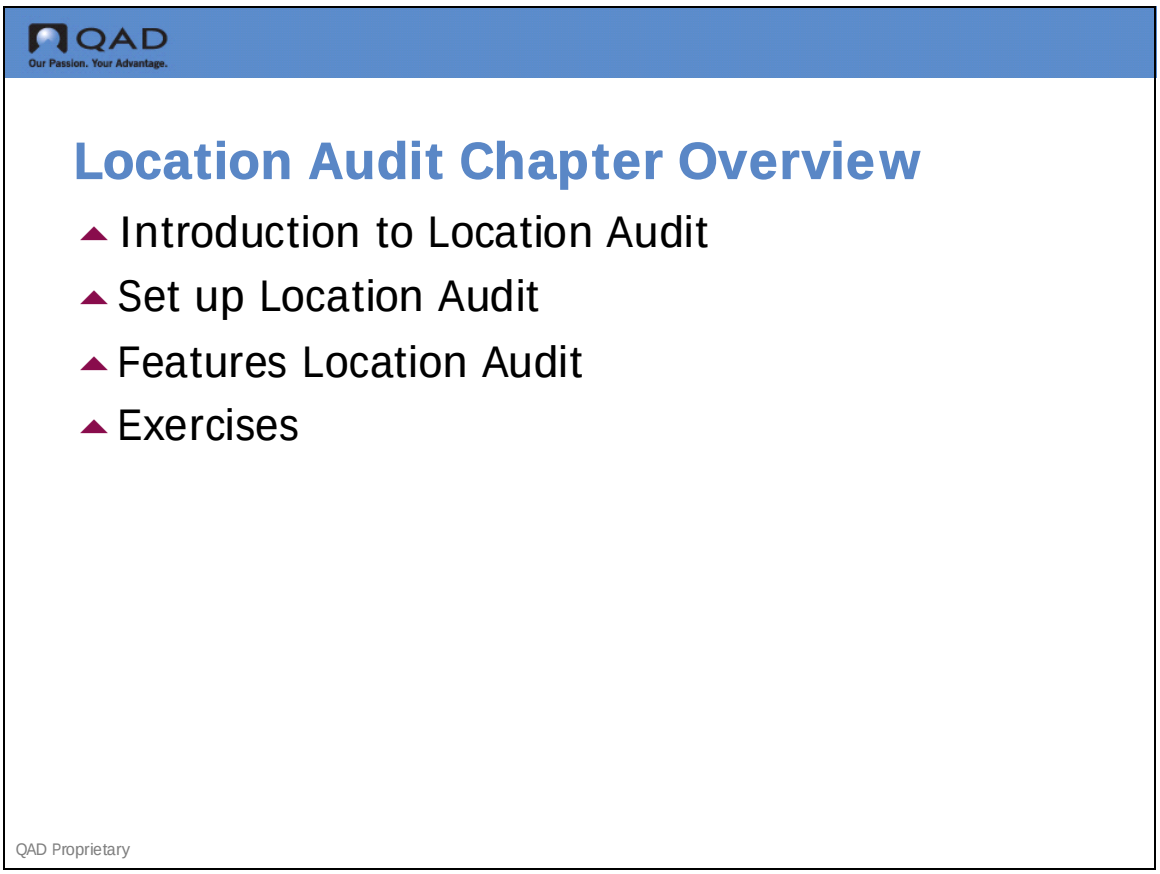
9 True or False. You can process engine workfiles in batch mode, but to avoid other real-time warehousing processing, you must run the engine processes once the workfiles are created.

10 True or False. Once the engine completes processing, the system creates engine history files so that you run engine reports.

Chapter 11

Location Audit

Chapter Overview



Introduction

From the RF, you can start a cycle count or a recount of a bin location. You can use functions in the RF Location Audit option to:

- Count the contents of a bin or pallet.
- View the stock you want to recount.
- Recount items that are not in the system yet.

After you select the Location Audit function, scan the location. The RF displays all pallets in the location. Select the pallet you want to audit. The RF displays item numbers and current quantities. Select the item you want recounted. If there are no pallets, the RF skips pallets and displays the items only. Once you select the item, the system creates a cycle count or a recount task.

Setup

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Location Audit Setup

- Set the item class
- Set the item tolerance

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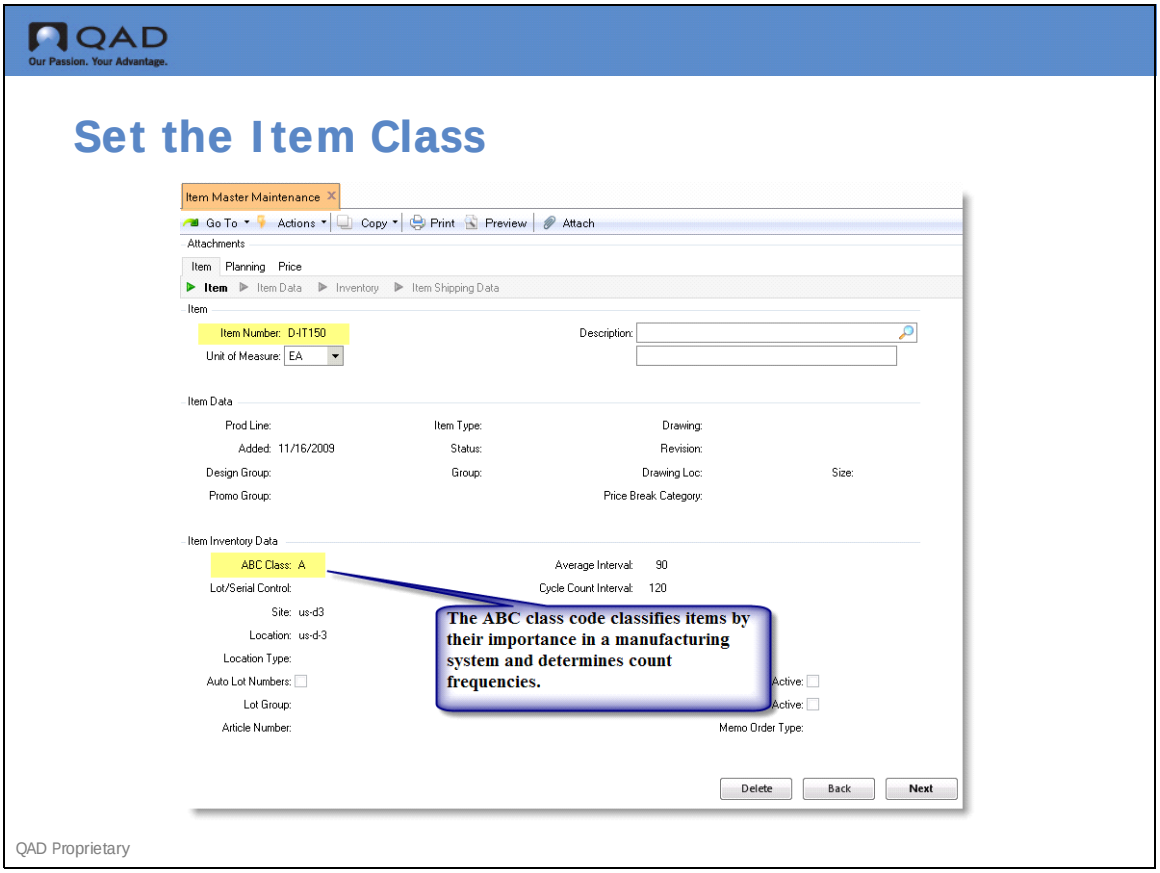
Setting the Item Class



Use Item Master Maintenance (1.4.1) to set the item class.

Fields

ABC. Enter a code classifying and ranking this item. ABC classification codes determine the count frequency and the error tolerance allowed for each item. The Cycle Count Worksheet selects items for counting based on ABC class. ABC class can also determine how an item is managed. Class A items usually require tighter physical control, such as a locked stocking area, and tighter planning parameters, as well as more frequent cycle counts.

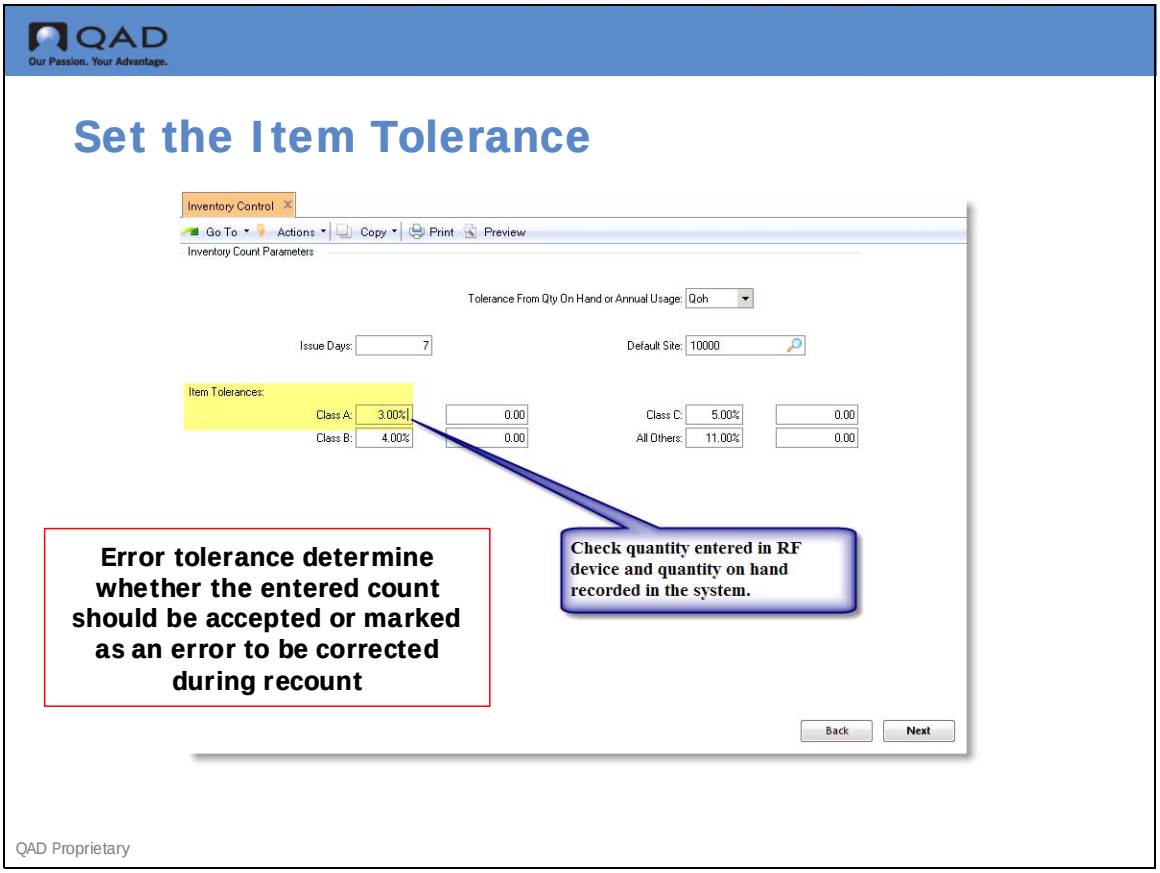
You can generate some reports, such as the Inventory Valuation Report, for ranges of ABC classes.

You can use Item ABC Status Report/Update to calculate ABC codes automatically based on annual item usage amounts. Usually items in the top 20% are given class A, the next 30% class B, and the rest class C. However, you can adjust these percentage as needed.

Any quantity below C is assigned a blank ABC code. For example, when A is 10%, B is 20%, and C is 30%, the remaining 40% is set to blank.

You can also classify items manually. You might do this for an item that has low use but is expensive or theft-prone.

Setting Up Item Tolerance



Use Inventory Control (3.24) to set the item tolerance.

Specify the count tolerance amount for items with this ABC class.

Cycle counting functions use this whenever a count is entered that is different from the quantity on hand recorded in the system. Error tolerance is calculated and used to determine whether the entered count should be accepted or marked as an error to be corrected during recount. Both percentage and amount tolerance is checked. The error must be within both tolerances for it to be accepted.

If the tolerance method is [Q]oh, item tolerances are calculated as a percentage of quantity on hand. If it is Usage, item tolerances are calculated as a percentage of annual usage. Value (currency) tolerance is always checked.

Note Unlike cycle counting, physical inventory counts let you enter out-of-tolerance quantities. No recount step is required. Instead, out-of-tolerance items are identified on count reports.

Tolerances are set up by ABC class. This allows you to exercise a greater degree of control over class A and B items than others. Setting tolerances based on annual usage further refines this by putting tolerance into perspective with the amount of use of an item.

Exercise 1:Create Stock, Audit Location, Review Stock

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Exercise Objectives

- Review stock in a location (100 EA)
- Audit location and simulate that there is 98 EA
- Review stock inquiry

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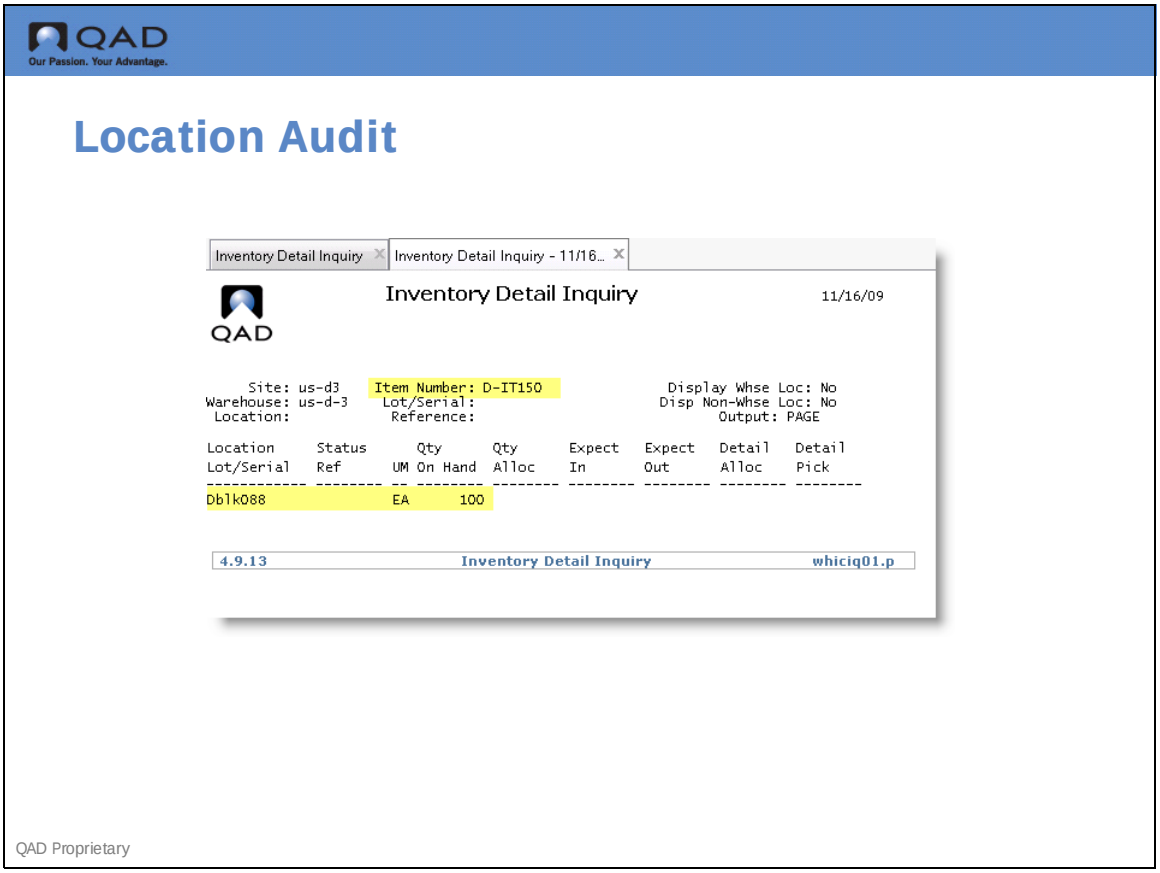
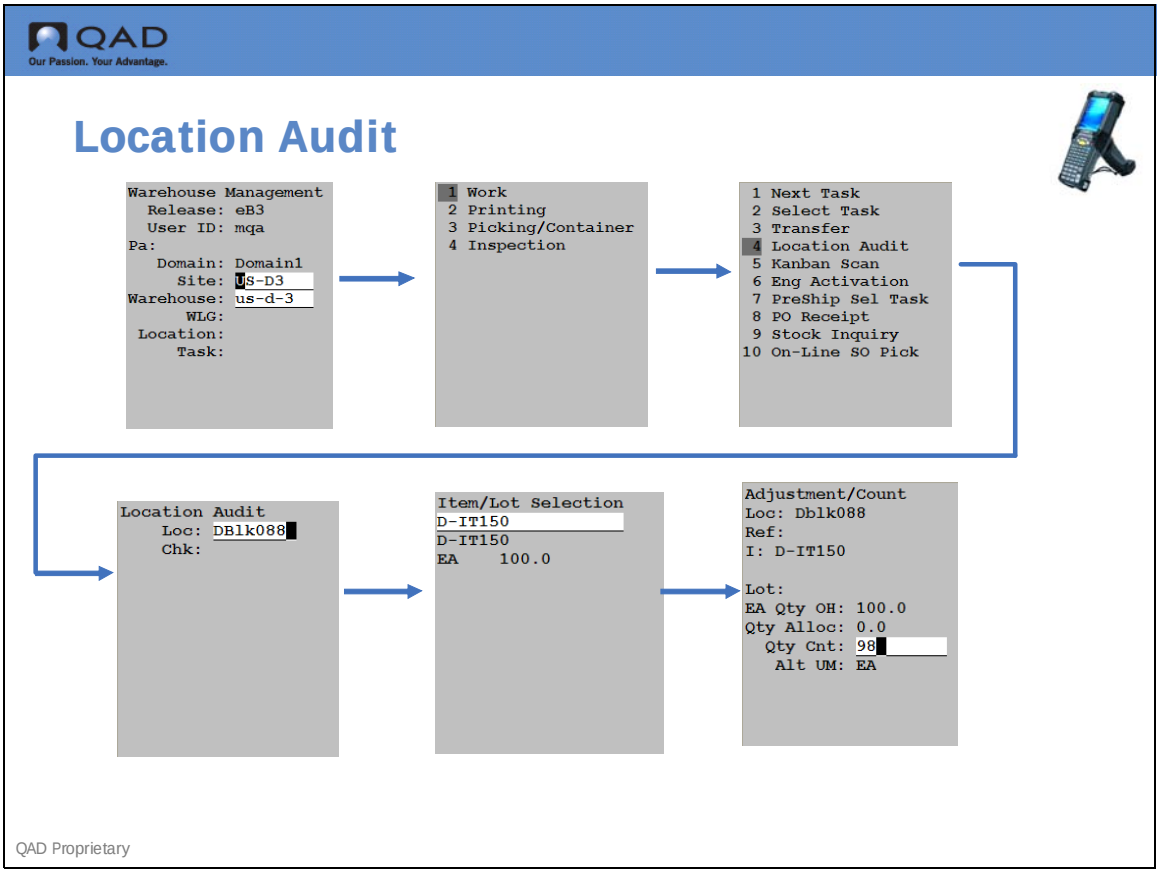
Step 1: Create/Review Stock



Use Inventory Detail Inquiry (4.9.13) to ensure that inventory exists at a specified warehouse location. Check the quantity on hand for the item you want to audit.

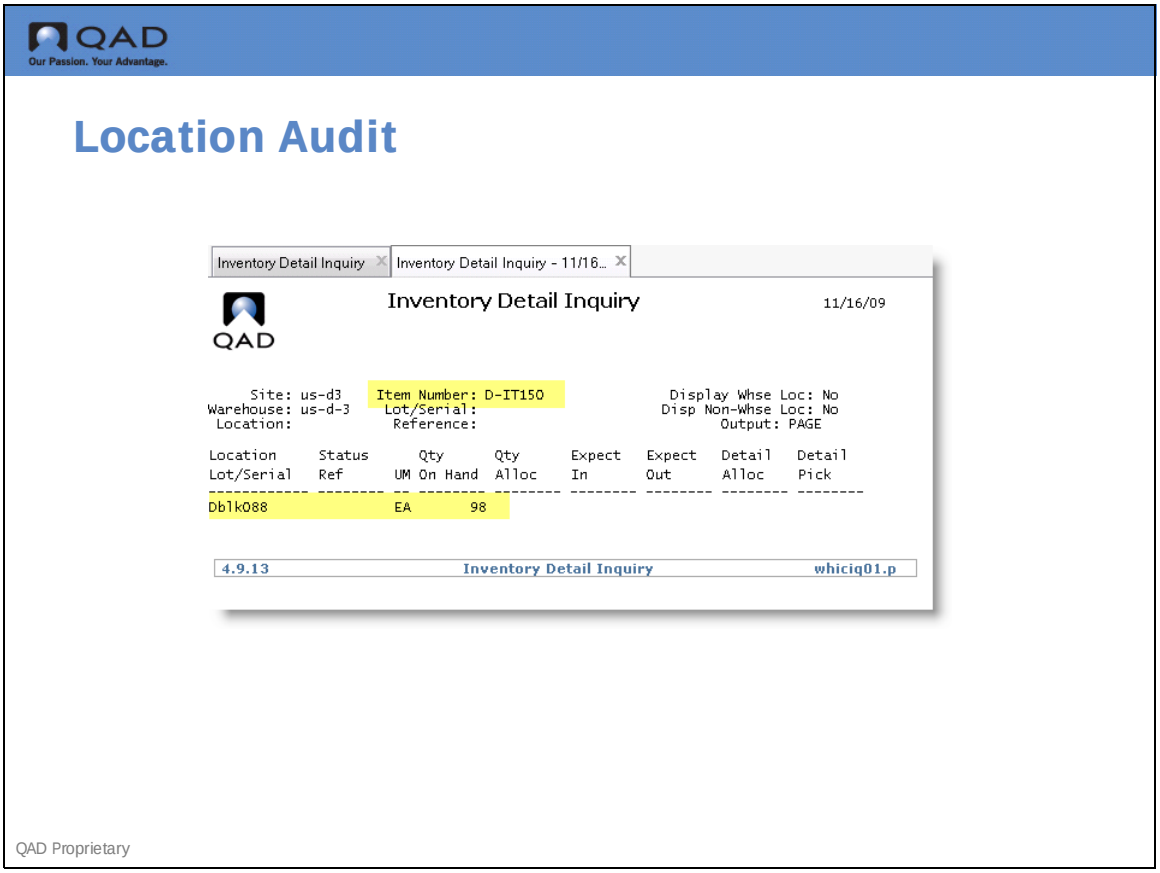
Step 2: Use the RF to Audit the Location



Use the RF Location Audit (1.4) to invoke a location audit.

1. Log onto the RF, entering site and warehouse.
2. Specify 1.4, Location Audit.
3. Enter the location with the stock to audit.
4. Enter the item number.
5. Enter the quantity counted.

Step 3: Review Inventory



Use Inventory Detail Inquiry to review the quantities on hand in the warehouse locations.

Exercise 2: Audit Location, Creating a Recount

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Objectives

- Create stock in a location (100 EA)
- Audit location and simulate that there is 95 EA
- Review stock inquiry
- Item is out of tolerance and system create a Recount task
- Confirm Recount task
- Review stock inquiry

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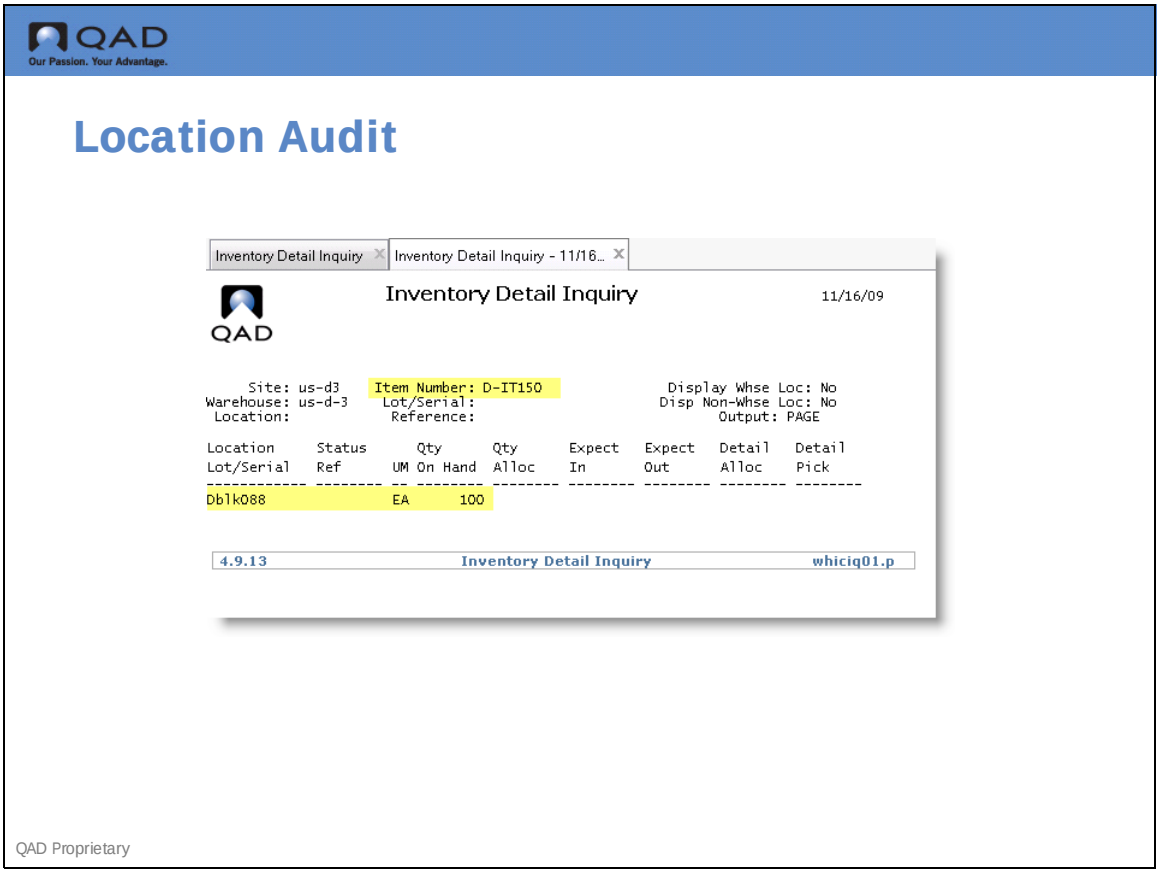
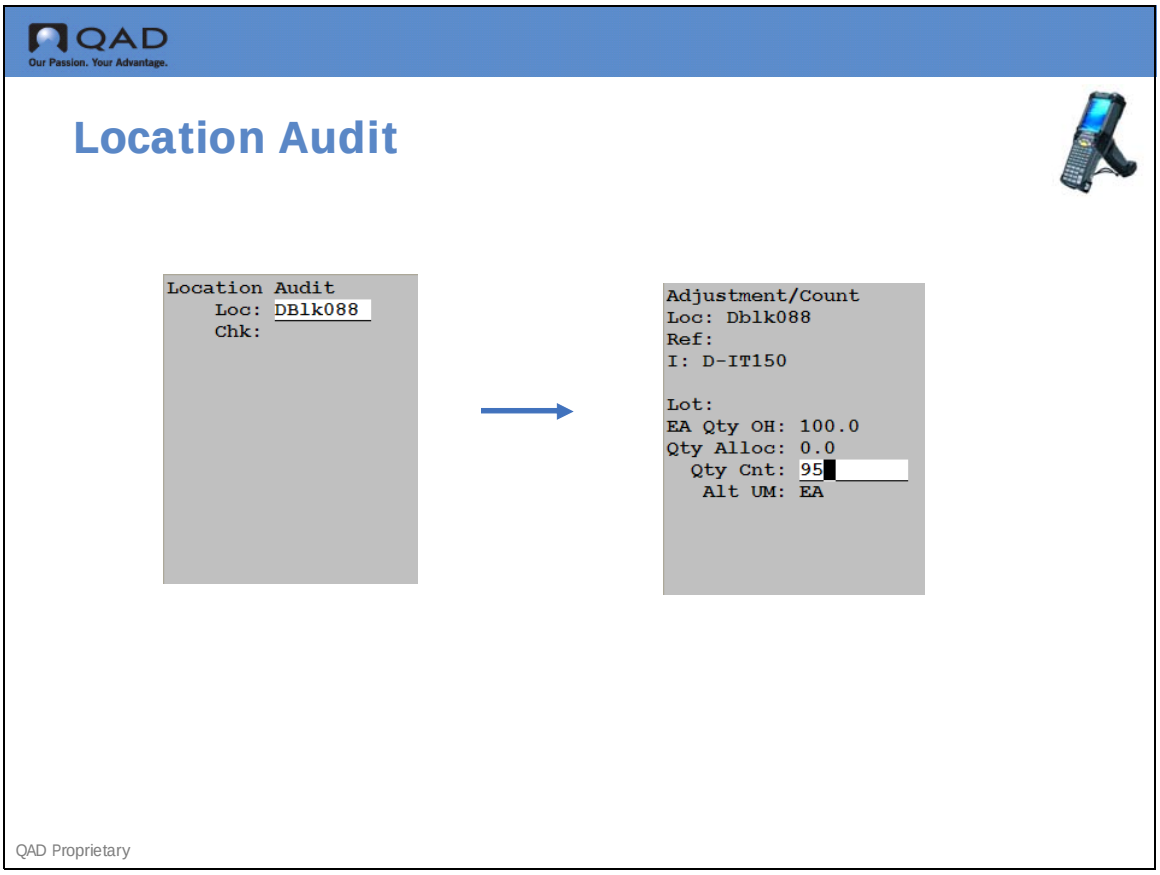
Step 1: Create/Review Stock in Location



Use Inventory Detail Inquiry (4.9.13) to ensure that inventory exists at a specified warehouse location. Check the quantity on hand for the item you want to audit.

Step 2: Use the RF to Audit Location



Use the RF Location Audit (1.4) to invoke a location audit.

1 Log onto the RF, entering site and warehouse.

2 Specify 1.4, Location Audit.

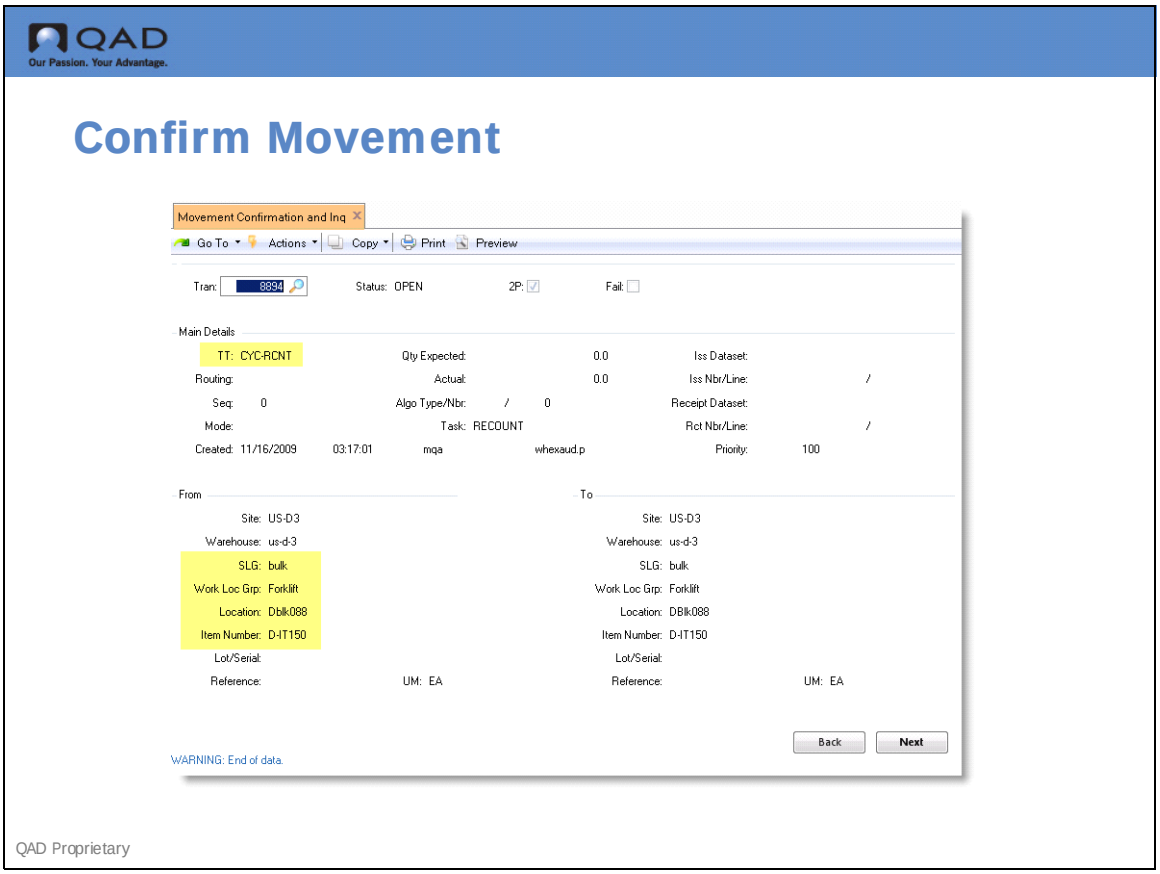
3 Enter the location with the stock to audit.

4 Enter the item number.

5 Enter the quantity counted as less than the quantity OH.

Note Because the quantity is out of tolerance, the system creates a recount automatically. This is considered an extra task that you should confirm using the RF Next Task option.

Step 3: Confirm Movement for the Recount



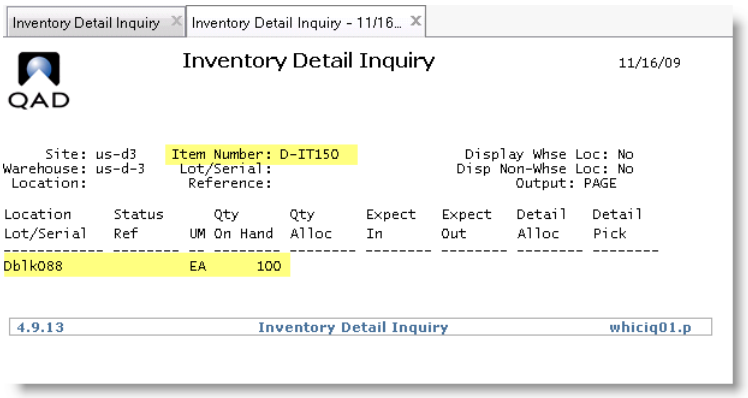
Use Movement Confirmation and Inquiry (4.8.9) to display and confirm movement transactions. You select inventory movements by transaction number. The header displays the status of the transaction and indicates if the transaction previously failed processing by the system.

The system displays transaction details and the source and destination of the movement. Press Go to display other transaction details, such as the create date, the shipper ID, ship-from data, and so on.

After all data displays, the system prompts you if it is OK to confirm the movement. Specify Yes to confirm. The system informs you that it is confirming the movement for the transaction.

Step 3: Review Stock in Location

Location Audit



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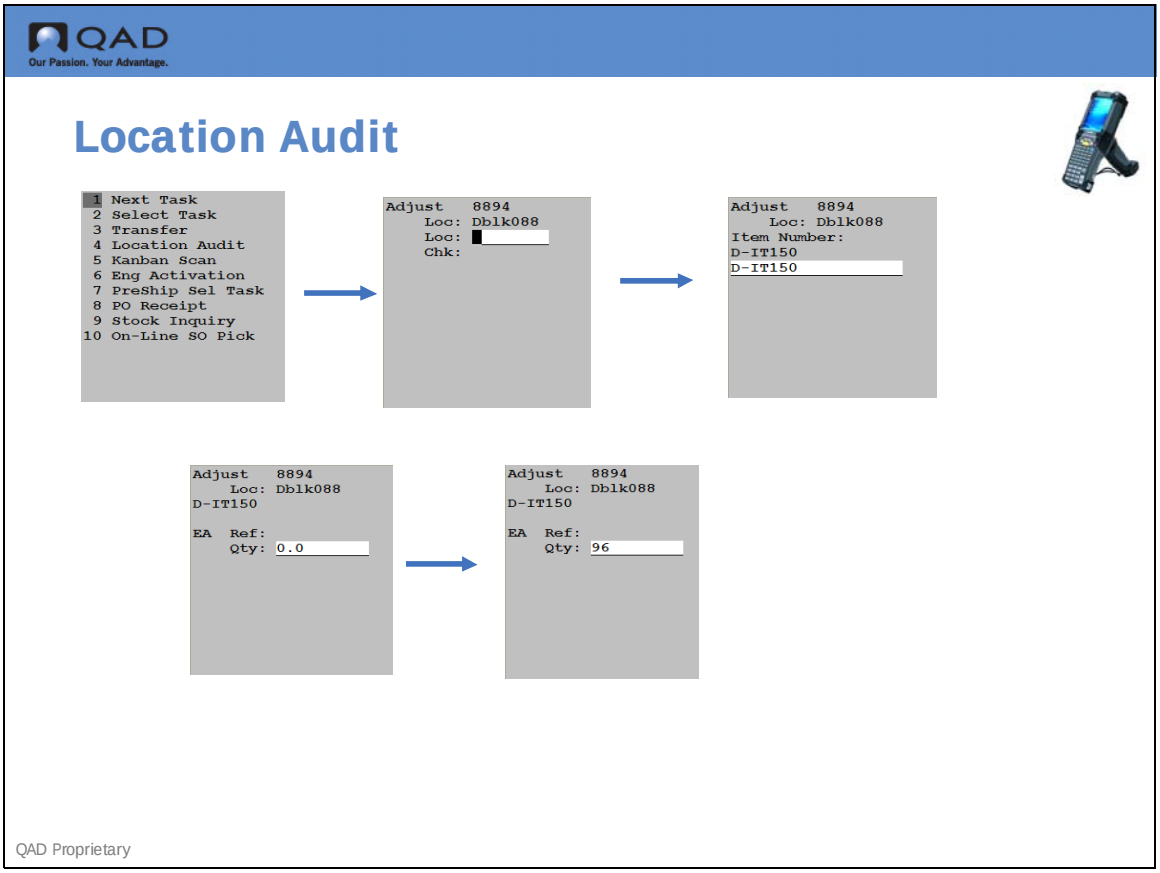
Use Inventory Detail Inquiry (4.9.13) to review inventory in the location.

Step 4: Use the RF to Adjust the Stock



Use the RF Next Task (1.1) to adjust stock.

1 Log onto the RF, entering site and warehouse.

2 Specify 1.1, Next Task.

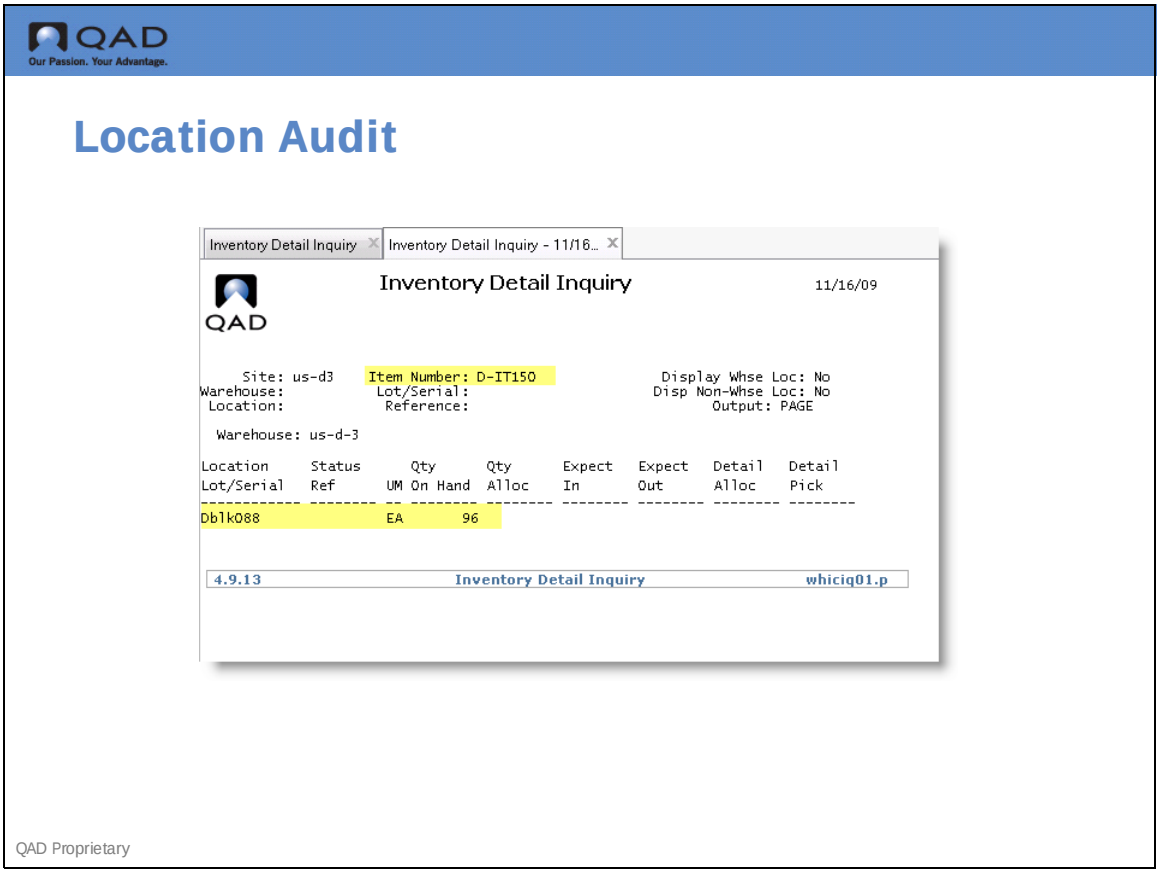
3 Enter the location with the stock to adjust.

4 Enter the item number.

Note With the movement confirmation programs, cycle count transactions are created with an expected quantity of zero so that the Expected In and Out inventory quantities are not automatically updated. If cycle count transactions are confirmed without first modifying them, they are confirmed as zero counts. That is, if each transaction is not manually modified to reflect the counted quantity, the on-hand quantity of each piece of counted inventory is set to zero.

5 Enter the quantity to adjust.

Step 5: Review Stock in Location



Use Inventory Detail Inquiry (4.9.13) to review inventory in the location.

Study Questions

1 Name three functions for which you use the RF Location Audit option.

2 True or False. Once you select the RF Location Audit function, the count items, then enter only the quantity counted.

3 True or False. If there are no pallets, the RF skips pallets and displays the items only.

4 What are setting up in Item Master Maintenance for audits?

5 Where do you set up the count tolerance for an item?

6 What is error tolerance?

7 True or False. You can only set tolerances based on the average daily usage of an item.

8 True or False. Item tolerances can be calculated as a percentage of the quantity on hand.

9 True or False. Cycle counts and audits deal with expected quantities in a given location; therefore, value (currency) tolerance is not. checked

10 True or False. With ABC rankings, the system classifies all items as A, B, or C, and there are no blank settings for items.

Appendix A

Answers to Study Questions

Chapter 1: Printing

1. Printing labels for unplanned receipts or printing IDs for incoming inventory.
2. False. Barcode printing functions must be purchased from third-party vendors.
3. False. You must set up various QAD EE programs in addition to QAD Warehousing programs.
4. You specify the system printer in QAD EE Printer Setup Maintenance (36.13.2).
5. You set up the code to define printing procedures for a receipt transaction in Transaction Type Maintenance.
6. In AUTO mode, the system prints IDs automatically as soon as they are created. In AUTO SIG mode, the system prints IDs automatically, but holds them until a signal is received that triggers printing.
7. False. The print setup in Warehouse Maintenance defaults to WLG print fields.
8. Print flavor determines the format of the printed output. They are set up in Generalized Codes Maintenance (36.2.13).
9. False. Use Internal Routing Maintenance's printing fields to set up printing for the warehouse internal routings.
10. For printing tags, the system uses the Print Mode fields in the Print Options frame of Internal Routing Maintenance (4.2.5) to determine the mode for printing for created, confirmed, and exception tasks.

Chapter 2: Batch Picking

1. Three options include:
   - Pick items per order, customer, or pre-shipper.
   - Print labels before or after picking.
   - Ability to move items from one box to another
2. False. You can pick for sales, work, and distribution orders in QAD Warehousing.
3. True. Combining items from different orders is a major feature of batch picking.
4. A user location is typically the picking cart in a warehouse.
5. False. When selecting order types for picking from the RF Batch Pick-All option, you can specify work, distribution, or sales orders.
6. False. Set one or all of the following in Batch Picking Control:
   - Include Sales Order
   - Include Distribution Order
   - Include Work Order
7. You must Set Allow Merged Orders to Yes to merge orders while batch picking.
8. False. You specify a value in the Maximum Selection field that represents the maximum number of sales orders, pre-shippers, or customers that display on the RF screen.

9 You can set the following container options in Batch Picking Control.
- Specify a container level to create for each tote/box/pallet staff use
- Specify the item number of the container
- Specify the number of characters in the container ID.

10 False. You must enable fields so that warehouse staff can enter data in the fields on the RF by setting the Scan Location field to Yes in Batch Picking Control.

Chapter 3: Containerization

1 False. The RF lets staff assemble pallets for shipment until all shipments for a particular customer ship-to address are complete.

2 The RF Screen shows you:
- Shipper number
- Ship-to code
- Scanned box ID
- Default Pallet ID
- Blank pallet ID to scan

3 False. On the right side of RF screen, the ID after the L indicates the location of the pallet.

4 False. Items from work orders typically do not ship to customers and therefore, are not containerized.

5 True. All boxes for a container must be on the same pre-shipper.

6 Optionally, you can use function keys to:
- F2 to see pallet data
- F3 to see box data

7 You remove boxes and containers using the RF Container Build (3.3) menu option.

8 When staff scan in another container, the system automatically understands that the intent is to transfer the box to the other container, and prompts staff to transfer the box, so staff do not press any function keys.

9 Containerization status includes:

Blank: More containerization is required.

Pick: There are open pick tasks for the pre-shipper. The total number of boxes to scan does not reflect the actual number because totals are unknown at this point.

Ready: There are no more open pick tasks for the pre-shipper, and all boxes have been containerized.

10 Name three options you can set up for containerization in Batch Picking Control.
- Specify a print program to use when printing labels for pallets.
- Specify whether pallet labels print automatically.
- Specify if you want the system to prompt RF users to remove a container.

Chapter 4: Container Move

1 False. Container Move provides functions to move the containers from location to location within the warehouse, to the loading docks, and to the shipping truck.

2 True. You can validation or staging steps when moving containers.

Set Sequential Shipper Option in Batch Picking Control to ensure all pallets for a given shipment are loaded consecutively in the truck, ideally in the reverse order of unloading so that the unloading process is easier.

3 Which field do you set so that users can continue processing despite messages before loading the truck?

4 Set Only Shipper Option to Yes so that users can continue processing despite messages before loading the truck?

5 You must set up QAD Warehousing so that trucks can be included as locations and routings, routing groups, and transactions exist within the system to interact with the truck location when moving containers.

6 True. You must define an internal routing group for all truck locations in Internal Routing Group Maintenance (4.2.1).

7 If you optionally define a stage location instead of a truck location, you must define the IRG for the stage location, not the truck location, in Internal Routing Group Maintenance.

8 To use container move features, you must set up the truck as a location and specify its storage location group and storage type.

9 True. Use Warehouse Location Maintenance (4.3.13) to specify the location for the truck, the SLG for the truck, and the storage type for the truck.

10 The location transfer transaction (LOC-TR) is included with the system data.

Chapter 5: Ship Truck

1 True. After the truck has been loaded, shipment documentation has been printed, and the shipment is ready, you can use a single transaction to confirm that the truck shipped.

2 Ship Truck lets you:

- Indicate truck shipment, resulting in shipment of all orders on the truck.
- Create a master bill of lading (MBOL) that includes all shippers for both SOs and DOs.
- View all shippers loaded on the truck for a given truck location.

3 False. You can view pre-shipper or shippers from the RF Ship Truck option.

4 If the pre-shipper/shipper is large and the items cannot fit in a single truck, warehouse staff can partially load another truck.

5 The three statuses available for a shipment include;

- OK: Can be shipped
- N/OK: Can be shipped; however, some items are not in the truck. If shipped, the items are shipped from their current location.

- TASK: There are open pick tasks against the pre-shipper, and you cannot confirm the shipment.

6 In the Ship Truck frame of Batch Picking Control (4.15.24).

7 If you use RF Ship Truck option in combination with the process end of day (EOD) message sent from a transportation management system (TMS), the system populates the Master Bill field automatically and creates an MBOL in Master Bill of Lading Maintenance.

8 You enter the truck location, and optionally, vehicle ID, or master bill of lading (MBOL).

9 False. An asterisk displays if the shipper is selected; however, you can press Enter while the cursor is on the shipper number to deselect the shipper.

10 False. Use Inventory Detail Inquiry to check that the location of the inventory is the truck location.

Chapter 6: Inspection (Work Orders)

1 For work orders, inspection typically takes place once warehouse staff pick raw materials and put away finished goods within a manufacturing process.

2 BACK WO is the transaction type for a sample return after inspection.

3 You must set up internal routing, assign the internal routing, and assign algorithms for each of the areas involved in the WO inspection flow. The following topics discuss the setup of these areas

4 You set up areas for storage of both raw and finished goods, a product area to build the finished product, and an inspection area.

5 You need the following transaction types for transactions that take place in the storage, product, and inspection areas:

6 PICK WO: Pick raw materials for the work order.

7 RCT WO: Receive newly built finished goods into storage.

8 INSP WO: Inspect the work order goods.

9 BACK WO: Send inspected work order goods back to storage.

10 False. You set up a Location Find (LF) algorithm for an INSP WO transaction type.

11 The system uses the algorithm to put inspected goods back into the storage area.

12 You specify a Quality Assurance (QA) algorithm for the RCT WO transaction type.

13 You modify the status associated with inventory being inspected, based on its original status in any of these situations.

- While a sample is in the inspection area waiting inspection results, you can prevent any transactions with the inventory the inventory by changing its status. Change Inspection Status Maintenance lets you define the new status of this inventory, based on its original status.

- Similarly, after a successful inspection is performed, you can release the inventory by changing its status again.

14 True. Inventory status codes restrict particular transactions at specific locations.

Chapter 7: Kanban Scan

1 Warehouse staff can use the RF Kanban Scan (1.5) to manually request replenishment of a specified quantity of an item or when they need an item in the production area but warehouse staff are not picking the item.

2 You set up kanban scanning by creating and assigning the internal routing, assigning algorithms, setting up replenishment lists, and setting up multi-items.

3 True. You use the PICK-RE transaction types for kanban scan transactions.

4 Set up a pick (PK) algorithm for kanban scanning.

5 The replenishment list contains SLGs you want to consider for picking the scanned item.

6 Use Multi-Level Item Maintenance to specify the replenishment list in the Site Data and Default Warehouse Data frame.

7 When you enter RF Kanban scan, it notifies the system that an item requires replenishment and creates a replenishment task for it at the correct time.

8 A default quantity displays in the Kanban Qty field if you specified a default quantity in Multi-Level Item Maintenance (4.4.5).

9 True. The system dynamically creates an item-location replenishment definition for the duration of the scan, and later removes the definition from the system.

10 Once you enter the destination location for the replenishment, then press Go, the system informs you that the replenishment is complete.

Chapter 8: Replenishment

1 Replenishment lets defined areas in the warehouse, where the main picking activity occurs, be maintained at optimum stock levels.

2 The area in which stock is stored prior to picking is generally called the primary picking area.

3 In warehousing, you can define:

- Replenishment for a given item and a given location.
- Replenishment for a given item in a storage location group.
- Replenishment lists.
- Replenishment in real-time on the RF device.
- Overpick Replenishment.

4 In overpick replenishment, warehouse staff can select a multi- or single-item pallet from the reserve area and replenish one or multiple locations from the pallet in the picking area. After staff replenish, they can return the remainder on the pallet to the reserve area.

5 False In warehousing, more commonly, you can define replenishment for a given item in a storage location group.

6 The replenishment request lets you run a simulation of the replenishment. You can then run a report to look at all the replenishments to be done, simulate a picking, and generate a list of all potential transactions, without actually creating the transactions.

7 The Area Below Replenishment Point field in Replenishment Request (4.16.13) lets you adjust the value of the replenishment point defined in Replenishment-Location Maintenance or Replenishment-SLG Maintenance.

8 True. When the inventory for a given item in a given location stays above the replenishment point, running the replenishment has no effect.

9 As soon as the system issues inventory and stock drops below the minimum level, the system automatically creates a replenishment task.

10 The system typically uses the pick (PK) algorithm for locations and the PK and put away (PA) algorithms for SLGs

Chapter 9: Cross-Docking

1 When insufficient stock prevents the complete filling of an order, the system keeps track of the order shortage quantities, item by item. When inventory is received with receipt transactions, the system automatically checks to see if the received stock can be used to fill back orders. The inventory can then be moved from receipt to dispatch, being stored in between.

2 True. By linking the appropriate internal routings to the transaction types, you can route the relevant stock directly from the receipt dock to the shipping dock, removing the need for additional put-away and picking activities.

3 To define shortages, you create a shortage transaction type using Transaction Type Maintenance (4.7.1), then link the transaction to an internal routing, and assign shortage clearance algorithms.

4 You specify cross-docking details for the shortage clearance using these four shortage fields defined for distribution order (SHRT-DO), sales order (SHRT-SO), and work order (SHRT-WO) transactions in Transaction Type Maintenance.

5 Set Clear Shortages to Yes in Internal Routing Maintenance to cause the shortage clearance algorithms to be run before a location is identified to receive the inventory.

6 You set up a sequence of algorithms so that you can specify the ideal method for selecting locations as the first step in the sequence. If the system cannot meet the full requirements either of put-away or picking by running the first choice algorithm, it then runs the second algorithm in the sequence, and so on until the requirement has been met.

7 Specify a shortage condition in the Shortage Definition field in Transaction type Maintenance.

8 True. You can set up shortages so that a field is available on each order detail record that can be manually set to Yes to indicate a shortage.

9 False. You can set shortage conditions based on open order quantities for previously picked quantities, general allocated, the sum of the quantity picked and quantity shipped, and so on.

10 You set a Shortage Window value to indicate the number of days before an order line due date that it can be considered short.

Chapter 10: Engine Processing

1 Engine workfiles are requests for a transactions that the system creates when processing warehouse tasks, such as picking and put-away. You can use the engines to process engine workfiles in the Engine menu (4.7).

2 False. Engine workfiles are always in use, though, in QAD Warehousing, whether you choose not to process them with the engines.

3 False. Programs in the Engine menu let you process different time-consuming functions and decrease user waiting by running the processes in the background.

4 You can use the programs to delay the creation of warehouse transactions, select and modify engine workfiles, and process engine workfiles singularly or in batch mode.

5 You cannot create a wave with a workfile.

6 The storage area is blocked, but pallets require storage and labelling and this cannot happen until the area clears.

7 False. When in MANUAL mode, you must start one of the engine processor programs in the Engine menu to process an engine workfile request.

8 You can process engine workfiles by engine type, site, date, order, item, or transaction number.

9 False. You can process engine workfiles at a later time.

10 False. Once the engine completes processing, it deletes the engine workfiles if you set control options to delete the files.

Chapter 11: Location Audit

1 You can use functions in the RF Location Audit option to:

- Count the contents of a bin or pallet.
- View the stock you want to recount.
- Recount items that are not in the system yet.

2 False. After you select the Location Audit function, you must scan the location. Once scanned, the RF displays the pallets to audit.

3 True. If there are no pallets, the RF skips pallets and displays the items only. Once you select the item, the system creates a cycle count or a recount task.

4 You set the item ranking in the ABC field in Item Master Maintenance. ABC classification codes determine the count frequency and the error tolerance allowed for each item.

5 Use Inventory Control (3.24) to set the item tolerance. Specify the count tolerance amount for items with this ABC class.

6 Error tolerance is calculated and used to determine whether the entered count should be accepted or marked as an error to be corrected during recount. Both percentage and amount tolerance is checked. The error must be within both tolerances for it to be accepted.

7 False. You can set tolerances based on annual usage; this puts tolerance into perspective with the amount of use of an item.

8 True. If the tolerance method is [Q]oh, item tolerances are calculated as a percentage of quantity on hand.

9 False. Value (currency) tolerance is always checked.

10 False. Any quantity below C is assigned a blank ABC code. For example, when A is 10%, B is 20%, and C is 30%, the remaining 40% is set to blank.