



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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# QAD Warehousing Advanced Concepts Change Summary

The following table summarizes significant differences between this document and the last published version.

<b>Date/Version</b>	<b>Description</b>	<b>Reference</b>
May 2016/v2016 EE-Rev1	Removed duplicated Inspection chapter, re-added Batch Picking chapter.	page 31
April 2016/v2016 EE	Rebranded for QAD 2016 EE, added links to Preface and book	---
March 2015/2015 EE	Rebranded for QAD 2015 EE	---
March 2014/2014 EE	Rebranded for QAD 2014 EE	---
March 2013/2013 EE	Rebranded for QAD 2013 EE	---
September 2012/2012.1 EE	Rebranded for QAD 2012.1 EE	---
March 2012/2012 EE	Rebranded for QAD 2012 EE	---
September 2011/2011.1 EE	Rebranded for QAD 2011.1 EE	---



# **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.

For more information, see [QAD Warehousing User Guide](#).

## Course Credit and Scheduling

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

## Accessing Warehousing Courses

For QAD employees, attending an internal class, exercises are built around existing data within the QMI training environment database which is built through Surgient software tools.

When using this training guide within a QAD-sponsored training class, your QAD Warehousing instructor provides information on the QMI environment and a student ID to access the environment.

If using this guide as a self-study course along with courses, you can contact the QAD IT department to request information on QAD Warehousing courses available in the QAD Learning Center. If you are a QAD employee, you can access the QAD Learning Center at any time and find QAD Warehousing courses.

## 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



### Advanced Printing Overview

- ✓ Introduction
- ✓ Setup
- ✓ Process
- ✓ Example

QAD Proprietary

## Introduction



### 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



### Identification Printing

- ✓ Receive goods into the warehouse with Unplanned Receipts
- ✓ Print an identification of inventory coming into the warehouse (pallet label)

QAD Proprietary

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



### Identification Printing Setup

- ✓ Printer Setup Maintenance
- ✓ Transaction Type Maintenance
- ✓ Warehouse Control
- ✓ Warehouse Maintenance
- ✓ Work-Location Group Maintenance
- ✓ Internal Routing Maintenance
- ✓ Alternate Unit of Measure Maintenance
- ✓ Item-Warehouse Maintenance

QAD Proprietary

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

## Printer Setup Maintenance

Printer Set up Maintenance  
36.13.2  
mgmgt05.p

Printer Setup Maintenance

Printer Definition

Output To: laser10

Description:

Max Pages: 0

Device Pathname: list\_print

Destination Type: Default

Printer Type: HP LASER

Lines / page: 64

Scroll Output:

Spooler:

Printer Control

Initialize Command:

Initialize Ctr: /027[5i]

80 Column Start: /027E/027&I00/027[8U/027[s0p10h12v0s0b3T/027&I66F/027&I66F/027&k2G

132 Column Start: /027E/027&I00/027[0U/027[s0p16.66h8.5v0s0b0T/027&I66F/027&I2E/027&i7.8689C/027&I66F/027&k2G

Reset Ctr: /012/018/027[4i

Reset Command: cat list\_print

Back Next

QAD Proprietary

QAD Menu option. Define printer in the same way as other QAD functionality

Specify the printer in the Output To field.

## Transaction Type Maintenance

Transaction Type Maintenance

Transaction Type: RCT-UNP  
Description: Unplanned Receipt

Engine and Printing Details: \_\_\_\_\_  
Mode: Auto  
Consolidate:

Print Procedure Code: R0

Code to define the printing procedures to be carried out for this transaction type

Delete Back Next

QAD Proprietary

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

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# Warehouse Maintenance

Warehouse Maintenance x

Go To Actions Copy Print Preview

Site: US-D4  
Warehouse: US-D-4

**Identification Printing**

Print ID:  Lines of Each:  Print Mode (ID):   
 ID Printer:  Width of Each:  Use External:   
 Number Across:  132 Mode (ID):

**Task Printing**

Print Create:  Number Across: Create Print Mode:  
 Print Confirm:  Lines of Each: Confirmed Print Mode:  
 Print Except:  Width of Each: Exception Print Mode:  
 Task Printer: 132 Mode (Task):  Use External:

**Inspection Printing**

Insp Printer: Width of Each:  
 Number Across: 132 Mode (Insp):  
 Lines of Each: Print Mode:

Use Warehouse Maintenance to set up generic defaults to Work Location Groups. This set up will not affect your process. This step is optional.

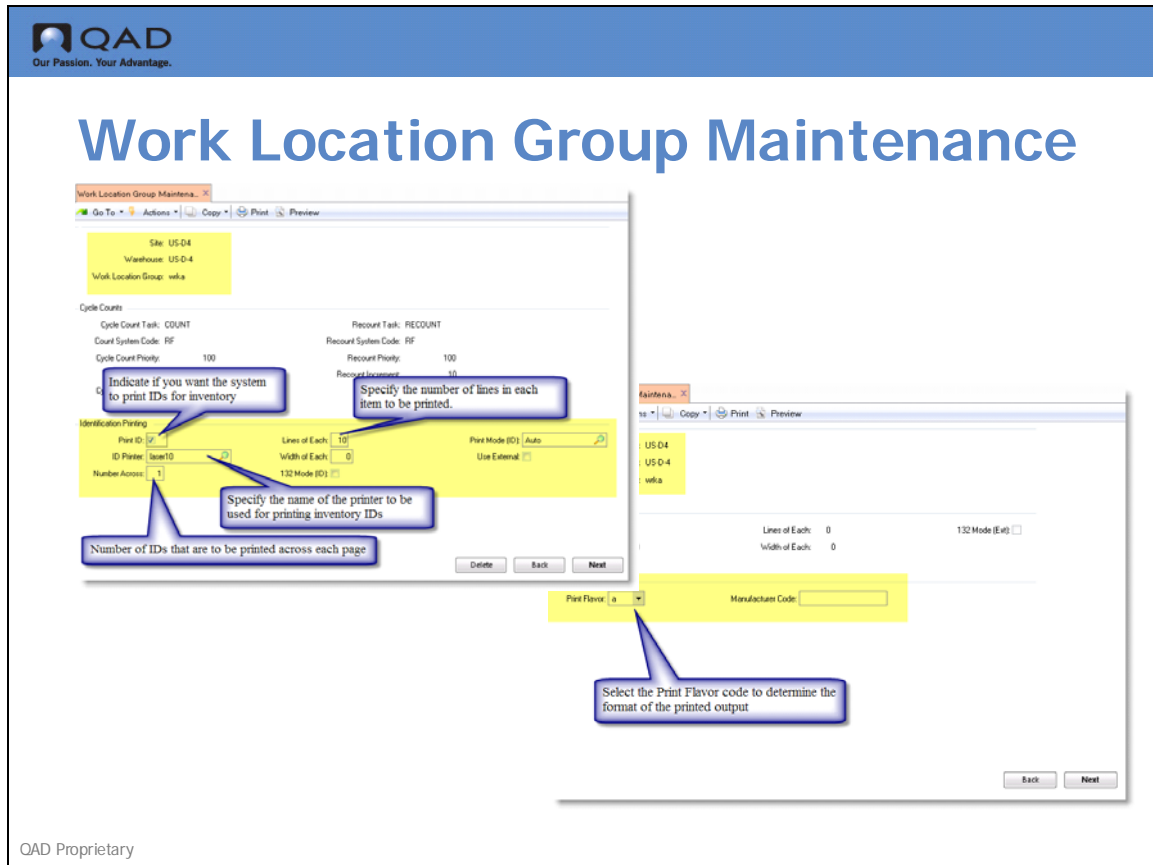
Back Next

QAD Proprietary

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 14.

## 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 16.

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 16.

### 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

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# Alternate Unit of Measure Maint

Alternate Unit of Measure Maint x

Go To Actions Copy Print Preview

Unit of Measure: pl  
Description: pallet

Properties

Sizing Type: R Sizing by Reference

Print ID:  **Print identification labels for this item**

ID Quantity:  **Number of identification labels to be printed**

Allow Split:

Item Number: pallet1

Ship Type:

Round Inspected Qty:

Conversion Rules

New Unit of Measure:

Change Action:

Back Next

QAD Proprietary

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

Item-Warehouse Maintenance

Go To Actions Copy Print Preview

Attachments

Item Number: D-Pr001  
 UM: EA  
 Site: US-D4  
 Warehouse: US-D-4

Warehouse US-D-4

Warehouse Data

Location: \_\_\_\_\_  
 Storage Location Group: bulk  
 SLG List: \_\_\_\_\_  
 Warehouse Item Type: \_\_\_\_\_  
 Popularity: \_\_\_\_\_  
 Logistics UM Tolerance: 0.00%  
 Auto Replenish:

Warehouse US-D-4

Single PA Trans:   
 Issue Method: \_\_\_\_\_  
 Print ID:   
 ID Quantity: 1  
 OPC Threshold: 0.0  
 Logistics UM: pl  
 Pallet Max Height: 0  
 Auto Replenishment: 0.00%  
 Print Unplanned Iss:

Print identification labels for this item

Number of identification labels to be printed

Logistics unit of measure to be used as the receipt UM when the receipt is made in base UM


Delete Back Next

Modifying existing record

QAD Proprietary

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



### 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



### Task Printing


- ▲ Receive goods into the warehouse with Unplanned Receipts menu option.
- ▲ Print labels for each task of inventory coming into the warehouse

QAD Proprietary

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



### Task Printing Setup

- ✓ Internal Routing Maintenance
- ✓ Work Location Group Maintenance

QAD Proprietary

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

## Internal Routing Maintenance

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# Internal Routing Maintenance

Internal Routing Maintenance x

Go To Actions Copy Print Preview

Site: US-D4 Warehouse: US-D-4 Internal Routing: receipt

Description:

Sequence: 20 Internal Routing Group: bulk

**Print Options**

Print ID:  Print Mode (ID): Auto

Print Created Tasks:  Create Print Mode: Auto

Print Confirmed Tasks:  Confirmed Print Mode: Auto

Print Exceptions:  Exception Print Mode: Auto

**Miscellaneous Options**

Mode:  New Unit of Measure:  Create Shipped:  Check Inspection:

Indicate if you want the system to print IDs for Inventory

Back Next

QAD Proprietary

Use the fields in the Task Printing Frame of Internal Routing Maintenance (4.2.5 if using QAD Warehousing or 80.2.5 if 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 18.

## Work Location Group Maintenance

The screenshot displays the 'Printing' configuration window for a Work Location Group. The window title is 'Work Location Group Maintenance'. The top navigation bar includes 'Go To', 'Actions', 'Copy', 'Print', and 'Preview'. The main content area is divided into three sections: Task Printing, Inspection Printing, and Form Printing. A callout box highlights the 'Print Create' checkbox in the Task Printing section, with the text: 'Indicates if system should print tags for tasks when they are created'.

**Task Printing**

Print Create: <input checked="" type="checkbox"/>	Number Across: <input type="text" value="1"/>	Create Print Mode: <input type="text" value="Auto"/>
Print Confirm: <input type="checkbox"/>	Lines of Each: <input type="text" value="10"/>	Confirmed Print Mode: <input type="text" value="Auto"/>
Print Except: <input type="checkbox"/>	Width of Each: <input type="text" value="0"/>	Exception Print Mode: <input type="text" value="Auto"/>
Task Printer: <input type="text" value="laser10"/>	132 Mode (Task): <input type="checkbox"/>	Use External: <input type="checkbox"/>

**Inspection Printing**

Insp Printer:	Width of Each:	Use External: <input type="checkbox"/>
Number Across:	132 Mode (Insp): <input type="checkbox"/>	
Lines of Each:	Print Mode:	

**Form Printing**

Form Printer:	132 Mode (Form): <input type="checkbox"/>	Use External: <input type="checkbox"/>
---------------	---	--

Buttons: Delete, Back, Next


QAD Proprietary

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 14) or Warehouse Maintenance (“Warehouse Maintenance” on page 16).

## Print Task Process



### Task Printing 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		PL014471	100.0
us-d4	ddock01		PL014472	100.0

E


Site	Location	Lot/Serial	Reference	Quantity
us-d4	ddock01		PL014471	100.0

Total lot/serial quantity entered: 200

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


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# Warehouse Task

Warehouse Task - 8981

Site: us-d4  
 Warehouse: us-d-4  
 From Storage Location Group: receipt      To: bulk  
 From Work Location Group: wrka              To: wrka  
 From Location: ddock01                      To: dblk01

Item Number: D-Pr001 -  
 Lot/Serial:  
 Reference: PL014471

Warehouse Task - 8982

Site: us-d4  
 Warehouse: us-d-4  
 From Storage Location Group: receipt      To: bulk  
 From Work Location Group: wrka              To: wrka  
 From Location: ddock01                      To: dblk01

Item Number: D-Pr001 -  
 Lot/Serial:  
 Reference: PL014472

QAD Proprietary

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



### Batch Picking Overview

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

QAD Proprietary

## Batch Picking Control

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### Indicate Order Type

Batch Picking Control File x

Go To Actions Copy Print Preview

Site: us-d3  
Warehouse: us-d3

Include Sales Order ?

Include Distribution Order ?

Include Work Order ?

SD Batch Selection: Order

Allow Merge ?

Indicate whether Sales orders, Distribution Order or Work Orders are included for batch picking when using Batch Pick-All on the RF.

Container / Reference: Container

Container Sequence ID: box01

Container Item: box

Container UM: bx

Modified: 10/19/2009

Scan Location ?

Scan Item ?

Scan Lot/Serial ?

Scan Reference ?

Scan Quantity ?

Single Packing Location ?

Default Packing Location:

Label Print Option: 0

Post Print Option: 0

Label Print Program:

RF Screen Height: 15

Logical Format: 1/0

S Order	Pk	Pr	Wgt
*SSO5749	1	22	18
*SSO5745	2	1	28
SSO5746	2	1	15
D610	1	0	10

To IRG: Dispatch  
Due Date: 10/30/09

Delete Back Next

Modifying existing record

QAD Proprietary

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

**Indicate Order Type**

Batch Picking Control File x

Go To Actions Copy Print Preview

Site: us-d3  
Warehouse: us-d-3

Include Sales Order ?   
 Include Distribution Order ?   
 Include Work Order ?   
 SD Batch Selection: Order  
 Allow Merge ?

Indicate whether Sales orders, Distribution Order or Work Orders are included for batch picking when using Batch Pick-All on the RF.

Scan Location ?    
 Scan Item ?    
 Scan Lot/Serial ?    
 Scan Reference ?    
 Scan Quantity ?    
 Single Packing Location ?   
 Default Packing Location:   
 Label Print Option: 0  
 Post Print Option: 0  
 Label Print Program:   
 RF Screen Height: 15  
 Logical Format: 1/0

S Order	Pk	Pr	Wgt
*SSO5749	1	22	18
SSO5745	2	1	28
SSO5746	2	1	15
D610	1	0	10

To IRG: Dispatch  
Due Date: 10/30/09

Container / Reference: Container  
 Container Sequence ID: box01  
 Container Item: box  
 Container UM: bx  
 Modified: 10/19/2009

Modifying existing record

Delete Back Next

QAD Proprietary

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

**Batch Picking Control File**

Site: us-d3  
Warehouse: us-d-3

Include Sales Order ?   
 Include Distribution Order ?   
 Include Work Order ?   
**SD Batch Selection: Order**  
 Allow Merge Orders ?   
 Close Option: 1  
 AutoSet   
 Maximum Selection: 99  
 Maximum Picked Cases: 50  
 Container / Reference: Container  
 Container Sequence ID: box01  
 Container Item: box  
 Container UM: bx  
 Modified: 10/19/2009

Scan Location ?   
 Scan Item ?   
 Scan Lot/Serial ?   
 Scan Reference ?   
 Scan Quantity ?   
 Single Packing Location ?   
 Default Packing Location:   
 Label Print Option: 0  
 Post Print Option: 0  
 Label Print Program:   
 RF Screen Height: 15  
 Logical Format: 1/0

**S Order**

S Order	Pk	Pr	Wgt
SO5748	1	77	14
SO5747	2	55	21
SO5749	1	22	18
SO5745	2	1	28
SO5746	2	1	15

To IRG: Dispatch  
Due Date: 10/30/09

**S Customer**

S Customer	Pk	Pr	Wgt
002	1	77	14
001a	2	55	21
4001	1	22	18
00010000	4	1	43

To IRG: Dispatch  
Due Date: 10/30/09

**S Pre-Ship**

S Pre-Ship	Pk	Pr	Wgt
PAIM885	1	77	14
PAIM884	2	55	21
PAIM886	1	22	18
PAIM883	4	1	43

To IRG: Dispatch  
Due Date: 10/30/09

Modifying existing record

Delete Back Next

QAD Proprietary

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

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### Combine Items from Different Orders

Batch Picking Control File x

Go To Actions Copy Print Preview

Site: us-d3  
Warehouse: us-d-3

Include Sales Order ?   
 Include Distribution Order ?   
 Include Work Order ?   
 SD Batch Selection: Order  
 Allow Merge Orders ?   
 Close Option: 1  
 AutoSet   
 Maximum Selection: 99  
 Maximum Picked Cases: 50  
 Container / Reference: Container  
 Container Sequence ID: box01  
 Container Item: box  
 Container UM: bx  
 Modified: 10/19/2009

Scan Lot/Serial ?   
 Scan Reference ?   
 Scan Quantity ?   
 Single Packing Location ?   
 Default Packing Location:  
 Label Print Option: 0  
 Post Print Option: 0  
 Label Print Program:  
 RF Screen Height: 15  
 Logical Format: 1/0

Warehouse staff can combine items from different orders into containers.

28628 3/4  
SO: SO5746  
Can not merge Orders  
CT001 is for  
Order SO5745  
I:  
R: 0/10  
Stk: 492.00 EA  
Qty: 3.00 EA  
Container: CT001

Modifying existing record

Delete Back Next

QAD Proprietary

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

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## Set Maximum Orders to Display

Batch Picking Control File x

Go To Actions Copy Print Preview

Site: us-d3  
Warehouse: us-d-3

Include Sales Order ?   
 Include Distribution Order ?   
 Include Work Order ?   
 SD Batch Selection: Order  
 Allow Merge Orders ?   
 Close Option: 1  
 AutoSet   
 Maximum Selection: 99  
 Maximum Picked Cases: 50  
 Container / Reference: Container

Scan Location ?   
 Scan Item ?   
 Scan Lot/Serial ?   
 Scan Reference ?   
 Scan Quantity ?   
 Single Packing Location ?   
 Default Packing Location:   
 Label Print Option: 0  
 Post Print Option: 0  
 Label Print Program:   
 RF Screen Height: 15  
 Logical Format: 1/0

To IRG: Dispatch  
Due Date: 10/30/09

Delete Back Next

Modifying existing record

QAD Proprietary

Maximum number of sales orders, preshippers or customers that display on the RF screen.

Maximum number of orders that warehouse staff can pick at the same time.

S	Order	Pk	Pr	Wgt
	SO5748	1	77	14
	SO5747	2	55	21
	SO5749	1	22	18

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**

Batch Picking Control File

Go To Actions Copy Print Preview

Site: us-d3  
Warehouse: us-d-3

Include Sales Order?:

Scan Location?:

Close: 1

Auto:

Maximum Selection: 99

Maximum Picked Cases: 50

Container / Reference: Container

Container Sequence ID: box01

Container Item: box

Container UOM: bx

Modified: 10/19/2009

Single Pick:

Picking Location:

RF Screen Height: 15

Logical Format: 1/0

Delete Back Next

Modifying existing record

QAD Proprietary

Undo Available?:

Release Orders Option: 0

Container Length: 5

28632 1/ 1  
SO: S05748  
Location: DBox001  
I: D-IT001  
L:  
R: 0/10  
Stk: 500.00 EA  
Qty: 7 EA  
Container: CT001

28632 1/ 1  
SO: S05748  
Location: DBox001  
I: D-IT001  
L:  
R: 0/10  
Stk: 500.00 EA  
Qty: 7.00 EA  
To Ref: REF01

Specify the number of characters for the container ID

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

**Enable or disable fields to staff on the RF.**

**Make scanning mandatory to these fields.**

28632 3/ 3  
 SO: S05748  
 Location: DBox001  
 I: D-IT001  
 L:  
 R: 0/10  
 Stk: 500.00 EA  
 Qty: 7.00 EA  
 Container:

Quantity Required  
 SO: S05748  
 Location: DBox001  
 I: D-IT001  
 L:  
 R: 0/10  
 Stk: 500.00 EA  
 Qty: 7.00 EA  
 Container:

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

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### Set the Packing Location

Batch Picking Control File x

Go To Actions Copy Print Preview

Site: us-d3  
Warehouse: us-d-3

Include Sales Order ?

Include Distribution Order ?

Include Work Order ?

SD Batch S

Allow Merge

Close option:

AutoSet

Maximum Selection: 99

Maximum Picked Cases: 50

Container / Reference: Container

Container Sequence ID: box01

Container Item: box

Container UM: bx

Modified: 10/30/2009

Scan Location ?

Scan Item ?

Scan Lot/Serial ?

Scan Reference ?

Scan Quantity ?

Single Packing Location ?

Default Packing Location: Dlane001

Label Print Program: 0

RF Screen Height: 10

Logical Format: 1/0

Delete Back Next

Modifying existing record

QAD Proprietary

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

QAD  
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# Set Up Labels

Batch Picking Control File x

Go To Actions Copy Print Preview

Site: us-d3  
Warehouse: us-d-3

Include Sales Order ?   
 Include Distribution Order ?   
 Include Work Order ?   
 SD Batch Selection: Order  
 Allow Merge Orders ?   
 Close Option: 2  
 AutoSet   
 Maximum Selection: 99  
 Maximum Picked C  
 Container / Refer  
 Container Sequen  
 Container Item Box  
 Container UM: bx  
 Modified: 10/30/2009

Scan Location ?   
 Scan Item ?   
 Item ?   
 Date ?   
 Qty ?   
 Site Picking Location ?   
 Default Picking Location: Dlane001

Label Print Option: 2  
 Post Print Option: 0  
 Label Print Program: whpripkz.p  
 RF Screen Height: 10  
 Label Format: 1/0

S	Order	Pk	Pr	Wgt
*	SO5748	1	77	14
Print 4 Lbls: 1				
	SO5746	2	1	15
To IRG: Dispatch Due Date: 10/30/09				

Delete Back Next

Modifying existing record

QAD Proprietary

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

QAD  
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# Set Up RF Look and Feel

Batch Picking Control File x

Go To Actions Copy Print Preview

Site: us-d3  
Warehouse: us-d-3

Include Sales Order ?   
Include Distribution Order ?   
Include Work Order ?   
SD Batch Selection: Order  
Allow Merge Orders ?   
Close Option: 1  
AutoSet   
Maximum Selection: 99  
Maximum Picked Cases: 50  
Scan Location ?   
Scan Item ?   
Scan Lot/Serial ?   
Location ?   
Label Print Option: 0  
RF Screen Height: 15  
Logical Format: 1/0

Specify the number of lines that display on the RF screen

RF users enter logical values 1/0 or Yes/No, Y/N, or any other logical format

Undo Available ?   
Release Orders Option: 0  
Container Length: 5

28630 2/ 4  
SO: SO5747  
Location: dbx005  
I: D-IT005  
L:  
R: 0/10  
Stk: 500.00 EA  
Qty: 5 EA  
Other Scan ? 1

Modified: 10/19/2009

Modifying existing record

QAD Proprietary

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

QAD  
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# Release the Order

Batch Picking Control File

Go To Actions Copy Print Preview

Site: us-d3  
Warehouse: us-d-3

Undo Available?:

Release Orders Option:

Container Length:

Release the order after staff close a box. If order is released staff cannot open additional boxes and the picking process for the order is complete.

28627 2 / 4  
SO: SO5745  
Location: dbox002  
I: D-IT002

L:  
R: 0/10  
Stk: 500.00 EA  
Qty: 4.00 EA  
Release SO5745 1

Delete Back Next

QAD Proprietary

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

**RF Batch Picking Screen**

Picks (Tasks) for this Order

S	Order	Pi	Pr	Wei
-	- - - - -	-	-	-
*	SSO11035	3	77	26
	SSO11038	1	77	15
	SSO11036	3	55	34
	SSO11037	3	44	32

To IRG: dispatch  
Due Date: 10/31/09

QAD Proprietary

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

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### Batch picking Screen 2

Task ID: 8725      Tasks completed / Total Tasks: 5 / 7

Order: SO: S011035

Location: DBox006

Item to be picked: I: D-IT006

Item description: L:

Reference to be picked: R: 0 / 10

Stock in source location: Stk: 500.00 EA

Qty: 6.00

Container: CT001

EA: EA



Annotations:

- Location where to pick: DBox006
- Lot to be picked: L:
- Boxes to pick/EA per box: 0 / 10
- Item UM: EA

QAD Proprietary

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

### RF Drop Off Screen

```
*** Drop Off ***
To Loc: Dlane001
Confirm ? 1
```

↑

If all completed pick tasks have the same destination location, we can drop off all boxes at once

```
*** Drop Off ***
Container: CT001
To Loc: Dlane001
```

↑

If one completed pick task is for a different destination location, we must drop off the boxes one by one, scanning the box number and the destination location

QAD Proprietary

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



### Batch Picking Function Keys

- ▲ **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.

S	Order	Pk	Pr	Wgt
	SO5748	1	77	14
	SO5747	2	55	21
	SO5749	1	22	18
	SO5745	2	1	28
	SO5746	2	1	15

To IRG: Dispatch  
Due Date: 10/30/09 \*

Call Linda Shield (Customer Service Department). Spare items should be delivered with previous order.

QAD Proprietary

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

<b>Function Key</b>	<b>Description</b>	<b>Task</b>
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



### Handling Exceptions

- ✓ Fail
- ✓ Repick
- ✓ Warehouse Maintenance

QAD Proprietary

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



### 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.



QAD Proprietary

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



### Handling Exceptions- Repick

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



QAD Proprietary

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.

## 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

## 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



### Exercise 1: Objectives

- ▲ Create Sales Orders and preshipper with all the tasks
- ▲ Use the QAD Warehousing RF Device to confirm Batch Picking tasks from Boxes area to dispatch area. Put stock into containers and create a **multi-box pick**.
- ▲ Drop all the boxes in the lanes.
- ▲ Review stock inquiries to see Batch Picking handle movements

QAD Proprietary

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.

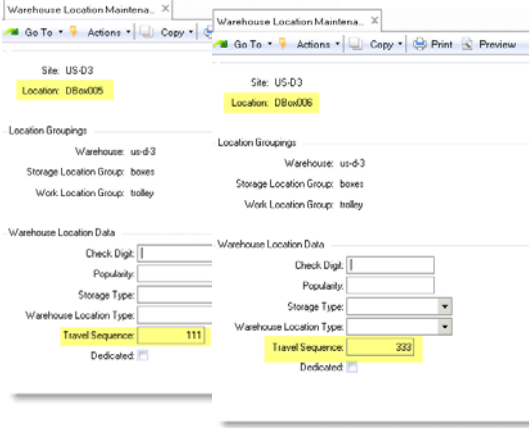
In Warehouse Location Maintenance, ensure the following:

- Set two locations: DBox005 and DB006

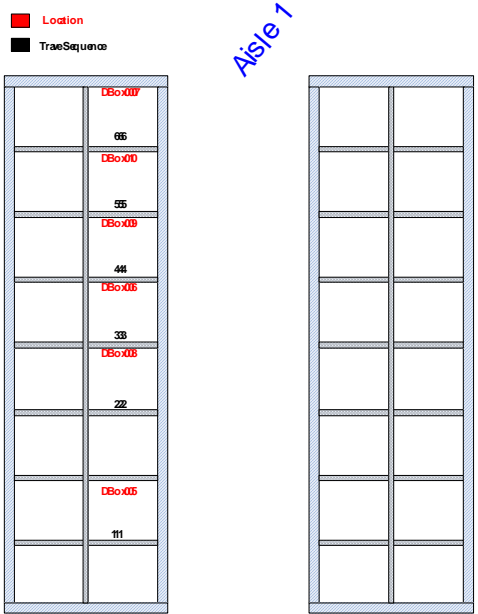
- In the Warehouse Location Data frame, set a travel sequence for each box location by setting the Travel Sequence field.


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## Exercise 1- Time Sequence




■ Location  
■ TracSequence



QAD Proprietary

## Step1- Create the Order and Pre-shipper



### 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


QAD Proprietary

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





### Exercise 1 - Batch Picking on RF

```

S PreShip Pi Pr Wei
-----
*s1031PS19 4 77 41
*s1031PS20 3 55 34
*s1031PS21 3 44 32

To IRG: dispatch
Due Date: 10/31/09
          
```

Select all the orders

```

8731 10/ 10
SO: SO11037
Location: DBox010
I: D-IT010

L:
R: 0/10
Stk: 500.00 EA
Qty: 7.00 EA
Container:
          
```

Put 7 EA D-IT010 in  
Box CT001

```

8731 10/ 10
SO: SO11037
Location: DBox010
I: D-IT010

L:
R: 0/10
Stk: 500.00 EA
Qty: 7.00 EA
Container: CT001
          
```

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- 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.



## Exercise 1 -Putting Items in Boxes



```

8733          9/ 10
SO: S011037
Location: DBox010
I: D-IT010

L:
R:           0/10
Stk: 493.00 EA
Qty: 3.00    EA
Container: CT001
    
```

Put 3 EA D-IT010  
in Box CT001

```

8726          8/ 10
SO: S011035
Location: DBox007
I: D-IT007

L:
R:           0/10
Stk: 500.00 EA
Qty: 4.00    EA
Container: CT002
    
```

Put 4 EA D-IT007  
in Box CT002

```

8730          7/ 10
SO: S011036
Location: DBox009
I: D-IT009

L:
R:           0/10
Stk: 500.00 EA
Qty: 5.00    EA
Container: CT003
    
```

Put 5 EA D-IT009  
in Box CT003

```

8725          6/ 10
SO: S011035
Location: DBox006
I: D-IT006

L:
R:           0/10
Stk: 500.00 EA
Qty: 6.00    EA
Container: CT002
    
```

```

8727          5/ 10
SO: S011038
Location: DBox006
I: D-IT006


L:
R:           1/10
Stk: 494.00 EA
Qty: 15.00   EA
Container: CT002
    
```


```

8727          5/ 10
SO: S011038
Location: DBox006
I: D-IT006

L:
R:           1/10
Stk: 494.00 EA
Qty: 10      EA
Container: CT004
Close CT002 ?
    
```

### Step 3 - Drop the Boxes to the Shipping Lane





## Exercise 1 – Drop Boxes in Shipping Lane

```

8728          2/ 10
SO: SO11036
Location: DBox005
I: D-IT005

L:
R:           0/10
Stk: 494.00 EA
Qty: 3.00    EA
Container: CT003
            
```

→

```

8732          1/ 10
SO: SO11037
Location: DBox005
I: D-IT005

L:
R:           0/10
Stk: 491.00 EA
Qty: 6.00    EA
Container: CT001
            
```

→

```

-- Batch Picking --

To Loc: Dlane001

Confirm ? 1
            
```

QAD Proprietary

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



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## Exercise 1- Verify the Move

Pre-Shipper/Shipper Inquiry - 1... x

**Pre-Shipper/Shipper Inquiry** 11/01/09

Ship-From ID: us-d3  
Pre-Shipper/Shipper: Pre-Shipper  
Number: 091031PS19

Output: PAGE

Ship-To/Dock: 002 Quality Products Div 1000 Status:  
Inventory Movement Code:

Master Bill ID:

ID Site	Item Number Location Customer Ref	PO Number Lot/Serial Model Year	Order Ref	Line Stat	To Ship
091031PS19				0	1.0
.CCT002 us-d3	Box Dlane001			0	EA
..I us-d3	D-IT006 Dlane001		S011035	2	6.0 EA
..I us-d3	D-IT007 Dlane001		S011035	3	4.0 EA
.CCT004 us-d3	Box Dlane001			0	EA
..I us-d3	D-IT006 Dlane001		S011038	1	10.0 EA
.CCT005 us-d3	Box Dlane001			0	EA
..I us-d3	D-IT005 Dlane001		S011035	1	6.0 EA
..I us-d3	D-IT006 Dlane001		S011038	1	5.0 EA

QAD Proprietary

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



### Containerization Overview

- ✓ Introduction
- ✓ RF Screen overview
- ✓ Containerization features
- ✓ Containerization controls
- ✓ Exercise

QAD Proprietary

## Introduction



### Introduction

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

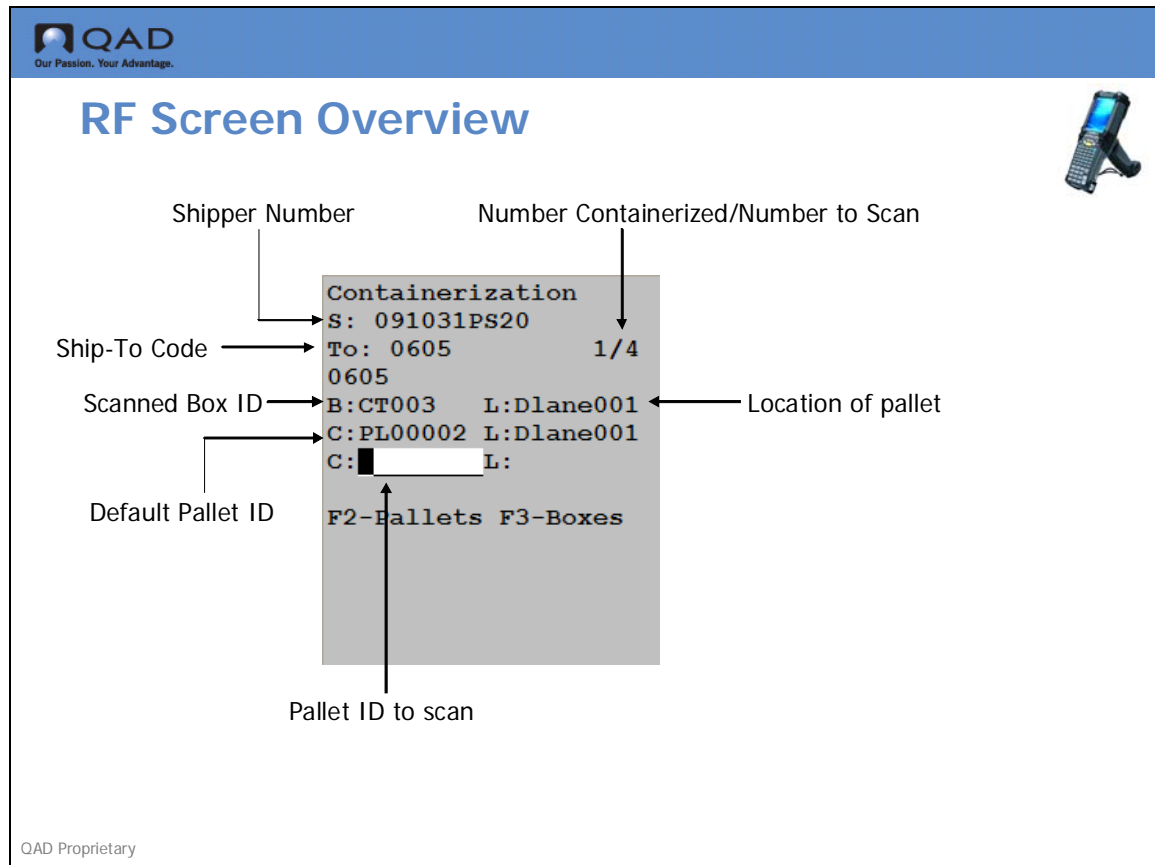


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Containerization is the process of placing all boxes that were filled during picking into other containers, such as pallets, for shipping.

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 diagram illustrates the RF Screen Overview. At the top left is the QAD logo with the tagline "Our Passion. Your Advantage." The main title "RF Screen Overview" is centered at the top. A handheld device icon is in the top right corner. The screen content is as follows:

```

Containerization
S: 091031PS20
To: 0605
0605
B:CT003 L:Dlane001
C:PL00002 L:Dlane001
C: [ ] L:
F2-Pallets F3-Boxes
  
```

Labels and arrows point to the following fields:

- Shipper Number: points to "S: 091031PS20"
- Ship-To Code: points to "To: 0605"
- Scanned Box ID: points to "B:CT003"
- Default Pallet ID: points to "C: [ ]"
- Pallet ID to scan: points to the blank box in "C: [ ]"
- Number Containerized/Number to Scan: points to "1/4" (with "Number Containerized" above "1" and "Number to Scan" above "4")
- Location of pallet: points to "L:Dlane001" (with "Location of pallet" above "L:Dlane001")


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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



### Containerization Features

- ▲ Available for sales orders and distribution orders
- ▲ Scan boxes first and add them to a pallet
- ▲ Remove boxes from containers or pallets
- ▲ View order status or shipper data that reflects warehouse containerization
- ▲ View the number of boxes already containerized and the remaining boxes to be containerized on the RF
- ▲ Merge a pallet into another pallet
- ▲ Transfer a scanned box to a pallet in another location on the same shipper
- ▲ Optionally, print pallet labels

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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

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### Viewing Containerized Boxes

▲ View the number of boxes already containerized and the remaining boxes to be containerized on the RF

```

Containerization
S: 091031PS20
To: 0605      1/4
0605
B:CT003   L:Dlane001
C:PL00002 L:Dlane001
C: [ ] L:
F2-Pallets F3-Boxes
                    
```

→

```

Containerization
S: 091031PS20
To: 0605      1/4
0605
B:CT003   L:Dlane001
C:PL00002 L:Dlane001
C: PL00002 Dlane001
                    
```

F2

```

Containerization
S: 091031PS20
To: 0605      1/4
0605
B:CT003   L:Dlane001
C:PL00002 L:Dlane001
C: CT003 Dlane001
CT006 Dlane001
CT007 Dlane001
                    
```

F3

QAD Proprietary



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

### Removing Boxes from Containers

```

Containerization
S: 091031PS20
To: 0605          1/4
0605
B:CT002   L:Dlane001
C:PL00002 L:Dlane001
C:PL00002 L:
F2-Pallets F3-Boxes
          
```

→


```

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


→

```

Containerization
S: 091031PS20
To: 0605          1/4
0605
B:CT002   L:Dlane001
C:PL00002 L:Dlane001
C:PL00002 L:Dlane001
Box removed
          
```



CT002  
PL00002



PL00002

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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
                    
```

PL00002


PL00003


PL00002

PL00003

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## View Order Status





# View Order Status

▲ View order status or shipper data that reflects warehouse containerization.

```

Containerization
S: 091031PS19  READY
To: 002        3/3
Quality Products Div
B:CT005   L:Dlane001
C:PL00001 L:Dlane001
C:PL00001 L:Dlane001

Box added
          
```

QAD Proprietary

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

The screenshot displays the 'Containerization Controls' window within the 'Batch Picking Control' application. The window title is 'Batch Picking Control (whbbpkpm.p)'. The interface includes the following elements:

- Site:** us-d3
- Warehouse:** us-d-3
- Undo Available:**
- Container Length:** 5
- Release Orders Option:** 2
- Create Date:** 10/31/2009, **Modified Date:** 11/8/2009
- User:** Miguel Alonso
- Containerization Section:**
  - Pallet Item:** pallet
  - Pallet Print Program:** (empty field)
  - Pallet Print Option:** 0
  - Prompt to Remove Constraint:**
  - Generate Identification:**
  - Explosion Option:** 2
- Buttons:** Delete, Back, Next

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



### Exercise Objectives

- ▲ Put boxes from the lanes in pallets
- ▲ Review stock inquiries and preshipper inquiry

QAD Proprietary

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.

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

The screenshot displays the QAD Pre-Shipper/Shipper Inquiry window. On the left, there are three container categories: CT001, CT004, and CT005, each with a box icon and associated item numbers and quantities. The main window shows a detailed view of the inquiry for Master Bill ID 091031PS19, including ship-to/dock information and a table of item locations and shipping lanes.

ID	Item Number	Location	PO Number	Order Ref	Line Stat	To Ship
091031PS19					0	1.0
.CCT001	Box	Dlane001			0	EA
..I	D-IT005	Dlane001		S011035	1	6.0 EA
.CCT004	Box	Dlane001			0	EA
..I	D-IT006	Dlane001		S011035	2	6.0 EA
.CCT005	Box	Dlane001			0	EA
..I	D-IT007	Dlane001		S011035	3	4.0 EA
..I	D-IT006	Dlane001		S011038	1	15.0 EA

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

**QAD**  
Our Passion. Your Advantage.

## RF Container Build

Warehouse Management  
Release: eB3  
User ID: mqa  
Pa:  
Domain: Domain1  
Site: US-D3  
Warehouse: us-d-3  
WLG:  
Location:  
Task:

1 BP Pick SO/DO  
2 BP Pick All  
3 Container Build  
4 Container Move  
5 Ship Truck  
6 Pallet Explosion  
7 Item Move  
8 Print Paperwork  
9 Cancel Shipment


QAD Proprietary

- 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

**QAD**  
Our Passion. Your Advantage.

# Containerization



```
Containerization
S: 091031PS19
To: 002          0/3
Quality Products Div
B:CT001   L:Dlane001
C:         L:
C: [ ] L:
```

F2-Pallets F3-Boxes


→

```
Containerization
S: 091031PS19
To: 002          0/3
Quality Products Div
B:CT001   L:Dlane001
C:         L:
C:PL00001 L:Dlane001
```

→

```
Containerization
S: 091031PS19
To: 002          1/3
Quality Products Div
B:CT001   L:Dlane001
C:         L:
C:PL00001 L:Dlane001
```

Box added



CT001  
PL00001

QAD Proprietary

- 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

The screenshot displays the QAD Pre-Shipper/Shipper Inquiry interface. The title bar shows 'Pre-Shipper/Shipper Inquiry' and the date '11/08/09'. The main header includes the QAD logo and the text 'Pre-Shipper/Shipper Inquiry 11/08/09'. Below this, the screen shows the following information:

- Ship-From ID: us-d3
- Pre-Shipper/Shipper: Pre-Shipper Number: 091031PS19
- Output: PAGE
- Ship-To/Dock: 002
- Quality Products Div 1000
- Status: Inventory Movement Code:
- Master Bill ID:

The main data table is as follows:

ID Site	Item Number Location Customer Ref	PO Number Lot/Serial Model Year	Order Ref	Line Stat	To Ship
091031PS19				0	1.0
.CPL00001	Pallet			0	EA
us-d3	Dlane001				
.CCT001	Box			0	EA
us-d3	Dlane001				
...I	D-IT005		5011035	1	6.0 EA
us-d3	Dlane001				
.CCT004	Box			0	EA
us-d3	Dlane001				
...I	D-IT006		5011035	2	6.0 EA
us-d3	Dlane001				
.CCT005	Box			0	EA
us-d3	Dlane001				
...I	D-IT007		5011035	3	4.0 EA
us-d3	Dlane001				
...I	D-IT006		5011038	1	15.0 EA
us-d3	Dlane001				

The bottom of the screen shows the version '7.9.3', the title 'Pre-Shipper/Shipper Inquiry', and the file name 'rciq03.p'.

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



### Container Move Overview

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

QAD Proprietary

## Introduction



### 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



### Container Move Features

- ▲ Allows moving a container with:
  - Detail allocations
  - Container structure (pre-shipper/shipper)
  - On-hand quantity
  
- ▲ Can also move a pallet (with no container) and all its content
  
- ▲ Typically used for:
  - Pallet Staging before shipment
  - Truck Loading

QAD Proprietary

- 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

The screenshot shows the QAD Batch Picking Control interface. At the top, there are two tabs labeled 'Batch Picking Control'. Below the tabs is a navigation bar with 'Go To', 'Actions', 'Copy', 'Print', and 'Preview' options. The main content area is titled 'Container Move Set Up' and includes the following sections:

- Site:** us-d3
- Warehouse:** us-d-3
- Print Paperwork:**
  - Include Shipper Comments:
  - Inc Packing Cmnts:
  - Print Features and Options:
  - Print Order Details:
  - Assign Shipper Number:
  - Display Quantity In SO UM:
  - Print Lot/Serial Numbers:
- Container Move:**
  - Sequential Shipper Option:  (highlighted with a callout box)
  - Only Shipper Option:

A callout box points to the 'Sequential Shipper Option' field with the text: 'Use the setting to ensure all pallets for a given shipment are loaded consecutively in the truck.' At the bottom right, there are 'Delete', 'Back', and 'Next' buttons. The QAD logo and 'QAD Proprietary' are visible at the bottom left.

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



### Additional Container Move Setup Steps

- ✓ Define an IRG for a truck load
- ✓ Define a truck SLG
- ✓ Define storage for the truck
- ✓ Define an IR for the truck
- ✓ Link a truckload transaction to the IR
- ✓ Assign an algorithm to the transaction type

QAD Proprietary

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

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### Container Move: Defining an Internal Routing Group

Internal Routing Group Maint x

Go To Actions Copy Print Preview

Site: us-d3  
Warehouse: us-d-3  
Internal Routing Group: Truck  
Description: Truck Area

Functional:

SLG Default Values

Allow Issues:   
Allow Receipts:   
Allow Outgoing Returns:   
Allow Incoming Returns:

Delete Back Next

QAD Proprietary

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

The screenshot shows the 'Storage Location Group Maint' window in QAD. The title bar includes 'Go To', 'Actions', 'Copy', 'Print', and 'Preview'. The main content area displays the following information:

- Site: us-d3
- Warehouse: us-d3
- Storage Location Group: **Truck**
- Description: Truck Area
- Internal Routing Group: **Truck**

Below this information are several configuration options:

- Allow Issues:
- Allow Receipts:
- Allow Incoming Returns:
- Allow Outgoing Returns:
- Opportunity Counts:
- Opportunity Count Frequency: 0
- Check Digits:
- Cycle Count Status Option: 0
- Exclude from Picking:
- Picking Level: 0
- Over Pick:
- Multi-Trans:
- Detail Overflow Group:
  - Capacity Check when OTF:
  - Optimized Storage:
  - Allow Mixed Status Codes:
- Picking Multiple UM: (field)
- Acquisition UM: (field)
- Recount UM: (field)

At the bottom right, there are three buttons: 'Delete', 'Back', and 'Next'. The QAD logo and 'QAD Proprietary' text are visible at the bottom left of the window.

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

The screenshot displays the QAD Warehouse Location Maintenance application. The main window is titled "Container Move: Defining Storage Truck". It shows two overlapping windows for editing location data.

**Left Window (Location: DTruck01):**

- Site: us-d3
- Location: DTruck01
- Location Groupings: Warehouse: us-d3, Storage Location Group: Truck, Work Location Group: forklift
- Warehouse Location Data:
  - Check Digit: [ ]
  - Popularity: [ ]
  - Storage Type: **TRUCK** (highlighted)
  - Warehouse Location Type: [ ]
  - Travel Sequence: [ 0 ]
  - Dedicated:

**Right Window (Location: DTruck02):**

- Site: us-d3
- Location: DTruck02
- Location Groupings: Warehouse: us-d3, Storage Location Group: truck, Work Location Group: forklift
- Warehouse Location Data:
  - Check Digit: [ ]
  - Popularity: [ ]
  - Storage Type: **TRUCK** (highlighted)
  - Warehouse Location Type: [ ]
  - Travel Sequence: [ 0 ]
  - Dedicated:
  - Picking Type: [ ]
  - Preferred UM: [ ]
  - Opportunity Count Frequency: 0
  - Last Opportunity Count:
    - Stage (In): [ ]
    - Stage (Out): [ ]

Buttons for "Back" and "Next" are visible at the bottom right of the right window.

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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

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### Container Move: Defining an IR

Internal Routing Maintenance

Go To Actions Copy Print Preview

Site: US-D3 Warehouse: us-d-3 Internal Routing: Loadpal

Description: Truck Loading

Sequence: 10 Internal Routing Group: truck

Transaction Create

Confirmed at Source:

System Code: RF

Two Phase:

Keep From Status:

Task: TRANSFER

Priority:

Increment:

Allow RF user change destination location

To Location Option: 3

To Item Option: 0

To Lot/Serial Option: 0

To Reference Option: 0

Alternative UM Option: 0

Expire Date (Days): 0

From Lot/Serial Option: 0

From Reference Option: 0

Allow Quantity Increase:

Allow Quantity Decrease:

Quantity Change Option: 0

Delete Back Next

QAD Proprietary

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.

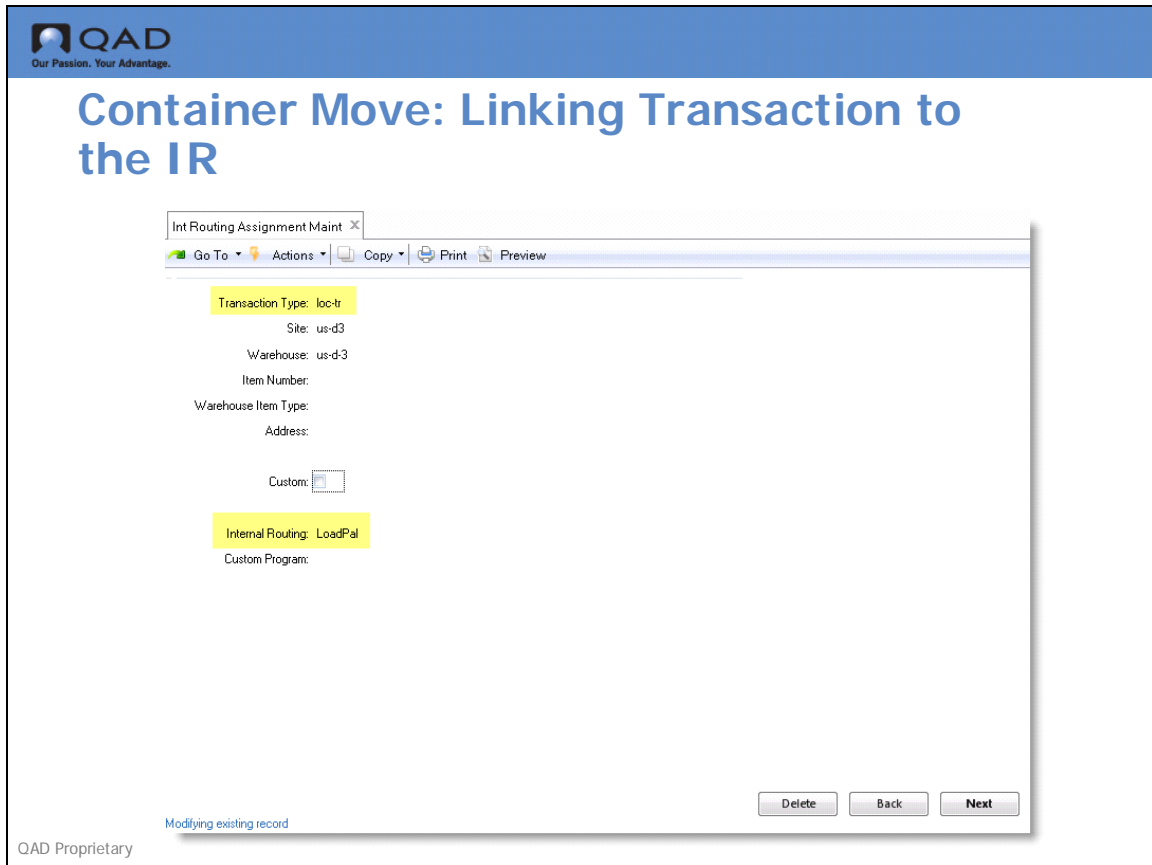
**Note** The location transfer transaction (LOC-TR) is included with the system data as a generalized code for field `tr_type`.

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

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### Container Move: Assigning an Algorithm

Algorithm Assignment Maintenance

Go To Actions Copy Print Preview

Algorithm Type: cm Transaction Type: loc-tr  
 Site: us-d3 Warehouse: us-d3  
 Item Number: Warehouse Item Type:  
 Address: Custom:

Assigned Algorithms

Seq	Algo	Description
10	11	Mov to Dock - Find Empty Location
20	12	Mov to Dock - Merge with same Shipper/Ship-To
30	13	Mov to Dock - Find Location with Best Load

Sequence: 11 Algorithm: 11  
 Description: Mov to Dock - Find Empty Location

Back Next

QAD Proprietary

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



### Exercise Objectives

- ▲ Load Pallet PL00001 and Pallet PL00002 in 2 different trucks
- ▲ Review stock inquiries and preshipper to see how algorithms handle movements

QAD Proprietary


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 2: Use the RF to Transfer the Container

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### Exercise: Use the RF to Transfer



```

Loc Transfer
Ref: PL00001
Loc: Dlane001
Chk:
S:
Sh:

Via:
Lo:
  
```

→

```

Loc Transfer
Ref: PL00001
Loc: Dlane001
Chk:
S: 091031PS19
Destination
  Loc: DTruck01
  Chk:
Via:
Lo:
  
```

→

```

Loc Transfer
Ref: PL00001
Loc: Dlane001
Chk:
S: 091031PS19
Sh: 002
Quality Products Div

Via:
Transfer complete
  
```

```

Loc Transfer
Ref: PL00002
Loc: Dlane001
Chk:
S: 091031PS20
Destination
  Loc: DTruck02
  Chk:
Via:
Lo:
  
```

→

```

Loc Transfer
Ref: PL00002
Loc: Dlane001
Chk:
S: 091031PS20
Sh: 0605
0605

Via:
Shipment Ready
  
```

QAD Proprietary

- 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.



- 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



### Course Overview

- ✓ Introduction to Ship Truck
- ✓ Ship Truck features
- ✓ Ship Truck control file
- ✓ Screen overview
- ✓ Exercise

QAD Proprietary

## Ship Truck Introduction



### 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

- ▲ View all shippers loaded on the truck for a given truck location
  
- ▲ Create a master bill of lading (MBOL) that includes all shippers for both Sales Orders and distribution Orders
  
- ▲ Indicate truck shipment, resulting in shipment of all orders on the truck
  
- ▲ Indicate shipment status

QAD Proprietary

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

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## Ship Truck Features: View shippers



Ship Truck		
Location: truck01		
ID	st	
091030PS10	OK	*
091030PS11	OK	*
091030PS13	OK	*
090030PS19	OK	*
091031PS19	OK	*

Via:  
Ship-To: 002


QAD Proprietary

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

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### Ship Truck Controls

Batch Picking Control

Go To Actions Copy Print Preview

Site: un-d3  
Warehouse: un-d3

Print Paperwork

Include Shipper Comments:  Print Paperwork Option: 0  
Inc Packing Create:   
Print Features and Options:   
Print Order Details:   
Assign Shipper Number:   
Display Quantity In SD UM:   
Print Lot/Serial Numbers:

Container Move

Sequential Shipper Option: 0  
Only Shipper Option: 0

Ship Truck

Master Bill Ship-To/Dock: 000  Confirm on Error:

Delete Back Next

Preview

Print Paperwork Option: 0

Container Move

Sequential Shipper Option: 0  
Only Shipper Option: 0

Ship Truck

Master Bill Ship-To/Dock: 000  Confirm on Error:

Delete Back Next



QAD Proprietary

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

### Ship Truck RF Screen Overview

Location (Truck)

Carrier Shipment Reference

Identifier Carrier Vehicle

Master Bill of Lading

Ship Truck

Location: Truck01

Carrier Shipment Ref  
REF0093837

Vehicle ID  
AB0974-CV

Master BOL  
MBOL0938747

Carrier:

Shipment Carrier

QAD Proprietary

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)

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## Ship Truck Screen Overview 2

Location (Truck)      Shipper Status

Ship Truck  
Location: truck01  
ID st

091030PS10	OK	*
091030PS11	OK	*
091030PS13	OK	*
090030PS19	OK	*
091031PS19	OK	*

Truck Contents

Selected (\*) / Deselected

Ship Via

Ship-To Address → via:  
Ship-To: 002

QAD Proprietary

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



### Objectives

- ▲ Pre-Shippers should be printed and converted to shipper (Print Paper Work)
- ▲ Confirm Dtruck01 and Dtruck02
- ▲ Review stock inquiries and pre-shipper inquiry
- ▲ Print pre-shipper and convert to shipper

QAD Proprietary

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

**QAD**  
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### Exercise: Review Inventory

Inventory Detail Inquiry - 11/8/09

**QAD** 11/08/09

Site: us-d3    Item Number:    Display Whse Loc: No  
 Warehouse: us-d-3    Lot/Serial:    Disp Non-Whse Loc: No  
 Location: dtruck01    Reference:    Output: PAGE

Item Lot	Status Ref	Qty UM On Hand	Expect In	Expect Out	Detail Alloc	Detail Pick
D-IT005	EA	6				6
D-IT006	EA	21				21
D-IT007	EA	4				4

4.9.13    Inventory Detail Inquiry    whiciq01.p

Inventory Detail Inquiry - 11/8/09

**QAD** 11/08/09

Site: us-d3    Item Number:    Display Whse Loc: No  
 Warehouse: us-d-3    Lot/Serial:    Disp Non-Whse Loc: No  
 Location: dtruck02    Reference:    Output: PAGE


Item Lot	Status Ref	Qty UM On Hand	Expect In	Expect Out	Detail Alloc	Detail Pick
D-IT005	EA	3				3
D-IT008	EA	6				6
D-IT009	EA	5				5

4.9.13    Inventory Detail Inquiry    whiciq01.p


QAD Proprietary

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

## Step 2: Use the RF Ship Truck Option


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### Exercise: RF Ship Truck Option



```

1 BP Pick SO/DO
2 BP Pick All
3 Container Build
4 Container Move
5 Ship Truck
6 Pallet Explosion
7 Item Move
8 Print Paperwork
9 Cancel Shipment
          
```

→

```

Ship Truck
Location: truck01
ID          St
-----
SHI0000003  OK  *
          
```

Via:  
Ship-To: 002

→

```

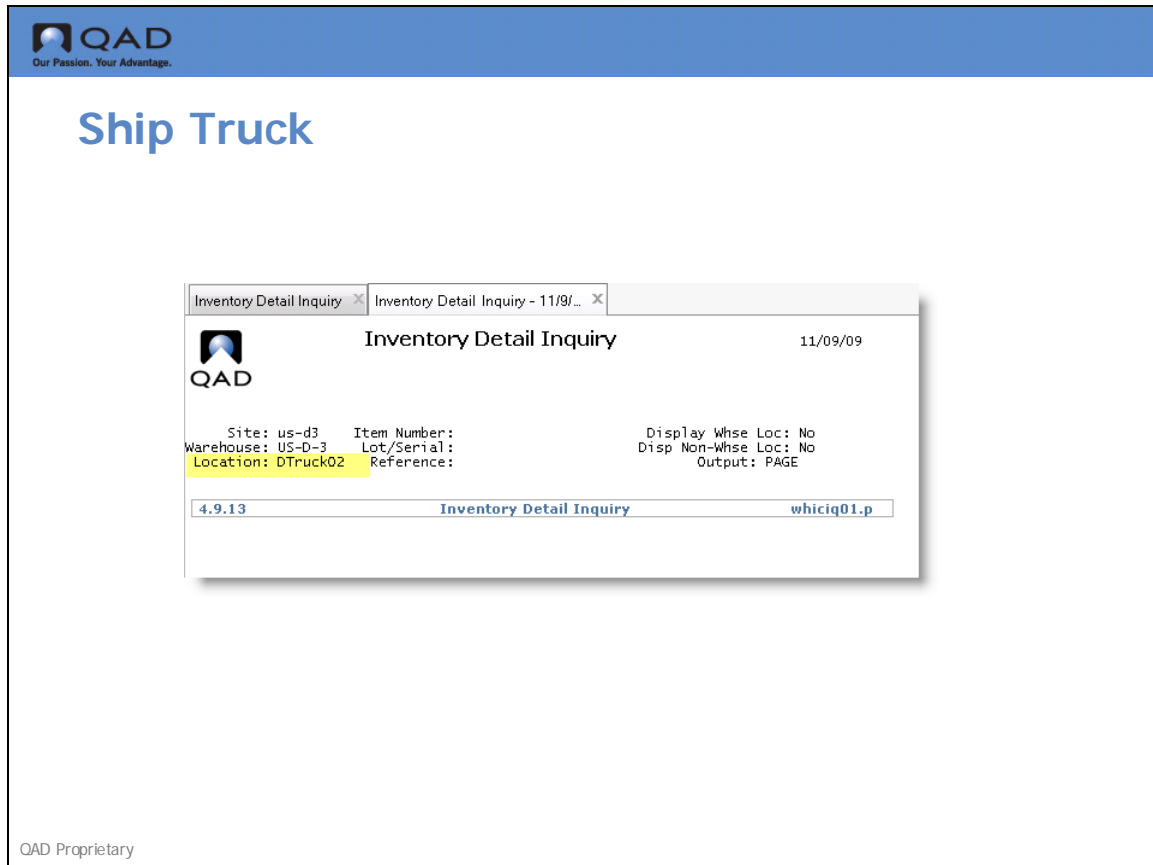
Ship Truck
Location: truck01
ID          St
-----
SHI0000003  OK  *
          
```

Confirm shipment  
1

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- 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



The screenshot displays the QAD 'Ship Truck' interface. At the top, the QAD logo and tagline 'Our Passion. Your Advantage.' are visible. The main heading is 'Ship Truck'. A window titled 'Inventory Detail Inquiry' is open, showing the following details:

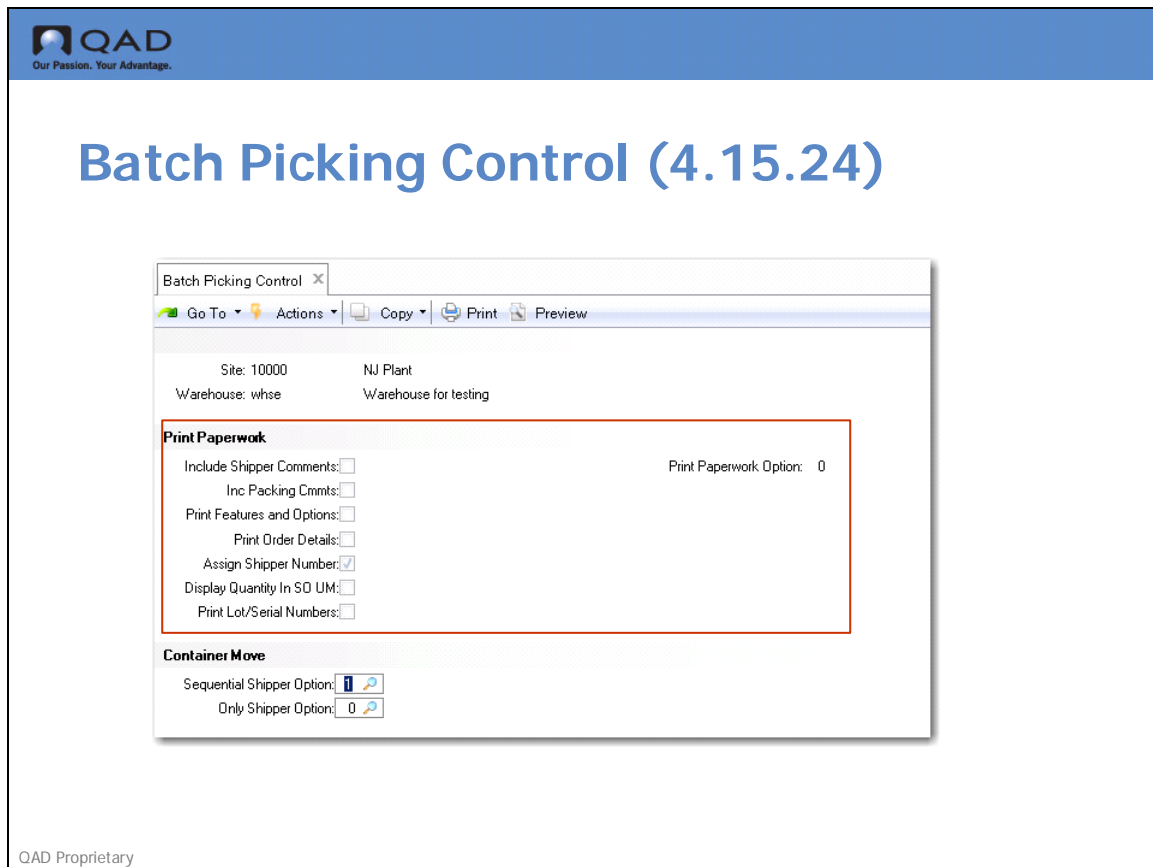
Site: us-d3	Item Number:	Display Whse Loc: No
Warehouse: US-D-3	Lot/Serial:	Disp Non-Whse Loc: No
Location: DTruck02	Reference:	Output: PAGE

At the bottom of the window, the version '4.9.13' and the file path 'whiciq01.p' are shown. The QAD logo is also present in the top left corner of the window.

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



### Inspection WO Chapter Overview

- ✓ Introduction to Inspection with WO
- ✓ Set up Inspection with WO
- ✓ Exercise

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# Introduction

**QAD**  
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## Inspection WO Introduction

- ▲ Inspect finish goods after manufacturing process.



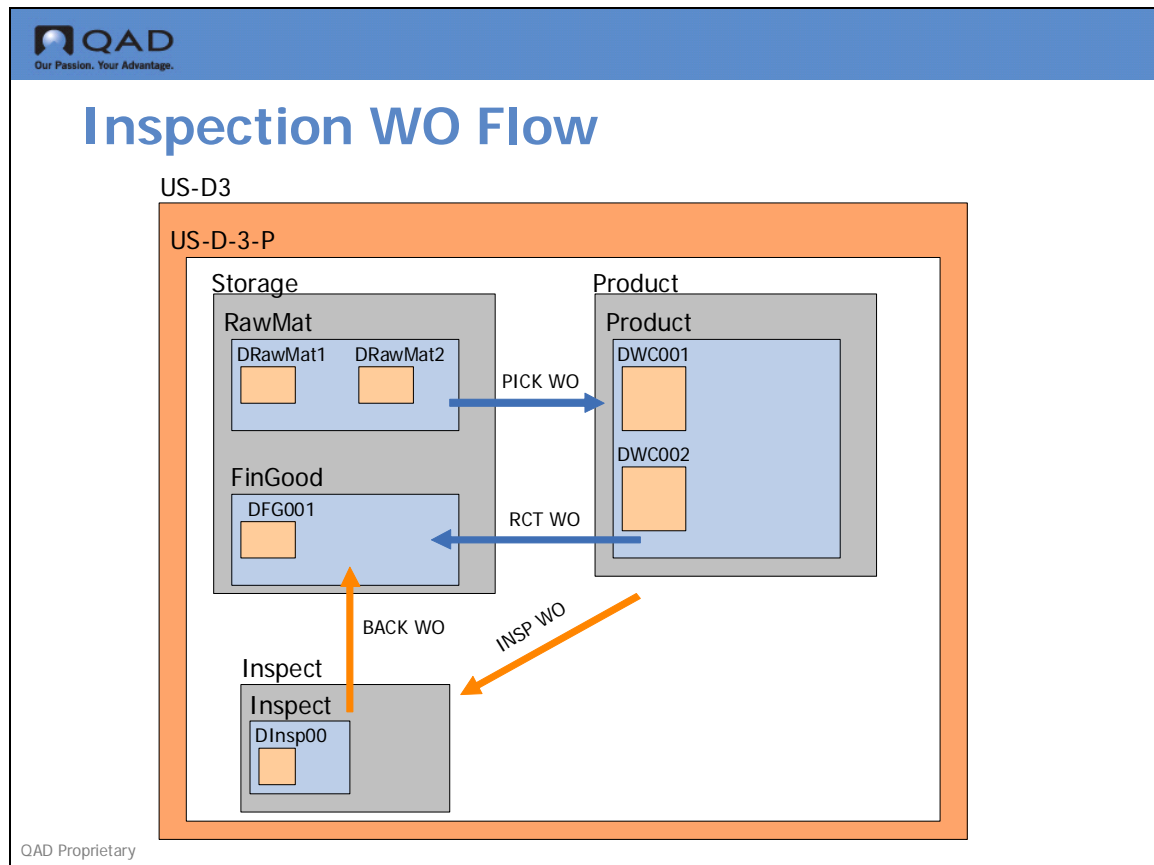
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QAD Warehousing supports quality inspection with sample control, change of inventory status, and creation of warehouse transaction.

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 *QAD Warehousing User Guide*. or complete the Inspection chapter and Work Order Chapter in *QAD Warehousing Fundamentals Training Guide*. 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



### Inspection WO Setup

- ✓ Internal Routing Maintenance
- ✓ Internal Routing Assignment Maintenance
- ✓ Algorithm Assignment Maintenance
- ✓ Inspection Status Change Maintenance

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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

The screenshot displays the QAD Internal Routing Maintenance interface. The main window is titled "Internal Routing Maintenance" and shows the following details:

- Site: us-d3
- Warehouse: us-d-3-p
- Internal Routing: Insplr
- Description: Manufacturing Inspection
- Sequence: 10
- Internal Routing Group: product

A diagram on the right illustrates the internal routing process, showing a flow from "RawMaterial" to "Product" with an "Inspect" step in between. A smaller window in the foreground shows the "Internal Routing Maintenance" window for the same site and warehouse, but with "Internal Routing: Insplr" and "Internal Routing Group: inspect". This window shows the following details:

- Site: us-d3
- Warehouse: us-d-3-p
- Internal Routing: Insplr
- Description: Manufacturing Inspection
- Sequence: 10
- Internal Routing Group: inspect
- Task: TRANSFER
- Priority: 100
- Increment: 10

Both windows have "Transaction Create" and "Transaction Confirmation" sections with various options like "Confirmed at Source", "System Code", "Two Phase", "Keep From Status", and "Quantity Change Option".

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

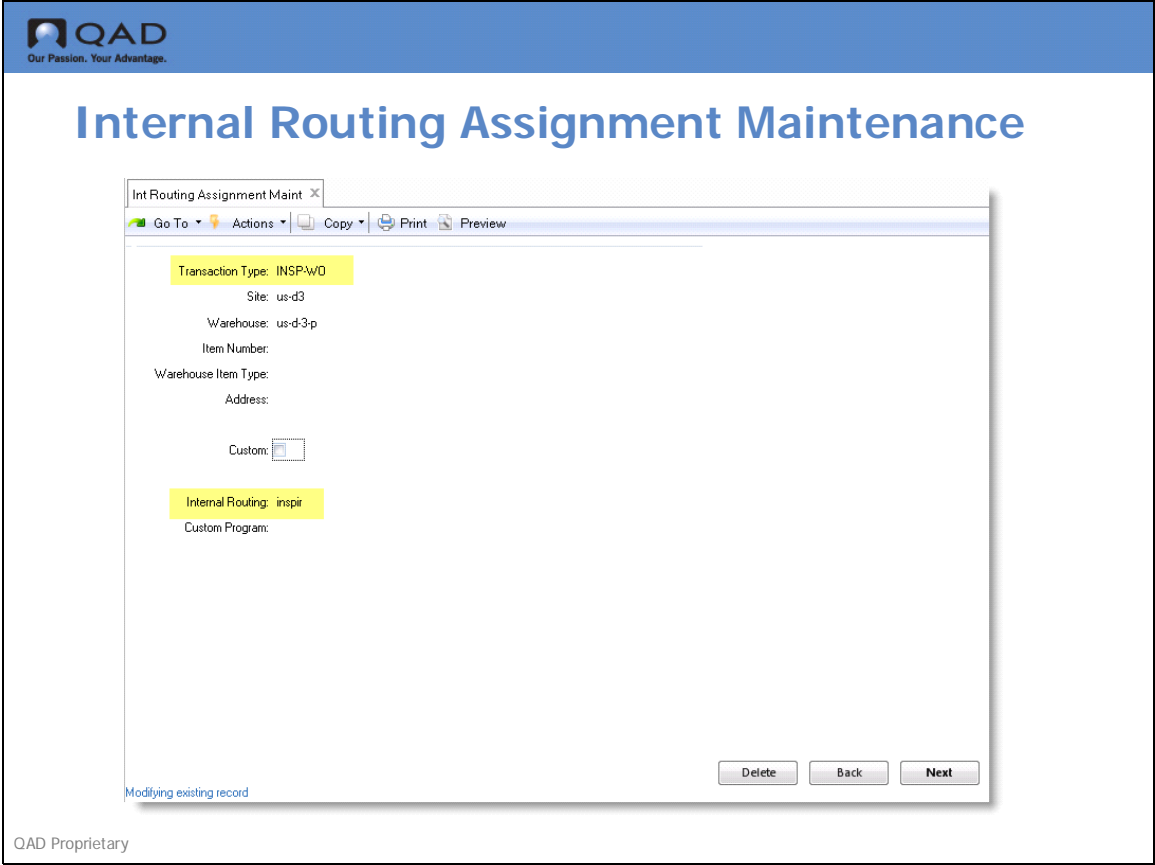
**Internal Routing.** Specify the code that identifies the internal routing you want to maintain or assign to a particular transaction type.

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.

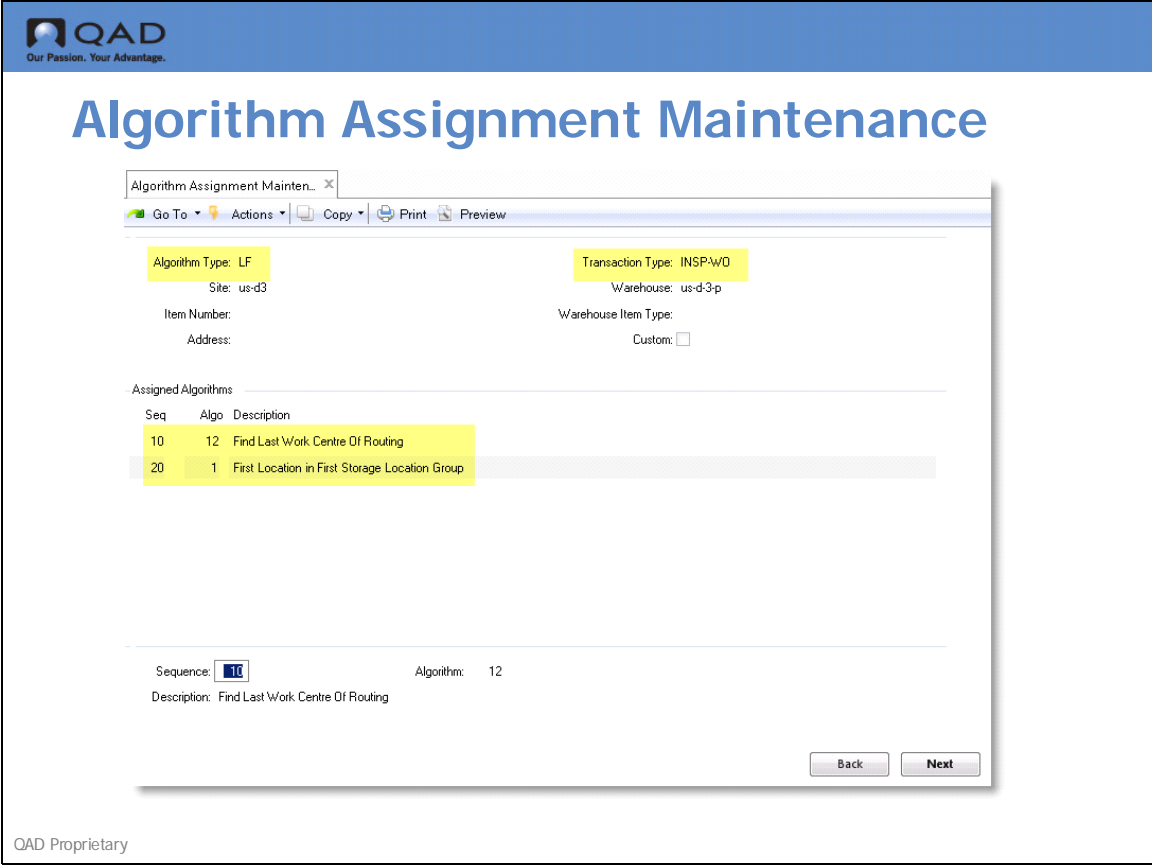
#### Fields

*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 128.

### 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

The screenshot displays the QAD Internal Routing Maintenance interface. The main window is titled "Internal Routing Maintenance" and shows the following details:

- Site: us-d3
- Warehouse: us-d3-p
- Internal Routing: InspBack
- Description:
- Sequence: 110
- Internal Routing Group: inspect

A secondary window, "Transaction Create", shows:

- Site: us-d3
- Warehouse: us-d3-p
- Internal Routing: InspBack
- Description:
- Sequence: 120
- Internal Routing Group: storage

The "Transaction Confirmation" section includes the following options:

- Confirmed at Source:
- System Code: RF
- Task: TRANSFER
- Priority: 100
- Two Phase:
- Increment: 10
- Keep From Status:

The "Transaction Confirmation" table shows various options set to 0:

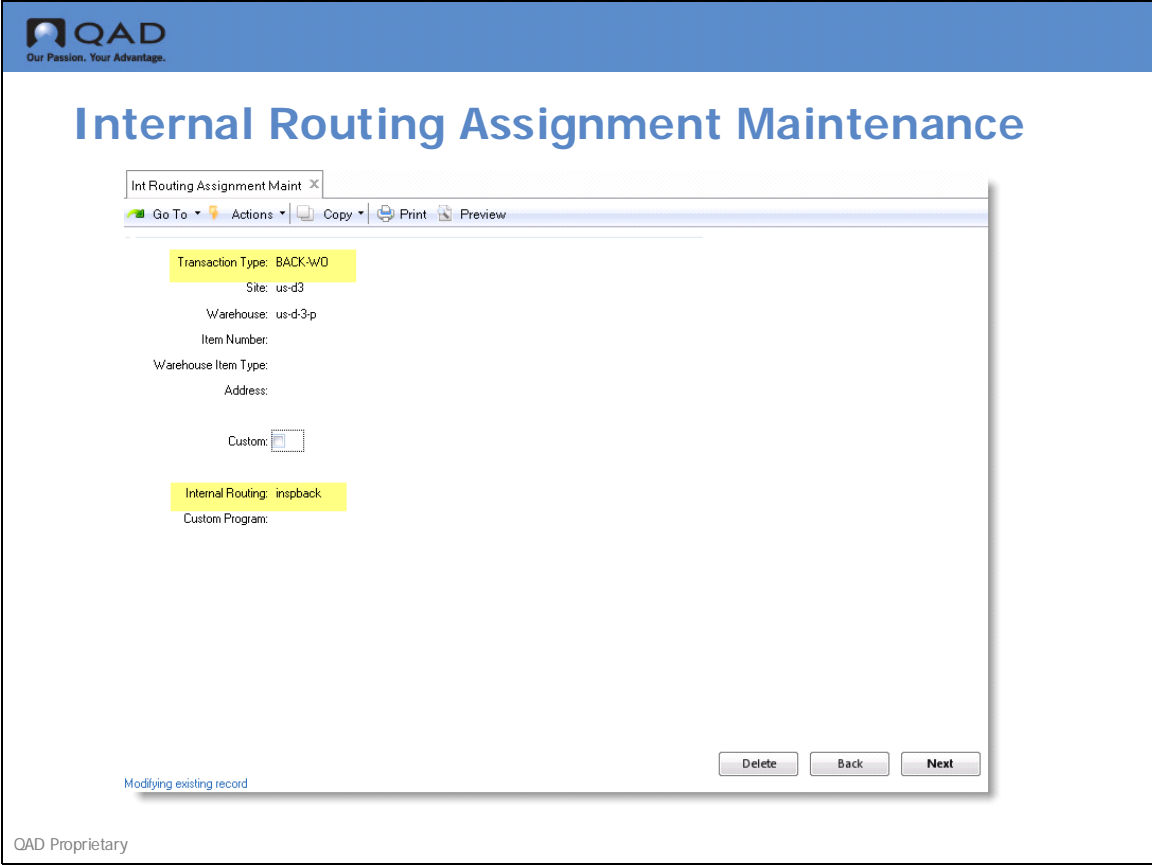
From Location Option:	0	Repick Type:		To Location Option:	0
From Item Option:	0			To Item Option:	0
From Lot/Serial Option:	0			To Lot/Serial Option:	0
From Reference Option:	0			To Reference Option:	0
Allow Quantity Increase:	<input type="checkbox"/>			Alternative UM Option:	0
Allow Quantity Decrease:	<input checked="" type="checkbox"/>			Expire Date (Days):	0
Quantity Change Option:	0				

The interface also includes a "WARNING: Beginning" message and a "WARNING: End of data" message. Buttons for "Back" and "Next" are visible at the bottom right.

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 124.

### 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 129.

## Algorithm Assignment Maintenance-Put Away Algorithm

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### Algorithm Assignment Maintenance: PA

Algorithm Assignment Mainten... x

Go To Actions Copy Print Preview

Algorithm Type: PA  
Site: us-d3  
Item Number:  
Address:

Transaction Type: BACK-WO  
Warehouse: us-d3-p  
Warehouse Item Type:  
Custom:

Assigned Algorithms

Seq	Algo	Description
10	9	S.L. - Merge with Item and UM
20	3	S.L. - Merge with part
30	1	Storage Locations

Sequence:  Algorithm: 9  
Description: S.L. - Merge with Item and UM

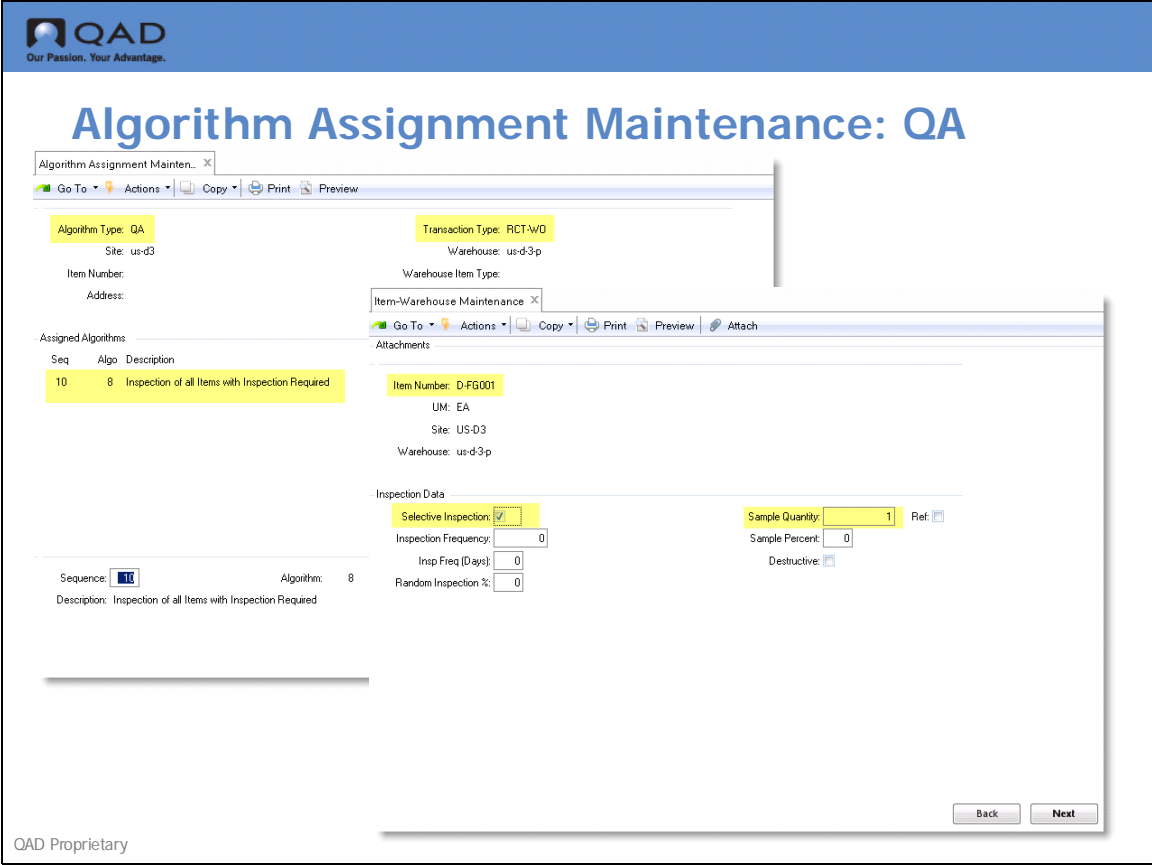
Back Next

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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.

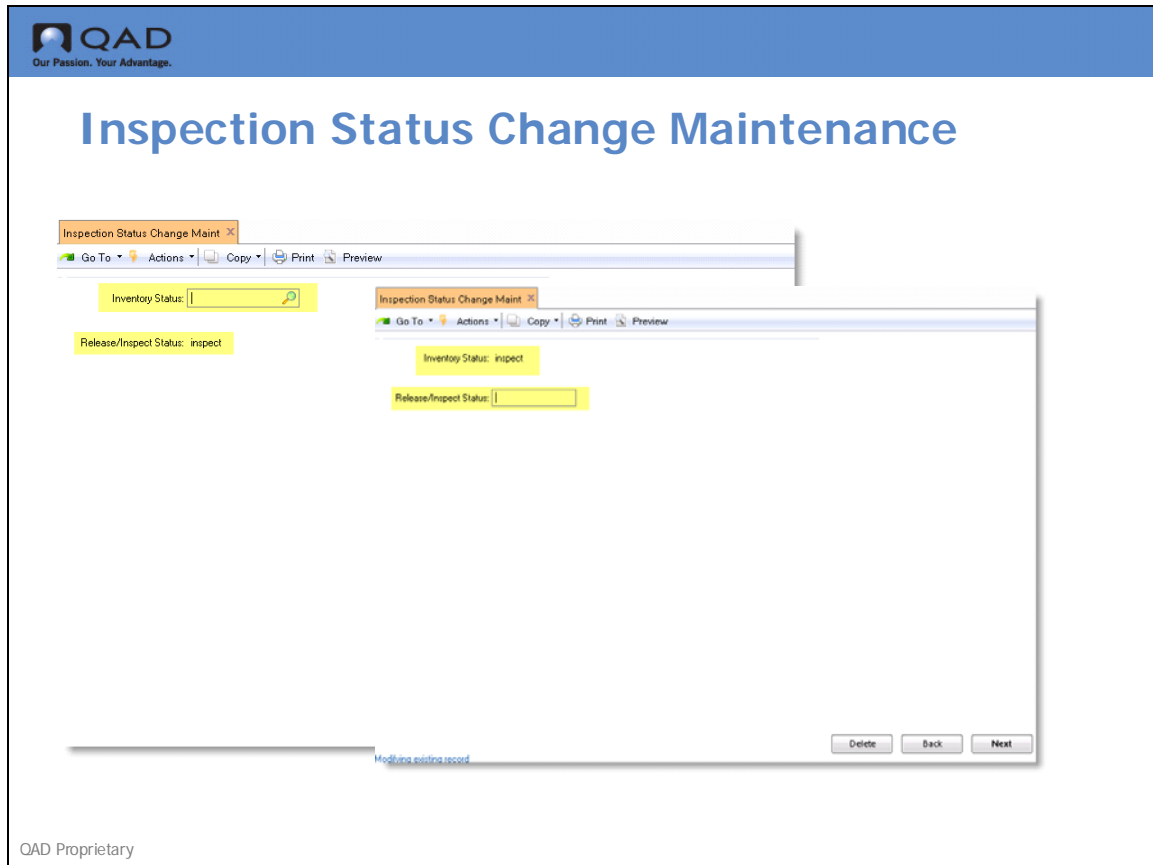
For field descriptions, see “Algorithm Assignment Maintenance” on page 127.

### 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



### Exercise 1 Objectives

- ✓ Review stock in warehouse locations
- ✓ Prepare and review work order
- ✓ Move stock from work center area to storage area and transfer sample from work center area to inspection area
- ✓ Validate inspection sample
- ✓ Move sample from inspection area to storage area
- ✓ Review stock

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### 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

The screenshot displays the QAD 'Review Stock' application. It features two overlapping 'Inventory Detail Inquiry' windows. The top window shows the following details:

- Site: us-d3
- Warehouse: US-D-3-P
- Location:
- Item Number: D-FG001
- Lot/Serial:
- Reference:
- Display Whse Loc: No
- Disp Non-Whse Loc: No
- Output: PAGE

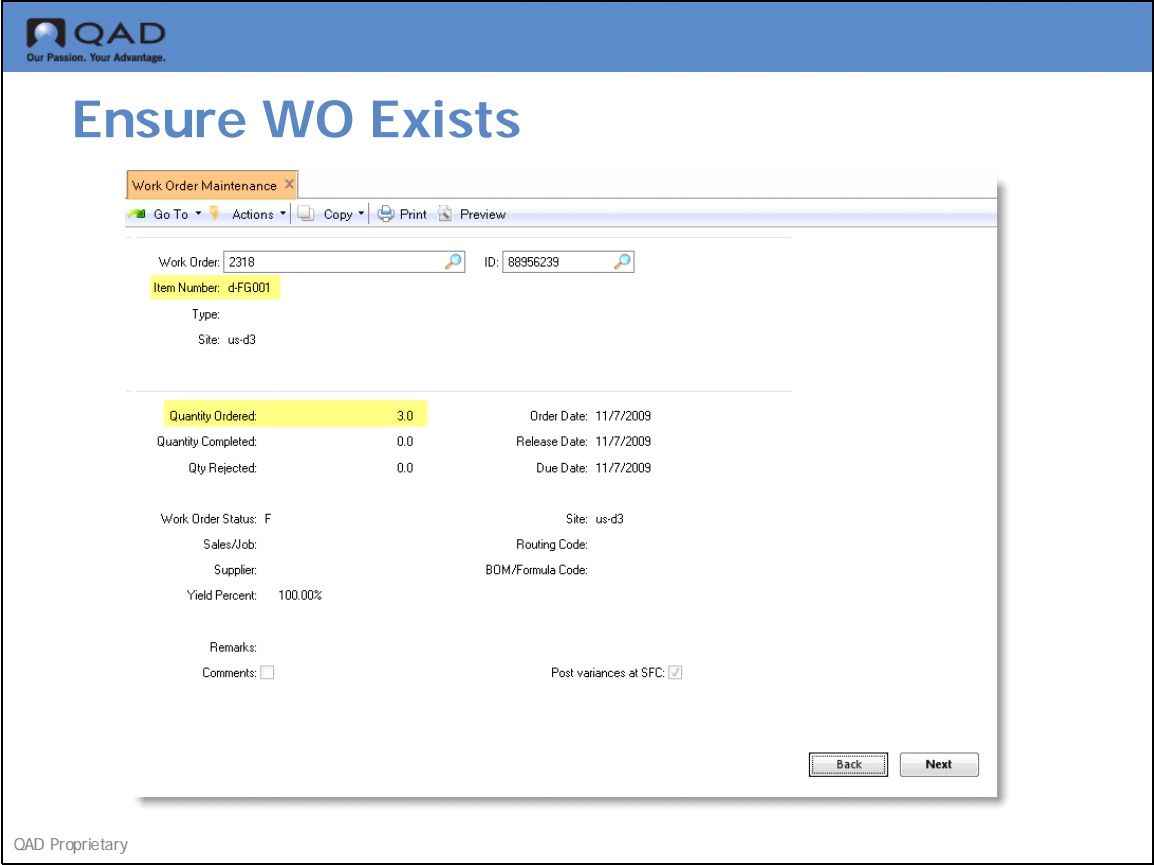
The bottom window shows a table of inventory items:

Item	Status	Qty	Expect	Expect	Detail	Detail
Location Lot	Ref	UM	On Hand	In	Out	Alloc Pick
D-RawMat1 D-RM002	EA	50				
D-RawMat1 D-RM001	EA	50				

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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

The screenshot displays the QAD software interface for releasing a work order. It features two overlapping windows:

- Work Order Release/Print (DOM1 USD DB NY):**
  - Work Order: 2318, ID: 88956239
  - Batch: d-FG001, Item Number: d-FG001
  - Qty Ordered: 3.0 EA
  - Table of Required Quantities:

Item Number	Rev	Site	Lot/Serial	Qty to Issue	UM	Issued
D-RM001		us-d3	DRawMat1	3.0	EA	( )
D-RM002		us-d3	DRawMat1	6.0	EA	( )
- Inventory Detail Inquiry (11/07/09):**
  - Site: us-d3, Warehouse: US-D-3-P, Location: [blank]
  - Item Number: [blank], Lot/Serial: [blank], Reference: [blank]
  - Table of Inventory Details:

Item	Status	Qty	Expect	Expect	Detail	Detail
Location Lot	Ref	UM	On Hand	In	Out	Alloc Pick
DRawMat1 D-RM001	EA	50			3	3
DRawMat1 D-RM002	EA	50			6	6
DWC001 D-RM001	EA				3	
DWC002 D-RM002	EA				6	

Arrows in the screenshot indicate that the 'Expected In' values (3 and 6) from the Inventory Detail Inquiry window are used to verify the 'Qty to Issue' values in the Work Order Release/Print window.

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

The diagram illustrates the RF Transfer process through three terminal screens:

- Warehouse Management:** Release: eB3, User ID: mqa, Pa: Domain: Domain1, Site: us-d3, Warehouse: us-d-3-p, WLG: [input], Location: [input], Task: [input].
- Task Menu:** 1 Next Task, 2 Select Task, 3 Transfer, 4 Location Audit, 5 Kanban Scan, 6 Eng Activation, 7 PreShip Sel Task, 8 PO Receipt, 9 Stock Inquiry, 10 On-Line SO Pick.
- Transfer 8850:** Loc: DRawMat1, D-RM001, EA Ref: Qty: 3.0, Qty: 3.0.

Arrows indicate the flow from Warehouse Management to the Task Menu, and then to the Transfer screen. A handheld RF device icon is shown in the top right corner of the diagram area.

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- 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

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# Transfer to Build Location

```

Transfer 8850
To Loc: DWC001
  Loc: DwC001
  Chk:
Item Number:
D-RM001
Lot/Serial:
EA Ref:
                    
```

→

```

Transfer 8851
  Loc: DRawMat1
D-RM002
EA Ref:
Qty: 6.0
Qty: 6.0
                    
```

→

```

Transfer 8851
To Loc: DWC002
  Loc: DWC002
  Chk:
Item Number:
D-RM002
Lot/Serial:
EA Ref:
                    
```

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- 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

The screenshot shows the QAD 'Inventory Detail Inquiry' window. At the top, it displays the QAD logo and the slogan 'Our Passion. Your Advantage.' Below this, the title 'Verify Transfer' is prominently displayed. The window title bar shows 'Inventory Detail Inquiry' and 'Inventory Detail Inquiry - 11/7/09'. The main header includes the QAD logo, the title 'Inventory Detail Inquiry', and the date '11/07/09'. Below the header, there are fields for 'Site: us-d3', 'Warehouse: US-D-3-P', and 'Location:'. To the right, there are options for 'Item Number:', 'Lot/Serial:', and 'Reference:'. Further right, there are options for 'Display Whse Loc: No', 'Disp Non-Whse Loc: No', and 'Output: PAGE'. The main data area contains a table with the following columns: Location, Item, Lot, Status, Ref, Qty, Expect, Expect, Detail, Detail. The table data is as follows:

Location	Item	Lot	Status	Ref	Qty	Expect	Expect	Detail	Detail
					UM On Hand	In	Out	Alloc	Pick
DRawMat1	D-RM001		EA		47				
DRawMat1	D-RM002		EA		44				
DWC001	D-RM001		EA		3				3
DWC002	D-RM002		EA		6				6

At the bottom of the window, there is a footer area with '4.9.13', 'Inventory Detail Inquiry', and 'whiciq01.p'. The QAD logo and 'QAD Proprietary' are visible in the bottom left corner of the window frame.

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

## Step 7: Backflush/Issue Items

The screenshot displays two overlapping windows in the QAD software interface. The top window is titled 'Work Order Receipt Backflush' and contains the following information:

- Work Order: 2318
- Item Number: dFG001
- ID: 88956239
- W/O Stat: R
- Effective Date: 11/7/2009
- Receive:
- Backflush:
- Document:

Below this information are fields for 'Remarks', 'Open Quantity: 3.0', 'UM: EA', and 'Lot/Ser'. A 'Quantity' field is highlighted with the value '3.000000000'. Other fields include 'Conversion: 1.0000', 'Scrapped Qty: 0.0', and 'UM Conversion: 1.0000'. There are also fields for 'Batch', 'Automatic Lot Numbers', 'Site: us-d3', 'Location: us-d-3-p', and 'Lot/Serial'.


The bottom window is titled 'Inventory Detail Inquiry' and shows a table of inventory details for Item Number: d-FG001. The table has the following columns: Location, Status, Qty, Qty, Expect, Expect, Detail, Detail. The rows are:

Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM	On Hand	Alloc	In	Out	Alloc
DFG001	inspect	EA				2	
Dinsp10	inspect	EA				1	
DWC002	inspect	EA	3				3


The bottom window also includes a 'QAD' logo, 'Warehouse: us-d-3', 'Location: us-d-3-p', and a footer with '4.9.13', 'Inventory Detail Inquiry', and 'whicq01.p'.

- 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 verify that the system allocated the quantity you entered for the correct location.

### Step 8: Transfer Stock to Inspection Location

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## Transfer Second Qty to Inspection Area



```
Transfer 8853
Fr Loc: DWC002
  Loc: 
  Chk:
```

→

```
Transfer 8853
  Loc: DWC002
D-FG001
EA Ref:
  Qty: 2.0
  Qty: 
```

→

```
Transfer 8853
  To Loc: DFG001
  Loc: 
  Chk:
Item Number:
d-FG001
Lot/Serial:
EA Ref:
```

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- 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

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# Transfer Second Qty to Inspection Area

```
Transfer 8853
Fr Loc: DWC002
Loc: 
Chk:
```

→

```
Transfer 8853
Loc: DWC002
D-FG001
EA Ref:
Qty: 2.0
Qty: 
```

→

```
Transfer 8853
To Loc: DFG001
Loc: 
Chk:
Item Number:
d-FG001
Lot/Serial:
EA Ref:
```

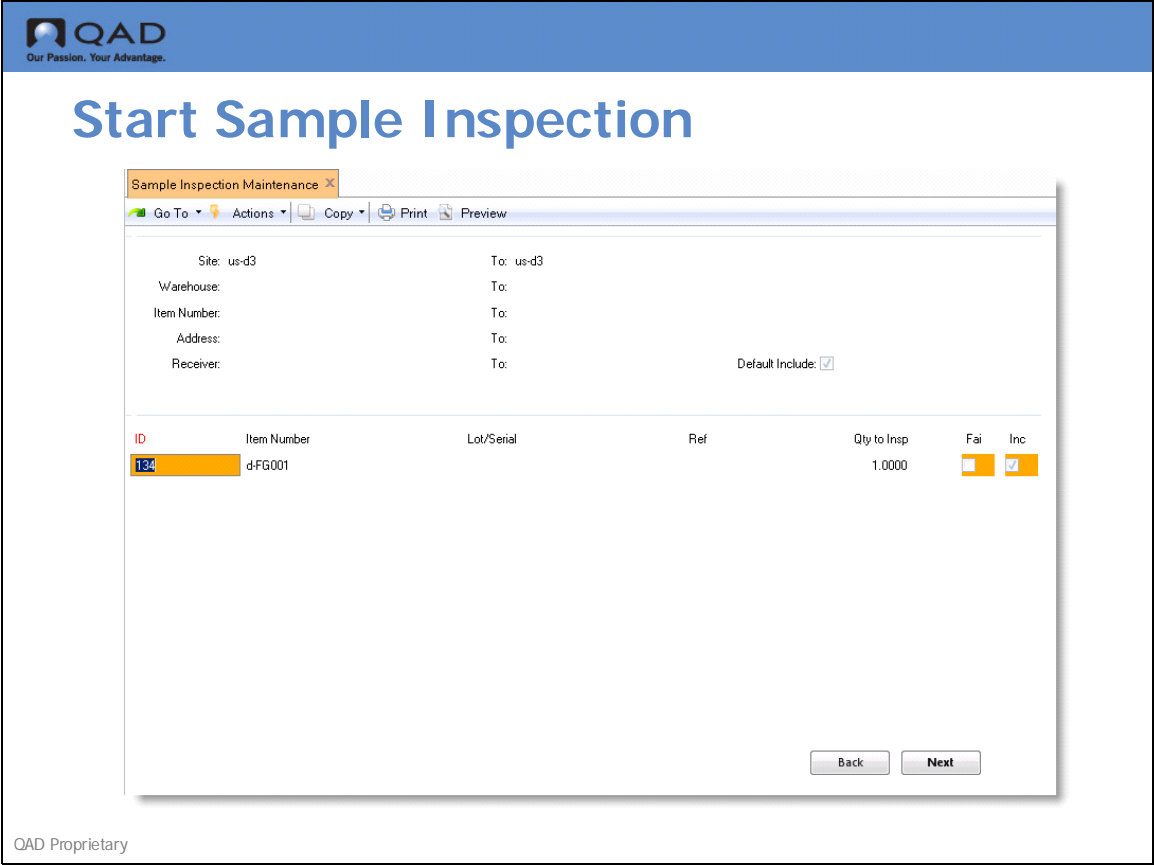
The screenshot shows the 'Inventory Detail Inquiry' window. The 'Item Number' is d-FG001. The table below shows the inventory status for this item:

Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM	On Hand	Alloc	In	Out	Alloc Pick
DFG001	inspect	EA	2				
Dinsp10	inspect	EA	1				

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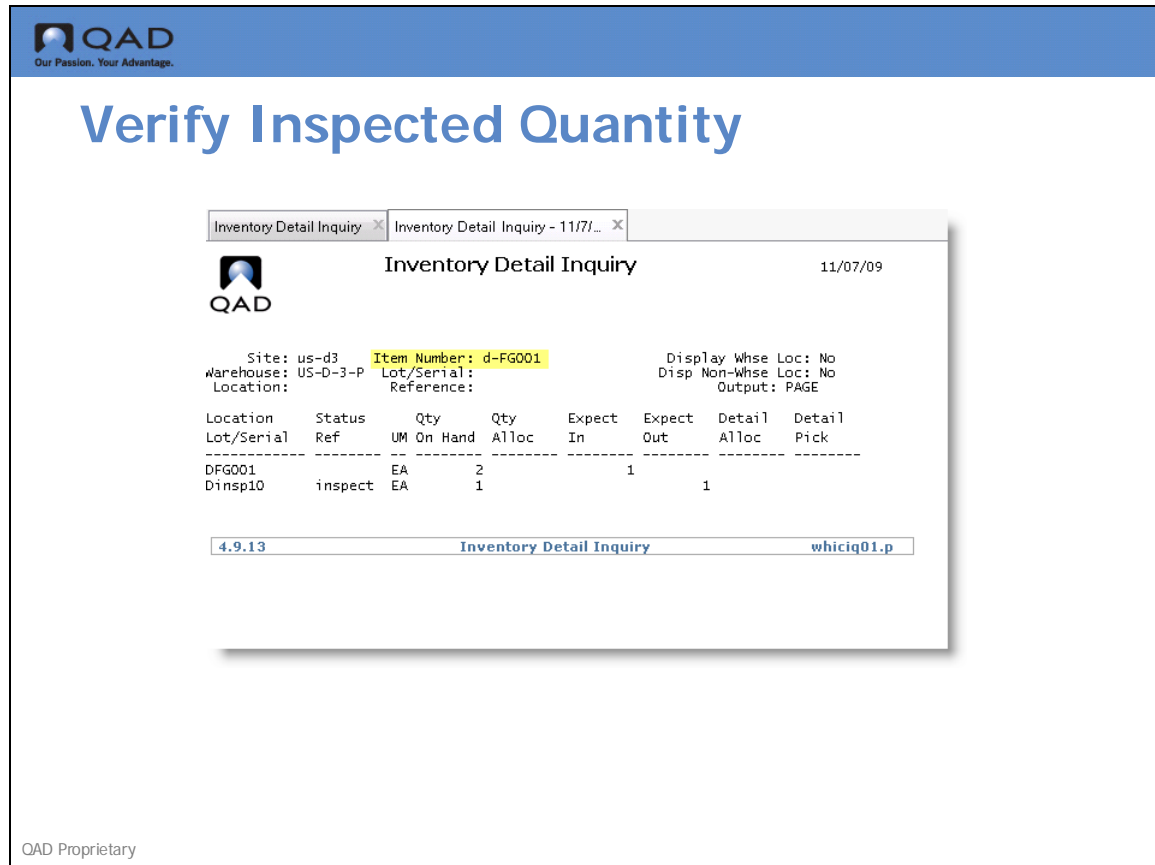
- 1 Use the RF Next Task function to transfer the second quantity of stock to the inspection area.
- 2 The system defaults a quantity; accept or change the default, then press Go.
- 3 Enter the inspection location; then press Go.
- 4 Use Inventory Detail Inquiry to verify the transfer.

### 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



The screenshot displays the QAD Inventory Detail Inquiry interface. At the top, the QAD logo and tagline "Our Passion. Your Advantage." are visible. The main title is "Verify Inspected Quantity". The window title is "Inventory Detail Inquiry - 11/7/09". The QAD logo is also present in the top left of the main content area.

Key information displayed includes:

- Site: us-d3
- Warehouse: US-D-3-P
- Location:
- Item Number: d-FG001
- Lot/Serial:
- Reference:
- Display Whse Loc: No
- Disp Non-Whse Loc: No
- Output: PAGE

The main data table is as follows:

Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM	On Hand	Alloc	In	Out	Alloc Pick
DFG001		EA	2		1		
Dinsp10	inspect	EA	1			1	

At the bottom of the window, the text "4.9.13 Inventory Detail Inquiry whiciq01.p" is displayed.

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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

**Transfer 8854**  
Fr Loc: Dinsp10  
Loc:   
Chk:

**Transfer 8854**  
Loc: dinsp10  
d-fg001  
EA Ref: 1.0  
Qty: 1.0

**Transfer 8854**  
To Loc: DFG001  
Loc:   
Chk:   
Item Number: d-FG001  
Lot/Serial:  
EA Ref:

Inventory Detail Inquiry - 11/7/09

QAD



Site: us-d3    Item Number: d-FG001    Display Wise Loc: No  
Warehouse: US-D-3-P    Lot/Serial:    Disp Non-Wise Loc: No  
Location:    Reference:    Output: PAGE

Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM	On Hand	Alloc	In	Out	Alloc
DFG001	EA		3				

4.9.13    Inventory Detail Inquiry    whiciq01.p

- 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 verify the transfer.

## Step 9: Transfer Second Qty to Inspection Location

### Transfer Second Qty to Inspection Area

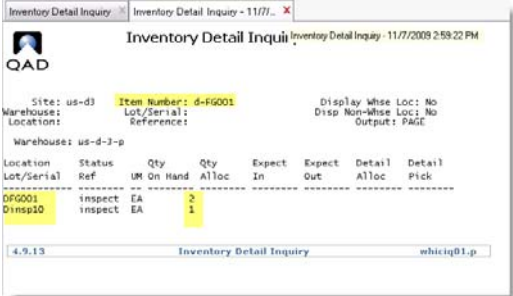
Transfer 8853  
 Fr Loc: DWC002  
 Loc:   
 Chk:

→

Transfer 8853  
 Loc: DWC002  
 D-FG001  
 EA Ref:  
 Qty: 2.0  
 Qty:

→

Transfer 8853  
 To Loc: DFG001  
 Loc:   
 Chk:  
 Item Number:  
 d-FG001  
 Lot/Serial:  
 EA Ref:



QAD Proprietary

- 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 verify 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



### Kanban Scan Chapter Overview

- ✓ Introduction to Kanban Scan
- ✓ Set up Kanban Scan
- ✓ Exercise

QAD Proprietary

## Introduction TO Kanban Scan



### 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



### Kanban Setup

- ✓ **Internal Routing Maintenance**
- ✓ **Internal Routing Assignment Maintenance**
- ✓ **Algorithm Assignment Maintenance**
- ✓ **Replenishment List Maintenance**
- ✓ **Multi-Level Item Maintenance**

QAD Proprietary

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

QAD  
Our Passion. Your Advantage.

### Internal Routing Maintenance

Internal Routing Maintenance x  
Go To Actions Copy Print Preview

Site: US-D3 Warehouse: us-d-3-p Internal Routing: ReplenIR

Description:  
Sequence: 10 Internal Routing Group: Storage

Transaction Create  
Confirmed at Source:   
System Code: RF  
Two Phase:   
Keep From Status:

Transaction Confirmation

From Location Option: 0	Repick Type:
From Item Option: 0	
From Lot/Serial Option: 0	
From Reference Option: 0	
Allow Quantity Increase: <input type="checkbox"/>	
Allow Quantity Decrease: <input checked="" type="checkbox"/>	
Quantity Change Option: 0	

QAD Proprietary

Internal Routing Maintenance x  
Go To Actions Copy Print Preview

Site: US-D3 Warehouse: us-d-3-p Internal Routing: ReplenIR

Description:  
Sequence: 20 Internal Routing Group: Product

Transaction Create  
Confirmed at Source:   
System Code: RF  
Two Phase:   
Keep From Status:

Task: TRANSFER  
Priority: 100  
Increment: 10

Transaction Confirmation

From Location Option: 0	Repick Type:	To Location Option: 0
From Item Option: 0		To Item Option: 0
From Lot/Serial Option: 0		To Lot/Serial Option: 0
From Reference Option: 0		To Reference Option: 0
Allow Quantity Increase: <input type="checkbox"/>		Alternative UM Option: 0
Allow Quantity Decrease: <input checked="" type="checkbox"/>		Expire Date (Days): 0
Quantity Change Option: 0		

Back Next

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

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### Internal Routing Assignment Maintenance

Int Routing Assignment Maint

Go To Actions Copy Print Preview

Transaction Type: pick-re  
Site: us-d3  
Warehouse: us-d-3-p  
Item Number:  
Warehouse Item Type:  
Address:  
Custom:

Internal Routing: ReplenIR  
Custom Program:

Delete Back Next

Modifying existing record

QAD Proprietary

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

QAD  
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### Algorithm Assignment Maintenance

Algorithm Assignment Mainten... x

Go To Actions Copy Print Preview

Algorithm Type: pk Transaction Type: pick-re  
 Site: us-d3 Warehouse: us-d-3-p  
 Item Number: Warehouse Item Type:  
 Address: Custom:

Assigned Algorithms

Seq	Algo	Description
10	1	Pick by Location

Sequence: 10 Algorithm: 1  
 Description: Pick by Location

Back Next

QAD Proprietary

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

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### Replenishment List Maintenance

Replenishment List Maintenance x

Go To Actions Copy Print Preview

Site: us-d3  
Description: Replenishment List Bulk

Replenishment List: ReplList  
Comments:

Replenishment List Details

Seq	Warehouse	Description	SLG	Description
10	US-D-3P		RawMat	Raw Material Area

Seq:  Warehouse: US-D-3P Store Loc Group: RawMat

Back Next

QAD Proprietary

Use Replenishment List Maintenance (4.16.1 if using QAD Warehousing and 80.16.1 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

**Multi-Level Item Maintenance**

Item Number: D-RM001  
 UM: EA  
 Site: US-D3

Site Data and Default Warehouse Data

Location: RMList2  
 Warehouse Item Type:   
 Replenishment Type:   
 Popularity:   
 Default Kanban Quantity: 15.0

Single PA Trans:   
 Issue Method:   
 Print ID:  ID Qty: 0  
 OPC Threshold: 0.0  
 Kanban Replen List: ReplList

Delete Back Next

QAD Proprietary

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



### Exercise 1: Replenish Using Kanban Scan

- ✓ Review items to replenish
- ✓ Use the RF Kanban Scan Option to replenish items
- ✓ Review replenished items

QAD Proprietary

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

The screenshot shows the QAD Inventory Detail Inquiry window. At the top, there are two tabs: "Inventory Detail Inquiry" and "Inventory Detail Inquiry - 11/14...". The main header displays the QAD logo, the title "Inventory Detail Inquiry", and the date "11/14/09".

Below the header, the following information is displayed:

- Site: us-d3
- Warehouse: us-d-3-p
- Item Number: D-RM001
- Lot/Serial: (blank)
- Reference: (blank)
- Display Whse Loc: No
- Disp Non-Whse Loc: No
- Output: PAGE

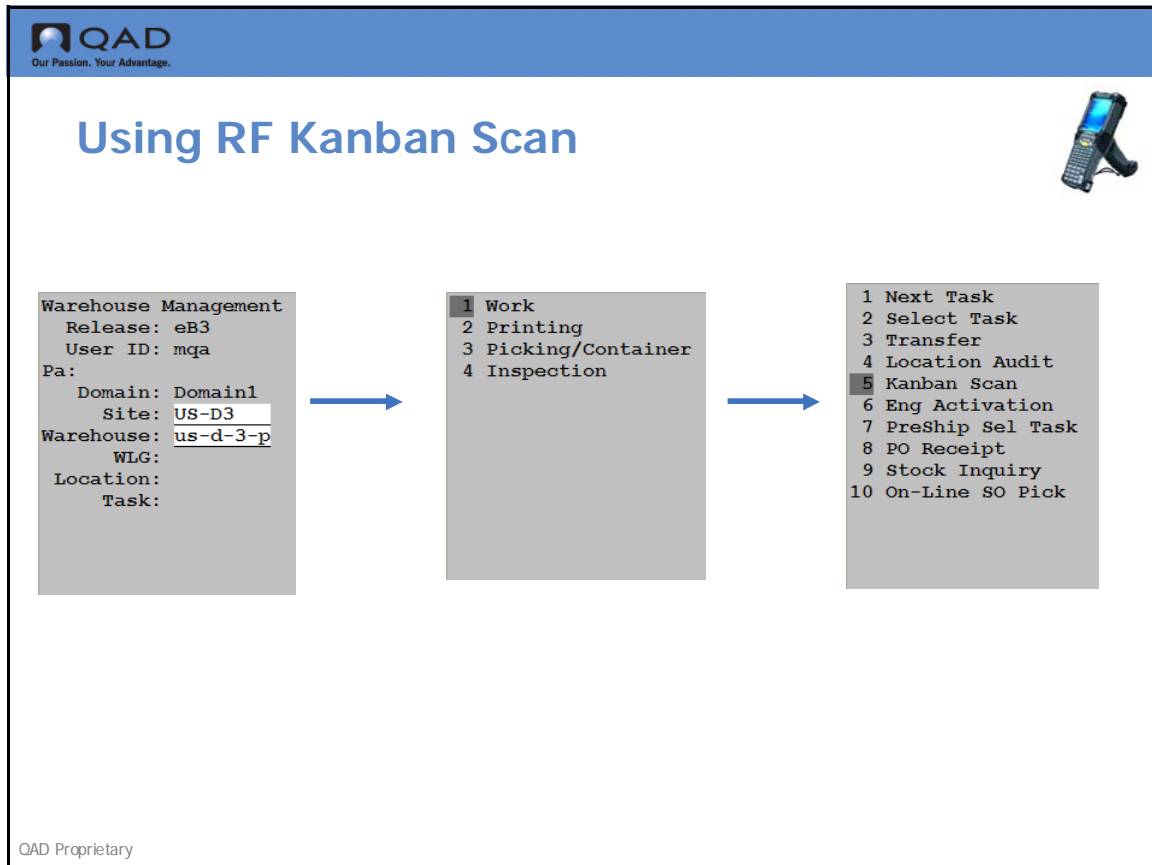
A table of inventory details is shown below:

Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM	On Hand	Alloc	In	Out	Alloc Pick
DRawMat1	EA		44				
DWC001	EA		3				

At the bottom of the window, the version number "4.9.13" and the file name "whiciq01.p" are visible.


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


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## Replenish Items

Item Number:  
 D-RM001  
 Kanban Quantity:  
 Destination:

→

Item Number:  
 D-RM001  
 Kanban Quantity:  
 15 EA  
 Destination:

Item Number:  
 D-RM001  
 Kanban Quantity:  
 15 EA  
 Destination:  
 DWC001

→

Item Number:  
 D-RM001  
 Kanban Quantity:  
 15 EA  
 Destination:  
 DWC001  
  
Repl complete

QAD Proprietary

- 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 157
- 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

The screenshot displays the QAD Inventory Detail Inquiry interface. At the top, the QAD logo and tagline 'Our Passion. Your Advantage.' are visible. The main title is 'Verify Replenished Items'. Below this, there are two browser tabs: 'Inventory Detail Inquiry' and 'Inventory Detail Inquiry - 11/14...'. The main window title is 'Inventory Detail Inquiry' with the date '11/14/09' in the top right corner.

Key parameters shown include:
 

- Site: us-d3
- Warehouse: us-d-3-p
- Item Number: D-RM001 (highlighted in yellow)
- Lot/Serial: (empty)
- Reference: (empty)
- Display Whse Loc: No
- Disp Non-Whse Loc: No
- Output: PAGE

A table displays inventory details for the item:

Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM	On Hand	In	Out	Alloc	Pick
DRawMat1	EA		44			15	
DWC001	EA		3	15			

At the bottom of the window, there is a footer bar with the text '4.9.13 Inventory Detail Inquiry whiciq01.p'. The QAD logo is also present in the bottom left corner of the window.

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




### Replenishment Chapter Overview

- ✓ **Introduction**
- ✓ **Setup**
- ✓ **Exercise**

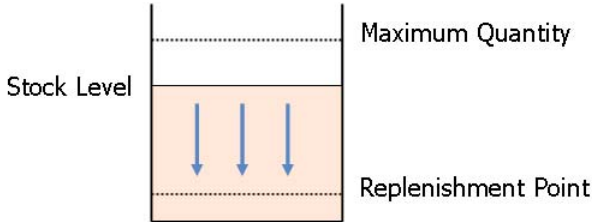
QAD Proprietary

## Introduction



# Replenishment

- ✓ Replenishment process maintain areas or locations with the optimum stock level.



The diagram illustrates a stock container with a vertical scale. A horizontal line at the top is labeled 'Maximum Quantity'. A horizontal line at the bottom is labeled 'Replenishment Point'. The area between these two lines is shaded light orange. A horizontal line within this shaded area is labeled 'Stock Level'. Three blue arrows point downwards from the 'Stock Level' line towards the 'Replenishment Point' line, indicating the direction of stock reduction or the target for replenishment.

QAD Proprietary

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.

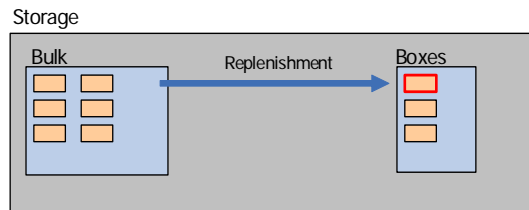
## Replenishment and SLGs

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

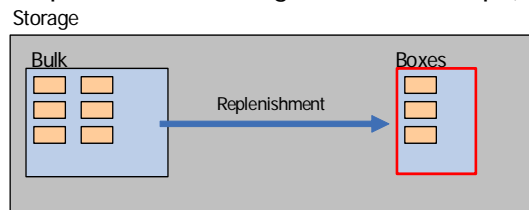
**Fig. 8.1**  
Replenishment and Locations

### ▲ Replenishment Location



PK Algorithm

### ▲ Replenishment Storage Location Group (SLG)



PK and PA  
Algorithm

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.



# 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



### 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



### Replenishment Setup



- ▲ Create a new 'Boxes' SLG for replenishment.
- ▲ Set up one location for an item in the Boxes SLG to be replenished.
- ▲ Ensure a replenish IR exists and a transaction type is assigned to the IR.
- ▲ Ensure an algorithm is assigned to the item/transaction.
- ▲ Create a replenishment list.
- ▲ Link the replenishment list to item/SLG or item/location.

QAD Proprietary

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

The screenshot displays the 'Storage Location Group Maintenance' interface. At the top, the QAD logo and tagline 'Our Passion. Your Advantage.' are visible. The main title is 'Replenishment (Storage Location Group)'. The interface includes a search bar with the following entries:

- Site: US-D3
- Warehouse: US-D-3
- Storage Location Group: Boxes (highlighted with a red box)
- Description: Pick Face(Boxes)

Below the search bar, there are several configuration options:

- Internal Routing Group: Storage
- Allow Issues:
- Allow Receipts:
- Allow Incoming Returns:
- Allow Outgoing Returns:
- Opportunity Counts:
- Opportunity Count Frequency: 0
- Check Digits:
- Cycle Count Status Option: 0
- Exclude from Picking:
- Picking Level: 20
- Over Pick:
- Multi-Trans:
- Detail Overflow Group:
- Capacity Check when OTF:
- Optimized Storage:
- Allow Mixed Status Codes:
- Recount UM:

An inset window titled 'US-D-3 Storage' shows a diagram of storage locations. It is divided into two sections: 'Bulk' and 'Boxes'. The 'Bulk' section contains six slots labeled DBlk001 through DBlk006. The 'Boxes' section contains one slot.

At the bottom left, the text 'QAD Proprietary' is visible.

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

**Replenishment (Warehouse Location Maintenance)**

Warehouse Location Maintenance

Site: US-D3 Warehousing Site  
Location: DBBox000

Warehouse Location Data

Check Digit:   
Popularity:   
Storage Type:   
Warehouse Location Type:   
Travel Sequence:   
Dedicated:

Item Number	UM	Quantity	Height	Length	Width
	EA	100.0000			

Storage Location Group: Boxes  
Work Location Group: Forklift

US-D-3  
Storage

Bulk

DBK001 DBK004  
DBK002 DBK005  
DBK003 DBK006

Boxes

DBBox000

Warehouse Location Maintenance

Site: US-D3 Warehousing Site  
Location: DBBox000

Item Number	UM	Quantity	Height	Length	Width
	EA	100.0000			

WARNING: End of data.

Back Next

QAD Proprietary

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

The screenshot displays the 'Internal Routing Maintenance' window for warehouse US-D-3. The 'Description' is 'Wave Replenishment IR' and the 'Sequence' is '10'. The 'Internal Routing Group' is 'Storage'. The 'Transaction Create' section shows 'Task: TRANSFER', 'Priority: 100', and 'Increment: 10'. The 'Transaction Confirmation' section lists various options like 'From Location Option' and 'Allow Quantity Increase'. A diagram on the right illustrates the 'Storage' layout with 'Bulk' bins (DBk001-006) and 'Boxes' (DBox000), with an arrow labeled 'Replenishment' indicating the flow from Bulk to Boxes.

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

QAD  
Our Passion. Your Advantage.

### Replenishment (Internal Routing Assignment)

- Assign Internal Routing to PICK-RE transaction.

Int Routing Assignment Maint

Go To Actions Copy Print Preview

Transaction Type: PICK-RE  
 Site: US-D-3  
 Warehouse: US-D-3  
 Item Number:  
 Warehouse Item Type:  
 Address:

Custom:

Internal Routing: ReplenR  
 Custom Program:

Back Next

QAD Proprietary

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

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# Replenishment (Algorithm Assignment)

Algorithm Assignment Mainten... x

Go To Actions Copy Print Preview

Algorithm Type: PK  
Site: US-D3  
Item Number: D4T000  
Address:

Transaction Type: PICK-RE  
Warehouse: US-D-3  
Warehouse Item Type: Custom

**Assigned Algorithms**

Seq	Algo	Description
10	4	Pick by Expiration Date
20	1	Pick by Location

Sequence: 10      Algorithm: 4  
Description: Pick by Expiration Date

Back    Next

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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 any of the warehouse item Maintenance functions.

## Replenishment List Maintenance

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# Replenishment (Replenishment List Maintenance)

▲ Storage location groups in which the system looks for the item to replenish.

Replenishment List: RepList  
Description: Rep List D-1T000

**Replenishment List Details**

Seq	Warehouse	Description	SLG	Description
10	US-D-3	Warehouse D-3	Bulk	Reserve Area(Pallets)

Seq: 10 Warehouse: US-D-3 Store Loc Group: Bulk

Back Next

QAD Proprietary

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

Replenishment Location Maint

Go To Actions Copy Print Preview

Site: US00

Location: DB0000

Item Number: D-JT000

Replenishment Type:

Start Date:

Maximum Quantity: 100 EA

Replenishment Point: 20 EA

End Date:

Replenishment UM: FA

Replenishment Point:	20.0
Maximum Quantity:	100.0
Replenishment List:	RepList

Percent Full: 0.00 Capacity: 100

Back Next

QAD Proprietary

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



### Objectives


- ✓ Review initial scenario
- ✓ Run Replenishment request menu option
- ✓ Use the QAD Warehousing RF Device to confirm tasks
- ✓ Review stock inquiries to see stock movements

QAD Proprietary

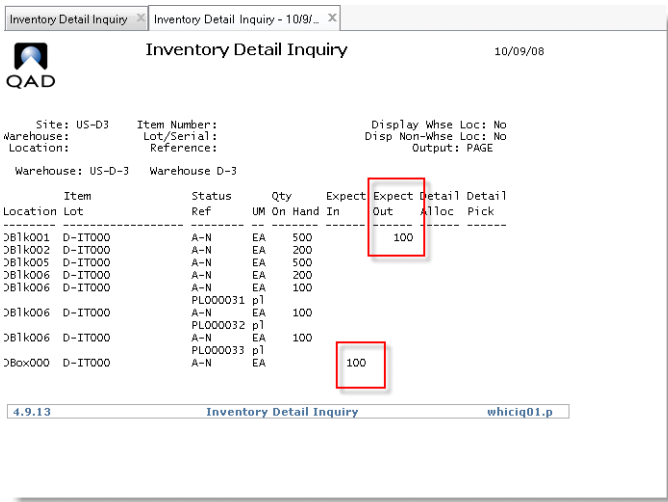
In this section, you will create and process a replenishment request. To do this, you will:

- 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


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# Replenishment (Inventory Detail Inquiry)



Inventory Detail Inquiry - 10/09/08

QAD 10/09/08

Site: US-D3    Item Number:    Display Whse Loc: No  
Warehouse:    Lot/Serial:    Disp Non-Whse Loc: No  
Location:    Reference:    Output: PAGE

Warehouse: US-D-3    Warehouse D-3

Location	Item	Status	Ref	Qty	Expect	Expect	Detail	Detail
	Lot			UM	On Hand	In	Out	Alloc Pick
>B1k001	D-IT000	A-N	EA	500		100		
>B1k002	D-IT000	A-N	EA	200				
>B1k005	D-IT000	A-N	EA	500				
>B1k006	D-IT000	A-N	EA	200				
>B1k006	D-IT000	A-N	EA	100				
>B1k006	D-IT000	PL000031	p1					
>B1k006	D-IT000	A-N	EA	100				
>B1k006	D-IT000	PL000032	p1					
>B1k006	D-IT000	A-N	EA	100				
>B1k006	D-IT000	PL000033	p1					
>Box000	D-IT000	A-N	EA			100		

4.9.13    Inventory Detail Inquiry    whiciq01.p

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

## Step 2: Run a Replenishment Request

**Replenishment (Replenishment Request)**

Run Replenishment request.

Report Criteria:

Site	Warehouse	Location	Lot/Serial	Reference Qty	Picked
US-D3	US-D-3	DB1K001		100.0	

Report Submitted By: mfg

Report Criteria:

Site:	US-D3	To:	US-D3
Warehouse:		To:	
Internal Routing Group:		To:	
Storage Location Group:		To:	
Location:		To:	
Item Number:	D-IT000	To:	D-IT000
Replenishment Type:		To:	
Item/Location Replenishment:	Yes		
Item/Storage Location Group Replenishment:	Yes		
Create Transactions:	Yes		

Include Area below Replenishment Point: 100 %

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

Inventory Detail Inquiry - 10/9/08

QAD


Site: US-D3    Item Number:    Display Whse Loc: No  
Warehouse:    Lot/Serial:    Disp Non-Whse Loc: No  
Location:    Reference:    Output: PAGE

Warehouse: US-D-3    Warehouse D-3

Location	Item Lot	Status Ref	Qty UM	On Hand	Expect In	Expect Out	Detail Alloc	Detail Pick
0B1k001	D-IT000	A-N	EA	500		100		
0B1k002	D-IT000	A-N	EA	200				
0B1k005	D-IT000	A-N	EA	500				
0B1k006	D-IT000	A-N	EA	200				
0B1k006	D-IT000	A-N	EA	100				
0B1k006	D-IT000	PL000031	p1					
0B1k006	D-IT000	A-N	EA	100				
0B1k006	D-IT000	PL000032	p1					
0B1k006	D-IT000	A-N	EA	100				
0B1k006	D-IT000	PL000033	p1					
0B0x000	D-IT000	A-N	EA		100			

4.9.13    Inventory Detail Inquiry    whiciq01.p

## RF Task Confirmation

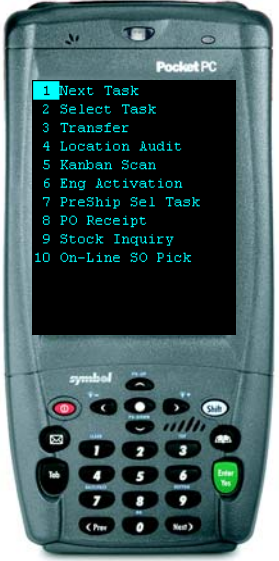

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## Receipt Task Confirmation

▲ Use Next Task Menu



→



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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



### 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

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## Step 1: Enable Auto Replenish

The screenshot shows the 'Warehouse Maintenance' window in QAD. The title bar reads 'Warehouse Maintenance' and the URL is '80.1.1 whwhmt.p'. The window displays the following configuration:

Site: US-D3  
Warehouse: US-D-3

**Cycle Count Defaults**

Cycle Count Task: COUNT	Recount Task: RECOUNT
Count System Code: RF	Recount System Code: RF
Cycle Count Priority: 0	Recount Priority: 0
Count Increment: 0	Recount Increment: 0
Cycle Count on Fail: <input type="checkbox"/>	Cycle Count Status Option: 0
Use Recount UM of SLG: <input type="checkbox"/>	Blind Location Audit: <input type="checkbox"/>

**Miscellaneous**

Mode: Auto

Opportunity Counts:

Optimized Storage:

Transaction Search Window: 0

Check Digits:

Fail Status: Fail

Hold Time (Minutes): 0

Repick Option: 2

Completion Option: 2

Fail Option: 2

**Auto Replenish:**  (highlighted with a red box)

Auto Replenishment %: 0.00%

Buttons: Back, Next

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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**

The screenshot displays the 'Item-Warehouse Maintenance' form in a web browser. The form title is 'Replenishment (Item-Warehouse Maintenance)'. The form contains the following fields and values:

- Item Number: D4T000
- Item: 001
- UM: EA
- Site: US-D3
- Warehouse: US-D-3
- Warehousing Site: Warehouse D-3

The 'Warehouse Data' section includes the following fields:

- Location: [Empty]
- Storage Location Group: Bulk
- SLG List: [Empty]
- Warehouse Item Type: [Empty]
- Replenishment Type: [Empty]
- Popularity: [Empty]
- Logistics UM Tolerance: 0.00%
- Auto Replenish:  (highlighted with a red box)
- Single PA Trans:
- Issue Method: [Empty]
- Print ID: [Empty]
- ID Quantity: 0
- OPC Threshold: 0.0
- Logistics UM: pl
- Pallet Max Height: 0
- Auto Replenishment %: 0.00%
- Print Unplanned Issue Tag:

At the bottom of the form, there are three buttons: 'Delete', 'Back', and 'Next'. The text 'Modifying existing record' is visible at the bottom left of the form area.

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

### Step 3: Check Processing

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## Replenishment (Unplanned Issue)

▲ See message on the bottom.

The screenshot shows the 'Issues - Unplanned' window with the following details:

- Item Number: 041000
- Description: Item 001
- Lot/Serial Control: UM: EA
- Quantity: 90.0
- Unit of Measure: EA
- Conversion: 1.0000
- Site: US-D3
- Location: DBox000
- Lot/Serial:
- Reference:
- Multi Entry:
- Total Qty: 90.0
- Total Cost: 0.00
- Unit Cost: 0.00
- Order: 0
- Line: 0
- Sales/Job:
- Address:
- Remarks:
- Effective Date: 10/9/2008
- Debit Account: 5770
- Cons
- Cost of Production
- Credit Account:

Automatic replenishment being processed

Back Next

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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

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## Replenishment (Inventory Detail Inquiry)

▲ ...check stock movement and confirm the task.

Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM	On Hand	Alloc	In	Out	Alloc
DB1k001	A-N	EA	400			90	
DB1k002	A-N	EA	200				
DB1k005	A-N	EA	500				
DB1k006	A-N	EA	200				
DB1k006	A-N	EA	100				
	PL000031	p1					
DB1k006	A-N	EA	100				
	PL000032	p1					
DB1k006	A-N	EA	100				
	PL000033	p1					
DBox000	A-N	EA	10		90		

4.9.13
whiciq01.p

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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



### Cross-Docking Chapter Overview

- ▲ Introduction to Cross-Docking
- ▲ Set up Cross-Docking
- ▲ Exercise

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## Introduction



### 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....

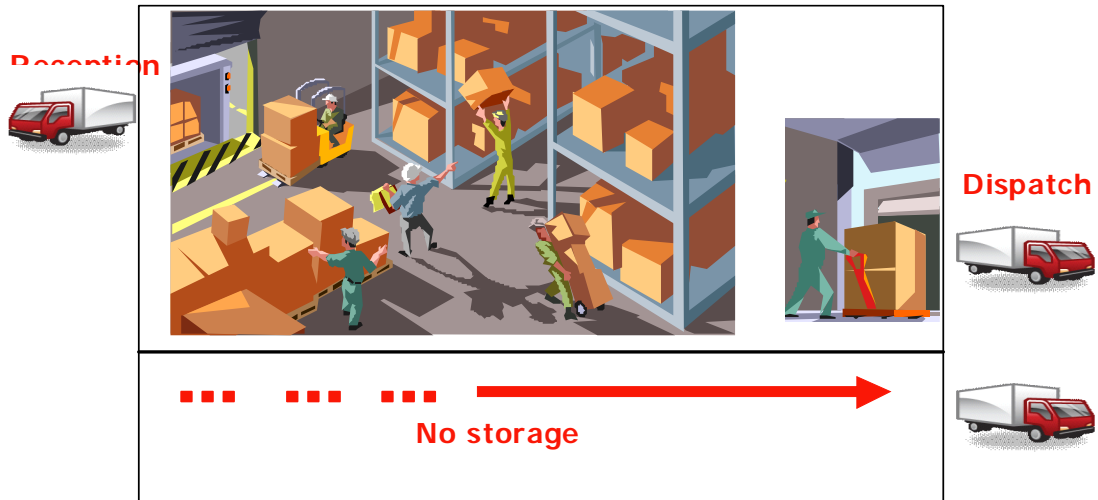


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In situations where insufficient stock prevents the complete filling of an order, the system keeps track of the order shortage quantities, item by item. To help you to fill the back orders with a minimum of inventory movements, you can use shortage 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



### Cross-Docking Setup

- ✓ Set up internal routings
- ✓ Assign transaction types to IRs
- ✓ Assign algorithms to the transaction types
- ✓ Specify transactions

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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.

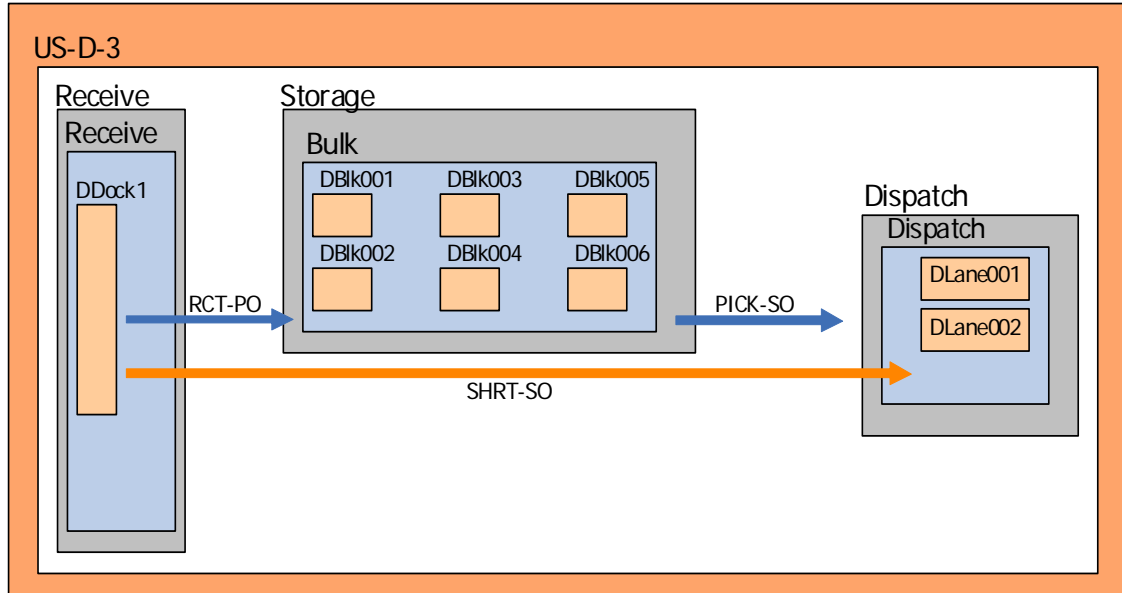
*Shortage Action.* Specify the action to take for a shortage.

*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

US-D3



## Setting Up Internal Routing

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# Setting Up Internal Routings

Internal Routing Maintenance

Go To Actions Copy Print Preview

Site: US-D3 Warehouse: US-D-3 Internal Routing: receipt

Description:  
Sequence: 20 Internal Routing Group: storage

Print Options

Print ID:  Print Mode (ID): Auto  
 Print Created Tasks:  Create Print Mode: Auto  
 Print Confirmed Tasks:  Confirmed Print Mode: Auto  
 Print Exceptions:  Exception Print Mode: Auto

Miscellaneous Options

Mode: Auto Clear Shortages:   
 New Unit of Measure:  Create Shipper:   
 Check Inspection:

Back Next

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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

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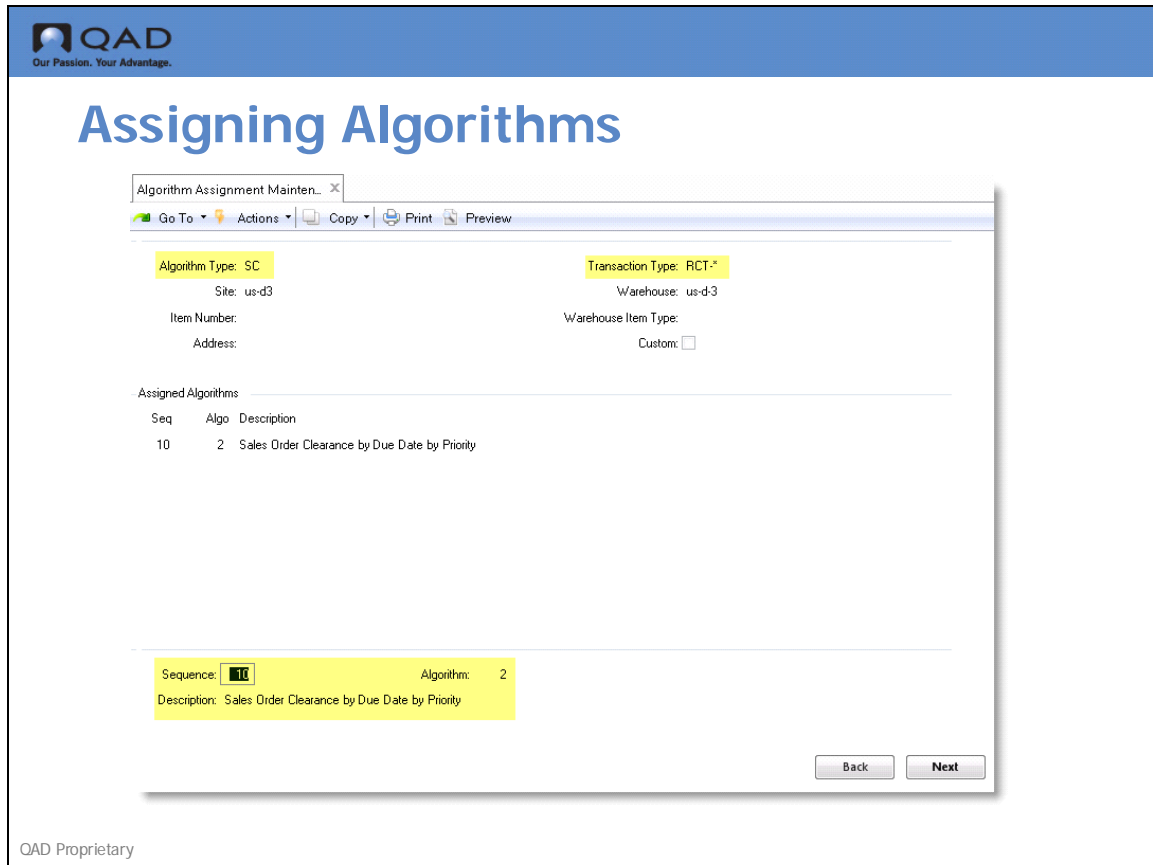
Use Internal Routing Assignment Maintenance to link transaction types to the IRs you create for cross-docking.

### 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

Transaction Type Maintenance

Transaction Type: PICK-SO  
Description: Sales Order Pick

Picking and Shortage Clearance Details

Control Over Pick at SLG:

Over Pick:

Shortage Definition: 3

Shortage Quantity Definition: 2

Shortage Action: 2

Shortage Window: 2

SLG Search Extension:

SLG List Search Extension:

Define what is a shortage condition.

Open order quantity: an order quantity greater than the sum of the allocated quantity, picked quantity, and shipped quantity indicates a shortage.

Delete Back Next

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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



### Exercise Objectives

- ▲ Create an SO with a shortage quantity
- ▲ Create the picklist and confirm picking tasks
- ▲ Receive inventory with Receipt Unplanned options
- ▲ Move stock from receive area to storage area
- ▲ Use the RF to confirm stock from receive area to dispatch area

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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

The screenshot displays the QAD Sales Order Maintenance window. The title bar reads "Sales Order Maintenance" and the QAD logo is in the top left. The main heading is "Creating an SO with a Shortage Qty". The interface shows a sales order header with Order: S011252, Sold-To: 00010000, Ln For: Single, and Orig: . Below the header is a table for Sales Order Lines:

Ln	Item Number	Qty Ordered	UM	List Price	Discount	Net Price
1	D-IT012	50.0	EA	0.00	0.0	0.00

Below the table is the "Line Details" section, which includes various fields and checkboxes:

- Desc: USD
- Loc: Ddock1
- Site: us-d3
- Cost: 0.00
- Sales Acct: 3000 0001 0001
- Disc Acct: 3900 100
- Confirmed:
- Required: 11/4/2009
- Credit Terms Int: 0.00
- Ship Type:
- UM Conversion: 1.0000
- Consumed Fcst:
- Detail Alloc:
- Taxable:
- Freight List:
- Comments:
- Qty Allocated: 0.0
- Qty Picked: 35.0
- Qty Shipped: 0.0
- Perform Date: 11/4/2009
- Due Date: 11/4/2009
- Pricing Date: 11/4/2009
- Multiple:
- Fixed Price:
- Commission 1: 10.00%
- Category:

Buttons for "End Lines" and "Next" are visible at the bottom right. A warning message "WARNING: End of data." is shown at the bottom left.

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

QAD  
Our Passion. Your Advantage.

# Review Inventory

Inventory Detail Inquiry - 11/5/09

QAD

Site: us-d3    **Item Number: d-it012**    Display Whse Loc: No  
 Warehouse: us-d-3    Lot/Serial:    Disp Non-Whse Loc: No  
 Location:    Reference:    Output: PAGE

Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM On Hand	Alloc	In	Out	Alloc	Pick
Dlane001	EA	35					35

4.9.13    Inventory Detail Inquiry    whiciq01.p

QAD Proprietary

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

### Step 3: Receive Items

**QAD**  
Our Passion. Your Advantage.

## Receiving Items

Receipts - Unplanned

Go To Actions Copy Print Preview Attach

Attachments

Item Number: D-IT012 Lot/Serial Control UM: EA

Description:

Quantity: 200.0 Site: us-d3

Unit of Measure: EA Location: Ddock1

Convert Receipt Detail - Quantity: 200 EA

Site	Location	Lot/Serial	Reference	Quantity
us-d3	Ddock1		PL014324	100.0
us-d3	Ddock1		PL014325	100.0

Line:

Sales/Job:

Address:

Remarks:

Effective Date:

Site	Location	Lot/Serial	Reference	Quantity
us-d3	Ddock1		PL014324	100.0

Total lot/serial quantity entered: 200

Back Next

QAD Proprietary

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

**QAD**  
Our Passion. Your Advantage.

## Review Received Items

Inventory Detail Inquiry x Inventory Detail Inquiry - 11/5/... x

**Inventory Detail Inquiry** 11/05/09

Site: us-d3 Item Number: D-IT012 Display Whse Loc: No  
 Warehouse: us-d-3 Lot/Serial: Disp Non-Whse Loc: No  
 Location: Reference: Output: PAGE


Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM	On Hand	Alloc	In	Out	Alloc
Db1k001	EA				85		
	PL014324	p1					
Db1k001	EA				100		
	PL014325	p1					
Ddock1	EA		100			100	15
	PL014324	p1					
Ddock1	EA		100			100	
	PL014325	p1					
Dlane001	EA		35				35
	PL014324	p1			15		

4.9.13 Inventory Detail Inquiry whicq01.p


QAD Proprietary

Use Inventory Detail Inquiry to review received items.

## Step 5: Transfer Items with RF Device


Our Passion. Your Advantage.

# Transfer Items with RF



```

1 Next Task
2 Select Task
3 Transfer
4 Location Audit
5 Kanban Scan
6 Eng Activation
7 PreShip Sel Task
8 PO Receipt
9 Stock Inquiry
10 On-Line SO Pick
          
```

→

```

Transfer 8793
Fr Loc: Ddock1
Loc: 
Chk: 
          
```

→

```

Transfer 8793
Loc: Ddock1
Item Number:
D-IT012

          
```

```

Transfer 8793
Loc: Ddock1
D-IT012

pl Ref: PL014324
Ref: 
          
```

→

```

Transfer 8793
Loc: Ddock1
D-IT012

pl Ref: PL014324
Qty: 15.0
Qty: 
          
```

→

```

Transfer 8793
To Loc: Dlane001
Loc: 
Chk: 

Item Number:
D-IT012
Lot/Serial:


pl Ref: PL014324
          
```

QAD Proprietary

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).

Comments? Go to [goo.gl/MfwKHm](http://goo.gl/MfwKHm)



## Review Transferred Items

The screenshot displays the QAD Inventory Detail Inquiry interface. At the top, there are two window titles: "Inventory Detail Inquiry" and "Inventory Detail Inquiry - 11/5/09". The main header includes the QAD logo and the date "11/05/09". Below the header, there are several fields for site, warehouse, location, item number, lot/serial, and reference. The "Item Number" field is highlighted in yellow and contains the value "D-IT012".

The main data area is a table with the following columns: Location, Status, Qty, Expect In, Expect Out, Detail Alloc, and Detail Pick. The table contains several rows of data, with the last two rows highlighted in yellow:

Location	Status	Qty	Expect In	Expect Out	Detail Alloc	Detail Pick
Db1k001	EA			85		
Db1k001	PL014324 p1			100		
Ddock1	EA	85			85	
Ddock1	PL014324 p1					
Ddock1	EA	100			100	
Ddock1	PL014325 p1					
Dlane001	EA	35				35
Dlane001	PL014324 p1	15				15


At the bottom of the window, there is a footer bar with the version number "4.9.13", the application name "Inventory Detail Inquiry", and the user ID "whiciq01.p".

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


Our Passion. Your Advantage.

# Review Allocated Inventory

Allocated Inventory Inquiry
Allocated Inventory Inquiry - 11...



### Allocated Inventory Inquiry

11/05/09

Item Number	Site	Location	Lot/Serial	Status	Output PAGE
D-IT012	us-d3				
Site Summary					
Avail Status					
Description	Site	Qty On Hand	UM	Qty Allocated	Unallocated
	us-d3	235.0	EA	35.0	200.0
T Order	Line/ID	Location	Lot/Serial	Qty Alloc	Picked
so S011252	1	Dlane001		0.0	35.0
		Dlane001		0.0	15.0
Ref: PL014324					
				0.0	50.0

3.18
Allocated Inventory Inquiry
icptiq02.p

QAD Proprietary

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

## Step 7: Review Pre-Shipper

QAD  
Our Passion. Your Advantage.

# Review Pre-Shipper

Pre-Shipper/Shipper Inquiry 11/07/09

Ship-From ID: us-d3  
Pre-Shipper/Shipper: Pre-Shipper  
Number: 091104PS04

Output: PAGE

Ship-To/Dock: 00010000 00010000

Master Bill ID: Inventory Movement Code: Status:

ID	Item Number	PO Number	Order	Line	To
Site	Location	Lot/Serial	Ref	Stat	Ship
	Customer Ref	Model Year			
091104PS04				0	1.0
.I us-d3	D-IT012 Dlane001		S011252	1	35.0 EA
.I us-d3	D-IT012 Dlane001		S011252 PL014324	1	15.0 EA

7.9.3 Pre-Shipper/Shipper Inquiry rciq03.p

QAD Proprietary

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



### Engine Processing Chapter Overview

- ▲ Introduction to Engine Processing
- ▲ Set up Engine processing
- ▲ Exercise

QAD Proprietary

## Introduction



### 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

QAD Proprietary

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



### Exercise Objectives

- ▲ 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.

QAD Proprietary

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

The screenshot shows the 'Internal Routing Maintenance' window in QAD. The window title is 'Internal Routing Maintenance' and it has a menu bar with 'Go To', 'Actions', 'Copy', 'Print', and 'Preview'. The main content area is titled 'Setting Up IR' and contains the following fields and options:

- Site: us-d3
- Warehouse: us-d-3
- Internal Routing: receipt
- Description:
- Sequence: 20
- Internal Routing Group: storage
- Print Options:
  - Print ID:
  - Print Mode (ID): Auto
  - Print Created Tasks:
  - Create Print Mode: Auto
  - Print Confirmed Tasks:
  - Confirmed Print Mode: Auto
  - Print Exceptions:
  - Exception Print Mode: Auto
- Miscellaneous Options:
  - Mode: Manua (with a search icon)
  - Clear Shortages:
  - New Unit of Measure:
  - Create Shipper:
  - Check Inspection:

At the bottom right of the window are 'Back' and 'Next' buttons. The QAD logo and 'QAD Proprietary' text are visible at the bottom left of the window frame.

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

QAD  
Our Passion. Your Advantage.

# Receive Items

Receipts - Unplanned

Go To Actions Copy Print Preview Attach

Attachments

Item Number: D-IT012 Lot/Serial Control: UM: EA

Description:

Quantity: 200.0 Site: us-d3

Unit of Measure: EA Location: Ddock1

Convert Receipt Detail - Quantity: 200 EA

Site	Location	Lot/Serial	Reference	Quantity
us-d3	Ddock1		PL014290	100.0
us-d3	Ddock1		PL014291	100.0

Line:

Sales/Job:

Address:

Remarks:

Effective Date:

Site	Location	Lot/Serial	Reference	Quantity
us-d3	Ddock1		PL014290	100.0

Total lot/serial quantity entered: 200

Back Next

QAD Proprietary

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

The screenshot shows the QAD 'Review Inventory' application. The main window title is 'Inventory Detail Inquiry' with a date of 11/04/09. The report displays the following information:

- Site: us-d3
- Warehouse: us-d-3
- Location:
- Item Number: D-IT012
- Lot/Serial:
- Reference:
- Display Whse Loc: No
- Disp Non-Whse Loc: No
- Output: PAGE

Location Lot/Serial	Status Ref	Qty UM On Hand	Qty Alloc	Expect In	Expect Out	Detail Alloc	Detail Pick
Ddock1	PL014290	EA p1	100				
Ddock1	PL014291	EA p1	100				

At the bottom of the window, the report number '4.9.13' and the file name 'whiciq01.p' are visible.

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

## Step 4: Set Up Engine Processor

The screenshot displays the QAD Engine Processing interface. The main window, titled "Engine Processing", shows a configuration form for an engine processor. The form includes fields for Engine Type, Create Date (11/4/2009), Site (us-d3), Locations, Item Number (D4IT012), Lot/Serial, Reference, Order, Line/ID, and Trans Type. There are also checkboxes for "Include Fail", "Update Fail", and "Process Records" (checked), and a "Repeat Every" field set to 0 seconds. The "Output: PAGE" button is visible at the bottom right.

An output window titled "Engine Processor - LotSerial/Ref" is open in the foreground, showing the results of the processing. The window displays the same configuration details as the main window, along with a table of processed records. The table has columns for Location, Item Number, Lot/Serial, Ref, Quantity, Tran Nbr, and S E. The data shows two records for location Ddock1 and item D-IT012, with lot/serial numbers PL014290 and PL014291, and quantities of 100.0.

Location	Item Number	Lot/Serial	Ref	Quantity	Tran Nbr	S E
Ddock1	D-IT012		PL014290	100.0	8757	P 0
Ddock1	D-IT012		PL014291	100.0	8758	P 0

QAD Proprietary


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


Our Passion. Your Advantage.

# Review Inventory

Inventory Detail Inquiry
Inventory Detail Inquiry - 11/4/09



**Inventory Detail Inquiry**

Site: us-d3    Warehouse: us-d-3    Location:

**Item Number: D-IT012**

Lot/Serial:    Reference:

11/04/09


Display Whse Loc: No  
Disp Non-Whse Loc: No  
Output: PAGE

Location Lot/Serial	Status Ref	Qty UM On Hand	Qty Alloc	Expect In	Expect Out	Detail Alloc	Detail Pick
Db1k001	PL014290	EA		100			
Db1k001	PL014291	p1		100			
Ddock1	PL014290	EA	100			100	
Ddock1	PL014290	p1					
Ddock1	PL014291	EA	100			100	
Ddock1	PL014291	p1					


4.9.13
Inventory Detail Inquiry
whiciq01.p

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


Comments? Go to [goo.gl/MfwKHm](http://goo.gl/MfwKHm)





## Step 6: Print Labels



# Print Labels







QAD Proprietary

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



### Location Audit Chapter Overview

- ▲ Introduction to Location Audit
- ▲ Set up Location Audit
- ▲ Features Location Audit
- ▲ Exercises

QAD Proprietary

## Introduction



### Introduction

- ✓ Start a cycle count or a recount of a bin location.



QAD Proprietary

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



### Location Audit Setup

- ✓ Set the item class
- ✓ Set the item tolerance

QAD Proprietary

## Setting the Item Class

The screenshot shows the 'Set the Item Class' window in QAD. The 'Item Number' is D4T150 and the 'Unit of Measure' is EA. Under 'Item Data', the 'Prod Line' is 11/16/2009. Under 'Item Inventory Data', the 'ABC Class' is set to 'A'. A callout box points to the 'ABC Class' field with the text: 'The ABC class code classifies items by their importance in a manufacturing system and determines count frequencies.'

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 percentages 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

**Set the Item Tolerance**

Inventory Control x

Go To Actions Copy Print Preview

Inventory Count Parameters

Tolerance From Qty On Hand or Annual Usage: Qoh

Issue Days: 7

Default Site: 10000

Item Tolerances:

Class A:	3.00%	0.00	Class C:	5.00%	0.00
Class B:	4.00%	0.00	All Others:	11.00%	0.00

Back Next

QAD Proprietary

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



### Exercise Objectives

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

QAD Proprietary

### Step 1: Create/Review Stock

The screenshot shows the QAD 'Location Audit' interface. At the top, there is a blue header with the QAD logo and the tagline 'Our Passion. Your Advantage.'. Below the header, the title 'Location Audit' is displayed in a large blue font. The main content area features a window titled 'Inventory Detail Inquiry' with a date of 11/16/09. The window contains the following information:

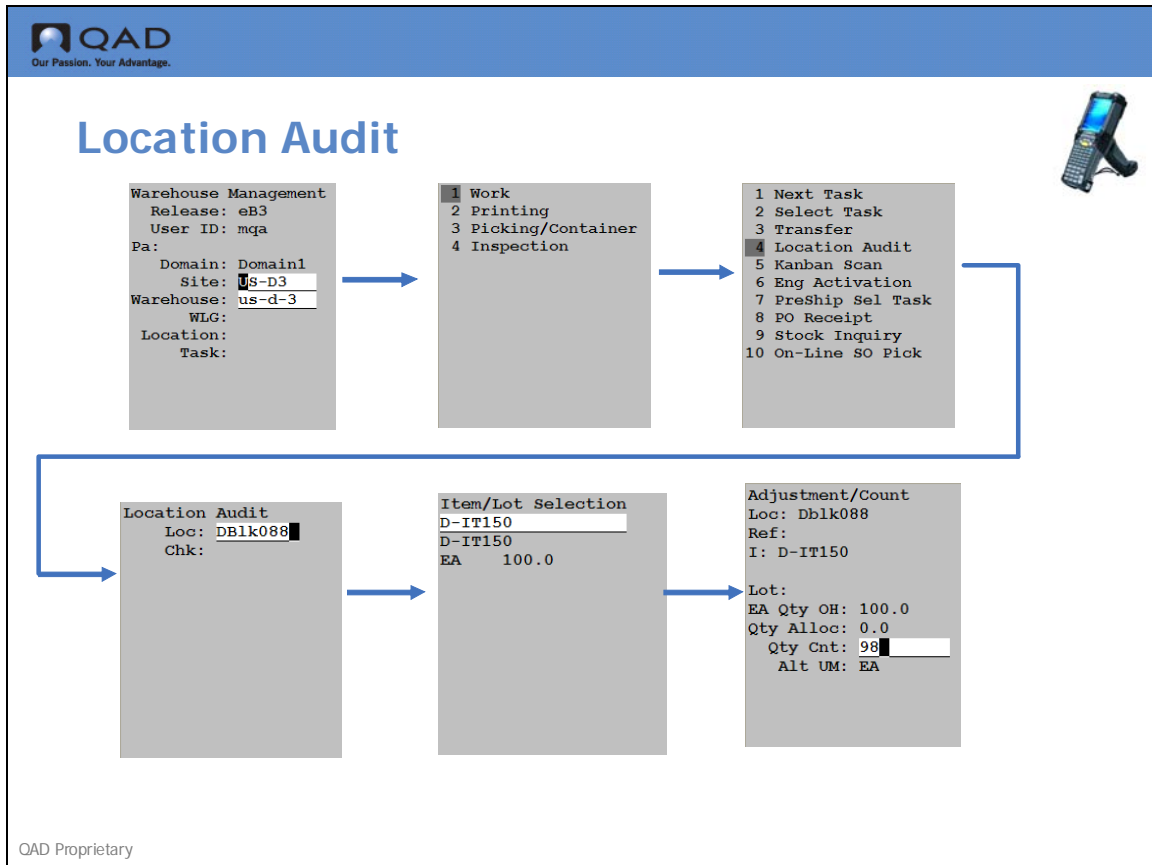
Site: us-d3    Item Number: D-IT150    Display Whse Loc: No  
 Warehouse: us-d-3    Lot/Serial:    Disp Non-Whse Loc: No  
 Location:    Reference:    Output: PAGE

Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM	On Hand	Alloc	In	Out	Alloc Pick
Db1k088		EA	100				

At the bottom of the window, there is a footer bar containing the version number '4.9.13', the title 'Inventory Detail Inquiry', and the file name 'whiciq01.p'. The QAD logo is also present in the bottom left corner of the window.

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

The screenshot shows the QAD Inventory Detail Inquiry window. At the top left is the QAD logo with the tagline "Our Passion. Your Advantage." The main title is "Location Audit". Below this, there are two window tabs: "Inventory Detail Inquiry" and "Inventory Detail Inquiry - 11/16...". The main window displays the QAD logo, the title "Inventory Detail Inquiry", and the date "11/16/09".

Parameters displayed include:
 

- Site: us-d3
- Warehouse: us-d-3
- Location: (blank)
- Item Number: D-IT150
- Lot/Serial: (blank)
- Reference: (blank)
- Display Whse Loc: No
- Disp Non-Whse Loc: No
- Output: PAGE

Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM	On Hand	Alloc	In	Out	Alloc Pick
Db1k088		EA	98				

At the bottom of the window, there is a status bar showing "4.9.13", "Inventory Detail Inquiry", and "whiciq01.p".

QAD Proprietary

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

## Exercise 2: Audit Location, Creating a Recount



### 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

QAD Proprietary

## Step 1: Create/Review Stock in Location

The screenshot shows the QAD Inventory Detail Inquiry interface. At the top, there are two browser tabs: "Inventory Detail Inquiry" and "Inventory Detail Inquiry - 11/16...". The main window title is "Inventory Detail Inquiry" with a date of "11/16/09". The QAD logo is visible in the top left corner.

Search criteria are displayed as follows:

- Site: us-d3
- Warehouse: us-d-3
- Location:
- Item Number: D-IT150
- Lot/Serial:
- Reference:
- Display Whse Loc: No
- Disp Non-Whse Loc: No
- Output: PAGE

The main data table is as follows:

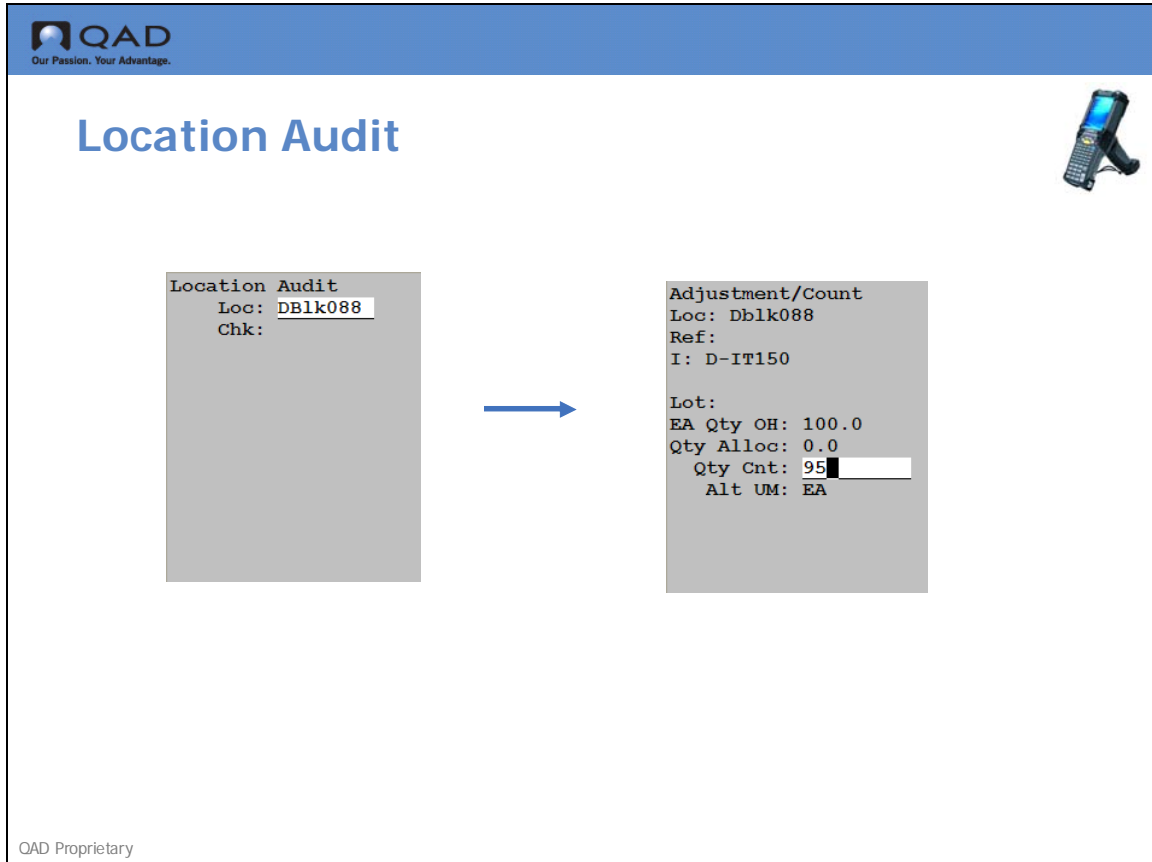
Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM	On Hand	Alloc	In	Out	Alloc Pick
Db1k088		EA	100				

At the bottom of the window, the version number "4.9.13" is shown on the left, the title "Inventory Detail Inquiry" is centered, and the file name "whiciq01.p" is on the right.

QAD Proprietary

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



The screenshot shows the QAD interface for a Location Audit. The title "Location Audit" is displayed in blue. A small image of a handheld RF device is in the top right corner. The main content area is divided into two panels by a blue arrow pointing from left to right.

**Left Panel: Location Audit**

```

Location Audit
Loc: DBlk088
Chk:
  
```

**Right Panel: Adjustment/Count**

```

Adjustment/Count
Loc: Dblk088
Ref:
I: D-IT150

Lot:
EA Qty OH: 100.0
Qty Alloc: 0.0
Qty Cnt: 95
Alt UM: EA
  
```

QAD Proprietary

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

**Confirm Movement**

Movement Confirmation and Inq

Go To Actions Copy Print Preview

Tran: 8894 Status: OPEN 2P:  Fail:

Main Details

TT: CYC-RCNT	Qty Expected: 0.0	Iss Dataset: /
Routing: Actual: 0.0	Iss Nbr/Line: /	
Seq: 0	Algo Type/Nbr: / 0	Receipt Dataset: /
Mode: Task: RECOUNT	Ret Nbr/Line: /	
Created: 11/16/2009 03:17:01	mqa whexaud.p	Priority: 100

From To

Site: US-D3	Site: US-D3
Warehouse: us-d-3	Warehouse: us-d-3
SLG: bulk	SLG: bulk
Work Loc Grp: Forklift	Work Loc Grp: Forklift
Location: DBK088	Location: DBK088
Item Number: D-IT150	Item Number: D-IT150
Lot/Serial	Lot/Serial
Reference: UM: EA	Reference: UM: EA

WARNING: End of data.

Back Next

QAD Proprietary

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

The screenshot shows the QAD Inventory Detail Inquiry window. The title bar includes 'Inventory Detail Inquiry' and 'Inventory Detail Inquiry - 11/16/09'. The window header displays the QAD logo and the date 11/16/09. The main content area shows the following details:

- Site: us-d3
- Warehouse: us-d-3
- Location:
- Item Number: D-IT150
- Lot/Serial:
- Reference:
- Display Whse Loc: No
- Disp Non-Whse Loc: No
- Output: PAGE


Location	Status	Qty	Qty	Expect	Expect	Detail	Detail	
Lot/Serial	Ref	UM	On Hand	Alloc	In	Out	Alloc	Pick
Db1k088		EA	100					


At the bottom of the window, there is a footer bar with the text '4.9.13 Inventory Detail Inquiry whiciq01.p'.

QAD Proprietary

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

## Step 4: Use the RF to Adjust the Stock


Our Passion. Your Advantage.



### Location Audit

```

1 Next Task
2 Select Task
3 Transfer
4 Location Audit
5 Kanban Scan
6 Eng Activation
7 PreShip Sel Task
8 PO Receipt
9 Stock Inquiry
10 On-Line SO Pick
          
```

→

```

Adjust 8894
Loc: Dblk088
Loc: 
Chk: 
          
```

→

```

Adjust 8894
Loc: Dblk088
Item Number:
D-IT150
D-IT150
          
```

```

Adjust 8894
Loc: Dblk088
D-IT150
EA Ref:
Qty: 0.0
          
```

→

```

Adjust 8894
Loc: Dblk088
D-IT150
EA Ref:
Qty: 96
          
```

QAD Proprietary

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

The screenshot shows the QAD Inventory Detail Inquiry interface. The title bar indicates the window is titled 'Inventory Detail Inquiry - 11/16/09'. The main header displays the QAD logo and the date '11/16/09'. Below the header, the following information is displayed:

- Site: us-d3
- Warehouse: us-d-3
- Item Number: D-IT150
- Lot/Serial: Reference:
- Display Whse Loc: No
- Disp Non-Whse Loc: No
- Output: PAGE

A table with the following columns is shown:

Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM	On Hand	Alloc	In	Out	Alloc Pick
Db1k088		EA	96				

At the bottom of the screen, the version number '4.9.13' and the file name 'whiciq01.p' are visible.

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.



# Product Information Resources

QAD offers a number of online resources to help you get more information about using QAD products.

[QAD Forums \(community.qad.com\)](http://community.qad.com)

Ask questions and share information with other members of the user community, including QAD experts.

[QAD Knowledgebase \(knowledgebase.qad.com\)\\*](http://knowledgebase.qad.com)

Search for answers, tips, or solutions related to any QAD product or topic.

[QAD Document Library \(www.qad.com/documentlibrary\)](http://www.qad.com/documentlibrary)

Get browser-based access to user guides, release notes, training guides, and so on; use powerful search features to find the document you want, then read online, or download and print PDF.

[QAD Learning Center \(learning.qad.com\)\\*](http://learning.qad.com)

Visit QAD's one-stop destination for all courses and training materials.

\*Log-in required

