



QAD Enterprise Applications  
Standard Edition

# Training Guide **WIP Lot Trace**

70-2963B  
QAD Enterprise Applications 2007  
Standard Edition  
June 2009

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**QAD Inc.**

100 Innovation Place  
Santa Barbara, California 93108  
Phone (805) 566-6000  
<http://www.qad.com>

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# **About This Course**

## Course Description

QAD designed this course to cover the basics of preparing to implement the WIP Lot Trace (WLT) module of QAD Enterprise Applications. The course includes:

- An introduction to the WLT module
- An overview of key business considerations
- Setting up the WLT module
- Operating the WLT module
- Activities and exercises throughout the course
  - Students practice key concepts and processes in the WLT module

### Course Objectives

By the end of this class, students will:

- Know how to analyze key business decisions before setting up the WLT module
- Know how to set up and operate the WLT module

### Audience

- Implementation consultants
- Members of implementation teams
- Key users

### Prerequisites

- Basic knowledge of how QAD Enterprise Applications is used in the business
- Working knowledge of the manufacturing industry in general

### Course Credit and Scheduling

This course is designed to be taught in one day.

### QAD Web Resources

The QAD website provides product and company overviews.

<http://www.qad.com/>

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

Chapter 1

# **Introduction to WLT**


## Course Overview



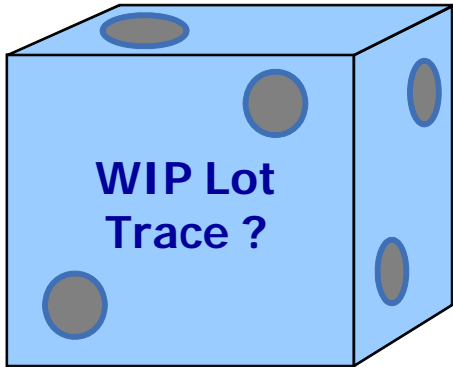
### Course Overview

- ▲ Introduction to WLT
- ▲ Business Considerations
- ▲ Set up WLT
- ▲ Process WLT
- ▲ WLT with Work Orders/SFC
- ▲ WLT with Advanced Repetitive
- ▲ WLT with Repetitive

## What is WIP Lot Trace?



# What is WIP Lot Trace



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WIP Lot Trace (WLT) is functionality in QAD Enterprise Applications that adds work-in-process (WIP) lot and serial tracing and reporting to several modules.

- Tracing records are created at the operation level whenever registered resources are consumed or produced
- Use to trace component, WIP material, and finished goods based on parent items, product structures, and routings

## WIP Lot Features



### WIP Lot Features

- ▶ **Assigns**
  - Assigns lot and serial tracing numbers to WIP
- ▶ **Creates**
  - Creates flexible registration to activate or deactivate WIP lot/serial tracking for all or specific: Bill of Materials (BOMs), Routing Codes, Parent Items, Component Items, Routings, Routing Operations
- ▶ **Renumbers**
  - Renumbers lot/serials from one operation to the next or retains the same numbers throughout all operations
- ▶ **Traces:**
  - WIP lot/serial numbers throughout the manufacturing process and into finished material inventory (including WIP material processed by multiple subcontractors)
  - Component material lots consumed at any operation in a routing to WIP or finished material lots
  - WIP material lots from operation to operation

## WIP Lot Features (continued)

- ▶ **Determines**
  - Determines the constituent WIP or component material lots of finished or WIP material lots
- ▶ **Maintains:**
  - Complete WIP tracing history
  - Up-to-date cumulative scrapped, consumed, and produced quantities for traced WIP lot/ serial numbers at the operations level
  - Quantity-on-hand (QOH) balances at the operation level for traced WIP lot serials
- ▶ **Generates**
  - Reports providing visibility of WIP lot/serial numbers and quantities
  - Can assign WIP lot/serial numbers automatically using Number Range Management (NRM) features
- ▶ **Controls**
  - Lot sizes for all traced material
  - Combining and splitting of lot and component material being traced
  - WIP inventory QOH balances for WIP material lot/serials being traced

## WIP Lot Subcontracting



### WIP Lot Subcontracting

- ▶ **Captures**
  - Captures WIP lot/serial information and maintains QOH balances for WIP material sent to multiple subcontractors
  
- ▶ **Moves**
  - Moves WIP lots to subcontract operations during shipper confirm
  
- ▶ **Backflushes**
  - Backflushes subcontracted WIP lots as part of the purchase order (PO) receipts process
  
- ▶ **Prints:**
  - WIP lot numbers in subcontract shippers
  - WIP lot numbers on subcontract POs

## Why Was WIP Developed?



Many companies need to keep detailed records of the:

- Raw materials they receive from their suppliers
- WIP that consumes those raw materials
- Finished items produced from WIP

Additionally, they must be able to track any WIP material sent for subcontract processing.

Some manufacturing environments require the ability to trace WIP to comply with government and customer safety requirements and regulations.

- ADG customers needed it
- Legal requirements

## WIP Lot Trace - Limitations



### WIP Lot Trace - Limitations

- ▲ WLT cannot be used to trace WIP material at non-milestone operations
  - WIP lot/serials are produced only by milestone operations
- ▲ WLT does not capture tracing information for the following transactions:
  - Inventory backflush
  - Work order receipt backflush
  - Sales order shipments of final assembly work orders
  - Transactions created by the Service/Support Management (SSM) module

## Terminology



### Terminology

- ▶ Lot Combining
- ▶ Lot Number
- ▶ Lot/Serial Number
- ▶ Lot Splitting
- ▶ Lot Traceability
- ▶ Milestone Operation
- ▶ Queue
- ▶ Reference
- ▶ Serial Number
- ▶ WIP

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#### Lot Combining

Creating one lot of processed material from several lots of input material.

#### Lot Number

A unique combination of letters and/or numbers identifying a discrete group of items in an inventory location.

#### Lot/Serial Number

Indicates it can be either a lot number or a serial number.

#### Lot Splitting

Creating several lots of processed material from one input lot.

#### Lot Traceability

Lot consumption and production information sufficient to trace material lots through the manufacturing and distribution process.

#### Milestone Operation

An operation, defined in Routing Maintenance 14.13.1, that is used to report completions.

**Queue**

A factory location containing material processed by an operation.

**Reference**

An additional, optional identifier that can be assigned to lot-controlled material.

**Serial Number**

A unique ID assigned to a discrete, single piece of material.

**WIP**

Work In Process. Indicates a product in various stages of completion throughout the plant. Stages include raw material released for manufacturing, up to completely processed material awaiting final inspection and acceptance as finished product.

## Supported Operations



### Supported Operations

- ▲ Advanced Repetitive
- ▲ Inventory Control
- ▲ Purchasing
- ▲ Shop Floor Control
- ▲ (Standard) Repetitive
- ▲ Work Orders

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Several modules have been modified to use the WLT functionality.

### Advanced Repetitive

- Operation Transaction Detail Inquiry (18.22.4.2)
- WIP Status Report (18.22.4.11)
- Sub Container Maintenance (18.22.5.4)
- Sub Shipper Maintenance (18.22.5.5)
- Sub Shipper Print (18.22.5.9)
- Sub Shipper Issue (18.22.5.11)
- Cumulative Order Close (18.22.10)
- WIP Status Inquiry (18.22.12)
- Backflush Transaction (18.22.13)
- Run Labor Transaction (18.22.14)
- Setup Labor Transaction (18.22.15)
- Reject Transaction (18.22.16)
- Rework Transaction (18.22.17)
- Scrap Transaction (18.22.18)

- Move Transaction (18.22.19)
- WIP Adjust Transaction (18.22.21)

### Inventory Control

- Transfer with Lot/Serial Change (3.4.3)
- Batchload Transfer with Lot/Serial Change (3.4.4)
- Transaction Detail Inquiry (3.21.1)

### Purchasing

- Purchase Order Maintenance (5.7)
- Purchase Order Print (5.10)
- Purchase Order Receipts (5.13.1)
- Purchase Order Returns (5.13.7)
- PO Container Maintenance (5.13.13)
- PO Shipper Maintenance (5.13.14)
- PO Shipper Receipt (5.13.20)

### Shop Floor Control

- Labor Feedback By Work Order (17.1)
- Labor Feedback By Employee (17.2)
- Labor Feedback By Work Center (17.3)
- Operation Move Transaction (17.6)
- Operation Scrap Transaction (17.7)
- Operation Transaction Browse (17.8)
- Operation Transaction Detail Inquiry (17.9)
- Operation by Work Center Report (17.13)
- Operation by Work Order Report (17.14)
- Operation by Employee Report (17.15)

### (Standard) Repetitive

- Repetitive Transaction Detail Inquiry (18.4.2)
- Repetitive Setup Transaction (18.13)
- Repetitive Labor Transaction (18.14)
- Repetitive Rework Transaction (18.16)
- Repetitive Reject Transaction (18.17)
- Repetitive Scrap Transaction (18.18)

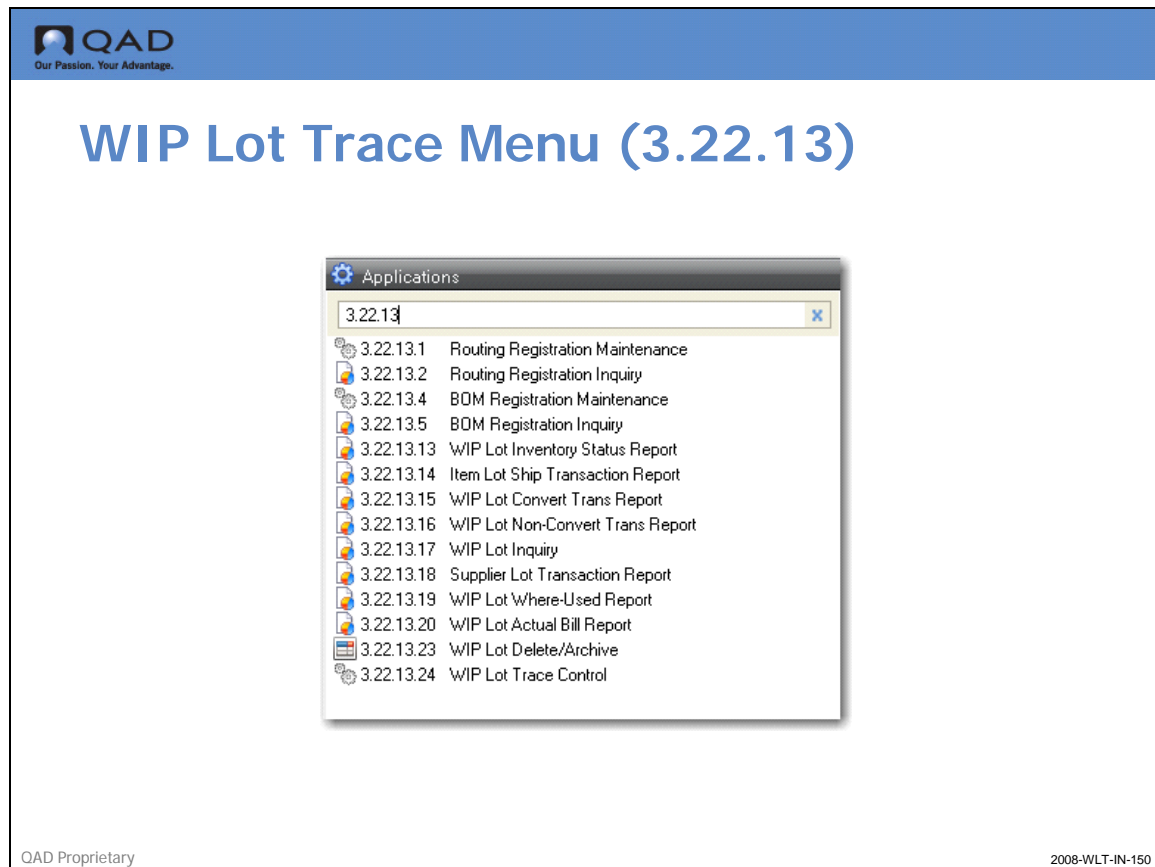
## Work Orders

- Work Order Split (16.9)
- Work Order Component Issue (16.10)
- Work Order Receipt (16.11)
- Work Order Receipt Backflush (16.12)
- Work Order Operation Backflush (16.19)

When using WLT in a work order manufacturing environment, you should be aware of the following:

- Work Order Receipt Backflush (16.12) is disabled because it does not let you report production on an operation per operation basis
- You must specify an operation when processing a receipt, issue, or labor transaction for a WLT controlled work order

## WIP Lot Trace Menu (3.23.13)



Use the WIP Lot Trace Menu to access specific WLT functions. You turn on WLT by setting the Enable WIP Lot Trace field to Yes in WIP Lot Trace Control File (3.22.13.24).

## WLT Functionality



### WLT Functionality

#### ▲ Traceability

- Capture and reporting of as-built data
  - Data Capture: By functions that record material conversion events - Data captured:
    - Material conversion event record
    - Operation History (op\_hist)
    - Material consumption and production records
    - WIP Lot Trace Master (wlt\_mstr) (new table)

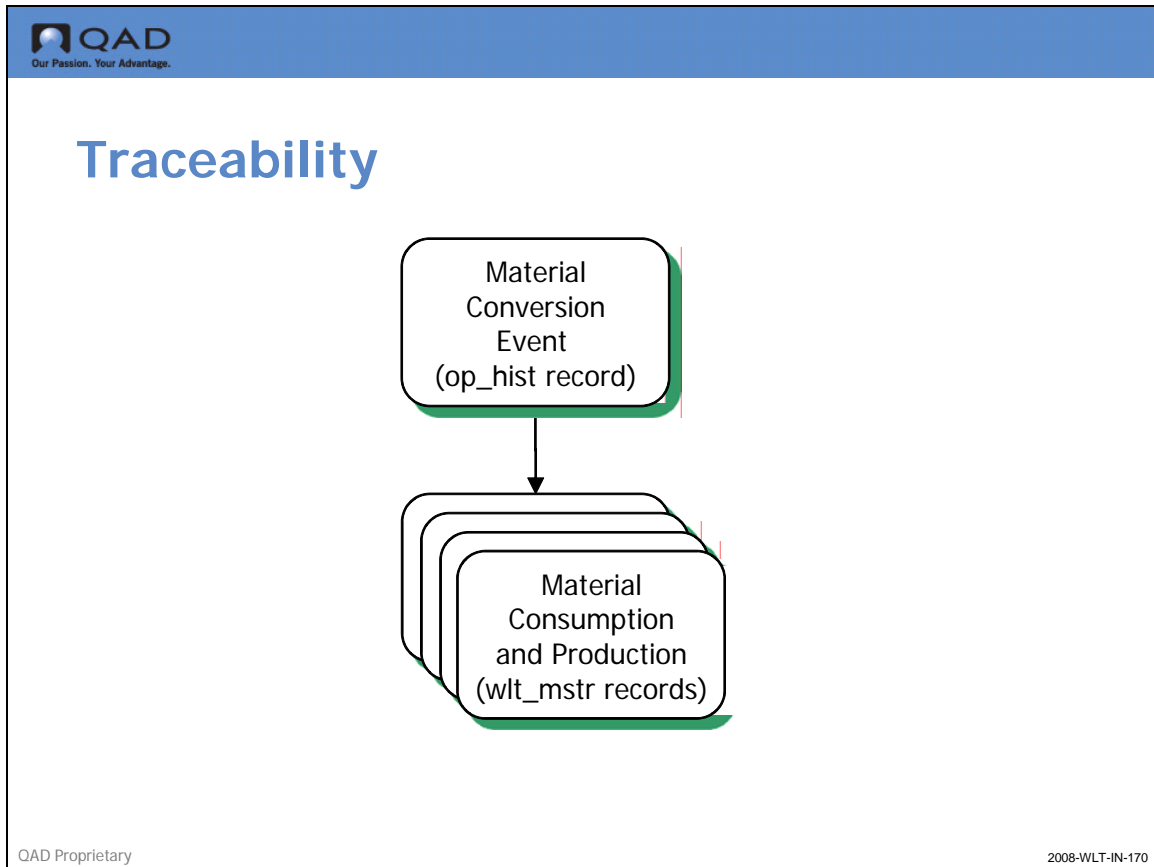
#### ▲ WIP Lot Inventory

- Maintenance and reporting of QOH balances for WIP lot/serials

#### ▲ Subcontract

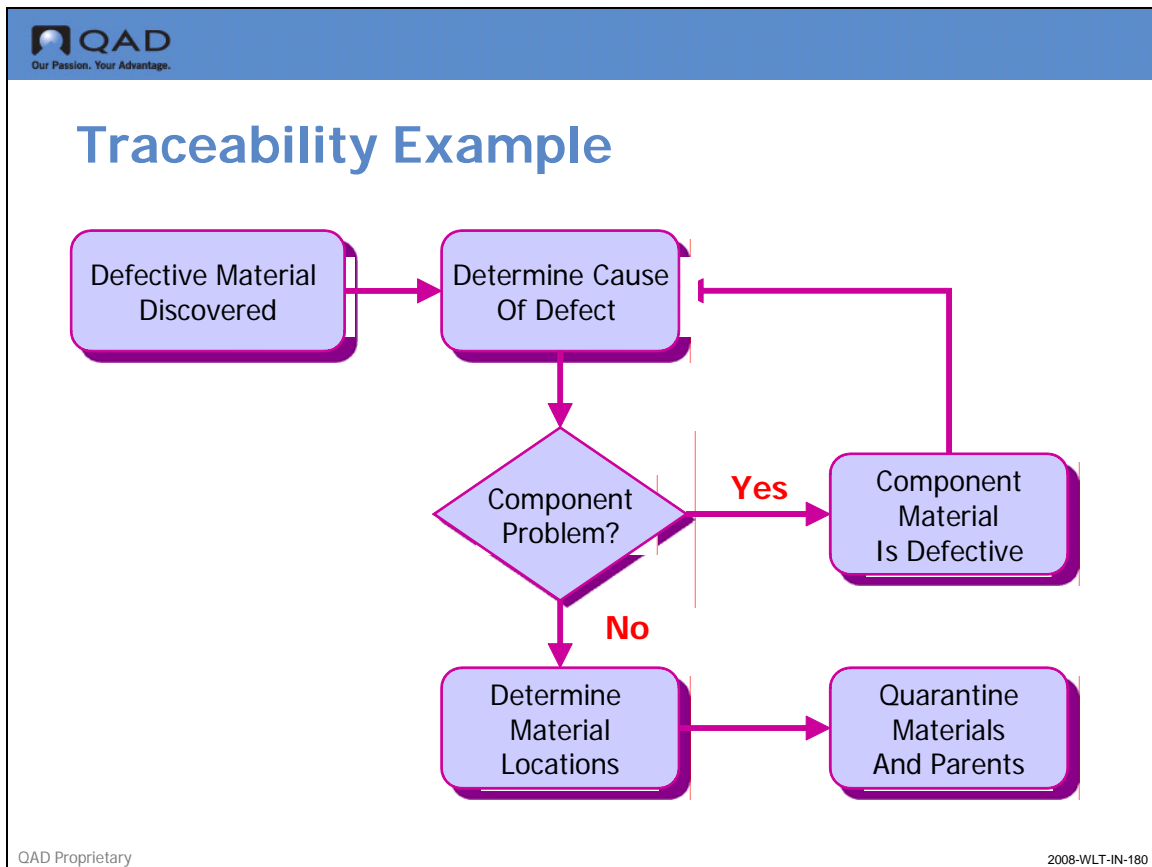
- Handling of WIP lot/serials for subcontract processing

## Traceability



The above graphic shows an example of captured data.

## Traceability Example



## Traceability - Data Reporting



### ► Data Reporting



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- WIP Lot Where-Used Report (3.22.13.19)
- Lot Actual Bill Report (3.22.13.20)
- Transaction detail reports
- Transaction detail inquiries

## WIP Lot Inventory

Our Passion. Your Advantage.

- ✓ **Data Maintenance**
- ✓ **Data Reporting**



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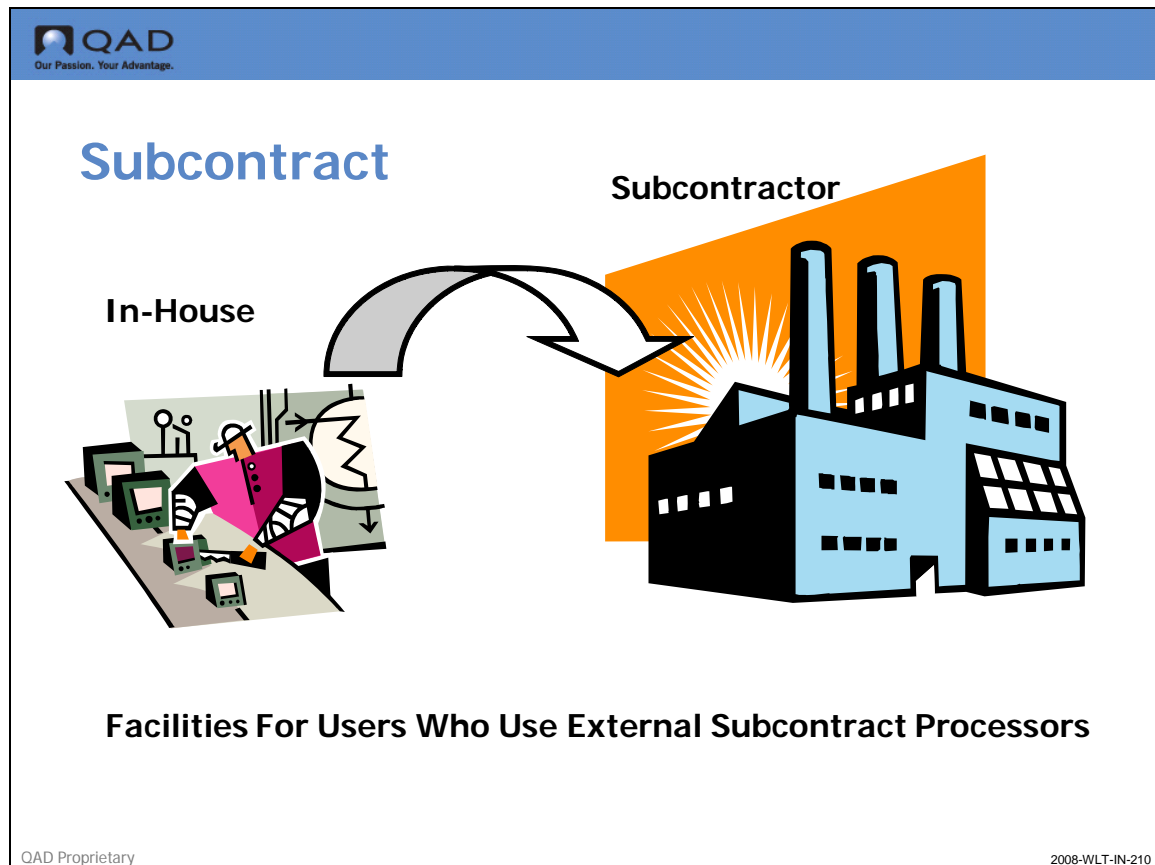
### Data Maintenance

- QOH balances maintained by:
  - WIP lot/serial
  - Operation
  - Queue
  - Work center
  - Machine
- Similar to inventory QOH balances
- Updated by material conversion functions (e.g., Backflush) and other functions (e.g., Scrap, Reject, Rework, Adjust)

### Data Reporting

- WIP Lot Inventory Status Report (3.22.13.13)
- Advanced Repetitive WIP Status Inquiry/Report

## Subcontract



Traceability data captured/WIP lot QOHs maintained.

- Purchase Order Maintenance (5.7)
  - Entry of a WIP lot/serial on each subcontract-type line
- Purchase Order Print (5.10)
  - Print entered WIP lot/serial
- Sub Container Maintenance (18.22.5.4) and Sub Shipper Maintenance (18.22.5.5)
  - Entry of a list of WIP lot/serials to ship
- Sub Shipper Print (18.22.5.9)
  - Print WIP lot/serials entered
- Advanced Repetitive Sub Shipper Confirm
  - Moves WIP lot/serials to next operation
- Purchase Order Receipts (5.13.1)
  - Backflushes the referenced operation
  - Entry of WIP lot/serials consumed and produced

## Review Questions

- 1 Does WIP Lot Trace impact component items? (Y/N)
- 2 Does WIP Lot Trace track items at non-milestone operations? (Y/N)
- 3 How does WIP Lot Trace impact Sales Orders?
- 4 Does WIP Lot Trace give you visibility of items after sale? (Y/N)



Chapter 2

# **Business Considerations**

## Course Overview



### Business Considerations

In this section you learn how to:

- ▲ Identify key business considerations before setting up WLT in QAD Standard Edition
- ▲ Set up WLT in QAD Standard Edition
- ▲ Process WLT in QAD Standard Edition
- ▲ WLT with Work Orders/SFC
- ▲ WLT with Advanced Repetitive
- ▲ WLT with Repetitive

## Considerations



### Business Considerations

- ▶ Tracing Requirements
- ▶ Subcontracted Tracing Requirements

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There are several business considerations to look at before setting up WIP Lot Trace. This section does not discuss all potential considerations, but presents several to generate thought and discussion.

## Tracing Requirements



### Tracing Requirements

- ▲ Create WIP Lot and serial tracing records at operation level
- ▲ Think about:
  - which material to trace
  - milestone operations
  - lot-sizing restrictions
  - inventory issuing restrictions
  - inventory reference tracing
  - lot splitting or combining
  - lot/serial format requirements

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### Definition


WLT allows you to create WIP lot and serial tracing records at the operation level whenever registered resources are consumed or produced. However, exactly what tracing records are created is determined by how you define your tracing requirements. In other words, you need to determine exactly how much tracing your manufacturing environment requires. Once you determine that, you can set up or define your individual tracing requirements.

### What to Consider?

- Decide which material to trace (i.e., which routings and BOMs consume components), and create the WIP material you need to trace
- Know the milestone operations
- If there are any lot-sizing restrictions in your manufacturing environment, list these restrictions, organized by routing, operation, and work center
- If there are any inventory lot quantities issuing restrictions, create records in Routing Registration Maintenance (3.22.13.1) that prevent or allow WIP lot overissuing based on the routing or routing operation
- If inventory reference tracing is required, set up naming and usage standards for references

- Determine if lot splitting or combining is an issue, and if so, clearly defined the requirements then use the information to create records in Routing Registration Maintenance (3.22.13.1) and BOM Registration Maintenance (3.22.13.4)
- If you have specific lot/serial number format requirements, create NRM sequence IDs using Number Range Maintenance (36.2.21.1)

## Functionality and Setup



## Functionality and Setup

<p>– Trace specific items</p> <p>Trace components</p> <p>Trace WIP material</p> <p>Trace finished goods</p>		<p>– Enable WIP Lot trace</p> <p>set in WLT Control File</p>
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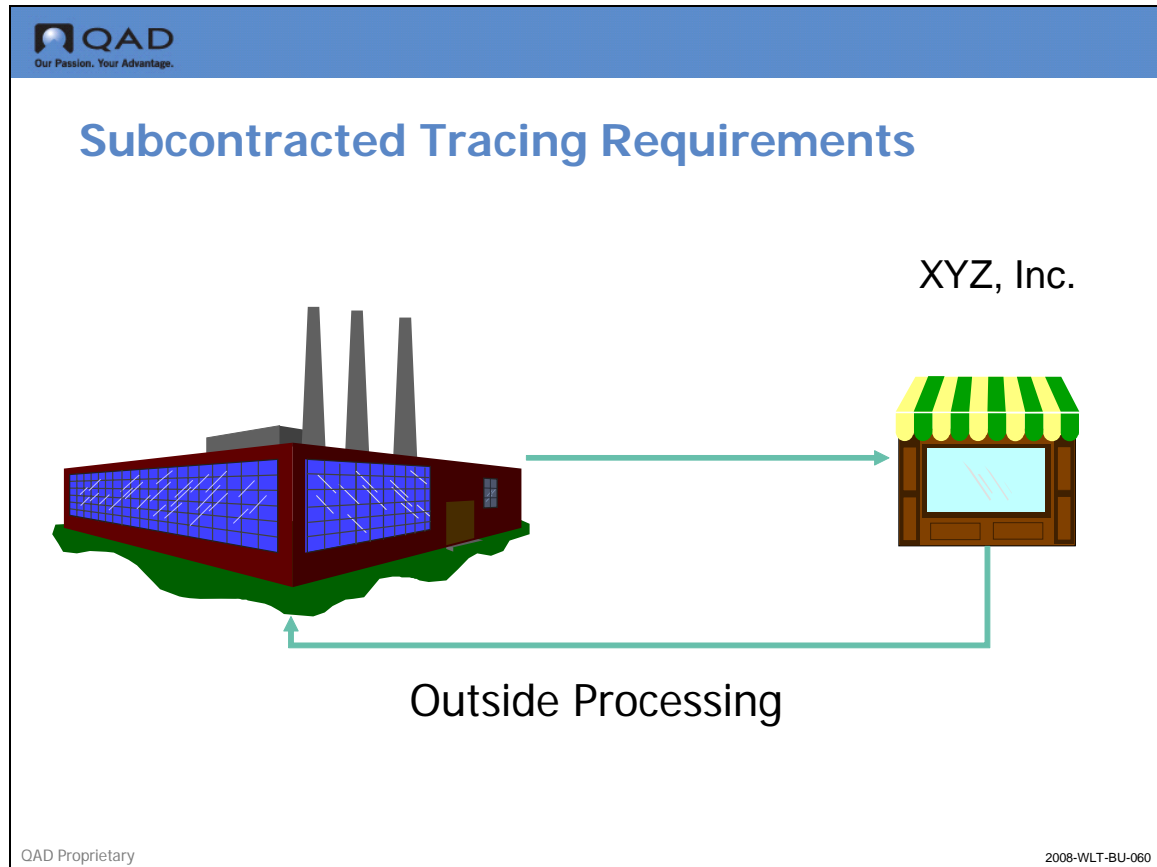
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- Trace specific items throughout the manufacturing process
- Trace component and WIP material consumed in the manufacturing of parent items
- Trace component, WIP material, and finished goods based on parent items, product structures, and routings

### Setup Implications

- WLT functionality needs to be turned on by setting the Enable WIP Lot Trace field to Yes in WIP Lot Trace Control File. (3.22.13.24)

## Subcontracted Tracing Requirements



## Tracing Subcontract Materials



### Tracing Subcontract Materials

- Use WLT to create tracing records of all subcontracted WIP material.
- Create and plan to maintain detailed records of subcontractors qualified to perform each operation
- QAD Enterprise Applications can trace WIP lot/serial numbers of material processed by multiple subcontractors
- Set in WLT Control file

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- WLT functionality needs to be turned on by setting the Enable WIP Lot Trace field to Yes in WIP Lot Trace Control File. (3.22.13.24)
- Use Work Center Maintenance (14.5) to create a work center for each subcontractor
- Use Routing Maintenance (14.13.1) to create or modify existing routing codes that have subcontracted operations

## Business Requirements



### Business Requirements

- ▶ Safety Issues
- ▶ Recalls
- ▶ “Crisis Containment”
- ▶ Sources of Quality Problems
- ▶ Effects of Quality Problems
- ▶ Applicable Industries
  - Automotive
  - Medical
  - Food & Beverage
  - High Tech

## Review



### Review

- ▲ Processes and Procedures
- ▲ Reporting Requirements
- ▲ Customer Expectations
- ▲ Product Configuration

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### Review Questions

- 1 What kinds of items should be traced? Not traced?
- 2 How do you identify WIP Lot Trace items on the plant floor?



Chapter 3

# Set Up WLT

## Course Overview




### Set up WLT


In this section you learn how to:

- ▲ Identify key business considerations before setting up WLT in QAD Standard Edition
- ▲ Set up WLT in QAD Standard Edition
- ▲ Process WLT in QAD Standard Edition
- ▲ WLT with Work Orders/SFC
- ▲ WLT with Advanced Repetitive
- ▲ WLT with Repetitive

## WLT Setup



### WLT Setup

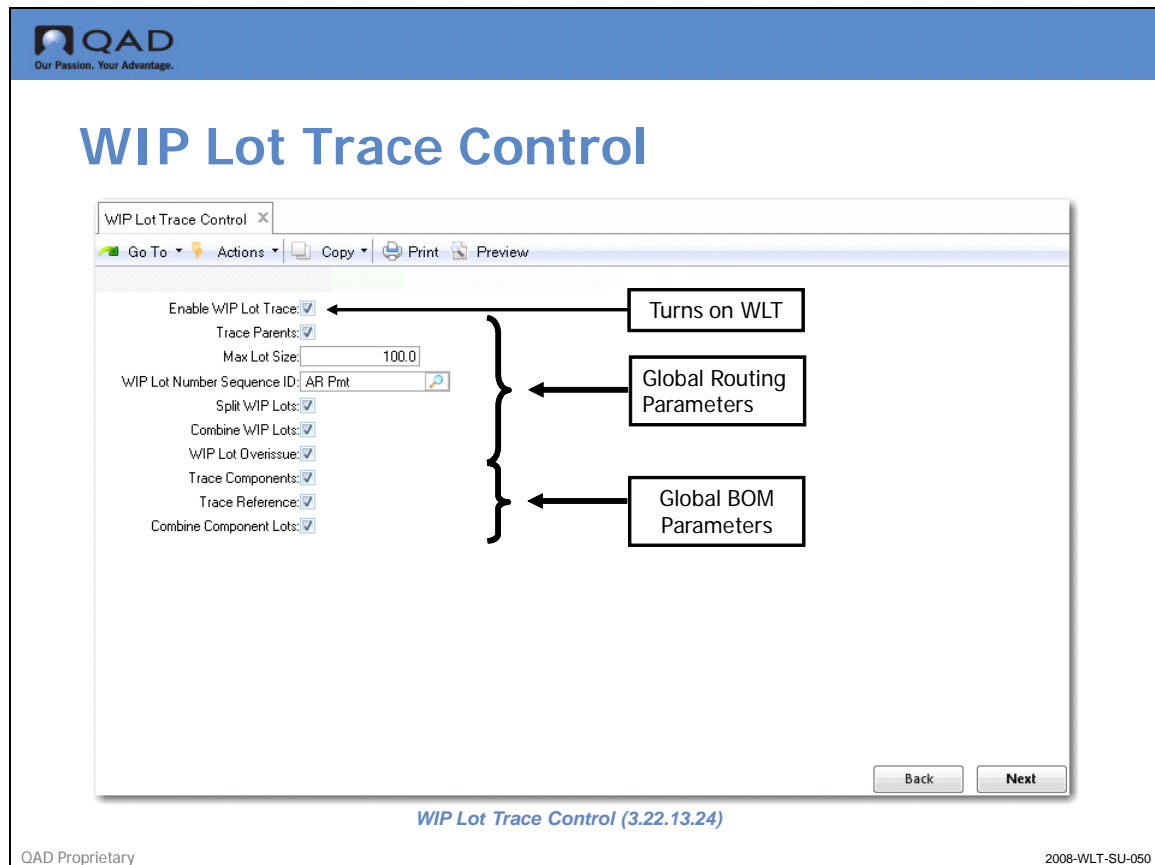


- ▲ Define Control File Parameters
- ▲ Routing Registration Records
- ▲ BOM Registration Records

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This illustration is a suggested setup sequence of master files for the WLT module which is based on information that flows from one master file to another and prerequisites that need to be accomplished before setting up a file.


## WIP Lot Trace Control (3.22.13.24)



Use WIP Lot Trace Control File to enable the WLT module and to set the parameters which will apply to all routings and BOMs using WLT in your manufacturing environment.

- When WLT is activated, new fields and WLT data collection frames display in programs such as backflush transactions, rework transactions, and reject transactions
  - Use the new fields and WLT data collection frames to enter tracing information
  - Appears in existing (Standard) Repetitive, Advanced Repetitive, Work Orders, Shop Floor Control, and Purchasing programs

## Additional Setup



## Additional Setup

- ▲ Advanced Repetitive
- ▲ Items
- ▲ Routings
- ▲ Product Structures
- ▲ Product Line

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### Exercise:

**Important** The data used in these exercises may not be the same as the data shown in the screen captures in this lesson. In an exercise, if a field is not listed, you can accept the default value or leave it blank. WIP Lot Trace Control File

### Default Site:

Use Inventory Control (3.24) to set or verify the default site code to the site Train.

### GL Calendar Period:

Use GL Calendar Maintenance (25.3.4) to add or verify a GL Calendar period that covers the time period of the training event. Enter the current year, if a calendar is not found enter period 1, and give it a date range that covers the entire year.

### Inventory Locations:

Use Location Maintenance (1.1.18).

For site Train add or verify location 100, give it a description of Raw Material and a status code of Y-Y-N, use the lookup icon to see available status codes.

For site Train add or verify location 200, give it a description of Finished Goods and a status code of Y-Y-N.

### Reason Code Maintenance (36.2.17)

Create a Reason Code Type = ESIG with a Reason Code = ESIG. This will be used as the electronic signature for labor reporting.

### Wip Lot Trace Control file

Before you can use the WIP Lot Trace module you must enable it by turning on global control variables.

- 1 Make sure the control settings are set as follows:  
Use WIP Lot Trace Control File (3.22.13.24)

Field	Data
Enable WIP Lot Trace	Yes
Trace Parents	Yes
Split WIP Lots	Yes
Combine WIP Lots	Yes
WIP Lot Overissue	Yes
Trace Components	Yes
Trace Reference	Yes
Combine Component Lots	Yes

### Enable Advanced Repetitive

**Important** The following activity requires Advanced Repetitive be enabled.

- 1 Check the setting of the Enable New Repetitive field. If it is set to Yes, set to No.  
Use Repetitive Control (18.22.24)  
If you get the message “You must run rewocl.p before using this module. Please re-enter.” do the following:
  - a Run Cumulative Order Accounting Close (18.9), accepting the defaults.
  - b Run Cumulative Order Maintenance (18.6). Using your Arrow keys, locate all cumulative orders and delete them.
  - c Change the Enable New Repetitive field to Yes.  
Use Repetitive Control (18.22.24)

## Set Up Items

This item data will be used in all of the following activities.

- 1 Create a parent item and four component items, using the following settings for each item. Use Item Number 500 for the parent item and 100, 200, 300, and 400 for the components.  
Use Item Master Maintenance (1.4.1)

Field	Data
Item Number	<your entry>
Description	<e.g., Parent Item, Component1 etc.>
Prod Line	<Press the lookup key to display a list of product lines.>
Lot/Serial Control	L
Site	Train
Location	200 (for parent)
Purchase/Manufacture	M

- 2 Repeat step 1 for each of the four component items, but use 100 for location and P for Purchase/Manufacture data.

## Set Up Work Centers and Machines

Use Work Center Maintenance (14.5).

For Work Center 1010 add machines 10, 20, 30 and 40.

## Set Up Routings

- 1 Create a routing for the parent item using the following settings:  
Use Routing Maintenance (14.13.1)

Field	Data
Routing Code	<your parent item>
Operation	10
Work Center	1010
Machine	10
Description	Operation 10
Milestone Operation	Yes
Move Next Op	Yes

Using the same routing code, add a second operation with the following settings:

Field	Data
Operation	20
Work Center	1010
Machine	20

Field	Data
Description	Operation 20
Milestone Operation	Yes
Move Next Op	Yes

Add the third operation using the following settings:

Field	Data
Operation	30
Work Center	1010
Machine	30
Description	Operation 30
Milestone Operation	Yes
Move Next Op	Yes

Add the fourth and last operation using the following settings:

Field	Data
Operation	40
Work Center	1010
Machine	40
Description	Operation 40
Milestone Operation	Yes
Move Next Op	Yes

## Set Up Product Structure

- 1 Create a product structure for the parent item using the following settings:

**Note** In QAD SE several programs including Product Structure Maintenance give you a choice of user interface. In some cases, as here, this presents very different screen handling characteristics. Right mouse click on the menu item (13.5) select Properties, select Program, note the Open with: field, select Desktop for the usual field driven format described in the activity. Select .NET User Interface for a drag and drop format. While you may wish to experiment with the Net UI the Desktop interface is recommended for the activities in this course.

Use Product Structure Maintenance (13.5)

Field	Data
Parent Item	<your parent item number>
Component Item	component item 1
Qty per	1
Op	10

Add the second component item using the following settings:

Field	Data
Component Item	component item 2
Qty per	1
Op	20

Add the third component item using the following settings:

Field	Data
Component Item	component item 3
Qty per	1
Op	30

Add the fourth and last component item using the following settings:

Field	Data
Component Item	component item 4
Qty per	1
Op	40

## Set Up Production Line

- 1 Create an entry using the following settings:  
Use Production Line Maintenance (18.22.1.1)

Field	Data
Production Line	1000
Site	Train
Item Number	500
Start Date	01/01/09
Units/Hour	1.00

## Create Inventory

Use Receipts Unplanned (3.9)

Receive into location 100, 500 of each of your four components, assign them lot numbers equal to the item codes, for example item 100, lot L100, item 200, lot L200, etc. This will keep things simple for the activity.

## Create A Work Order

- 1 Create a work order using the following settings:  
Use Work Order Maintenance (16.1)

<b>Field</b>	<b>Data</b>
Work Order	<leave blank>
ID	<leave blank>
Item Number	<your parent item number>
Type	<leave blank>
Site	Train
Qty Ordered	100

Record the work order number: \_\_\_\_\_

- 2 Using the work order number you just created, print the release, or set output to page.  
Use Work Order Release/Print (16.6)

## Routing Registration Records



### WLT Setup



- ▲ Define Control File Parameters
- ▲ Routing Registration Records
- ▲ BOM Registration Records

## Routing Registration Maintenance (3.22.13.1)

Routing Code:

Start Date:

Trace Parents:

Max Lot Size:

WIP Lot Number Sequence ID:

Split WIP Lots:

Combine WIP Lots:

WIP Lot Dverissue:

Lot Trace Start Op:

Serialized WIP Start Op:

End Date:

Apply to all operations for the specified routing

Back Next

Routing Registration Maintenance (3.22.13.1)

QAD Proprietary 2008-WLT-SU-090

Use Routing Registration Maintenance to define control parameter exceptions for an individual routing code. You do this by creating new settings for parent item routings. Additionally, you can define settings for individual routing operations.

- Settings defined here override WIP Lot Trace Control File settings

Routing Registration Maintenance consists of two frames. In the first frame you enter control information for the routing code. These settings will be used for all operations of the specified routing. However, you can use the second frame to enter control information specific to an operation within the routing. This information overrides the global routing information entered in the first frame.

## Routing Registration Maintenance - 2nd Frame

Routing Code: 02-0005  
Start Date: 4/22/2009

Trace Parents:   
Max Lot Size: 100.0  
WIP Lot Number Sequence ID: AR Pmt  
Split WIP Lots:   
Combine WIP Lots:   
WIP Lot Overissue:   
Lot Trace Start Op: 0  
Serialized WIP Start Op: 99999  
End Date:

Operation: 10  
Split WIP Lots:   
Combine WIP Lots:   
WIP Lot Overissue:

Defaults from the first frame, but can be changed for individual operations


Back Next

Routing Registration Maintenance (3.22.13.1)


QAD Proprietary 2008-WLT-SU-100

You can use the fields in the second frame to further define whether to allow lot splitting, combining, and overissuing for a specific operation in the routing.

## BOM Registration Records



### WLT Setup



- ▲ Define Control File Parameters
- ▲ Routing Registration Records
- ▲ BOM Registration Records

QAD Proprietary 2008-WLT-SU-110

## BOM Registration Maintenance (3.22.13.4)

**BOM Registration Maintenance**

BOM Code: 02-0001  
Start Date: 4/22/2009

Trace Components:   
Trace Reference:   
Combine Component Lots:   
End Date:

Apply to all component items for the specified BOM

Delete Back Next

*BOM Registration Maintenance (3.22.13.4)*

QAD Proprietary 2008-WLT-SU-120

Use BOM Registration Maintenance to define control parameter exceptions for an individual BOM. You can also define settings for individual BOM component items.

- Settings defined here override WIP Lot Trace Control File settings

BOM Registration Maintenance consists of two frames. In the first frame you enter control information for the BOM. These settings will be used for all component items for the specific BOM code. However, you can use the second frame to enter control information for a component of the BOM.

## BOM Registration Maintenance - 2nd Frame

**BOM Registration Maintenance**

BOM Code: 02-0001  
Start Date: 4/22/2009

Trace Components:   
Trace Reference:   
Combine Component Lots:   
End Date:

Component Item: 02-0005

Trace Components:   
Trace Reference:   
Combine Component Lots:

Defaults from the first frame but can be changed for individual component items

Back Next

*BOM Registration Maintenance (3.22.13.4)*

QAD Proprietary 2008-WLT-SU-130

In the second frame you can override the BOM registration controls for a specific component item.

- Changes you make here override the controls set in the first frame for this component in this BOM code only

You also have the option of further defining whether to:

- Trace components or references
- Allow combining of component lots for specific component in the BOM

## Summary - Routings and Routing Operations



### Summary

#### Routings and Routing Operations

- ▲ Routing and routing operations become WLT controlled when:
  - Trace Parents is set to Yes in WIP Lot Trace Control (3.22.13.24) and a routing registration does not exist for the routing being used
    - Set up in Routing Registration Maintenance (3.22.13.1)
    - All operations for that routing become WLT controlled
- ▲ A WLT routing registration is active for the routing
  - WLT control begins at the start operation (Operation field) specified in the registration record

For our activity we will not setup any exceptions to the WIP Lot Trace rules set in the control file.

## Summary - Components



### Summary

#### ▲ Components

- A component item becomes WLT controlled when it is consumed at a WLT controlled operation and either of the following is true:
  - Trace Components is set to Yes in WIP Lot Trace Control
  - Trace Components is Yes in BOM Registration Maintenance (3.22.13.4) for any BOMs that use the component

Chapter 4

# Process WLT

## Course Overview



### Process WLT

- ▲ In this section you learn how to:
- ▲ Identify key business considerations before setting up WLT in QAD Standard Edition
- ▲ Set up WLT in QAD Standard Edition
- ▲ Process WLT in QAD Standard Edition
- ▲ WLT with Work Orders/SFC
- ▲ WLT with Advanced Repetitive
- ▲ WLT with Repetitive


## Processing Tips



### Processing Tips

- ▲ WIP material cannot be traced at non-milestone operations
- ▲ WIP lot/serial balances can reside only at milestone operations
- ▲ Some normally editable fields are not editable
  - WLT data collection frames are used to record the information
- ▲ WIP QOH balances cannot reside in the input queue of the first milestone operation, even if the first milestone operation is not the first operation
- ▲ Any information entered in WLT data collection frames is used to update QOH balances and WLT history records
- ▲ Before processing any WLT modified transactions, the system checks for associated WLT routing or BOM registrations that include lot splitting, combining, and size restrictions
  - If there are none, the system then looks for related restrictions in the WIP Lot Trace Control File (3.22.13.24)

## WLT Data Collection Frames



### WLT Data Collection Frames

- ▶ Destination Work Center and Machine
- ▶ WIP Lot Input Queue Issue Data
- ▶ WIP Lot Output Queue Receipt Data
- ▶ WIP Lot Reject Data
- ▶ WIP Lot Scrap Data
- ▶ WIP Lot Reject Queue Scrap Data
- ▶ WIP Lot Input Queue Scrap Data
- ▶ WIP Lot Output Queue Scrap Data
- ▶ Labor WIP Lots
- ▶ Reporting Rework Data
- ▶ WIP Lot Move Data
- ▶ Current Work Center and Machine
- ▶ Issued To WIP Lots
- ▶ WIP Lot Output Queue Issue Data

QAD Proprietary 2008-WLT-PR-040

During processing, the system uses WLT data collection frames to collect, record, and update tracing records. Depending on how you have set up your tracing control parameters, these frames appear in various programs in the following modules:

- Repetitive
- Advance Repetitive
- Work Orders
- Shop Floor Control
- Purchasing

## Destination Work Center and Machine Frame

The screenshot displays the 'Backflush Transaction' window in QAD. The window title is 'Backflush Transaction' and it includes a menu bar with 'Go To', 'Actions', 'Copy', 'Print', and 'Preview'. The main area shows transaction details for Employee: 00000001 (BILL WHITEHEAD), Effective: 4/23/2009, Site: 8000, Item Number: 10-00, Operation: 10, Line: , Routing: 10-00, BOM Code: 10-00, and ID: 406047. A 'Destination Work Center and Machine' dialog box is open, showing 'Work Center: ASM' and 'Machine:'. Other fields include 'version: 1.0000', 'Multi Entry' checkboxes, 'Move Next Op' (checked), 'Start Time', and 'Elapsed or Stop Time'. Buttons for 'Back' and 'Next' are at the bottom right. The text 'Backflush Transaction (18.22.13)' is centered below the window.

QAD Proprietary 2008-WLT-PR-050

Use the Destination Work Center and Machine frame to specify where to move the WIP material produced at the current operation.

- System uses the information to update QOH balances for the affected queues
- Appears in:
  - Labor Feedback by Work Order (17.1)
  - Labor Feedback by Employee (17.2)
  - Labor Feedback by Work Center (17.3)
  - Work Order Operation Backflush (16.19)
  - Repetitive Labor Transaction (18.14)
  - Repetitive Rework Transaction (18.16)
  - Backflush Transaction (18.22.13)
  - Reject Transaction (18.22.16)
  - Rework Transaction (18.22.17)
  - Move Transaction (18.22.19)

## WIP Lot Input Queue Issue Data Frame

Backflush Transaction

Go To Actions Copy Print Preview

Employee: 00000001 BILL WHITEHEAD  
 Effective: 4/23/2009 Shift: Site: 8000  
 Item Number: 10-00 Nu-Line Yo-Yo  
 Operation: 10 Assemble Halves with Pin

Line:  
 Ro: **WIP Lot Output Queue Receipt Data - Qty Processed: 0 EA** 7

Work Center: ASM Machine: Assembly  
 Department: PROD Yo-Yo Production

Qty Processed: 0.0 UM: EA Conversion: 1.0000  
 Qty Scrapped: 0.0 Reason Code: Multi Entry:   
 Qty Rejected: 0.0 Reason Code: Multi Entry:   
 Reject To Op: 10 Modify Backflush:  Move Next Op:   
 Actual Run Time: 0.0 Start Time:  
 Earning Code: Stop Time:

Lot/Serial	Ref	Quantity
Lot 5		

Back Next

*Backflush Transaction (18.22.13)*

QAD Proprietary 2008-WLT-PR-060

Use the WIP Lot Input Queue Issue Data frame to register the lot/serial numbers, references, and quantities of the WIP material being consumed at the current operation.

- Displays when the previous operation's output queue and the current operation's input queue are WLT controlled
- Appears in:
  - Purchase Order Receipts (5.13.1)
  - Purchase Order Returns (5.13.7)
  - Work Order Component Issue (16.10)
  - Work Order Operation Backflush (16.19)
  - Repetitive Labor Transaction (18.14)
  - Repetitive Reject Transaction (18.17)
  - Backflush Transaction (18.22.13)

## Wip Lot Output Queue Receipt Data Frame

**WIP Lot Output Queue Receipt Data Frame**

Backflush Transaction

Go To Actions Copy Print Preview

Employee: 00000001 BILL WHITEHEAD  
 Effective: 4/23/2009 Shift: Site: 8000  
 Item Number: 10-00 Nu-Line Yo-Yo  
 Operation: 10 Assemble Halves with Pin  
 Line:  
 Routing: 10-00

**WIP Lot Output Queue Receipt Data - Qty Processed: 0 EA** ID: 406047

Lot/Serial	Ref	Quantity

Work Center: ASM  
 Department: PROD Yo-Yo Production

Qty Processed: 0.0 UM: EA Conversion: 1.0000  
 Qty Scrapped: 0.0 Reason Code: Multi Entry:   
 Qty Rejected: 0.0 Reason Code: Multi Entry:   
 Reject To Op: 10 Modify Backflush:  Move Next Op:   
 Actual Run Time: 0.0 Start Time:  
 Earning Code: Stop Time:

Lot/Serial	Ref	Quantity
Lot 5		100.0

Delete Back Next

*Backflush Transaction (18.22.13)*

QAD Proprietary 2008-WLT-PR-070

Use the WIP Lot Output Queue Receipt Data frame to report the WIP lot/serial numbers, references, and quantities of the WIP material produced by an operation.

- Appears in:
  - Purchase Order Receipts (5.13.1)
  - Purchase Order Returns (5.13.7)
  - Work Order Operation Backflush (16.19)
  - Labor Feedback by Work Order (17.1)
  - Labor Feedback by Employee (17.2)
  - Labor Feedback by Work Center (17.3)
  - Repetitive Labor Transaction (18.14)
  - Backflush Transaction (18.22.13)

## WIP Lot Reject Data Frame

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### WIP Lot Reject Data Frame

Backflush Transaction x

Go To Actions Copy Print Preview

Employee: 00000001 BILL WHITEHEAD  
 Effective: 1/20/2009 Shift: Site: train  
 Item Number: parent item parent item  
 Operation: 20 operation 20  
 Line: 1000

WIP Lot Reject Data - Qty Rejected: 5 EA				06045
Lot/Serial	Ref	Code	Quantity	
Lot6			5.0	

Work Cell

Department: 10 Assembly  
 Qty Processed: 10.0 UM: EA Conversion: 1.0000  
 Qty Scrapped: 0.0 Reason Code: Multi Entry:   
 Qty Rejected: 5.0 Reason Code: Multi Entry:   
 Reject To Op: 20 Modify Backflush:  Move Next Op:   
 Actual Run Time: 0.0 Start Time:

Lot/Serial	Ref	Code	Quantity
Lot6			5.0

Backflush Transaction (18.22.13)

QAD Proprietary 2008-WLT-PR-080

Use the WIP Lot Reject Data frame to report the WIP lot/serial numbers, references, reject codes, and quantities of rejected material.

- Quantity is moved from the operation's output queue to the reject queue
- Appears in:
  - Repetitive Labor Transaction (18.14)
  - Repetitive Reject Transaction (18.17)
  - Backflush Transaction (18.22.13)
  - Reject Transaction (18.22.16)

## Reporting Scrap Data

The screenshot displays the 'Backflush Transaction' window in QAD. The window title is 'Backflush Transaction'. The menu bar includes 'Go To', 'Actions', 'Copy', 'Print', and 'Preview'. The main content area shows the following information:

Employee: 00000001 BILL WHITEHEAD  
 Effective: 1/20/2009 Shift: Site: train  
 Item Number: parent item parent item  
 Operation: 20 operation 20  
 Line: 1000  
 Routing: **WIP Lot Scrap Data - Qty Scrapped: 3EA** 36045

Lot/Serial	Ref	Code	Quantity
lot7			3.0

Work Cell: Department: 10 Assembly  
 Qty Processed: 3.0 UM: EA Conversion: 1.0000  
 Qty Scrapped: 3.0 Reason Code: Multi Entry:   
 Qty Rejected: 0.0 Reason Code: Multi Entry:   
 Reject To Op: 20 Modify Backflush:  Move Next Op:   
 Actual Run Time: 0.0 Start Time:

Lot/Serial	Ref	Code	Quantity
lot7			3.0

QAD Proprietary 2008-WLT-PR-090

*Backflush Transaction (18.22.13)*

There are four different WLT frames that can be used to record WLT controlled material being scrapped from an operation's input, output, or reject queues. Each frame records lot/serial numbers, references, scrap codes, and quantities being scrapped.

- WIP Lot Scrap Data Frame appears in:
  - Repetitive Labor Transaction (18.14)
  - Backflush Transaction (18.22.13)
- WIP Lot Reject Queue Scrap Data Frame appears in:
  - Repetitive Scrap Transaction (18.18)
  - Scrap Transaction (18.22.18)
- WIP Lot Input Queue Scrap Data Frame appears in:
  - Operation Scrap Transaction (17.7)
  - Repetitive Labor Transaction (18.14)
  - Backflush Transaction (18.22.13)
  - Repetitive Scrap Transaction (18.22.18)
- WIP Lot Output Queue Scrap Data Frame appears in:
  - Operation Scrap Transaction (17.7)
  - Repetitive Scrap Transaction (18.22.18)

## Labor WIP Lots Frame

**Setup Labor Transaction**

Go To Actions Copy Print Preview

Employee: 00000001 BILL WHITEHEAD  
 Effective: 4/23/2009 Shift: Site: 8000  
 Item Number: 10-00 Nu-Line Yo-Yo  
 Operation: 10 Assemble Halves with Pin  
 Line:  
 Routing: 10-00 BOM Code: 10-00 ID: 406047

Work Center: ASM  
 Department: PROD

Act Setup Time: 20.0  
 Earning Code: REG REGULAR

**Labor WIP Lots**

Lot/Serial:  assembly  
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:

Start Time: 8  
 Elapsed or Stop Time: 4

Back Next

*Setup Labor Transaction (18.22.15)*

QAD Proprietary 2008-WLT-PR-100

Use the Labor WIP Lots frame to associate run and set up labor time with corresponding lot/serial numbers. When the output queue of the operation being processed is WLT controlled, the Labor WIP Lots frame appears in:

- Repetitive Setup Transaction (18.13)
- Run Labor Transaction (18.22.14)
- Setup Labor Transaction (18.22.15)

## Recording Rework Data

**Reporting Rework Data**

Rework Transaction

Go To Actions Copy Print Preview

Employee: 00000001 BILL WHITEHEAD  
 Effective: 4/23/2009 Shift: Site: 8000  
 Item Number: 10-00 Nu-Line Yo-Yo  
 Operation: 10 Assemble Halves with Pin  
 Line:  
 Routing: 10-00 BOM Code: 10-00 ID: 406047

**WIP Lot Rework Data - Qty to Rework: 0EA**

Produced By Op: 10  
 Lot/Serial: Reference:  
 Reworked Lot/Serial: Reference:

Qty Reworked: 0.0 Reason Code: Multi Entry:   
 Modify Backflush:   
 Actual Run Time: 0.0 Start Time:  
 Earning Code: REG REGULAR Elapsed or Stop Time:  
 To Operation: 10 Assemble Halves with Pin To Queue: Output

Back Next

*Rework Transaction (18.22.17)*

QAD Proprietary 2008-WLT-PR-110

Use the WIP Lot Rework Data frame to specify the WIP lot/serial numbers and references that were reworked.

- Can also be used to assign new WIP lot/serial numbers and references to WIP material
- Appears in:
  - Repetitive Rework Transaction (18.16)
  - Rework Transaction (18.22.17)

## Wip Lot Move Data Frame

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### WIP Lot Move Data Frame

Move Transaction x

Go To Actions Copy Print Preview

Employee: 00000001 BILL WHITEHEAD  
 Effective: 1/20/2009 Shift: Site: train  
 Item Number: parent item parent item  
 Operation: 20  
 Line: 1000  
 Routing: parent item

WIP Lot Move Data - Qty To Move: 6 EA		
Lot/Serial	Ref	Quantity
lot8		6.0

ID: 406045

Work Center: 1010 Machine: ASSEMBLY  
 Department: 10 Assembly  
 Unit of Measure: EA Conversion: 1.0000  
 Quantity To Move: 6.0  
 Modify Receipt:

Lot/Serial	Ref	Quantity
lot8		6.0

Move Transaction (18.22.19)

QAD Proprietary 2008-WLT-PR-120

Use the WIP Lot Move Data frame to record the WIP lot/serial numbers, references, and quantities of material being moved.

- Appears in:
  - Operation Move Transaction (17.6)
  - Move Transaction (18.22.19)
  - Sub Container Maintenance (18.22.5.4)
  - Sub Shipper Maintenance (18.22.5.5)

**Note** This frame does not appear if you are moving WIP quantities to finish goods inventory. The Receipt Data Input frame appears for receipt of finished goods into inventory.

## Current Work Center and Machine Frame

The screenshot displays the 'Work Order Component Issue' form in a web browser. The form includes a header with the QAD logo and tagline 'Our Passion. Your Advantage.'. Below the header, the title 'Current Work Center and Machine Frame' is prominently displayed. The main content area contains a table with the following data:

Work Order: 1003	ID: 406047	Op: 20	Effective: 1/20/2009
Item Number: parent item	parent item	WO Stat: R	Issue Alloc: <input type="checkbox"/>
			Issue Picked: <input checked="" type="checkbox"/>

Below the table, there is a section titled 'Current Work Center and Machine' with two input fields: 'Work Center: 1010' and 'Machine:'. Both fields have a magnifying glass icon to the right, indicating a search function. The 'Work Order Component Issue (16.99)' label is centered below the form.

QAD Proprietary 2008-WLT-PR-130

Use the Current Work Center and Machine frame to specify the work center and machine location from where the input WIP lot/serial inventory will be consumed by the operation.

- Appears in:
  - Work Order Component Issue (16.10)
  - Work Order Receipt (16.11)

## Issued to WIP Lots Frame

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### Issued To WIP Lots Frame

Work Order Component Issue

Go To Actions Copy Print Preview

Work Order: 1001 ID: 406029 Op: 10 Effective: 4/23/2009  
 Item Number: 10-00 W/O Stat: R Issue Alloc:   
 Nu-Line Yo-Yo Issue Picked:

**Issued To WIP Lots**

Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:

Back Next

*Work Order Component Issue (16.99)*

QAD Proprietary 2008-WLT-PR-140

Use the Issued To WIP Lots frame to specify the produced WIP lot/serial numbers to which the specified components and WIP material are being issued.

**Note** The WIP material to be issued is specified in the WIP Lot Input Queue Issue Data frame that appears immediately before this frame.

- Appears in:
  - Work Order Component Issue (16.10)

## WIP Lot Output Queue Issue Data Frame

The screenshot displays the 'Work Order Receipt (16.11)' window. The main data area shows the following information:

- Work Order: 1003 ID: 406047 Effective: 1/20/2009
- Remarks: Batch:
- Item Number: parent item Lot/Serial Control: L UM: EA
- Description: parent item W/O Stat: R
- Open Quantity: 100.0 Automatic Lot Numbers:

The 'WIP Lot Output Queue Issue Data UOM: EA' frame is active, showing a table with the following data:

Quantity	Lot/Serial	Ref	Quantity
UM:	lot 10		20.0

Additional fields in the frame include:

- Conversion:
- Scrapped Qty: UM:
- UM Conversion:
- Reference: Multi Entry:  Set Attributes:
- Total Units: 0.0

At the bottom, there is a 'Remarks:' section with a 'Close:' button and another table:

Lot/Serial	Ref	Quantity
lot 10		20.0

QAD Proprietary 2008-WLT-PR-150

Use the WIP Lot Output Queue Issue Data frame to enter a list of the WIP lot/serial numbers that should be consumed from the pervious operation's output queue in the specified work center and machine.

- Appears in:
  - Work Order Receipt (16.11)

## Review Questions

- 1 What causes the WIP Lot data entry frames to display?
- 2 Can you reject partial lots using WIP Lot Trace? (Y/N)
- 3 Can you move WIP Lots into finished goods inventory? (Y/N)



Chapter 5

# **WLT with Work Orders/SFC**

## Course Overview

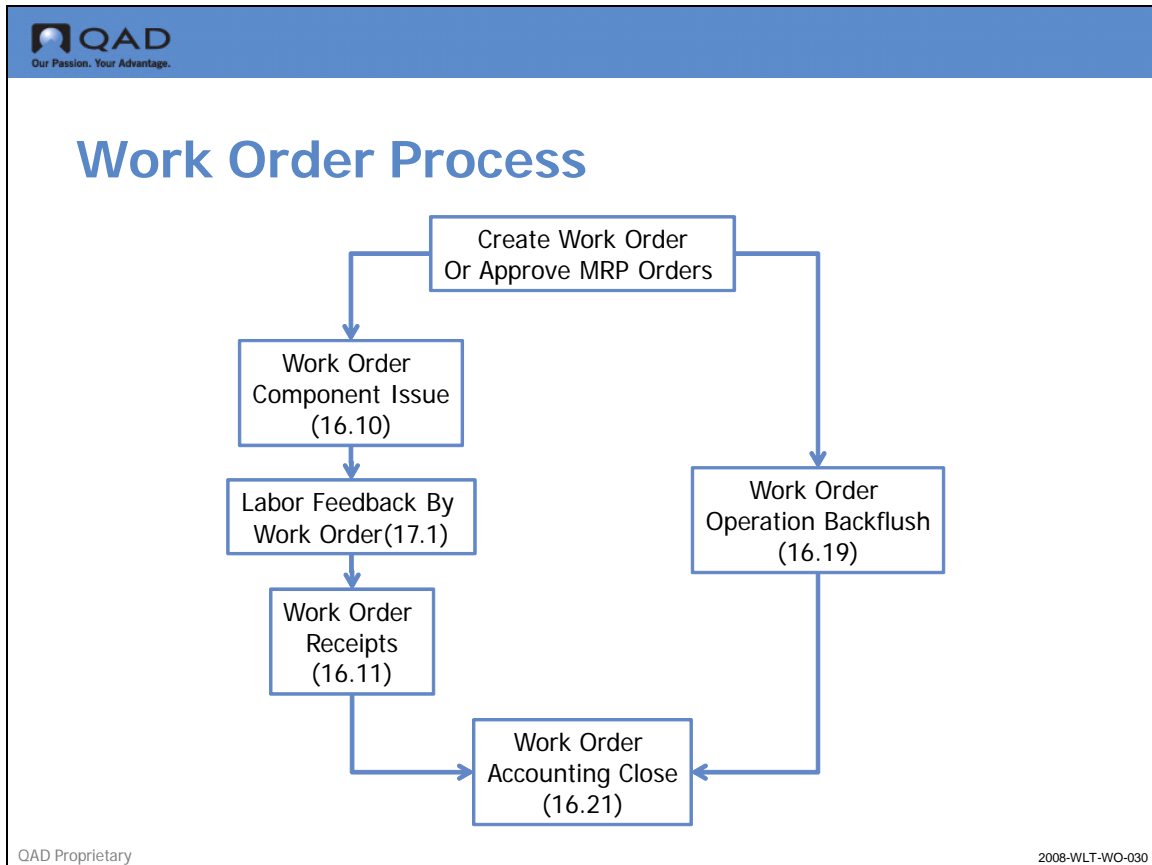


### WLT with Work Orders

In this section you learn how to:

- ▲ Identify key business considerations before setting up WLT in QAD Standard Edition
- ▲ Set up WLT in QAD Standard Edition
- ▲ Process WLT in QAD Standard Edition
- ▲ **WLT with Work Orders/SFC**
- ▲ WLT with Advanced Repetitive
- ▲ WLT with Repetitive

## Work Order Process



When processing a work order (WO), the system uses WLT data collection frames to collect tracing information if the WO is WLT controlled. A WO is WLT controlled when:

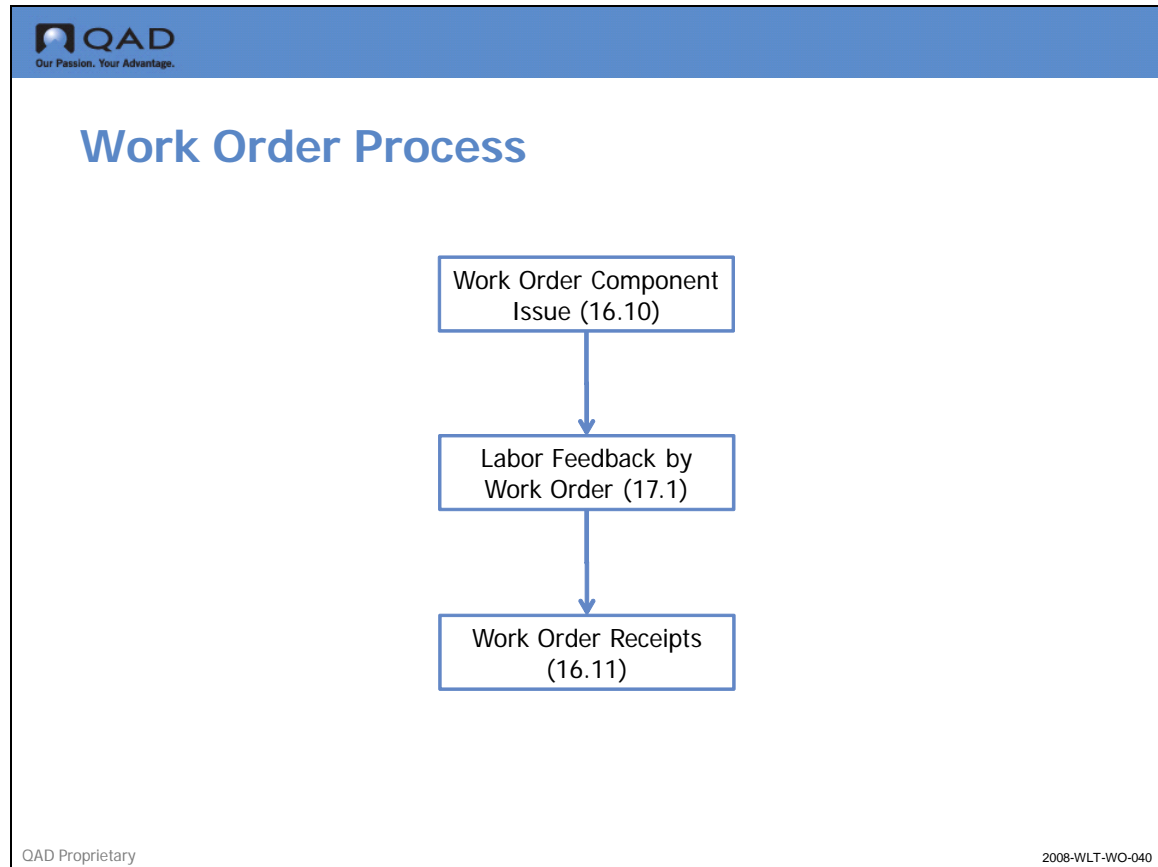
- WLT has been enabled
- Trace Parents is Yes in the WIP Lot Trace Control File (3.22.13.24), or
- A WLT BOM registration record is active for the parent item being manufactured and Trace Parents is Yes for that BOM registration record

The above graphic shows two methods for processing a WO. In the first method, the job flow is:

- Issue the components
- Report labor
- Receive finished goods into inventory

The second, or alternative, method is to use Work Order Operation Backflush (16.19). It combines issuing, labor reporting, and receiving functions.

## Work Order Process



## Work Order Component Issue (16.10)

**Work Order Component Issue**

**Issued To WIP Lots Frame**

Work Order: 1003      ID: 406047      Op: 20      Effective: 1/20/2009  
 Item Number: parent item      W/O Stat: R      Issue Alloc:   
    Issue Picked:

**Issued To WIP Lots**

Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:   
 Lot/Serial:

QAD Proprietary      *Work Order Component Issue (16.10)*      2008-WLT-WO-050

Use Work Order Component Issue to issue component and WIP material to WLT controlled WOs. It uses the following WLT data collection frames:

- Current Work Center and Machine
- WIP Lot Input Queue Issue Data
- Issued to WIP Lots

## Labor Feedback by Work Order (17.1)

**WIP Lot Output Queue Receipt Data**

Work Order: 1001 ID: 406044  
 Operation: 20 operation 20 Op Status:  
 Employee: 00000001 WHITEHEAD Pay Code: REG  
 Department: 10 Work Center: 1010 Time Ind: DecHours  
 Shift:

WIP Lot Output Queue Receipt Data - Qty Processed 3 EA		
Lot/Serial	Ref	Quantity
20-1		1.0
20-2		2.0

Quantity Compl: /20/2009  
 Rework:  Move to Next Operation:   
 Previous Ops Complete:   
 Start Setup: 0.000 Elapsed Setup: 0.000  
 Elapsed/Stop Setup: 0.000 Start Run: 0.000  
 Elapsed/Stop R: 0.000  
 Down Tit: 20-2

*Labor Feedback by Work Order (17.1)*

QAD Proprietary 2008-WLT-WO-060

To report labor you can use any of the following Shop Floor Control programs:

- Labor Feedback by Work Order (17.1)
- Labor Feedback by Employee (17.2)
- Labor Feedback by Work Center (17.3)

The labor feedback programs use the following WLT data collection frame:

- WIP Lot Output Queue Receipt Data frame

## Work Order Receipt (16.11)

**Work Order Receipt**

**WIP Lot Output Queue Issue Data Frame**

Work Order: 1003 ID: 406047 Effective: 1/20/2009

Remarks: Batch:

Item Number: parent item Lot/Serial Control: L UM: EA

Description: parent item WO Stat: R

Open Quantity: 100.0 Automatic Lot Numbers:

Quantity: **WIP Lot Output Queue Issue Data UOM: EA**

Lot/Serial	Ref	Quantity
lot 10		20.0

UM: Conversion: Scrapped Qty: Reference: Multi Entry:

UM Conversion: Set Attributes:  Total Units: 0.0

Remarks: Close:

Lot/Serial	Ref	Quantity
lot 10		20.0

QAD Proprietary *Work Order Receipt (16.11)* 2008-WLT-WO-070

You use Work Order Receipt to receive the finished goods manufactured with WLT controlled routings. Work Order Receipt uses the WLT data collection frames:

- Current Work Center and Machine
- WIP Lot Output Queue Issue Data

## Work Order Process



# Work Order Process

Work Order Operation  
Backflush (16.19)

## Work Order Operation Backflush (16.19)

**WIP Lot Output Queue Receipts Data**

Work Order: 1001 ID: 406044 Work Order Status: R  
 Item Number: parent item parent item  
 Operation: 10 operation 10 Op Status: Q

**WIP Lot Output Queue Receipt Data - Qty Processed: 10 EA**

Lot/Serial	Ref	Quantity
lot 7		10.0

Lot/Serial Ref Quantity  
 lot 7 | | 10.0

QAD Proprietary *Work Order Operation Backflush (16.19)* 2008-WLT-WO-090

You can also use Work Order Operation Backflush to process a WO. It uses the following WLT data collection frames:

- WIP Lot Input Queue Issue Data
- Destination Work Center and Machine
- WIP Lot Output Queue Receipt Data

### Exercise: Work Orders/SFC

**Important** The data used in these exercises may not be the same as the data shown in the screen captures in this lesson. In an exercise, if a field is not listed, you can accept the default value or leave it blank.

#### Work Order Component Issues

Issue materials to an operation. In addition to the component material to issue, you will be prompted to enter a list of WIP material to issue. You will also be prompted to enter a list of WIP lot numbers to which the issued WIP and component lot/serials are issued. Note that these WIP lot numbers are not “produced” by this transaction, but rather, they are used to form the association between the materials issued and the materials that will be produced later.

- 1 To issue the components, enter the following:  
 Use Work Order Component Issue (16.10)

Field	Data
Work Order	<work order number created earlier>
Op	20

2 For the component item listed enter:

Field	Data
Item Number	<component item number listed>
Quantity	3
Lot/Serial	L200

**Note** Ignore any warning message.

3 Advance to the WIP Lot Input Queue Issue Data frame and enter the following:

Field	Data
Lot/Serial	10-1
Ref	<leave blank>
Qty	1

Repeat the above using the following data:

Field	Data
Lot/Serial	10-2
Ref	<leave blank>
Qty	2

**Note** Ignore warning message.

4 Complete the transaction by clicking back until the Is all information correct? message appears, confirm by clicking Yes.

## View Tracing Data

Now you can view the tracing data created by the component issue transaction.

1 Review the operation transaction detail. It should default to your last transaction (ISSUE).  
Use Operation Transaction Detail Inq (17.13.9)

2 Advance to the WIP Lot Trace Data frame.

The data displayed shows the material lots consumed and produced as a result of your issue transaction.

**Note** The WIP material will be listed with an item number which is the same as the parent item number.

3 View the same detail in report format.

Use WIP Lot Convert Trans Report (3.22.13.15)

**4** View downstream traceability.

Use WIP Lot Where-Used Report (3.22.13.19)

**5** View composed-of traceability.

Use WIP Lot Actual Bill Report (3.22.13.20)

## Labor Feedback by Work Order

Register an operation completion at the second operation. You will be prompted to enter a list of WIP lot numbers that were produced. This also updates the QOH for the WIP lot/serials produced.

**1** Record the labor feedback by entering the following:

Use Labor Feedback by Work Order (17.1)

Field	Data
Work Order	<the work order number entered above>
Operation	20
Employee	<use your Down Arrow to select the first record>
Qty Completed	3
Operation Complete	No

**2** Advance to the WIP Lot Output Queue Receipt Data frame and enter the following:

Field	Data
Lot/Serial	20-1
Ref	<leave blank>
Qty	1

Repeat the above using the following data:

Field	Data
Lot/Serial	20-2
Ref	<leave blank>
Qty	2

Complete the transaction by clicking back until the Is all information Correct? message appears, confirm by clicking Yes.

If an E-signature frame appears enter your user id code for the current session and in the reason code field enter ESIG.

**3** View the WIP lot/serial QOH balances for this work order.

Use WIP Lot Inventory Status Report (3.22.13.13)

## Work Order Receipts

Record the completion of finished material, similar to an Advanced Repetitive backflush at the last operation. You will be prompted to enter a list of output queue WIP lot/serials to consume. Tracing data will be recorded to show the consumption of the WIP lot/serials entered and the production of the finished-material lots entered. QOH balances are adjusted accordingly.

- 1 To process the receipt, enter the work order number of the work order created earlier.  
Use Work Order Receipt (16.11)
- 2 Advance to the WIP Lot Output Queue Issue Data frame and enter the following:

Field	Data
Lot/Serial	40-1
Ref	<leave blank>
Qty	1

Repeat the above using the following data:

Field	Data
Lot/Serial	40-2
Ref	<leave blank>
Qty	2

**Note** Ignore any warning message.

- 3 In the main data entry frame, enter the following:

Field	Data
Quantity	3
Site	Train
Location	200
Lot/Serial	FGL2

Complete the transaction by clicking next until the Is all information correct? message appears, confirm.

- 4 Review the operation transaction detail. It should default to your last transaction (RECEIPT).  
Use Operation Transaction Detail Inq (17.13.9)
- 5 Advance to the WIP Lot Trace Data frame.  
The data displayed shows the material lots consumed and produced as a result of your last transaction.

**Note** The WIP material will be listed with an item number the same as the parent item number.

- 6 View the same detail in report format.  
Use WIP Lot Convert Trans Report (3.22.13.15)

- 7 View downstream traceability.  
Use WIP Lot Where-Used Report (3.22.13.19)
- 8 View composed-of traceability.  
Use WIP Lot Actual Bill Report (3.22.13.20)

## Work Order Operation Backflush

Issue material and labor and record completions at the second operation. It is very similar in concept to the Advanced Repetitive Backflush Transaction.

- 1 To perform the backflush, enter the following:  
Use Work Order Operation Backflush (16.19)

Field	Data
Work Order	<work order number created earlier>
Operation	20
Employee	<use your Down Arrow to select the first record>
Qty Completed	3
Op Complete	No
Prev Ops Complete	No

- 2 Click Next until you are prompted for component lot/serials. For the component item listed enter:

Field	Data
Item Number	<component item number listed>
Quantity	3
Lot/Serial	L4

**Note** Ignore any warning message.

- 3 Advance to the WIP Lot Input Queue Issue Data frame and enter the following:

Field	Data
Lot/Serial	10-1
Ref	<leave blank>
Qty	3

**Note** Ignore any warning message.

- 4 Advance to the WIP Lot Output Queue Receipt Data frame. Delete the default entry by doing the following:
  - a Press the Down Arrow.
  - b Click Next

- c Click Delete.
- d Confirm the delete.

5 In the WIP Lot Output Queue Receipt Data frame enter the following:

Field	Data
Lot/Serial	20-1
Ref	<leave blank>
Qty	3

Complete the transaction by clicking next until the Is all information correct? message appears, confirm.

6 Review the operation transaction detail. It should default to your last transaction (MOVE).  
Use Operation Transaction Detail Inq (17.13.9)

7 Advance to the WIP Lot Trace Data frame.  
The data displayed shows the material lots consumed and produced as a result of your last transaction.

**Note** The WIP material will be listed with an item number the same as the parent item number.

8 View the same detail in report format.  
Use WIP Lot Convert Trans Report (3.22.13.15)

9 View downstream traceability.  
Use WIP Lot Where-Used Report (3.22.13.19)

10 View composed-of traceability.  
Use WIP Lot Actual Bill Report (3.22.13.20)

## Register Work Order Operation Scrap

Use this function to record WIP material scrapped at an operation. This function is very similar to the Advanced Repetitive Scrap Transaction. Additionally, this function can be used with or without WIP Lot Trace.

1 To record the scrap material, enter the following:  
Use Operation Scrap Transaction (17.7)

Field	Data
Work Order	<work order number created earlier>
Operation	30
Employee	<use your Down Arrow to select the first record>

2 Advance to the WIP Lot Input Queue Scrap Data input frame, press the Lookup key. You should see lot/serial 20-1 listed in the lookup frame. Select it and enter a Qty of 1.

Complete the transaction by clicking next until the Is all information correct? message appears, confirm.

- 3 Review the transaction detail for your last transaction (WOSCRAPI). It will be the default. Use Operation Transaction Detail Inq (17.13.9)
- 4 Advance to the WIP Lot Processed frame. This frame shows the WIP lot/serial that was scrapped by this transaction. Note that there will be one Operation History record written for each WIP lot/serial scrapped.

**Note** You can also use:

- WIP Lot Non-Convert Trans Report (3.22.13.16) to display this information
- Operations by Work Center Report (17.13), Operations by Work Order Report (17.14), and Operations by Employee Report (17.15) to report operation scrap data



Chapter 6

# **WLT with Advanced Repetitive**

## Course Overview



### WLT with Advanced Repetitive

In this section you learn how to:

- ▲ Identify key business considerations before setting up WLT in QAD Standard Edition
- ▲ Set up WLT in QAD Standard Edition
- ▲ Process WLT in QAD Standard Edition
- ▲ WLT with Work Orders/SFC
- ▲ **WLT with Advanced Repetitive**
- ▲ WLT with Repetitive

## Advanced Repetitive



### Advanced Repetitive

- ▲ Backflushing WIP Material
- ▲ Reporting Run and Setup Labor
- ▲ Reworking Rejected Material
- ▲ Scrapping Reject Material
- ▲ Adjusting WIP Quantities

QAD Proprietary

2008-WLT-AR-030

When processing a cumulative order in the Advanced Repetitive module, the system uses WLT data collection frames to collect tracing information if the cumulative order is WLT controlled.

- WLT has been enabled

## Backflush Transaction (18.22.13)

**QAD**  
Our Passion. Your Advantage.

### Backflush Transaction

**WIP Lot Output Queue Receipt Data**

Backflush Transaction x

Go To Actions Copy Print Preview

Employee: 00000001 BILL WHITEHEAD  
Effective: 1/20/2009 Shift: Site: train  
Item Number: parent item parent item  
Operation: 20 operation 20  
Line: 1000  
Routing: parent item

WIP Lot Output Queue Receipt Data - Qty Processed: 10 EA		
Lot/Serial	Ref	Quantity
Lot5		10.0

Work Center: 1010 Department: 10 Assembly ID: 406045

Qty Processed: 10.0 UM: EA Conversion: 1.0000  
Qty Scrapped: 0.0 Reason Code: Multi Entry:   
Qty Rejected: 0.0 Reason Code: Multi Entry:   
Reject To Op: 20 Modify Backflush:  Move Next Op:   
Actual Run Time: 0.0 Start Time:  
Earning Code: Stop Time:

Lot/Serial	Ref	Quantity
Lot5		10.0

*Backflush Transaction (18.22.13)*

QAD Proprietary 2008-WLT-AR-040

Use Backflush Transaction to report production activity at advanced repetitive manufacturing operations. When WLT is active, the following WLT data collection frames display:

- Destination Work Center and Machine
  - Appears only if Move Next Op is set to Yes
- WIP Lot Input Queue Issue Data
- WIP Lot Output Queue Receipt Data
- WIP Lot Scrap Data
  - Appears only if you enter a value in the Qty Scrapped field
- WIP Lot Reject Data
  - Appears only if you enter a value in the Qty Rejected field



## Rework Transaction (18.22.17)

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# Rework Transaction

**WIP Lot Rework Data Frame**

Rework Transaction X
Go To Actions Copy Print Preview

Employee: 00000001      BILL WHITEHEAD  
 Effective: 1/21/2009      Shift:      Site: train  
 Item Number: parent item      parent item  
 Operation: 10      operation 10  
 Line: 1000  
 Routing: parent item      BOM Code: parent item      ID: 406045

**WIP Lot Rework Data - Qty to Rework: 1 EA**

Produced By Op: 10  
 Lot/Serial: 40-1      Reference:  
 Reworked Lot/Serial: 40-1R      Reference:

Qty Reworked: 1.0      Reason Code:      Multi Entry:   
 Modify Backflush:   
 Actual Run Time: 0.0      Start Time:  
 Earning Code: REG      REGULAR      Elapsed or Stop Time:  
 To Operation: 10      operation 10      To Queue: Output

*Rework Transaction (18.22.17)*

QAD Proprietary
2008-WLT-AR-060

Use Rework Transaction to move previously rejected WLT-controlled material back into production. The following WLT data collection frames display:

- Destination Work Center and Machine
- WIP Lot Rework Data

## Scrap Transaction (18.22.18)

**Scrap Transaction**

**WIP Lot Output Queue Scrap Data Frame**

Scrap Transaction x

Go To Actions Copy Print Preview

Employee: 00000001 BILL WHITEHEAD  
 Effective: 1/21/2009 Shift: Site: train  
 Item Number: parent item parent item  
 Operation: 10 operation 10  
 Line: 1000  
 Routing: **WIP Lot Output Queue Scrap Data - Qty Scrapped: 2 EA** J6045

Lot/Serial	Ref	Code	Quantity
lot7			2.0

Work Cen  
 Department: 10 Assembly  
 Unit of Measure: EA Conversion: 1.0000  
 In Queue: From Queue: Multi Entry:   
 Out Queue: 2.0 Reason Code: Multi Entry:   
 Reject Queue: 0.0 Reason Code: Multi Entry:

Lot/Serial	Ref	Code	Quantity
lot7			2.0

*Scrap Transaction (18.22.18)*

QAD Proprietary 2008-WLT-AR-070

Use Scrap Transaction to scrap or remove WIP quantities from any queue of an operation without backflushing. Depending on which queue you are scrapping material from, one or more of the following WLT data collection frames will appear:

- WIP Lot Input Queue Scrap Data
  - Enter a value in the In Queue field
- WIP Lot Output Queue Scrap Data
  - Enter a value in the Out Queue field
- WIP Lot Reject Queue Scrap Data
  - Enter a value in the Rjct Queue field

The system reduces the WIP QOH at each queue by the quantity scrapped at the indicated work center and machine (specified in the second frame). It also adds the quantity scrapped to the cumulative scrapped quantity for the specified lot/serials.

## WIP Adjust Transaction (18.22.21)

The screenshot displays the QAD WIP Adjust Transaction (18.22.21) window. The title bar reads "WIP Adjust Transaction" and the main title is "WIP Lot Output Queue Adjust Data". The window includes a menu bar with "Go To", "Actions", "Copy", "Print", and "Preview". The main content area shows the following data:

Employee: 00000001 BILL WHITEHEAD  
 Effective: 1/21/2009 Shift: Site: train  
 Item Number: parent item parent item  
 Operation: 10 operation 10  
 Line: 1000  
 Routing: **WIP Lot Output Queue Adjust Data: UOM: EA** 406045

Lot/Serial	Ref	Qty on Hand Code
lot7		-2.0

Work Center:  
 Department: 10 Assembly  
 Unit of Measure: EA  
 In Queue:  
 Out Queue: -2.0 From Queue:  
 Reject Queue: 0.0 Reason Code:

Inv Discrep Acct:

Lot/Serial	Ref	Qty on Hand Code
lot7		-2.0

QAD Proprietary 2008-WLT-AR-080

Use WIP Adjust Transaction to adjust quantities at an operation's input, output, and reject queues. The following WLT data collection frames display:

- WIP Lot Input Queue Adjust Data
- WIP Lot Output Queue Adjust Data
- WIP Lot Reject Queue Adjust Data

**Note** When using WLT, the In Queue, Out Queue, and Rjct Queue fields are not available. You must enter the WLT data collection frames to enter adjustments to QOH balances for the WIP lot/serials in each queue.

### Exercise: Advanced Repetitive

**Important** The data used in these exercises may not be the same as the data shown in the screen captures in this lesson. In an exercise, if a field is not listed, you can accept the default value or leave it blank.

### Backflush

Backflush the first operation of your parent item's routing. Then you will be prompted to enter the lot numbers of the WIP that was produced by the material conversion event.

**Note** Because this is the first operation, you are not prompted for input WIP lot/serials to consume.

- 1 To run the backflush, enter the following:

Use Backflush Transaction (18.22.13)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	500
Operation	10
Line	1000
Qty Processed	3

Record the cumulative order ID (displays in the lower-right corner of the first frame):

\_\_\_\_\_

- 2 Advance to the Issue Data Input frame and for the component item listed enter:

Field	Data
Quantity	3
Location	100
Lot/Serial	L1

**Note** Ignore any warning message. Accept the destination work center and machine.

- 3 Advance to the WIP Lot Output Queue Receipt Data frame and enter the following:

Field	Data
Lot/Serial	10-1
Ref	<leave blank>
Qty	1

Create a second entry by entering the following:

Field	Data
Lot/Serial	10-2
Ref	<leave blank>
Qty	2

## View Tracing Data

- 1 Review the operation transaction detail. It should show your last transaction first (BACKFLSH). It will be the default.

Use Operation Trans Detail Inquiry (18.22.4.2)

**2** Advance to the WIP Lot Trace Data frame.

The data displayed shows the material lots consumed and produced as a result of your backflush transaction.

**Note** The WIP material will be listed with an item number the same as the parent item number.

**3** Enter your cumulative order ID in the ID and To fields.

The data displayed shows the material lots consumed and produced as a result of your backflush transaction, similar to Operation Trans Detail Inquiry. WIP material is listed with Type of WIP and with an Item Number the same as the parent item number.

Use WIP Lot Convert Trans Report (3.22.13.15)

**Note** WIP Lot Convert Trans Report is called that because tracing data is recorded only when material is converted (e.g., fabricated, assembled, reworked, etc.).

**4** To print a WIP Lot Actual Bill Report enter the following:

Use WIP Lot Actual Bill Report (3.22.13.20)

Field	Data
Material Type (Item/WIP)	WIP
Item Number	<your parent item number>
Produced by ID	<cumulative order ID>
Produced by Op	10
Lot/Serial	10-1
To	10-2

**5** Review the report taking note of the following.

- a** The component you backflushed as the level 1 line.
- b** The Qty value is the total quantity of this lot/serial that was consumed.
- c** Each level 1 line is followed by a level 2 line.
- d** The level 2 lines represent the material that was consumed to produce their respective level 1 lines.
- e** The Qty value is the quantity consumed into its respective level 1 line.

### View WIP Lot Inventory

**1** To view the on-hand balances, enter the following:

Use Wip Status Inquiry (18.22.12)

Field	Data
Effective	<accept the default>
Site	Train
Item Number	<your parent item number>

Field	Data
Operation	20
Line	1000

**Note** You had to view operation 20 because Move To Next Op in the Backflush Transaction was set to Yes.

- 2 Review the report. Look at the WIP Lot Inventory section. This section displays a list of the WIP lots at this operation.
- 3 To print the WIP Lot Inventory Status Report, enter the ID of the cumulative order in the ID and To fields.  
Use WIP Lot Inventory Status Report (3.22.13.13)
- 4 Review the report. You will see the two WIP lots you entered in the Backflush Transaction.

## Backflush

Backflush a WIP lot all the way through the rest of the routing in order to view the tracing data that is created.

- 1 To run the backflush, enter the following:  
Use Backflush Transaction (18.22.13)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	<your parent item number>
Operation	20
Line	1000
Qty Processed	1

- 2 Advance to the Issue Data Input frame and for the component item listed enter:

Field	Data
Quantity	1
Location	100
Lot/Serial	L2

**Note** Ignore any warning message.

- 3 Advance to the WIP Lot Input Queue Issue Data frame, and enter the following:

Field	Data
Lot/Serial	10-1
Ref	<leave blank>
Qty	1

- 4 Complete the transaction for operation 20
- 5 You are now going to do another backflush, using the same Employee and Site. Enter the following:

Use Backflush Transaction (18.22.13)

Field	Data
Item Number	<your parent item number>
Operation	30
Line	1000
Qty Processed	1

- 6 Advance to the Issue Data Input frame and for the component item listed enter:

Field	Data
Quantity	1
Location	100
Lot/Serial	L3

**Note** Ignore any warning message.

- 7 Advance to the WIP Lot Input Queue Issue Data frame and enter the following:

Field	Data
Lot/Serial	20-1
Ref	<leave blank>
Qty	1

- 8 Advance to the WIP Lot Output Queue Receipt Data frame. Delete the default entry by doing the following:

- a Click Next, cursor advances to quantity field.
- b Click Delete.
- c Confirm the delete.

- 9 In the WIP Lot Output Queue Receipt Data frame enter the following:

Field	Data
Lot/Serial	30-1
Ref	<leave blank>
Qty	1

- 10 Using the same Employee and Site, you are going to do another backflush. Enter the following:

Use Backflush Transaction (18.22.13)

Field	Data
Item Number	<your parent item number>
Operation	40
Line	1000
Qty Processed	1

**11** Advance to the Issue Data Input frame and for the component item listed enter:

Field	Data
Quantity	1
Location	100
Lot/Serial	L1

**Note** Ignore any warning message.

**12** Advance to the WIP Lot Input Queue Issue Data frame and enter the following:

Field	Data
Lot/Serial	30-1
Ref	<leave blank>
Qty	1

**13** Advance to the Receipt Data Input frame and enter the following:

Field	Data
Lot/Serial	FGL1

**14** Complete the transaction by confirming that all data is correct.

## View Tracing Data

View the tracing data created by the backflashes using the Lot Where-Used and Lot Actual Bill reports. This demonstrates traceability of component, WIP, and finished material lots throughout the entire routing.

**1** Print a WIP Lot Where-Used report by entering the following:

Use WIP Where-Used Report (3.22.13.19)

Field	Data
Material Type (Item/WIP)	Item
Item Number	<first component item you backflushed>
Lot/Serial	L1
To	L1

2 Review the report taking note of the following:

- a The component you backflushed appears as the level 1 line.
- b The Qty value on that line is the total quantity of the lot/serial that was consumed.
- c The next several lines trace the flow of material as it is successively processed by each operation in the routing.

For level 2 and greater lines, the Qty value displayed on each line is the quantity of the respective parent level material that was consumed into this material. For example, the Qty displayed on a level 5 line is the total quantity of the preceding level 4 line material that was consumed into it.

3 Print a WIP Lot Actual Bill report by entering the following:

Use WIP Lot Actual Bill Report (3.22.13.20)

Field	Data
Material Type (Item/WIP)	Item
Item Number	<parent item number>
Lot/Serial	FGL1
To	FGL1

4 Review the report taking note of the following:

- a The finished material item log (FGL1) that you backflushed appears as a level 1 line.
- b The Qty value is the total quantity of this lot/serial that was produced.
- c This is followed by a level 2 line.  
This represents the material and quantity consumed at operation 40 to produce the level 1 material.
- d The level 2 line is followed by level 3 lines, which represent the materials and quantities consumed at operation 30, and so forth.
- e You should be able to see how material (WIP and component) is consumed, starting with the parent lot FGL1 all the way to the component lots consumed at the first operation.

### Run Labor Transaction

Record labor against an operation. You will be prompted to enter the lot numbers of the WIP to which this reported labor will be associated.

1 To record labor, enter the following:

Use Run Labor Transaction (18.22.14)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	500

Field	Data
Operation	10
Line	1000
Act Run Time	5

- 2 Advance to the Labor WIP Lots frame and enter 10-1 in the first Lot/Serial field.
- 3 Review the operation transaction detail. It should default to your last transaction (LABOR).  
Use Operation Trans Detail Inquiry (18.22.4.2)
- 4 Advance to the WIP Lot Trace Data frame.  
The data displayed shows the WIP lot/serial entered with a quantity of 0.0 (zero). This tracing record is created in order to associate the reported labor with the “production” of the WIP lot/serial.

**Note** Setup Labor Transaction (18.22.15) works similarly.

## WIP Adjust Transaction

Modify WIP lot/serial QOH balances at an operation.

- 1 To adjust the data, enter the following:  
Use Wip Adjust Transaction (18.22.21)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	500
Operation	20
Line	1000

- 2 Advance to the WIP Lot Input Queue Adjust Data frame.  
This frame presents a list of the input queue WIP lot/serials and QOH balances for this operation.
- 3 Enter several WIP lot/serials and quantities.  
Entries in the list will be added or updated.
- 4 Advance to the WIP Lot Output Queue Adjust Data frame and repeat step 3.
- 5 Advance to the WIP Lot Reject Queue Adjust Data frame and repeat step 3.
- 6 Cycle back through the transaction. You should see your updated entries.
- 7 View the updated WIP lot/serial QOH balances.  
Use Wip Status Inquiry (18.22.12) and WIP Lot Inventory Status Report (3.22.13.13)
- 8 Review the operation transaction detail. It should default to your last transaction (WIPADJ-x).  
Use Operation Trans Detail Inquiry (18.22.4.2)

- 9 Advance to the WIP Lot Processed frame.

This frame shows the WIP lot/serial that was adjusted by this transaction. Notice that there will be one Operation History record written for each WIP lot/serial adjusted.

**Note** You can also use WIP Lot Non-Convert Trans Report (3.22.13.16) to display this information.

## Scrap Transaction

Scrap quantities of WIP lot/serial QOH balances at an operation.

- 1 To begin the scrap process, enter the following:

Use Scrap Transaction (18.22.18)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	500
Operation	20
Line	1000

- 2 Advance to the second (i.e., lower) frame. Enter 2 in the In Queue, Out Queue and Reject Queue fields.
- 3 Advance to the WIP Lot Input Queue Scrap Data frame. Press the Lookup key to display a list of WIP lot/serials at that operation. Select one and enter 2 in Qty.

**Note** You can enter a non-existent WIP lot/serial if necessary.

- 4 Repeat the process for the WIP Lot Output Queue Scrap Data frame and the WIP Lot Reject Queue Scrap Data frame.
- 5 View the updated WIP lot/serial QOH balances.  
Use Wip Status Inquiry (18.22.12) and WIP Lot Inventory Status Report (3.22.13.13)
- 6 Review the transaction history for your last transaction (SCRAP-x). (It will be the default.)  
Use Operation Trans Detail Inquiry (18.22.4.2)
- 7 Advance to the WIP Lot Processed frame.

This frame shows the WIP lot/serial that was scrapped by this transaction. Notice that there will be one Operation History record written for each WIP lot/serial scrapped.

**Note** You can also use WIP Lot Non-Convert Trans Report (3.22.13.16) to display this information.

## Move Transaction

This function moves WIP from the output queue of one operation to the input queue of the following operation. You use this transaction when manual control over moving WIP to the next operation is desired, e.g., when Move Next Op is set to No in Routing Maintenance (14.13.1).

- 1 Enter the following:  
Use Move Transaction (18.22.19)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	500
Operation	20
Line	1000
Qty to move	1

- 2 Advanced to the WIP Lot Move Data frame. Press the Lookup key to select a WIP lot/serial. Enter 1 in the Qty field.

**Note** Ignore any warning message.

- 3 View the updated WIP lot/serial QOH balances.  
Use Wip Status Inquiry (18.22.12) and WIP Lot Inventory Status Report (3.22.13.13)

## Reject Transaction

This function rejects WIP lot/serials from the output queue to the reject queue.

- 1 To run the reject process, enter the following:  
Use Reject Transaction (18.22.16)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	<your parent item number
Operation	20
Line	1000
Qty Rejected	1

- 2 Advance to the WIP Lot Reject Data frame and enter 20-1 in the Lot/Serial field. Enter 1 in the Qty field.
- 3 View the updated WIP lot/serial QOH balances.  
Use Wip Status Inquiry (18.22.12) and WIP Lot Inventory Status Report (3.22.13.13)

## Rework Transaction

Use this function to register the rework of WIP lot/serials. This involves moving WIP lot/serials from the reject queue back to the output queue.

- 1 To register the rework, enter the following:

Use Rework Transaction (18.22.17)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	<your parent item number
Operation	20
Line	1000
Qty Reworked	1

- 2 Advance to the WIP Lot Rework Data frame. In the Lot/Serial field enter 20-1 and in the Reworked Lot/Serial field enter 20-1R.
- 3 Review the operation transaction detail. It should default to your last transaction (REWORK). Use Operation Trans Detail Inquiry (18.22.4.2)
- 4 Advance to the WIP Lot Processed frame.  
This frame lists the WIP lot/serial processed by this transaction.
- 5 Advance to the WIP Lot Trace Data frame.  
The data displayed shows the material lots consumed and produced as a result of the Rework Transaction. This tracing data is recorded only because the entered Reworked Lot/Serial value is different from the Lot/Serial value.

**Note** You can also use WIP Lot Non-Convert Trans Report (3.22.13.16) or WIP Lot Convert Trans Report (3.22.13.15) to display this information.

## Close Cumulative Order

Close the Advanced Repetitive cumulative order that you have been working with.

- 1 To close the cumulative order, enter the following:

Use Cumulative Order Close (18.22.10)

Field	Data
ID	<your cumulative order ID
To	<your cumulative order ID
End Effective	<end effective date of your cumulative order>
Transfer WIP	Yes
Update	Yes

**Note** If you do not know the end effective date of your cumulative order, you can find it by running Cumulative Order Report (18.22.8).

This function closes your cumulative order and transfers its WIP lot/serials to the new cumulative order. The report output contains a list of the WIP lot/serials transferred to the new cumulative order.



Chapter 7

# **WLT with Repetitive**

## Course Overview



### WLT with Repetitive

In this section you learn how to:

- ▲ Identify key business considerations before setting up WLT in QAD Standard Edition
- ▲ Set up WLT in QAD Standard Edition
- ▲ Process WLT in QAD Standard Edition
- ▲ WLT with Work Orders/SFC
- ▲ WLT with Advanced Repetitive
- ▲ **WLT with Repetitive**

## Repetitive



### Repetitive

- ▲ Reworking Material
- ▲ Report Labor
- ▲ Handling Reject Material
- ▲ Tracing Scrap Material
- ▲ Repetitive Transaction History

QAD Proprietary

2008-WLT-REP-030

When processing a cumulative order in the Repetitive module, the system uses WLT data collection frames to collect tracing information if the cumulative order is WLT controlled.

- WLT has been enabled



Repetitive Setup Transaction (18.13)

The screenshot shows the QAD software interface for the 'Repetitive Setup Transaction' screen. The title bar reads 'Repetitive Setup Transaction' with a close button. Below the title bar is a menu bar with 'Go To', 'Actions', 'Copy', 'Print', and 'Preview'. The main content area is divided into several sections:

- Employee Information:** Employee: 0000001, BILL WHITEHEAD, Effective Date: 1/21/2009, Shift: , Site: train, Input Total: 0.0, Control Total: 0.0.
- Item Information:** Item Number: parent item, Op: 10, operation 10, Production Line: 1000, Routing: , Work Center: 1010, Department: 10.
- Actual Setup Time:** 0.0, Earning Code: REG, REGU, Transaction Number: 864.
- Labor WIP Lots Frame:** A central window with the title 'Labor WIP Lots' containing ten rows of 'Lot/Serial:' input fields.
- Time Fields:** Start Time: 00:00:00, or Stop Time: 00:00:00.

At the bottom of the screenshot, there is a footer with 'QAD Proprietary' on the left, 'Repetitive Setup Transaction (18.13)' in the center, and '2008-WLT-REP-050' on the right.

Use Repetitive Setup Transaction to report labor performed for WLT controlled lot/serial numbers. You do this using the WLT data collection frame:

- Labor WIP Lots

## Repetitive Labor Transaction (18.14)

The screenshot displays the QAD Repetitive Labor Transaction (18.14) window. The title bar reads "Repetitive Labor Transaction" and the QAD logo is in the top left. The main content area is titled "WIP Lot Output Queue Receipts Data" in red. The interface includes a menu bar with "Go To", "Actions", "Copy", "Print", and "Preview". Below the menu bar, the following data is displayed:

Employee: 00000001 BILL WHITEHEAD Input Total: 0.0  
 Effective Date: 1/21/2009 Shift: Site: train Control Total: 0.0

Item Number: parent item parent item  
 Operation: **WIP Lot Output Queue Receipt Data - Qty Processed: 10 EA**

Production Line:	Lot/Serial	Ref	Quantity
Routing:	Lot1		10.0

Work Center: 10  
 Department: 10 Assembly  
 Quantity Completed: 10.0 EA Conv: 1.0000  
 Qty Rejected: 5.0 Chg Attributes:   
 Modify Backflush:  Start Time: 00:00:00  
 Actual Run Time: 0.0 Elapsed or Stop Time: 00:00:00  
 Earning Code: REG REGULAR

Transaction Num	Lot/Serial	Ref	Quantity
Down Time	Lot1		10.0

At the bottom of the window, the text "Repetitive Labor Transaction (18.14)" is centered. The footer contains "QAD Proprietary" on the left and "2008-WLT-REP-060" on the right.

Use Repetitive Labor Transaction to report production activity (input, output, reject) at repetitive manufacturing operations. When WLT is active, the following WLT data collection frames display:

- Destination Work Center and Machine
- WIP Lot Input Queue Issue Data
- WIP Lot Output Queue Receipt Data
- WIP Lot Reject Data
  - Appears only if you enter a value in the Qty Reject field

Repetitive Reject Transaction (18.17)

The screenshot shows the QAD software interface for the 'Repetitive Reject Transaction' window. The window title is 'Repetitive Reject Transaction' and it includes a menu bar with 'Go To', 'Actions', 'Copy', 'Print', and 'Preview'. The main content area displays the following information:

- Site: train Training Database Site Effective Date: 1/21/2009
- Item Number: parent item parent item
- Operation: 10 operation 10
- Production: **WIP Lot Reject Data - Qty Rejected: 3 EA**
- Table with columns: Lot/Serial, Ref, Code, Quantity. Row: Lot 5, 3.0
- Department: 10 Assembly
- Employee: 00000001 BILL WHITEHEAD
- Shift:
- Quantity WIP: 0.0
- Table with columns: Lot/Serial, Ref, Code, Quantity. Row: Lot 5, 3.0

At the bottom of the screenshot, there is a footer with 'QAD Proprietary' on the left, 'Repetitive Reject Transaction (18.17)' in the center, and '2008-WLT-REP-070' on the right.

Use Repetitive Reject Transaction to enter reject material information for an operation. The following WLT data collection frames display:

- WIP Lot Input Queue Issue Data
- WIP Lot Reject Data

## Repetitive Scrap Transaction (18.18)

**WIP Lot Reject Queue Issue Data**

Repetitive Scrap Transaction

Go To Actions Copy Print Preview

Site: train Training Database Site Effective Date: 1/21/2009

Item Number: parent item parent item  
 Operation: 10 operation 10

Produced **Wip Lot Reject Queue Issue Data - Qty Scrapped: 3 EA**

Lot/Serial	Ref	Code	Quantity
lot8			3.0

WIP

Department: 10 Assembly

Employee:  
Shift:

Qty Rejected: 3.0

Qty Scrapped

Reas	Lot/Serial	Ref	Code	Quantity
Transaction Num	lot8			3.0

QAD Proprietary 2008-WLT-REP-080

*Repetitive Scrap Transaction (18.18)*

Use Repetitive Scrap Transaction to scrap or remove WIP quantities of an operation. The following WLT data collection frame appears:

- WIP Lot Reject Queue Scrap Data

The system updates tracing history records and WIP lot/serial QOH balances.

## Repetitive Trans Detail Inquiry (18.4.2)

QAD  
Our Passion. Your Advantage.

### Repetitive Trans Detail Inquiry

01/21/09

Tran Nbr: 868 Output: page

Type: SCRAP  
 Transaction Date: 01/21/09 08:03:02 Cumulative Order: parent item  
 Effective Date: 01/21/09 Shift: ID: 406045  
 Employee: Operation: 10

Item Number: parent item Quantity Completed: 3.0  
 parent item Qty Rejected: -3.0  
 Site: train Line: 1000 Reject Reason:  
 Work Center: 1010 Machine: Qty Rework: 0.0  
 Department: 10 Rework Reason:  
 Std Setup Time: 0.0 Actual Setup Time: 0.0  
 Std Run Time: 0.0 Actual Run Time: 0.0  
 Labor Cost Std: 0.00 Labor Cost: 0.00  
 Burden Cost Std: 0.00 Burden Cost: 0.00  
 Subcontract Std: 0.00 Subcontract Cost: 0.00

WIP Lot Processed  
 Lot/Serial: lot8  
 Reference:

*Repetitive Trans Detail Inquiry (18.4.2)*

QAD Proprietary 2008-WLT-REP-090

Use Repetitive Trans Detail Inquiry to display WIP lot/serial information connected with an operation history record. Also displayed are:

- Tracing records associated with the operation history record
- WIP lot/serials recorded by a scrap, reject, rework, or adjust transaction

### Exercise: Repetitive

**Important** The data used in these exercises may not be the same as the data shown in the screen captures in this lesson. In an exercise, if a field is not listed, you can accept the default value or leave it blank.

#### Setup

Before proceeding, you need to enable the system to use Repetitive. The first step will be to report all expired or open Advanced Repetitive cumulative orders. The next step will be to close them. The next step will be to delete them. The last step is to set the control file such that Advanced Repetitive is no longer enabled.

- 1 Get a list of all cumulative orders and their end-effective dates.  
Use Cumulative Order Report (18.22.8)
- 2 You need to close the cumulative order for each different end effective date.

Use Cumulative Order Close (18.22.10)

Field	Data
End Effective	<end effective date of the cumulative orders being closed>
Transfer WIP	No
Update	Yes

- 3 To delete the next cumulative order:  
Use Cumulative Order Maintenance (18.22.6)
  - a Use the Down Arrow to select the next cumulative order.
  - b Press F2.
  - c Press F5.
- 4 Repeat this process for every cumulative order.
- 5 Turn off new repetitive by setting Enable New Repetitive to No.  
Use Repetitive Control File (18.22.24)

## Labor Transaction

Use this function to issue material and labor and record completions at the second operation. It is very similar in concept to the Advanced Repetitive Backflush Transaction.

- 1 To record labor feedback, enter the following:  
Use Repetitive Labor Transaction (18.14)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	<your parent item number>
Op	20
Production Line	1000
Qty Completed	3

- 2 Advance to the Issue Data Input frame and for the component item listed enter:

Field	Data
Quantity	3
Lot/Serial	L1

**Note** Ignore any warning message.

- 3 Advance to the WIP Lot Input Queue Issue Data frame and enter the following:

Field	Data
Lot/Serial	10-1
Ref	<leave blank>
Qty	3

**Note** Ignore any warning message.

- 4 Advance to the WIP Lot Output Queue Receipt Data frame. Delete the default entry by doing the following:
  - a Press the Down Arrow.
  - b Press Enter.
  - c Press Delete-button.
  - d Confirm the delete.
- 5 In the WIP Lot Output Queue Receipt Data frame enter the following:

Field	Data
Lot/Serial	20-1
Ref	<leave blank>
Qty	3

- 6 Review the repetitive transaction detail. There will be two Operation History records created of type LABOR. Select the first one.  
Use Repetitive Trans Detail Inquiry (18.4.2)
- 7 The data displayed shows the material lots consumed and produced as a result of this transaction.

**Note** You can also use WIP Lot Convert Trans Report (3.22.13.15) to display this information.

## Setup Transaction

Record setup labor against an operation. You will be prompted to enter the lot numbers of the WIP to which this reported labor will be associated.

**Note** Note this function is very similar to Run Labor Transaction (18.22.14) and Setup Labor Transaction (18.22.15).

- 1 To record setup labor against an operation, enter the following:  
Use Repetitive Setup Transaction (18.13)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	<your parent item number>

Field	Data
Op	10
Production Line	1000
Actual Setup Time	5

- 2 Advance to the Labor WIP Lots frame and enter 10-1 in the first Lot/Serial field.
- 3 Review the repetitive transaction detail. It should default to your last transaction (LABOR). Use Repetitive Trans Detail Inquiry (18.4.2)
- 4 Review the WIP Lot Trace Data. The data displayed shows the WIP lot/serial entered with a quantity of 0.0 (zero). This tracing record is created in order to associate the reported labor with the “production” of the WIP lot/serial.

## Reject Transaction

This function lets you issue material and labor, record completions at an operation, and immediately disposition the completed material as rejected. The completed WIP material will be placed in the Reject Queue of the operation, where it waits for disposition by the user (either scrap or rework).

- 1 To record the completions, enter the following:  
Use Repetitive Reject Transaction (18.17)

Field	Data
Site	Train
Item Number	<your parent item number>
Operation	20
Production Line	1000
Employee	<use your Down Arrow to select the first record>
Qty Reject	3

- 2 Advance to the Issue Data Input frame and for the component item listed enter:

Field	Data
Quantity	3
Lot/Serial	L1

**Note** Ignore any warning message.

- 3 Advance to the WIP Lot Input Queue Issue Data frame, enter the following:

Field	Data
Lot/Serial	10-1
Ref	<leave blank>
Qty	3

**Note** Ignore any warning message.

- 4 Advance to the WIP Lot Reject Data frame, delete any default entry, and enter the following:

Field	Data
Lot/Serial	20-1
Ref	<leave blank>
Qty	3

- 5 Review the repetitive transaction detail. There will be two Operation History records created of type LABOR. Select the first one.

Use Repetitive Trans Detail Inquiry (18.4.2)

- 6 Review the WIP Lot Trace Data. The data displayed shows the material lots consumed and produced as a result of this transaction. Select the second one.

- 7 Review the WIP Lot Processed. This shows the rejected WIP lot/serial entered above.

**Note** You can also use WIP Lot Non-Convert Trans Report (3.22.13.16) and WIP Lot Convert Trans Report (3.22.13.15) to display this information.

- 8 Run the WIP Lot Inventory Status Report by entering the cumulative order ID in the ID and To fields.

You can use the Lookup key to select the cumulative order ID.

Use WIP Lot Inventory Status Report (3.22.13.13)

- 9 Review the report. You will see the rejected WIP lot in the operation's reject queue.

## Rework Transaction

Change the disposition of rejected material back to good material. For WIP lot/serials, this involves moving them from the reject queue of the reporting operation to the input queue of the following operation. If at the last operation, it involves moving to finished material inventory.

- 1 To change the rejected material back to good material, enter the following:

Use Repetitive Rework Transaction (18.16)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	<your parent item number
Operation	10
Production Line	1000
Qty Rework	3

- 2 Advance to the WIP Lot Rework Data frame. Enter 20-1 in the Lot/Serial field and in the Reworked Lot/Serial field enter 20-1R.

- 3 Review the repetitive transaction detail. It should default to your last transaction (LABOR).

Use Repetitive Trans Detail Inquiry (18.4.2)

- 4 Review the WIP Lot Processed frame. This lists the WIP lot/serial processed by this transaction.
- 5 Review the WIP Lot Trace Data frame. The data displayed shows the material lots consumed and produced as a result of your rework transaction. This tracing data is recorded only because the entered Reworked Lot/Serial value is different from the Lot/Serial value.

**Note** You can also use WIP Lot Non-Convert Trans Report (3.22.13.16) and WIP Lot Convert Trans Report (3.22.13.15) to display this information.

## Scrap Transaction

Use this function to scrap material previously rejected. For WIP lot/serials, this entails reducing their QOH balances at the reject queue of the reporting operation.

- 1 To scrap the rejected material, enter the following:  
Use Repetitive Scrap Transaction (18.18)

Field	Data
Site	Train
Item Number	<your parent item number>
Operation	10
Production Line	1000
Qty Scrapped	3

- 2 Advance to the WIP Lot Reject Queue Issue Data frame. Press the Lookup key to display a list of WIP lot/serials at that operation. Select one and enter 3 in Qty.

**Note** You can enter a non-existent WIP lot/serial if necessary.

- 3 Review the repetitive transaction detail. It should show your last transaction (SCRAP) as the default.  
Use Repetitive Trans Detail Inquiry (18.4.2)
- 4 Review the WIP Lot Processed frame. This shows the WIP lot/serial that was scrapped by this transaction. Note that there will be one Operation History record written for each WIP lot/serial scrapped.

**Note** You can also use WIP Lot Non-Convert Trans Report (3.22.13.16) to display this information.

APPENDIX A

# Workshops

## Control and Registration

### WIP Lot Number Sequence ID

Set this field, then run the Backflush Transaction to view how an automatic lot number can be generated.

- To set up the number range, enter the following:  
Use Number Range Maintenance (36.2.21.1)

Field	Data
Sequence ID	WLT
Description	<anything>
Target Dataset	<leave blank>
Internal	Yes
Allow Discarding	Yes
Allow Voiding	Yes

- Advance to the Segment List frame and enter the following:

Field	Data
Nbr	1
Type	FIXED

- The Fixed Segment Editor frame displays. Enter the following:

Field	Data
Fixed Value	WLT

- In the Segment List frame create a second entry by entering the following:

Field	Data
Nbr	2
Type	INT

- The Integer Segment Editor frame displays. Enter the following:

Field	Data
Minimum Value	0
Maximum Value	9999
Initial Value	0
Reset Value	9999

- To create the sequence ID, in the WIP Lot Number Sequence ID field enter WLT.

Use WIP Lot Trace Control File (3.22.13.24)

## Backflush

**Note** The following activity requires Advanced Repetitive be enabled.

- 1 Check the setting of the Enable New Repetitive field. If it is set to No, set to Yes.  
Use Repetitive Control File (18.22.24)  
If you get the message “You must run rewocl.p before using this module. Please re-enter.” do the following:
  - a Run Cumulative Ord Accounting Close (18.9), accepting the defaults.
  - b Run Cumulative Order Maintenance (18.6). Using your Arrow keys, locate all cumulative orders and delete them.
  - c Change the Enable New Repetitive field to Yes.  
Use Repetitive Control File (18.22.24)
- 2 To run the backflush, enter the following:  
Use Backflush Transaction (18.22.13)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	<your parent item number>
Operation	10
Line	1000
Qty Processed	3

- 3 Advance to the Issue Data Input frame and for the component item listed enter:

Field	Data
Quantity	3
Lot/Serial	L1

**Note** Ignore any warning message.

- 4 Advance to the WIP Lot Output Queue Receipt Data frame. Leave Lot/Serial and Reference blank. When you proceed to Qty, Lot/Serial, it will default to the next sequence number for the indicated sequence id. Do not complete the transaction.

**Note** You can override this field by creating an entry in Routing Registration Maintenance (3.22.13.1).

## Split WIP Lots

- 1 Change the Split WIP Lots field to No.

Use WIP Lot Trace Control File (3.22.13.24)

By setting this field to No, you prevent an input WIP lot from being processed into two or more output WIP lots.

- 2 To run the backflush, enter the following:

Use Backflush Transaction (18.22.13)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	<your parent item number>
Operation	20
Line	1000
Qty Processed	3

- 3 Advance to the Issue Data Input frame and for the component item listed enter:

Field	Data
Quantity	3
Lot/Serial	L1

**Note** Ignore any warning message.

- 4 Advance to the WIP Lot Input Queue Issue Data frame and enter lot number L1, quantity 3.

- 5 Advance the WIP Lot Output Queue Receipt Data frame and change the quantity for L1 to 1. Also enter lot number L2, quantity 2.

You should see the message “ERROR: Cannot specify more than one WIP lot when splitting not allowed.” Do not complete the transaction.

The checking works across transactions also. For example, instead of trying to create output WIP lots L1 and L2 from input WIP lot L1 at the same time, you could have entered them in separate transactions. The second transaction would produce the error message. In this case, the error message occurs after entry of the WIP Lot Output Queue Receipt Data and appears as an overlay frame.

**Note** You can override this field by creating an entry in Routing Registration Maintenance (3.22.13.1).

## Combine WIP Lots

Set this field to No and run the Backflush Transaction to view its effect. By setting this field to No, you prevent two or more input WIP lot from being processed into one output WIP lot.

- 1 Set the following control fields:

Use WIP Lot Trace Control File (3.22.13.24)

Field	Data
Split WIP Lots	Yes
Combine WIP Lots	No

- 2 To run the backflush transaction, enter the following:

Use Backflush Transaction (18.22.13)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	<your parent item number>
Operation	20
Line	1000
Qty Processed	3

- 3 Advance to the Issue Data Input frame and for the component item listed enter:

Field	Data
Quantity	3
Lot/Serial	L1

**Note** Ignore any warning message.

- 4 Advance to the WIP Lot Input Queue Issue Data frame and enter lot number L1, quantity 1, and lot number L2, quantity 2.

You should see the message “ERROR: Cannot specify more than one WIP lot when combining not allowed.” Do not complete the transaction.

The checking works across transactions also. For example, instead of trying to enter input WIP lots L1 and L2, you could have entered them in separate transactions. The second transaction would produce the error message. In this case, the error message occurs after entry of the WIP Lot Output Queue Receipt Data and appears as an overlay frame.

**Note** You can override this field by creating an entry in Routing Registration Maintenance (3.22.13.1).

## WIP Lot Overissue

Set WIP Lot Overissue to No and run the Backflush Transaction to view its effect. By setting this field to No, you prevent QOH balances for WIP lots from becoming negative.

**Note** This is similar to Overissue in Inventory Status Code Maint (1.1.1).

- 1 Set the following control fields:  
Use WIP Lot Trace Control File (3.22.13.24)

Field	Data
Combine WIP Lots	Yes
WIP Lot Overissue	No

- 2 To run the backflush, enter the following:  
Use Backflush Transaction (18.22.13)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	<your parent item number>
Operation	20
Line	1000
Qty Processed	3

- 3 Advance to the Issue Data Input frame and for the component item listed enter:

Field	Data
Quantity	3
Lot/Serial	L1

**Note** Ignore any warning message.

- 4 Advance to the WIP Lot Input Queue Issue Data frame and enter lot number L100, quantity 3.  
You should see the message “ERROR: Quantity on hand will become negative Op/Queue/Lot/Ref 20/Input/L100/. Please re-enter.” Do not complete the transaction.

**Note**

- All queues are checked to see if the transaction would result in any negative WIP lot QOH balances (e.g., output queue WIP lots for reversing backflushes)
- You can override this field by creating an entry in Routing Registration Maintenance (3.22.13.1)

## Combine Component Lots

Set the Combine Component Lots field to No and run the Backflush Transaction to view its effect. By setting this field to No, you prevent more than one lot of a particular component item from being consumed into a particular WIP lot.

**1** Set the following control fields:

Use WIP Lot Trace Control File (3.22.13.24)

Field	Data
WIP Lot Overissue	Yes
Combine Component Lots	No

**2** To run the backflush, enter the following:

Use Backflush Transaction (18.22.13)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	<your parent item number>
Operation	10
Line	1000
Qty Processed	3

**3** Advance to the Issue Data Input frame. Set Multi Entry to Yes.

**4** Advance to the Issue Detail frame.

- a** Delete the default entry.
- b** Enter two different lots for one component item.

**5** Advance to the WIP Lot Output Queue Receipt Data frame, enter lot number L11, quantity 3. You should then see the message “ERROR: Lots would be combined. Please re-enter.” and an overlay frame listing the component lots that are combined and into which output WIP lots they are being combined into. Do not complete the transaction.

**Note**

- The checking works across transactions also. For example, you could have consumed a lot of the component into WIP lot L11 in one transaction, and the other lot of the component into WIP lot L11 in another transaction. In this case, the message and overlay frame would appear in the second transaction.
- You can override this field by creating an entry in BOM Registration Maintenance (3.22.13.4).

## Lot Trace Start Op

Set this field to an operation other than the first and run the Backflush Transaction to view its effect.

- 1 Make sure all the control file Yes/No fields are set to Yes.  
Use WIP Lot Trace Control File (3.22.13.24)
- 2 Create an entry for the parent item. Set Lot Trace Start Op to 20.  
Use Routing Registration Maintenance (3.22.13.1)
- 3 To run the backflush, enter the following:  
Use Backflush Transaction (18.22.13)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	<your parent item number>
Operation	10
Line	1000
Qty Processed	3

- 4 Advance to the Issue Data Input frame and for the component item listed enter:

Field	Data
Quantity	3
Lot/Serial	L1

**Note** Ignore any warning message.

**Note** The WIP Lot Input Queue Issue Data frame does not appear. This is because the Lot Trace Start Op is the first operation at which lot/serial-controlled WIP material is produced.

## Serialized WIP Start Op

Set this field to the second operation in your routing, then run the Backflush Transaction to view its effect. This causes WIP inventory on and after this operation to be serial-controlled which means:

- WIP QOH changes can only be -1, 0, or 1
- WIP QOH balances can only be 0 or 1
- In effect it is the same as setting the Lot/Serial Control field to S (Serial) in Item Master Maintenance 1.4.1

- 1 Make sure all the control file Yes/No fields are set to Yes.  
Use WIP Lot Trace Control File (3.22.13.24)

- 2 Create an entry for the parent item. Make sure all the Yes/No fields are set to Yes. Enter the following:

Use Routing Registration Maintenance (3.22.13.1)

Field	Data
Lot Trace Start Op	0
Serialized WIP Start Op	20

- 3 To run the backflush, enter the following:

Use Backflush Transaction (18.22.13)

Field	Data
Employee	<use your Down Arrow to select the first record>
Site	Train
Item Number	<your parent item number>
Operation	20
Line	1000
Qty Processed	3

- 4 Advance to the Issue Data Input frame and for the component item listed enter:

Field	Data
Quantity	3
Lot/Serial	L1

**Note** Ignore any warning message.

- 5 Advance to the WIP Lot Input Queue Issue Data frame and enter lot L100 quantity 3.

**Note** Ignore any warning message.

- 6 Advance to the WIP Lot Output Queue Receipt Data frame and try to take the default entry. You should see the message “ERROR: Change in QOH must be 1 or 0 or -1. Please re-enter.”

- 7 Delete the default entry and try to enter a quantity other than -1, 0, or 1.

You should see the same message. Do not complete the transaction.

