

# **R11i Oracle Work In Process Transactions - Moves and Resources**

**Student Guide**

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## Preface

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### **Profile**

#### **Before You Begin This Course**

Before you begin this course, you should have the following qualifications:

- Thorough knowledge of Oracle Bills of Material Release 11*i*

#### **Prerequisites**

- Oracle Inventory Release 11*i*

#### **How This Course Is Organized**

R11*i* Oracle Work in Process Transactions – Moves and Resources is an instructor-led course featuring lecture and hands-on exercises. Online demonstrations and written practice sessions reinforce the concepts and skills introduced.

## Related Publications

### Oracle Publications

<b>Title</b>	<b>Part Number</b>
<i>Oracle Work in Process User's Guide</i>	<i>A83598-01</i>
<i>Oracle Shop Floor Management User's Guide</i>	<i>A83717-01</i>

### Additional Publications

- System release bulletins
- Installation and user's guides
- read.me files
- Oracle Magazine



# Typographic Conventions

## Typographic Conventions in Text

Convention	Element	Example
Bold italic	Glossary term (if there is a glossary)	The <b><i>algorithm</i></b> inserts the new key.
Caps and lowercase	Buttons, check boxes, triggers, windows	Click the Executable button. Select the Can't Delete Card check box. Assign a When-Validate-Item trigger to the ORD block. Open the Master Schedule window.
Courier new, case sensitive (default is lowercase)	Code output, directory names, filenames, passwords, pathnames, URLs, user input, usernames	Code output: <code>debug.set ('I', 300);</code> Directory: <code>bin</code> (DOS), <code>\$FMHOME</code> (UNIX) Filename: Locate the <code>init.ora</code> file. Password: User <code>tiger</code> as your password. Pathname: Open <code>c:\my_docs\projects</code> URL: Go to <code>http://www.oracle.com</code> User input: Enter <code>300</code> Username: Log on as <code>scott</code>
Initial cap	Graphics labels (unless the term is a proper noun)	Customer address ( <i>but</i> Oracle Payables)
Italic	Emphasized words and phrases, titles of books and courses, variables	Do <i>not</i> save changes to the database. For further information, see <i>Oracle7 Server SQL Language Reference Manual</i> . Enter <code>user_id@us.oracle.com</code> , where <i>user_id</i> is the name of the user.
Quotation marks	Interface elements with long names that have only initial caps; lesson and chapter titles in cross-references	Select "Include a reusable module component" and click Finish.  This subject is covered in Unit II, Lesson 3, "Working with Objects."
Uppercase	SQL column names, commands, functions, schemas, table names	Use the SELECT command to view information stored in the <code>LAST_NAME</code> column of the EMP table.

Convention	Element	Example
Arrow	Menu paths	Select File→ Save.
Brackets	Key names	Press [Enter].
Commas	Key sequences	Press and release keys one at a time: [Alternate], [F], [D]
Plus signs	Key combinations	Press and hold these keys simultaneously: [Ctrl]+[Alt]+[Del]

## Typographic Conventions in Code

Convention	Element	Example
Caps and lowercase	Oracle Forms triggers	When-Validate-Item
Lowercase	Column names, table names	SELECT last_name FROM s_emp;
	Passwords	DROP USER scott IDENTIFIED BY tiger;
	PL/SQL objects	OG_ACTIVATE_LAYER (OG_GET_LAYER ( 'prod_pie_layer' ) )
Lowercase italic	Syntax variables	CREATE ROLE <i>role</i>
Uppercase	SQL commands and functions	SELECT userid FROM emp;

## Typographic Conventions in Navigation Paths

This course uses simplified navigation paths, such as the following example, to direct you through Oracle Applications.

(N) Invoice > Entry > Invoice Batches Summary (M) Query > Find (B) Approve

This simplified path translates to the following:

1. (N) From the Navigator window, select Invoice > Entry > Invoice Batches Summary.
2. (M) From the menu, select Query > Find.
3. (B) Click the Approve button.

## **Notations :**

(N) = Navigator

(M) = Menu

(T) = Tab

(I) = Icon

(H) = Hyperlink

(B) = Button

## **Typographical Conventions in Help System Paths**

This course uses a “navigation path” convention to represent actions you perform to find pertinent information in the Oracle Applications Help System.

The following help navigation path, for example—

(Help) General Ledger > Journals > Enter Journals

—represents the following sequence of actions:

1. In the navigation frame of the help system window, expand the General Ledger entry.
2. Under the General Ledger entry, expand Journals.
3. Under Journals, select Enter Journals.
4. Review the Enter Journals topic that appears in the document frame of the help system window.

## **Getting Help**

Oracle Applications provides you with a complete online help facility.

Whenever you need assistance, simply choose an item from the Help menu to pinpoint the type of information you want.

## **To display help for a current window:**

1. Choose Window Help from the Help menu, click the Help button on the toolbar, or hold down the Control key and type 'h'.

A web browser window appears, containing search and navigation frames on the left, and a frame that displays help documents on the right.

The document frame provides information on the window containing the cursor. The navigation frame displays the top-level topics for your responsibility, arranged in a tree control.

2. If the document frame contains a list of topics associated with the window, click on a topic of interest to display more detailed information.
3. You can navigate to other topics of interest in the help system, or choose Close from your web browser's File menu to close help.

## **Searching for Help**

You can perform a search to find the Oracle Applications help information you want. Simply enter your query in the text field located in the top-left frame of the browser window when viewing help, then click the adjacent Find button.

A list of titles, ranked by relevance and linked to the documents in question, is returned from your search in the right-hand document frame. Click on whichever title seems to best answer your needs to display the complete document in this frame. If the document doesn't fully answer your questions, use your browser's Back button to return to the list of titles and try another.

# **R11i Oracle Work in Process Transactions - Moves and Resources**

## **Chapter 1**



### **Work In Process Transactions Moves and Resources R11i**

## Objectives

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### Objectives

**After completing this component, you should be able to do the following:**

- **Move assemblies on the shop floor**
- **Track assembly movements on the shop floor**
- **Report shop floor activity**
- **Manage rejected assemblies in work in process**
- **Charge resources to jobs or schedules**
- **Monitor resource transaction activity**

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# Agenda

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## Agenda

- Overview
- Moving Assemblies
- Managing Rejecting Assemblies
- Charging Resources

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## Overview

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Overview

### Objectives

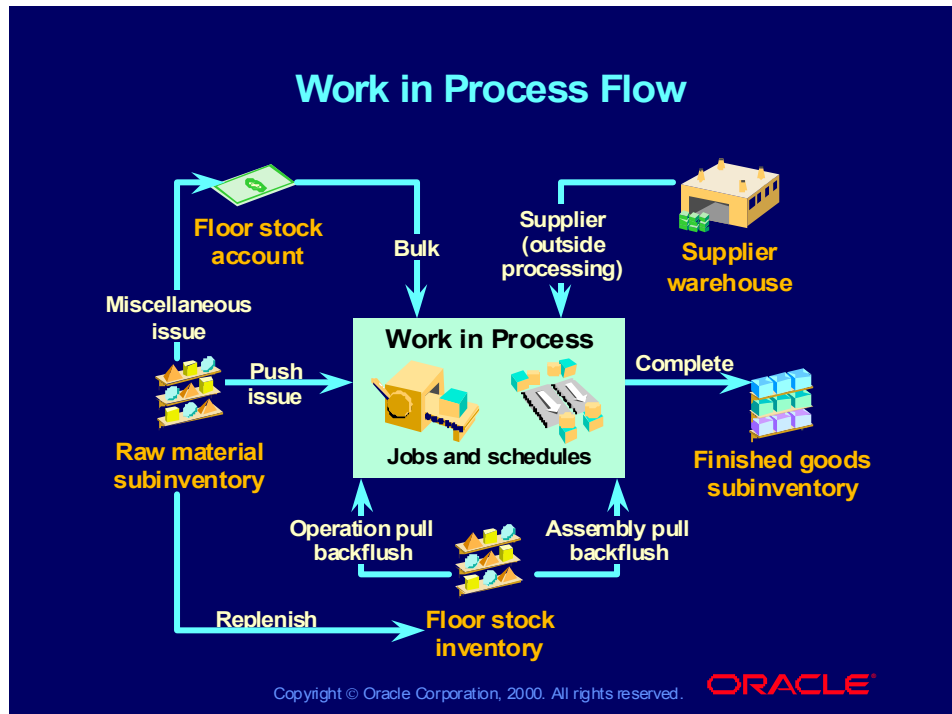
In this section you will cover the following:

- Work in process flow
- Repetitive flow
- WIP transactions
- Backflushing components
- Moving assemblies and charging resources
- Managing rejected assemblies
- WIP integration

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## Work in Process Flow



### Definitions

- **Issue transaction** is a material transaction to issue component items from inventory to work in process.
- **Replenishment transaction** is a material transaction to stage components in advance of backflushing.
- **Return transaction** is a material transaction to return components from WIP back to inventory. Return transactions increase WIP material requirements, inventory balances, and valuation, and decrease WIP valuation.

### Distinguishing Between Types of Material Transactions

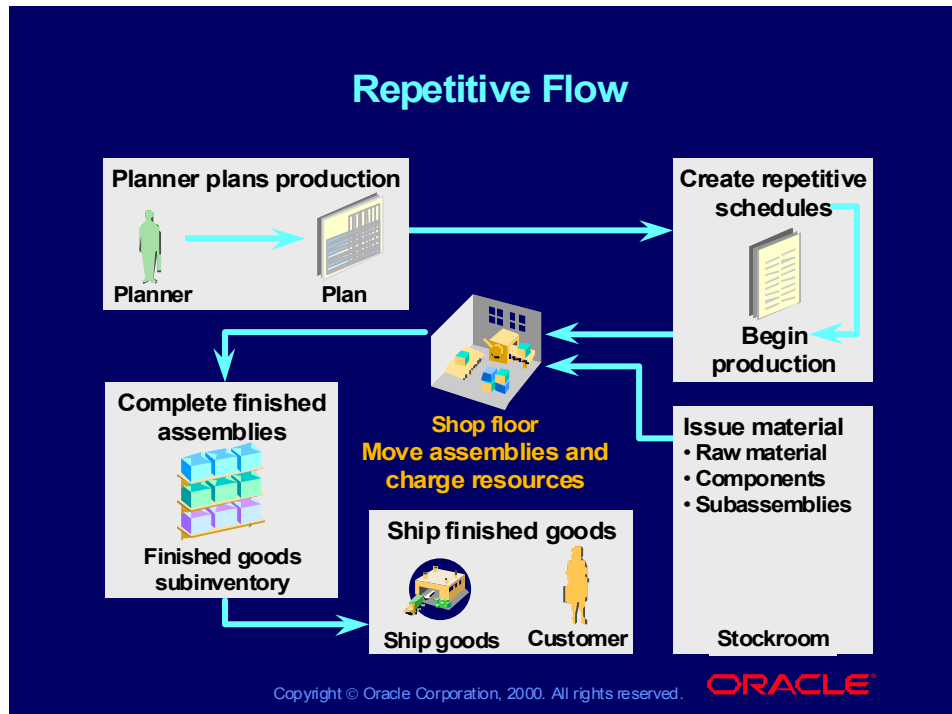
- **Material issue transactions** fulfill WIP material requirements on jobs or schedules.
  - Issue transactions reduce inventory balances and valuation.
  - Issue transactions incur WIP costs and increase WIP valuation.
- You can use supply types to control how components are supplied to fulfill material requirements.
- **Push issue transaction** is a material transaction to issue component items from inventory to work in process before you manufacture the assembly.

- **Backflush transaction** is a material transaction that automatically issues component items into work in process from inventory when you move or complete the assembly. A backflush transaction is also known as post-deduct or pull.

### **WIP Material Requirements**

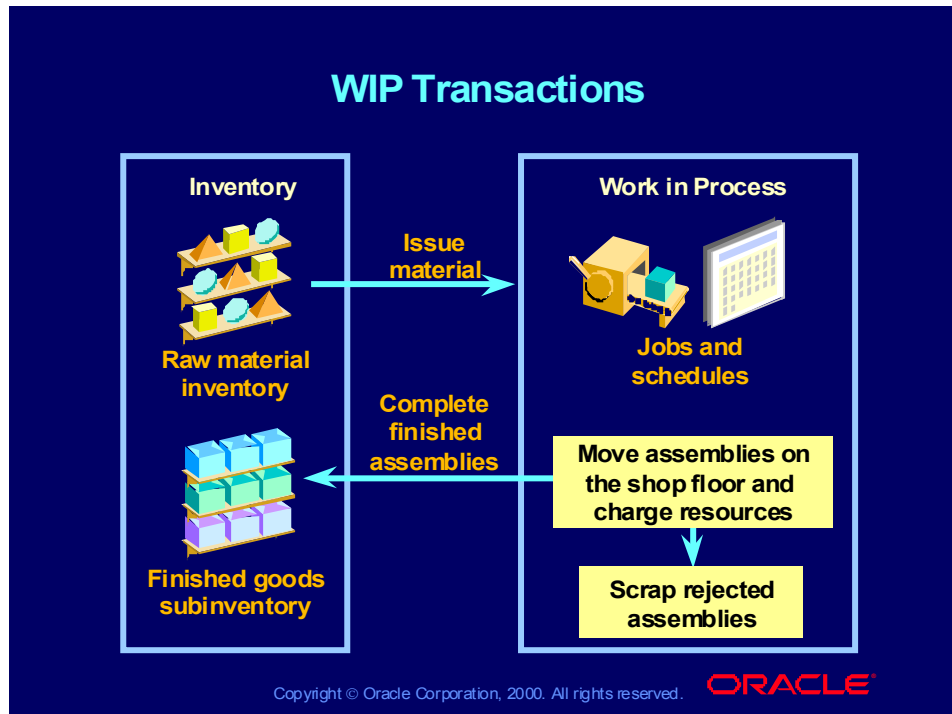
WIP material requirements describe the items and quantities needed to build an assembly on a discrete job or repetitive schedule. Requirements in discrete jobs or repetitive schedules come from component items defined on a bill of materials. WIP issue transactions fulfill material requirements.

## Repetitive Flow



## WIP Transactions

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### WIP Transactions

With Oracle WIP transactions, you can:

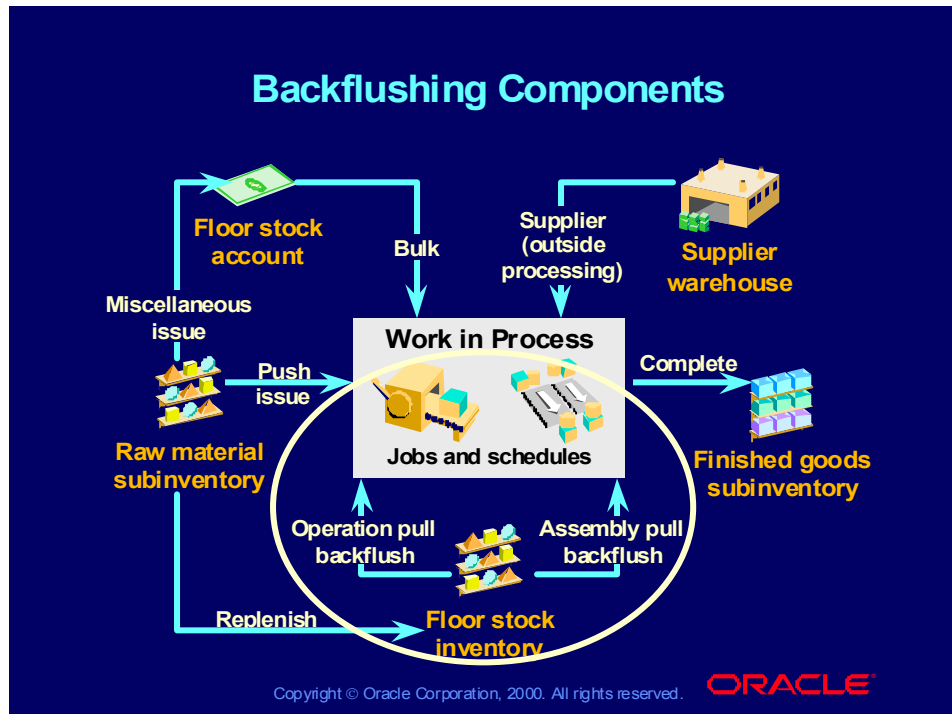
- Track and report your inventory accurately.
- Maintain accurate supply and demand information.
- Track activity costs.
- Value work in process.

Transactions are driven by actions.

### Examples

- Picking material from a picklist drives a material issue transaction in Oracle Work in Process.
- Completing an assembly at an operation drives a move and possibly a backflush transaction.
- Replenishing your subinventories drives a subinventory transfer transaction.
- Failing a test at an operation drives a scrap transaction.
- Receiving an assembly back from an outside vendor drives a move transaction.
- Finishing an assembly drives a completion into inventory and possibly a backflush transaction and job completion.

## Backflushing Components



### Backflushing Components

You can initiate a backflush from several sources. You do not need to do an explicit issue transaction if you use backflushing. You can automatically launch backflush transactions when moving or completing assemblies.

### Backflush Sources

- Move Transactions window
- Completion Transactions window
- Enter Receipts window in Oracle Purchasing (for outside processing)
- Oracle Inventory Material Transaction interface
- Open Move Transaction interface

### Operation Pull

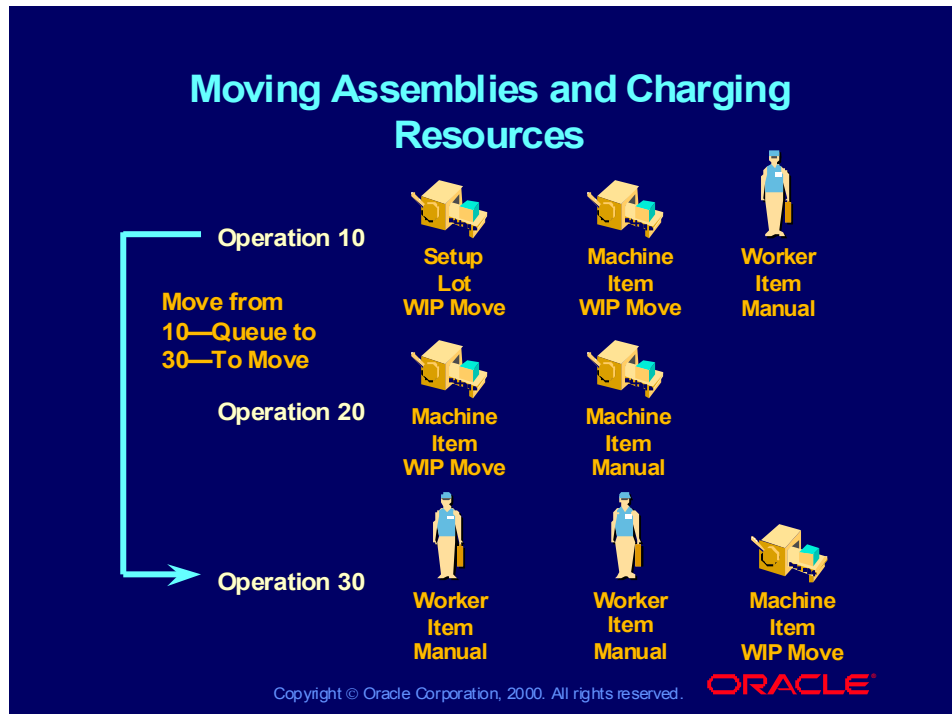
- Move transactions that complete an operation backflush all components with a supply type of Operation Pull.
- The backflush occurs only at routing operations with a backflush type of Yes. The backflush transaction backflushes all Operation Pull components at all appropriate previous operations in the routing as well.
- Components with a supply type of Operation Pull defined for an operation with a backflush type of No are backflushed after completing an operation with a backflush type of Yes later in the routing.

## **Assembly Pull**

WIP completion transactions backflush all components with a supply type of Assembly Pull.



## Moving Assemblies and Charging Resources



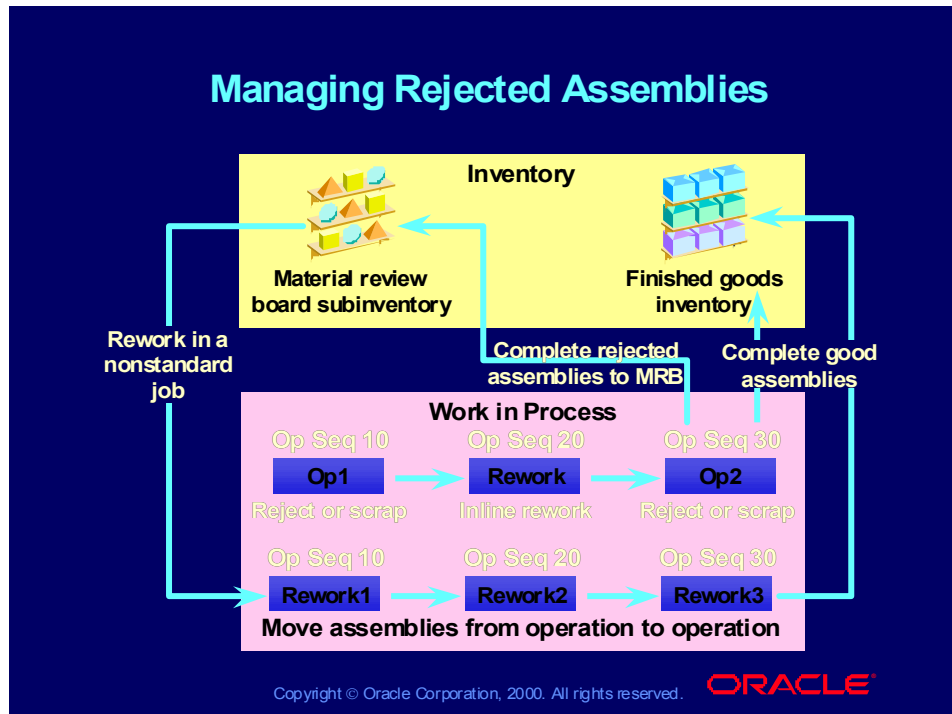
### Moving Assemblies and Charging Resources

#### Move and Resource Transactions

- **Move transactions** move assemblies from any operation on the routing to any other operation. Moves normally follow the sequence as defined by the routing.
- **Backward move** is used to correct a mistake or to perform additional work at a previous operation. Backward moves uncharge everything that was charged by the forward move.
- **Resource** is a thing of value, except material and cash, that is required to manufacture, cost, and schedule products. Resources include people, tools, machines, services purchased from a vendor, and physical space.
- **Resource basis** is the basis for resource usage quantity that indicates whether that quantity is required per item or per lot.
- **Lot-based resources** are resources whose usage quantity represents the amount you require per job or schedule. For example, a lot-based resource could be the amount of time required to set up a machine at an operation to build the assemblies on a job or painting or drying, where time is constant regardless of the job or schedule quantity.
- **Item-based resources** are resources whose usage quantity represents the amount you require per assembly you make. For example, an item-based resource could be the amount of time required to process each assembly at an operation for the job.

- **Resource transaction** is a transaction in which you automatically or manually charge resource costs to a discrete job or repetitive schedule. Transacting a resource is synonymous with charging a resource.

## Managing Rejected Assemblies



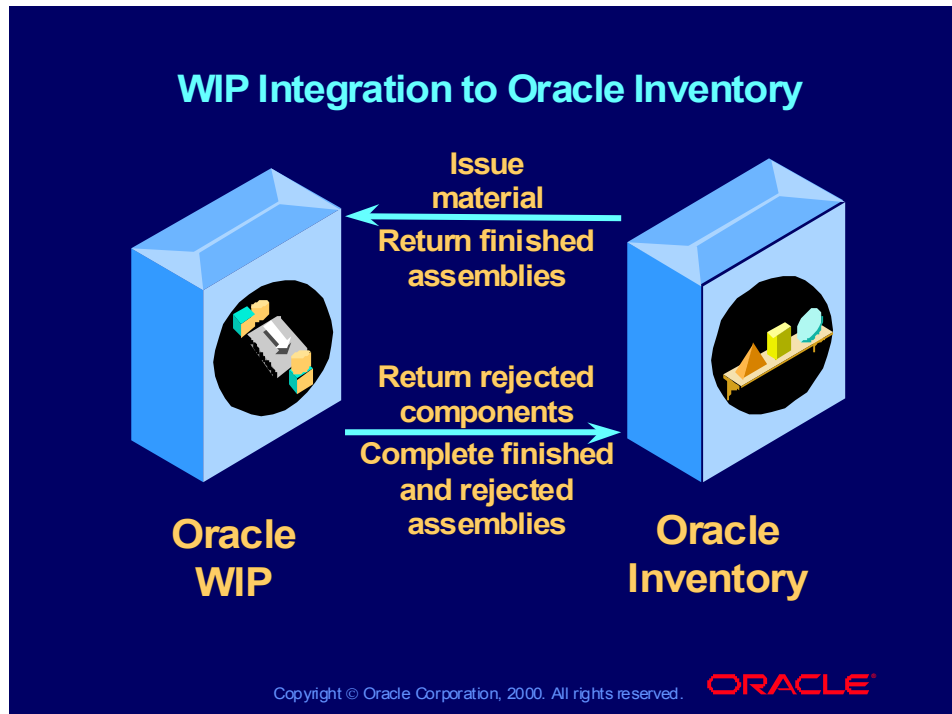
## Managing Rejected Assemblies

### Definitions

- **Reject** is an intraoperation step in an operation at which you record assemblies that require rework or need to be scrapped.
- **Scrap** is an intraoperation step at which you move assemblies that cannot be reworked or completed.
- **Scrap account** is an account that you use to charge scrap transactions.

## WIP Integration to Oracle Inventory

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### WIP Integration to Oracle Inventory

#### Material Transactions Use Inventory Controls

##### Item Status

The item being transacted must be transactable in Oracle Inventory.

##### Subinventories and Locators

You can use the subinventories and locators and any transaction default values defined in Oracle Inventory.

##### Lot Control

- Oracle Work in Process supports lot control for all material transactions.
- You can use the same entry window for issues, backflushes, and completions.
- You can enter lot numbers for items under lot control when performing issues, returns, and completions.
- You can use the lot number assigned upon receipt of an item into inventory when issuing that item to work in process.

##### Serial Number Control

- Oracle Work in Process supports serial number control for all material transactions.
- You can use the same entry window for issues, backflushes, and completions.

- When performing issues, returns, and completions, you can enter serial numbers for items under serial number control.
- When issuing that item to work in process, you can use the predefined or dynamically created serial numbers assigned upon receipt of an item into inventory.

### **Revisions**

- You can issue, return, or complete components under revision quantity control.
- Transaction quantities are tracked by revision.

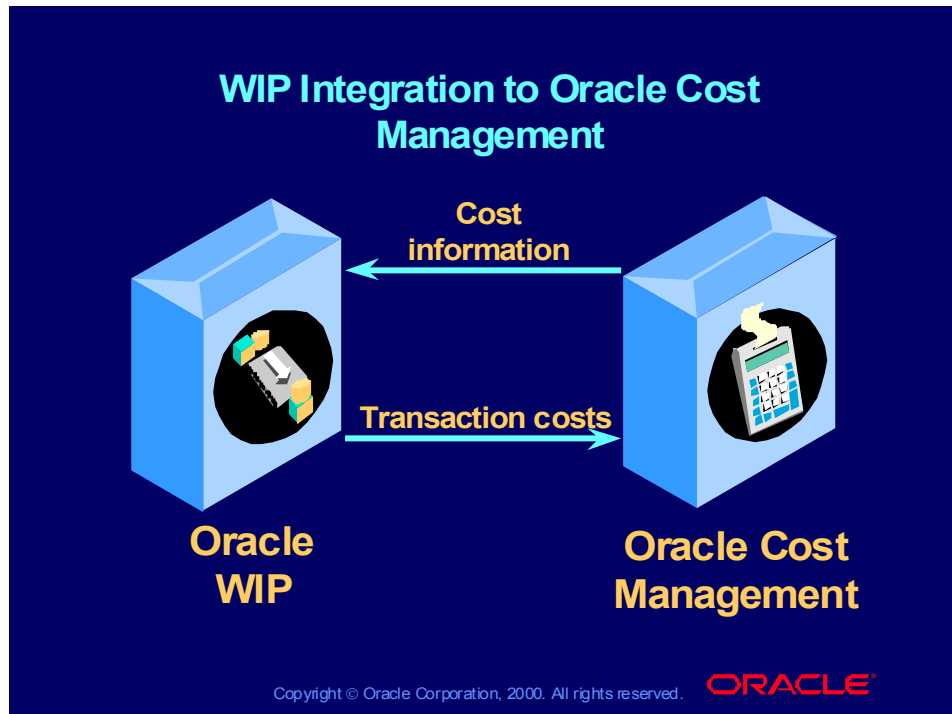
### **Issuing Material**

An issue transaction is a material transaction to issue component items from inventory to work in process.

- Material issue transactions fulfill WIP material requirements on jobs or schedules.
- Issue transactions reduce inventory balances and valuation.
- Issue transactions incur WIP costs and increase WIP valuation.
- You can use supply types to control how components are supplied to fulfill material requirements.
- A push issue transaction is a material transaction to issue component items from inventory to work in process before you manufacture the assembly.
- A backflush transaction is a material transaction that automatically issues component items into work in process from inventory when you move or complete the assembly. A backflush transaction is also known as post-deduct or pull.

## WIP Integration to Oracle Cost Management

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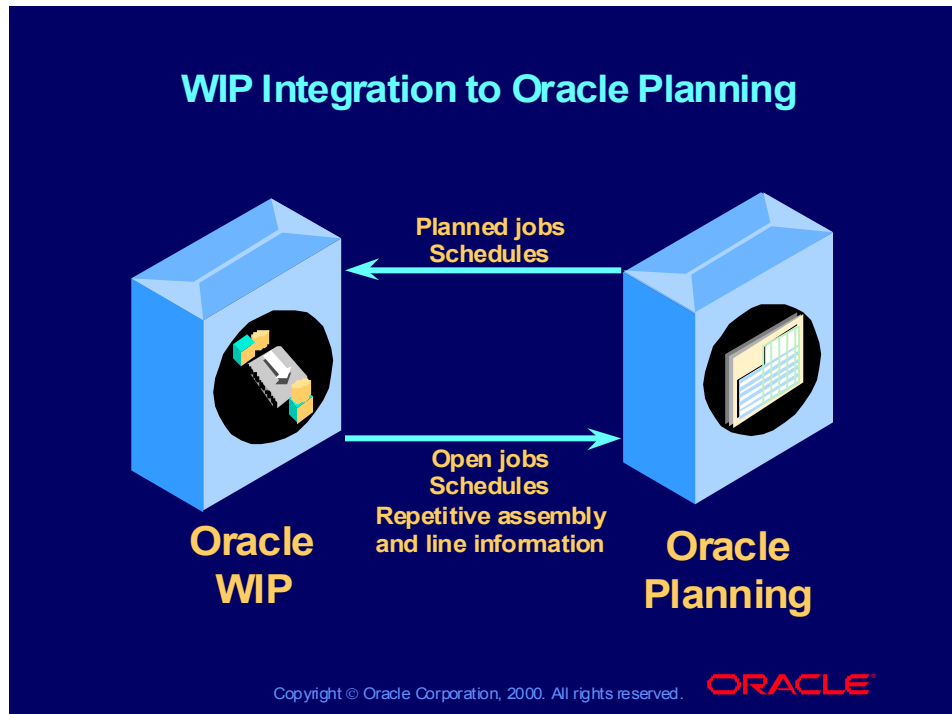
### WIP Integration to Oracle Cost Management

#### Costing Transactions

- Issue and return transactions affect your work in process and inventory valuations.
- Issue transactions increase your work in process valuation and decrease your inventory valuation.
- Return transactions increase your inventory valuation and decrease your work in process valuation.
- Move transactions can automatically launch backflush transactions and charge resources and overheads.
- Backflush material transactions increase your work in process valuation and decrease your inventory valuation.
- Resource charges increase your work in process valuation.
- Overhead charges increase your work in process valuation.
- You can cost resource transactions at either standard or actual.
- Completion transactions affect your work in process and inventory valuations.
- Completion transactions decrease your work in process valuation and increase your inventory valuation.

## WIP Integration to Oracle Planning

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### WIP Integration to Oracle Planning

#### Requirements

The planning process inflates the demand for a component with a yield factor of less than 1 to compensate for the expected component rejection in WIP.

**New Component Usage Quantity = Component Usage Quantity / Yield Factor**

The planning process creates additional demand for an item to compensate for the expected assembly shrinkage loss and maintain supply.

**Supply Quantity = (MRP Net Quantity - Quantity Completed - Quantity Scrapped) \* (1 - Shrinkage Rate)**

**Net Requirement = Original Demand - Supply Quantity From the Job**

**Shrinkage Demand = Demand \* 1 / (1 - Shrinkage Rate)**

**Total Demand = Manual (Original) Demand + Discrete Job Shrinkage + Planned Order Shrinkage**

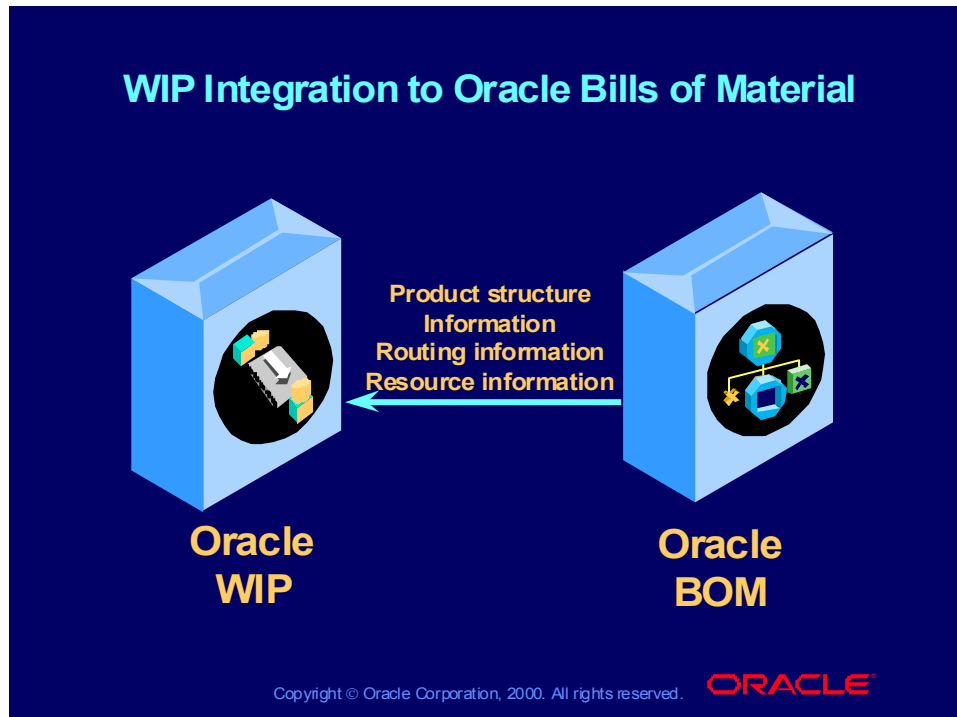
**Discrete Job Shrinkage = MRP Net Quantity - Supply Quantity from the Job**

**Planned Order Shrinkage = Shrinkage Demand - Net Requirement**

**Total Supply = Discrete Job Quantity + Planned Order Quantity**

## WIP Integration to Oracle Bills of Material

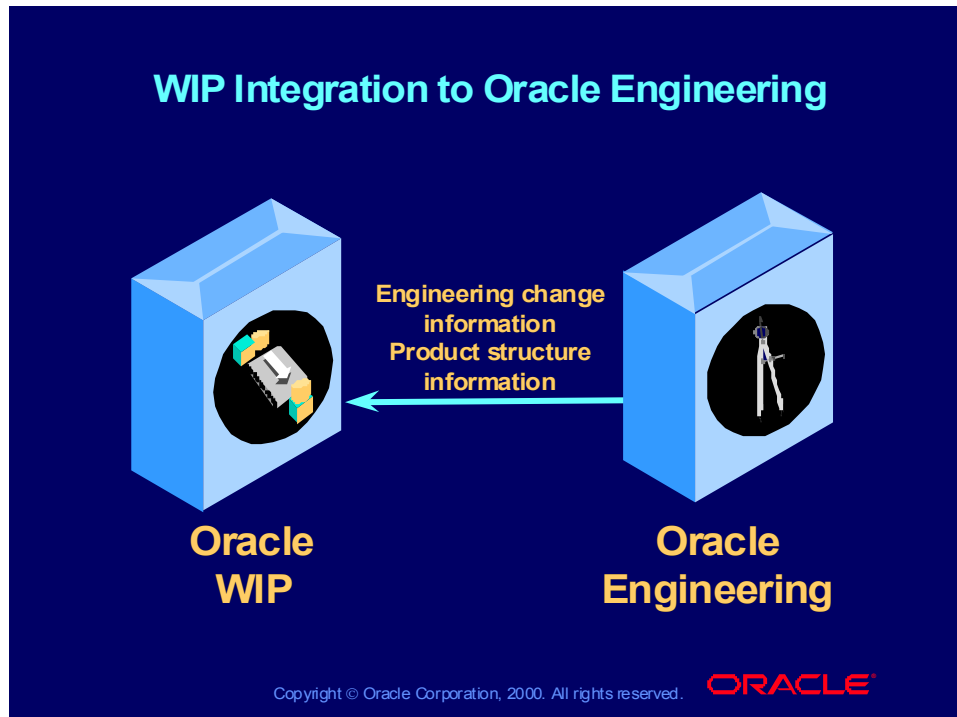
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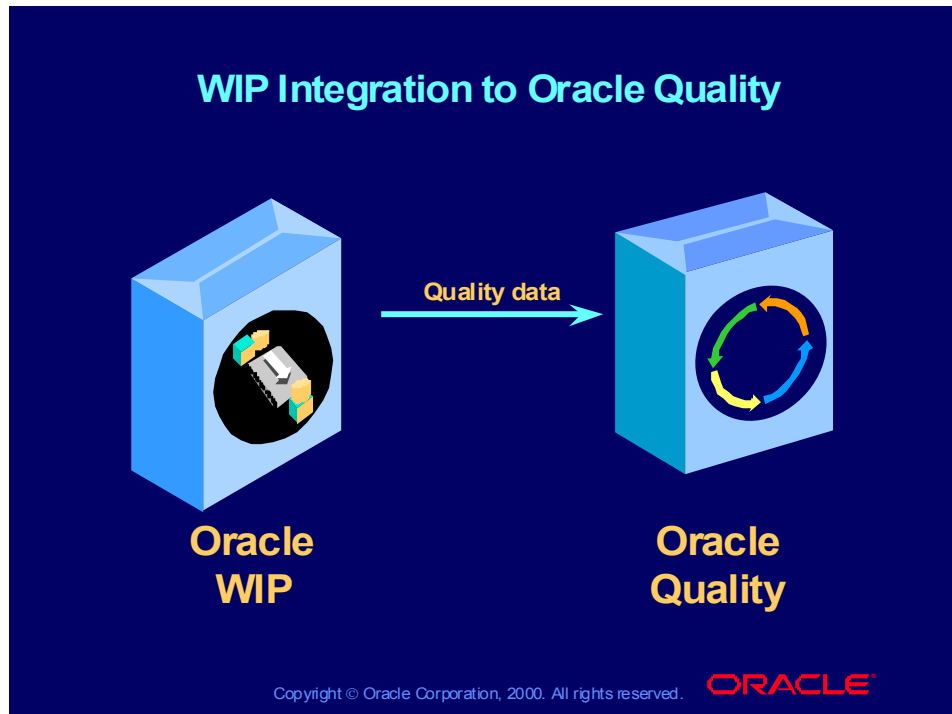
## WIP Integration to Oracle Engineering

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## WIP Integration to Oracle Quality

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### WIP Integration to Oracle Quality

- Collecting transactional data when doing move transactions.
- Writing context information for reference collection elements to the quality data repository.

### Collection Elements

Before you can collect data with Oracle Quality, you must first set up your data collection structure. The basic building block of this structure is the collection element, which is used in both the specification and the collection plan.

Collection elements define the characteristics of the product or process for which you are collecting, analyzing, and reporting data. For each collection element, you can specify a list of acceptable values or specification limits, such as target value and upper and lower limits.

### Specifications

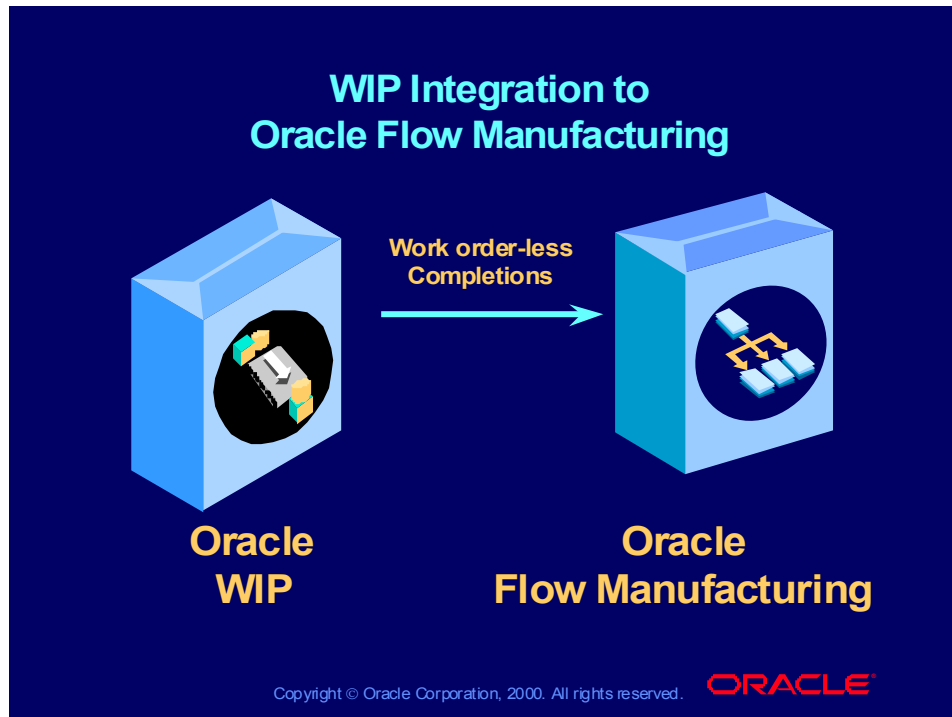
Specifications describe the requirements of a product. You can define specification limits for key characteristics of the product that you produce.

### Collection Plans

Collection plans are similar to test or inspection plans. Collection plans specify the collection elements to use in collecting data. Collection plans specify when and how to collect the data as well as the actions to take based on the data collected.

## WIP Integration to Oracle Flow Manufacturing

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### WIP Integration to Oracle Flow Manufacturing

Flow Manufacturing is a manufacturing approach with the objective of building the highest quality product in the shortest possible time at the lowest cost.

Production is recorded with the Work Order-less Completion transaction against flow schedules created with the Line Scheduling Workbench. Completions can be either unscheduled or scheduled against a flow schedule. The system backflushes all components and performs resource and overhead transactions upon recording completion of the finished product. Additionally, Oracle Flow Manufacturing allows assembly completions to be recorded without having to create work order, a job or repetitive schedule, or a flow schedule.

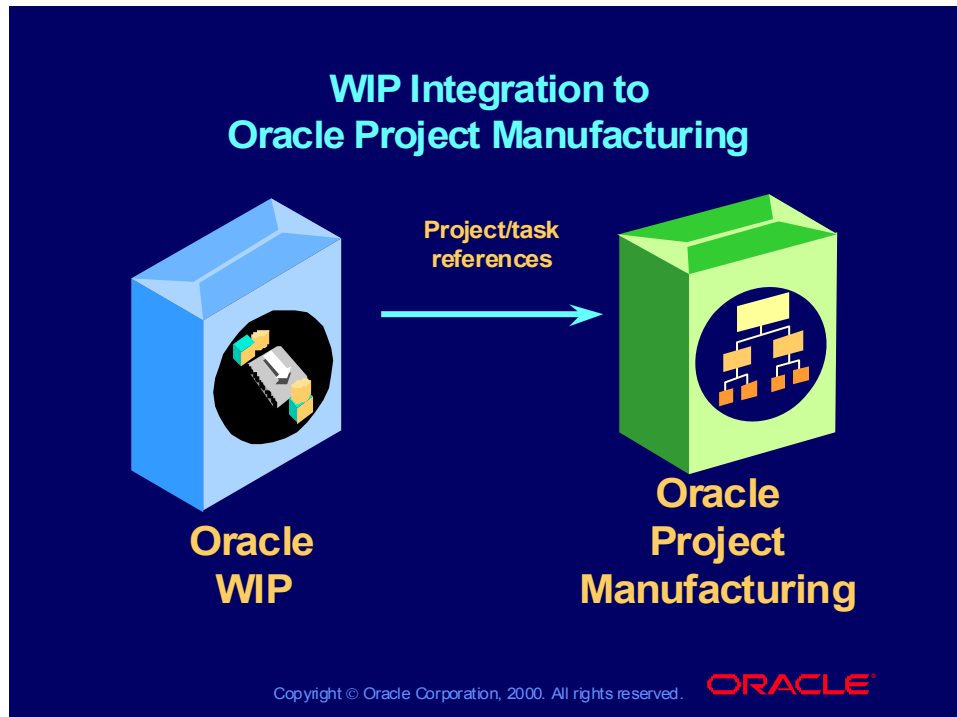
Work order-less completions in WIP and Flow do the following:

- Backflush pull and push components
- Charge resources and overhead based on the flow routing

You do not need to use Flow Manufacturing to do work order-less completions. They can be completed in Work in Process.

## WIP Integration to Oracle Project Manufacturing

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### WIP Integration to Oracle Project Manufacturing

#### Project WIP Jobs

You can create WIP jobs (work orders) with project/task references. Both standard and non-standard WIP jobs are supported. Standard Project WIP jobs can be created automatically and released from the Planner Workbench.

Performing move and resource transactions in Project Manufacturing is similar to doing moves and resources in discrete WIP jobs.

## Moving Assemblies

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**Moving Assemblies**

## Objectives

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### Objectives

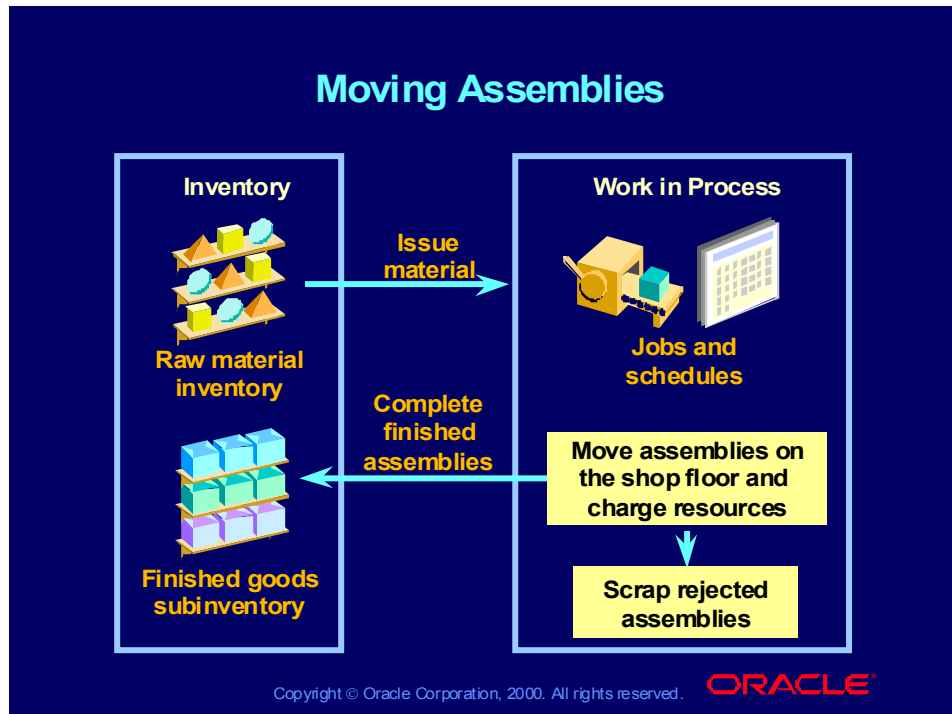
In this section you will cover the following:

- Intraoperation and interoperation moves
- Operation completions and uncompletions
- Reverse backflush transactions
- Performing, viewing, and pending move transactions
- Overcompletions
- Assignment of shop floor statuses and move restrictions
- Discrete workstation
- Shop floor activity reports
- Costing move transactions

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## Moving Assemblies



### Moving Assemblies

#### Moving Assemblies from Any Operation on the Routing to Any Other Operation

Moves normally follow the sequence as defined by the routing. For example, you can perform backward moves to correct a mistake or to perform additional work at a previous operation.

Backward moves uncharge everything that was charged by the forward move.

#### Adding Operations to WIP Routings

You can add an operation during a move transaction using the Move Transactions window only.

You can verify that the Enable Adding Operation flag is set to Yes in the Work in Process Parameters window.

For example, you can add an operation to perform sample testing if the routing does not already have it.

#### Move Transaction Concepts

Move Transactions can initiate other transactions in Oracle Work in Process:

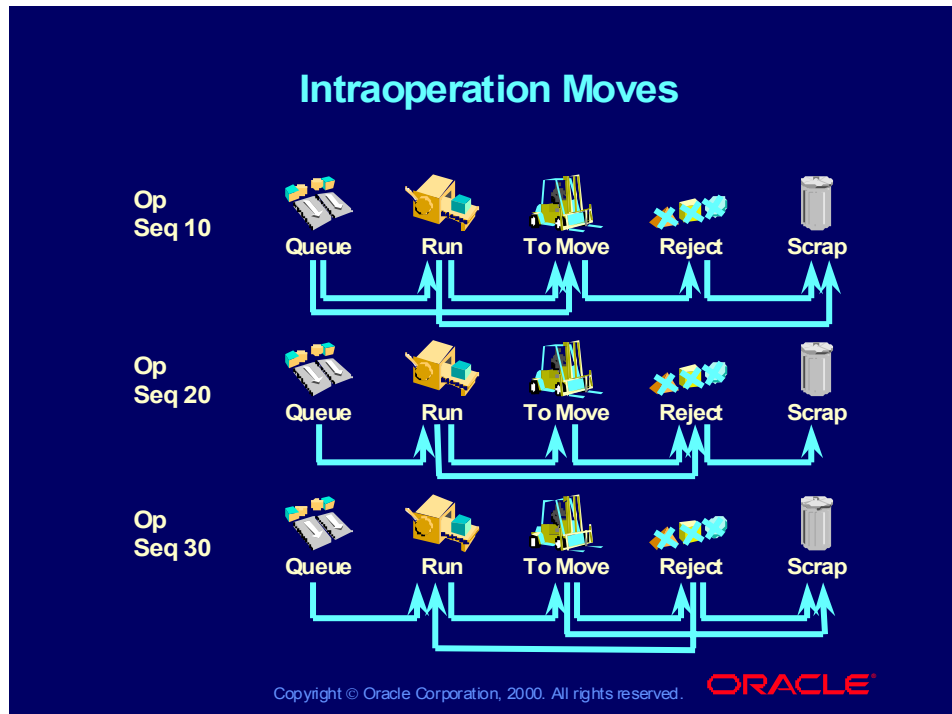
- Backflush issue transactions for components with supply type Operation Pull

- Automatic resource transactions for resources with autocharge type WIP Move
- Overhead transactions for overheads with basis type Item or Lot

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Shop Floor Control > Move Transactions



## Intraoperation Moves



### Intraoperation Moves

Intraoperation moves are assembly moves within an operation. Intraoperation steps are phases within an operation used to track assembly locations in detail. The steps are Queue, Run, To Move, Reject, and Scrap.

Intraoperation steps are not related to resource information or scheduling. For example, if you want to schedule queue time, you must define a queue resource in Oracle Bills of Material.

### Enable Steps

You can use the WIP Parameters window to specify which intraoperation steps you want to use. For example, if you want to keep track of the phases of your assemblies at each operation very closely, you would enable all intraoperation steps.

The Queue intraoperation step must be enabled.

### Move Assemblies to Enabled Steps

A pull manufacturer would probably enable the Run and To Move intraoperation steps. Assemblies wait in the To Move intraoperation step of the previous operation before they are pulled to the Run step of the next operation.

A push manufacturer would probably enable the Queue and Run intraoperation steps. Items wait in the Queue intraoperation step of the operation before they are pushed to the Run intraoperation step of the operation.

## **Automatic Transactions Timing**

The automatic transactions that can result from a move transaction must take place at one specific event point for each operation. This ensures that transactions are handled consistently and are not duplicated.

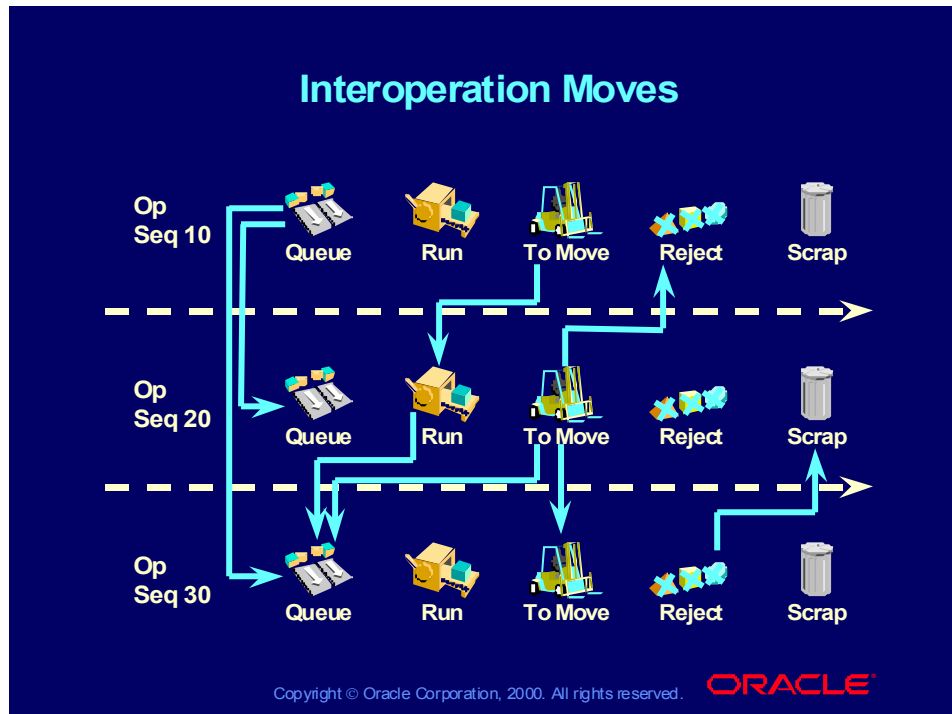
The event point at which the automatic transactions take place is called the operation completion.

Operation completions occur when quantities move into to move, reject, or scrap.

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Shop Floor Control > Move Transactions > Intraoperation Moves

## Interoperation Moves

---



### Interoperation Moves

Interoperation moves are assembly moves from one operation to another in a routing.

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Shop Floor Control > Move Transactions > Interoperation Moves

## Review Question

---

### Review Question

**Which intraoperation steps might you want to enable if you have a just-in-time production environment?**

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## Review Question Solution

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### Review Question Solution

**Which intraoperation steps might you want to enable if you have a just-in-time production environment?**

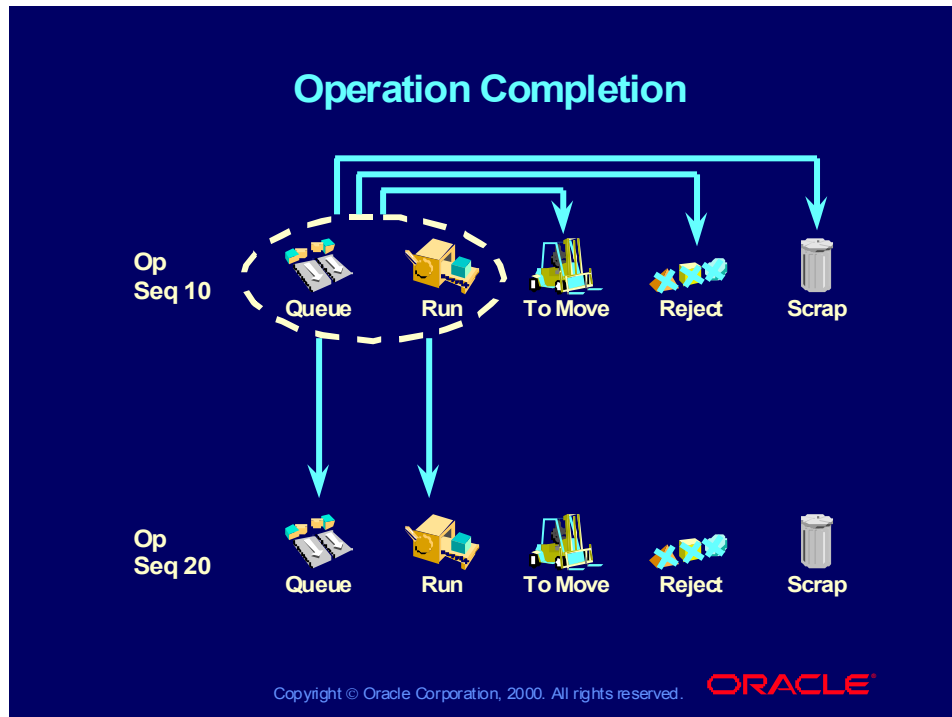
**You would probably enable only Run and To Move to model your environment.**

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## Operation Completion

---



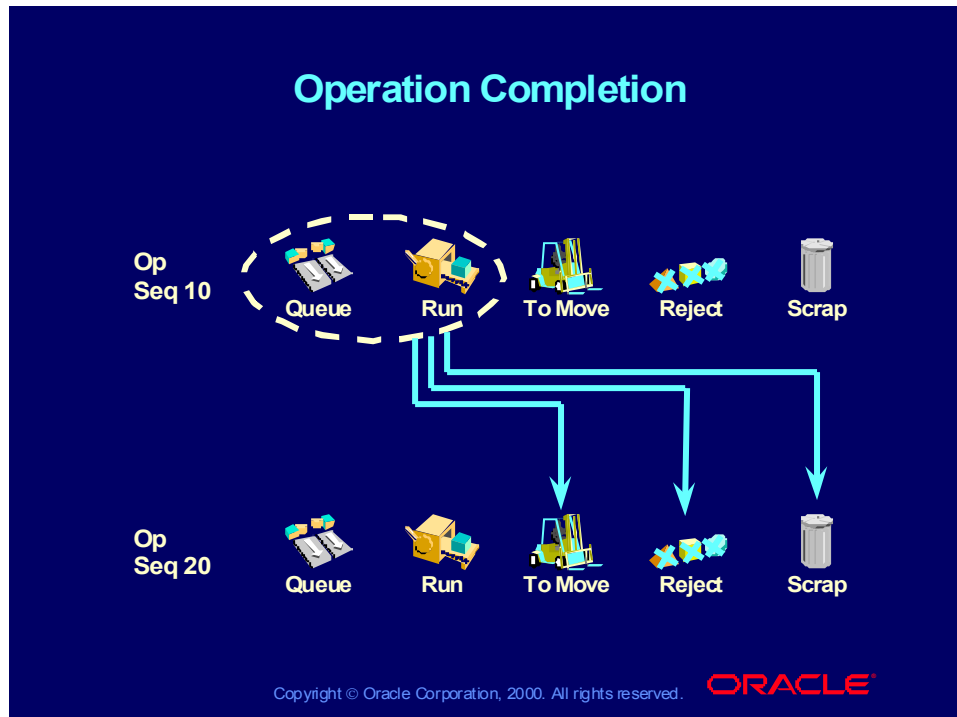
### Operation Completion

The slide shows the operation completion for Operation Sequence 10.

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Shop Floor Control > Move Transactions > Operation Completion Moves

## Operation Completion

---



### Operation Completion

The slide shows the operation completion for Operation Sequences 10 and 20.

## Operation Completion: Example 1

---

### Operation Completion: Example 1

Move Transaction	Operations Completed
10 Queue→10 Run	
10 Queue→10 To Move	10
10 Queue→20 Queue	10
10 Queue→20 Scrap	10, 20
10 Queue→50 Queue	20, 30, 40
30 Reject→50 To Move	40, 50
50 Reject→50 Scrap	

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### Operation Completion: Example 1

The routing consists of operation sequences 10, 20, 30, 40, and 50.

Assume that all operations have Autocharge selected.

#### Notes

With the autocharge flag you can control operation completions and associated automatic transactions.

Count point determines the default for the next operation when you do a move transaction.



## Operation Completion: Example 2

---

### Operation Completion: Example 2

Move Transaction	Operations Completed
10 Queue→10 Run	
10 Queue→10 To Move	10, 20
10 Queue→30 Queue	10
10 Queue→20 Scrap	10, 20
10 To Move→40 Queue	30
10 Queue→50 To Move	10, 30, 40, 50
30 Queue→50 Scrap	30, 40, 50

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### Operation Completion: Example 2

The routing consists of operation sequences 10, 20, 30, 40, and 50.

The count point types are

- Op seq 10: Count Point selected, Autocharge cleared.
- Op seq 20: Count Point cleared, Autocharge cleared.
- Op seq 30: Count Point cleared, Autocharge selected.
- Op seq 40: Count Point selected, Autocharge selected.
- Op seq 50: Count Point selected, Autocharge selected.

## Operation Completion: Example 3

---

### Operation Completion: Example 3

Op Seq	Backflush Flag	Component	Supply Type
10	No	A B C	Push Operation pull Assembly pull
20	Yes	D E	Operation pull Assembly pull
30	No	F G	Operation pull Assembly pull
40	Yes	H	Operation pull

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### Operation Completion: Example 3

Assume that all operations have Autocharge selected.

With backflush flag you can control when you want to process your backflush transactions.

## Operation Completion: Example 3

---

### Operation Completion: Example 3

Move Transactions	Backflushing Now?
10 Queue—>20 To Move	Yes—Components B and D
10 Queue—>30 To Move	Yes—Components B and D
10 Queue—>40 To Move	Yes—Components B, D, F, and H
20 Queue—>30 To Move	Yes—Components B and D
20 Queue—>40 To Move	Yes—Components B, D, F, and H
20 To Move—>30 To Move	No
20 To Move—>40 Queue	No
30 Queue—>40 To Move	Yes—Components F and H

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## Review Question

---

### Review Question

**Why should the backflush flag of the last operation on a routing always be set to Yes?**

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### Review Question Solution

**Why should the backflush flag of the last operation on a routing always be set to Yes?**

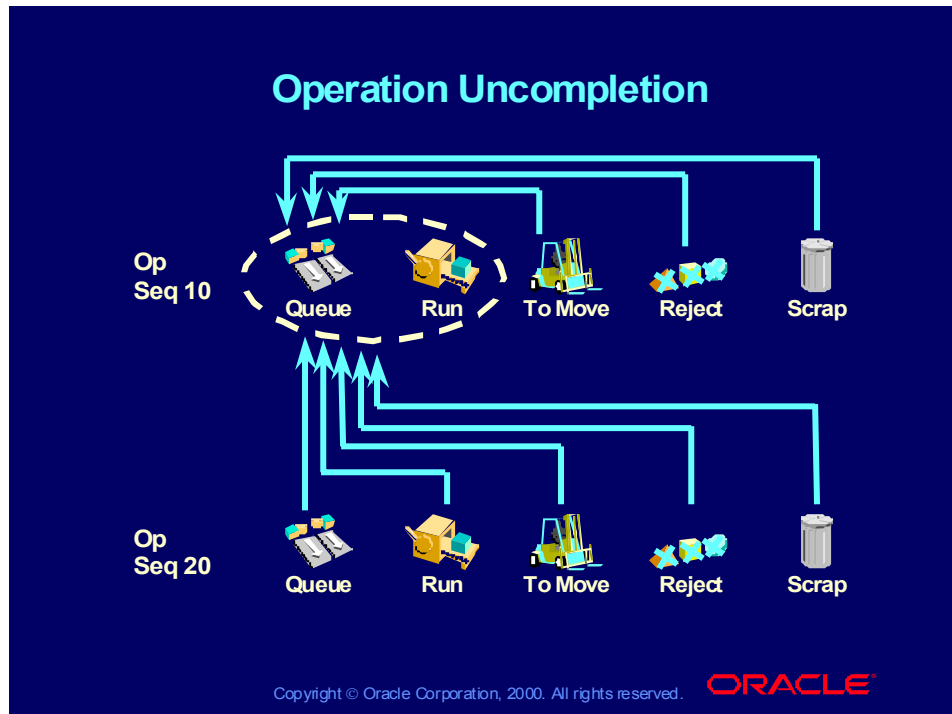
**Because otherwise some of the components at that operation and at previous operations would not get backflushed.**

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## Operation Uncompletion

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### Operation Uncompletion

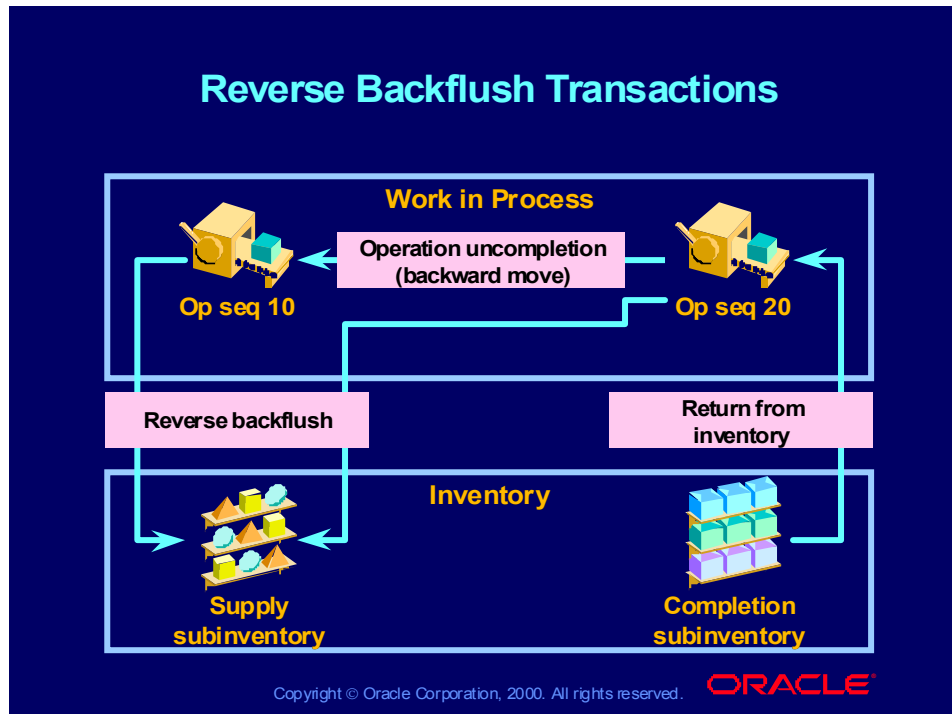
#### Backward Move

A backward move into or past the To Move step of an operation constitutes an operation uncompletion for that operation.

You can uncomplete an operation by reversing any of the moves that constitute operation completion.

Oracle Work in Process reverses any automatic transaction that took place upon completion of an operation when that operation is uncompleted.

## Reverse Backflush Transactions



### Backflush Transactions

When an assembly is completed at an operation, Oracle Work in Process automatically backflushes any Operation Pull components associated with it.

When an operation is uncompleted, Oracle Work in Process automatically reverses any backflushing transactions that have taken place during the forward move.

### Resource Charging

Upon operation completion, Oracle Work in Process automatically charges WIP move resources associated with that operation.

For WIP move resources with a basis of Item, Oracle Work in Process automatically charges them upon completion of each assembly at the operation.

For WIP move resources with a basis of Lot, Oracle Work in Process automatically charges them upon completion of the first assembly at the operation.

On uncompletion, Oracle Work in Process automatically reverses WIP move resource charges (because these are the only resources that Oracle Work in Process automatically charges on forward moves).

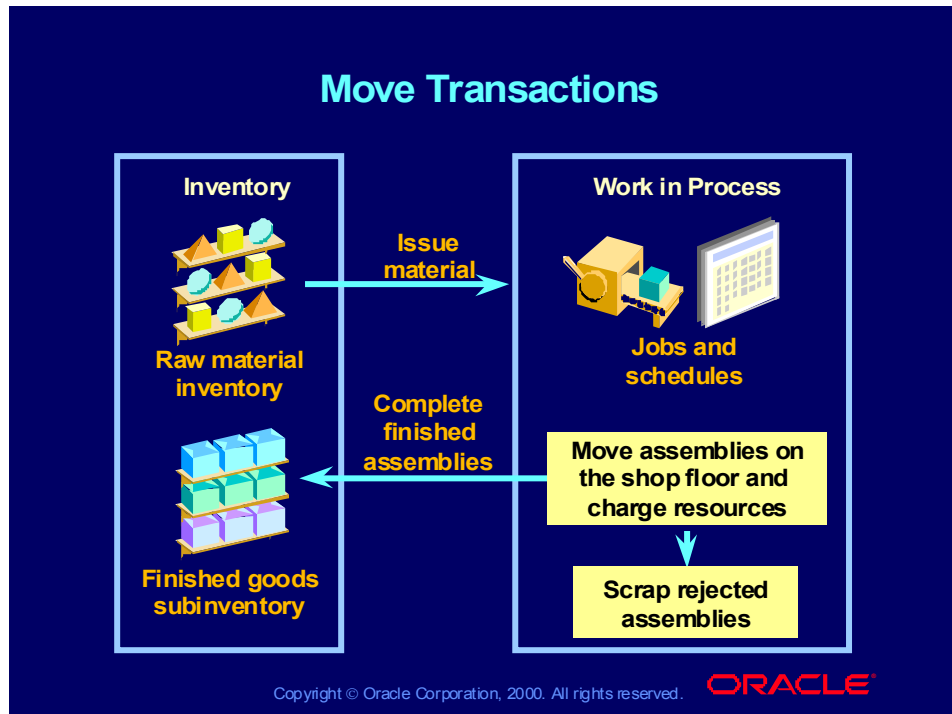
Automatic resource charges for Lot-based resources are reversed when all assemblies have been uncompleted at the operation.

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Shop  
Floor Control > Move Transactions > Move Completion/Return Transactions



## Move Transactions

---



### Move Transactions

#### Where Can You Perform Move Transactions?

##### Move Transactions window

- You can move assemblies between and within the operations on a routing.
- Oracle Work in Process validates the transaction information online.

##### Open Move Transaction Interface

- You can insert move transactions into the Move Transaction Interface table.
- Oracle Work in Process validates and then processes the transactions.
- Failed transactions are marked with an appropriate error code.
- You can view, update, and resubmit the information in the Pending Move Transactions window.

##### Receipts form in Oracle Purchasing (for outside processing)

- You can automatically move assemblies from an outside processing operation to the next operation in the routing as you receive the outside processed assembly back from the vendor.

##### Discrete Workstation

- You can move quantities within an operation.
- You can also access the move transaction window to perform moves between operations.

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Shop  
Floor Control > Move Transactions > Move Transaction Options

## Performing Move Transactions

---

### Performing Move Transactions

Use the Move Transactions window to:

- Perform move transactions for discrete jobs and repetitive schedules with routings
- Perform move transactions for non-standard discrete jobs that have assemblies and routing references

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Oracle WIP (N) Move Transaction > Move Transactions

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Shop Floor Control > Move Transactions

../ > Performing Move Transactions

../ > Operation Pull Backflush Transactions

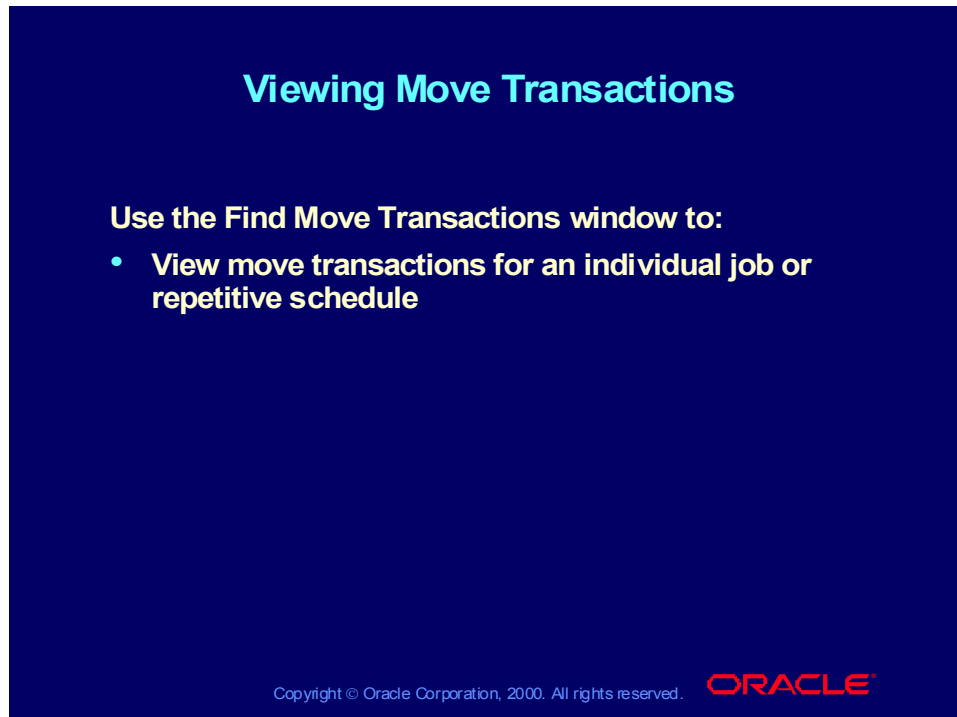
../ > Backflushing Pull Components

../ > Move Completions/Return Rules

../ > Performing Move Completions/Return Transactions

## Viewing Move Transactions

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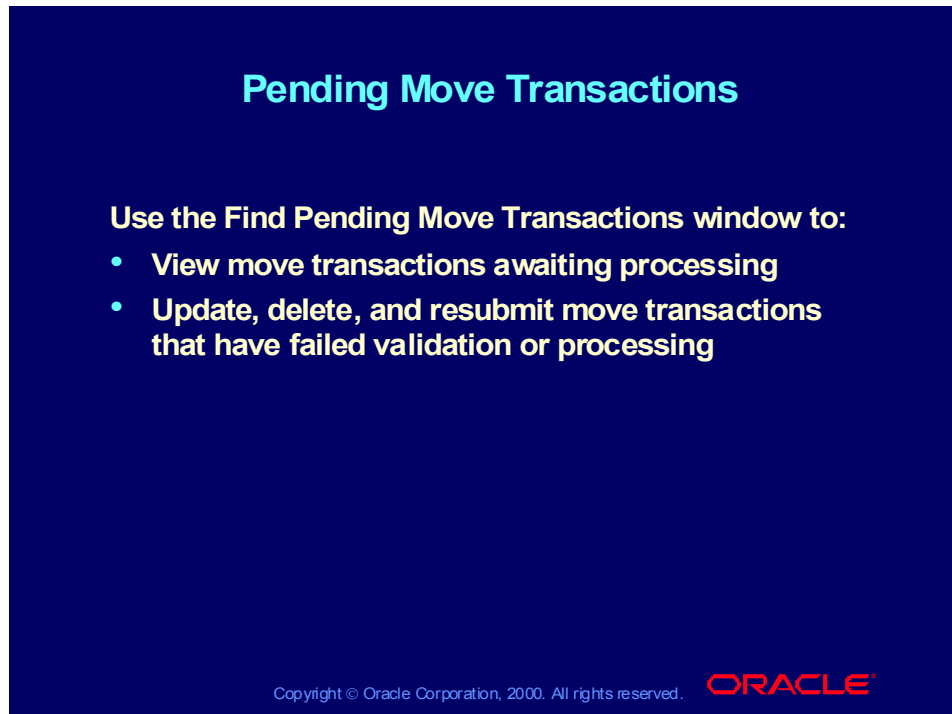
Oracle WIP (N) Move Transaction > View Move Transactions

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Shop Floor Control > Move Transactions

../ > Viewing Move Transactions

## Pending Move Transactions

---



Oracle WIP (N) Move Transaction > Pending Move Transactions

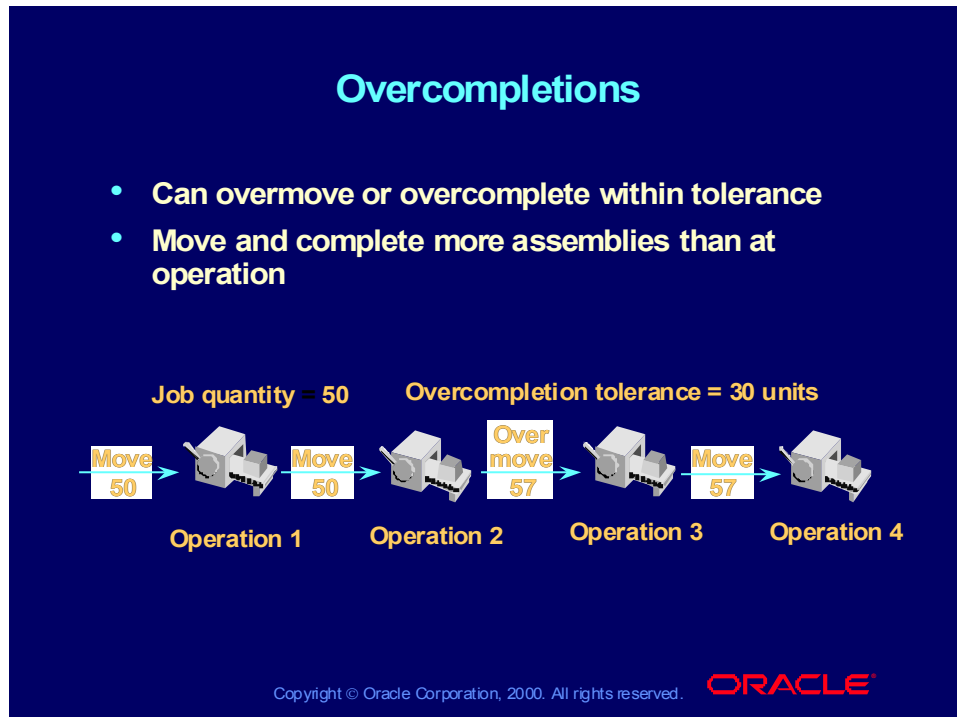
(Help) Oracle Manufacturing Applications > Oracle Work in Process > Shop Floor Control > Move Transactions

../ > Processing Pending Move Transactions

../ > Finding Pending Move Transactions

## Overcompletions

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(Help) Oracle Manufacturing Applications > Oracle Work in Process >  
Material Control > Assembly Over-Completions and Over-Moves

## Demonstration

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### Demonstration

**This demonstration covers overcompletions.**



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## Review Questions

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### Review Questions

#### True or False

- You can overcomplete assemblies to inventory from jobs and schedules per established tolerance limits without changing the job start quantity.
- You cannot move more assemblies than are available at a routing operation.

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### Review Questions Answers

#### True or False

- You can overcomplete assemblies to inventory from jobs and schedules per established tolerance limits without changing the job start quantity.  
**True**
- You cannot move more assemblies than are available at a routing operation.  
**False**

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## Assignment of Shop Floor Statuses

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**Assignment of Shop Floor Statuses**

Use the Assign Shop Floor Statuses window to:

- Assign shop floor statuses to operations steps for individual jobs or for an assembly and line combination

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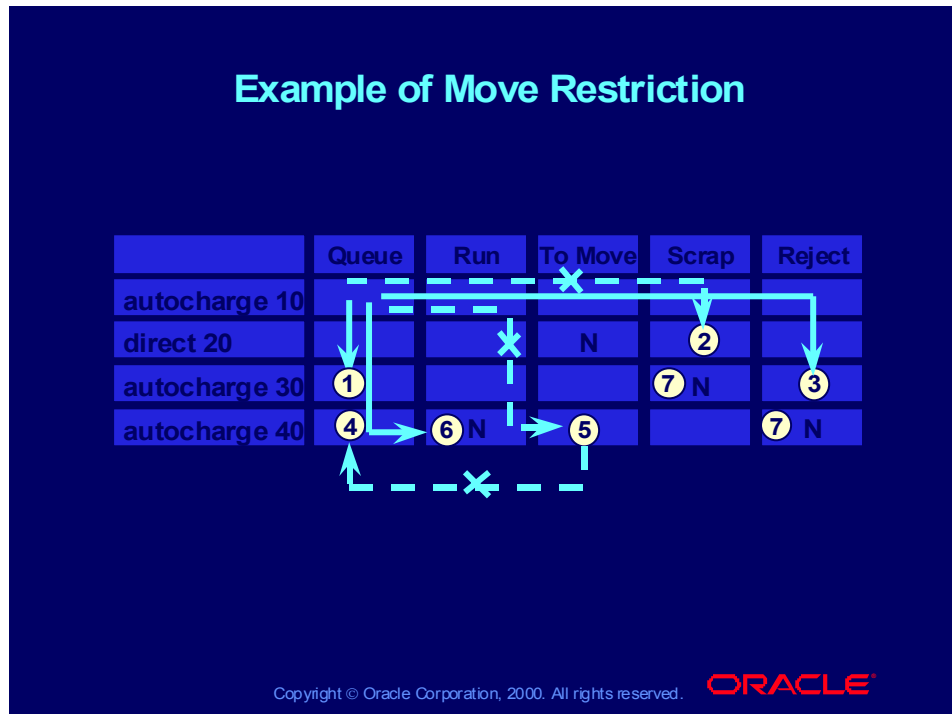
(N) Move Transaction > Shop Floor Statuses > Assign Shop Floor Statuses

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Shop Floor Control > Move Transactions

../ > Shop Floor Statuses

../ > Assigning and Viewing Shop Floor Statuses

## Example of Move Restriction



### Example of Move Restriction

Given the routing shown in the slide, in which a label of N indicates a No Move shop floor status; a label of autocharge indicates an operation that is Yes—Autocharge or No—Autocharge, and a label of direct indicates an operation that is No—Direct Charge.

1. You can move from 10 Queue to 30 Queue because the No Move status at 20 To Move is on a direct operation.
2. You cannot move from 10 Queue to 20 Scrap because there is a No Move status at 20 To Move.
3. You can move from 10 Queue to 30 Reject because the No Move status at 30 Scrap is not considered.
4. You cannot move from 40 To Move to 40 Queue because of the No Move status at 40 Run.
5. You cannot move from 10 Queue to 40 To Move because of the No Move status at 40 Run, and you cannot move-complete from 10 Queue because of that same status; however, you can complete from 40 To Move.
6. You can move from 10 Queue to 40 Run because you can move *into* an operation and step with a No Move status.
7. The No Move statuses at 30 Scrap and 40 Reject are of no consequence unless you move into them. In that case, you cannot

move out once you move in until you have either disabled the status or deleted it.

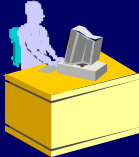
Oracle Work in Process provides an option that prevents you from performing move transactions over operations and intraoperation steps that have No Move statuses, depending on the autocharge types of the operations.

## Discrete Workstation

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### Discrete Workstation

- Provides a basic shop floor execution bench and shows operators the information they need to do their jobs on the shop floor



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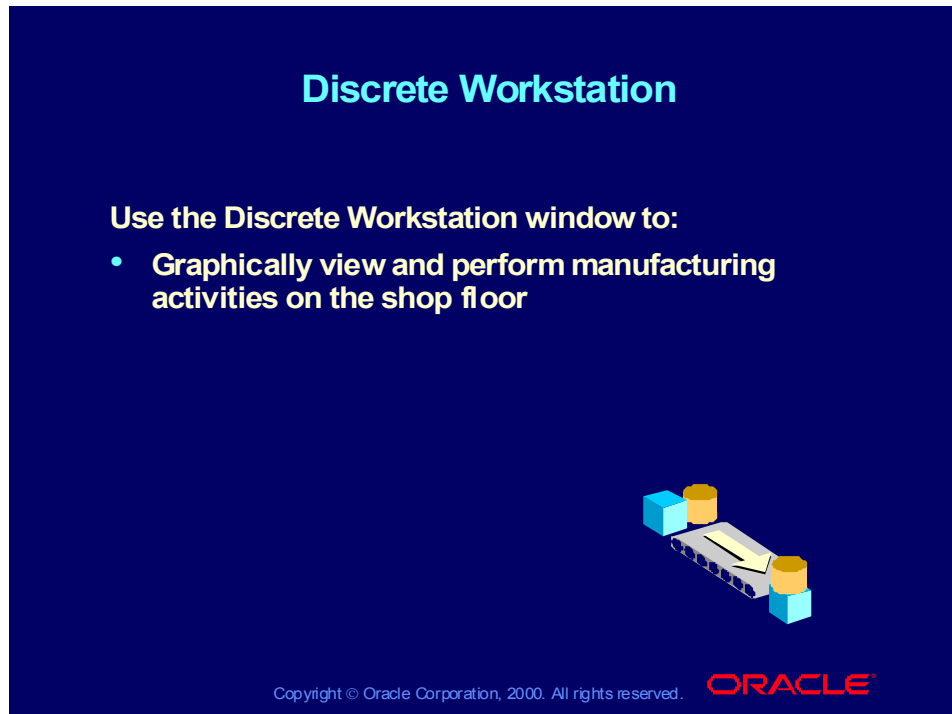
### Production Control Board

You can now graphically view and perform manufacturing activities on the shop floor using the discrete workstation. The graphical interface of the workstation enables employees to quickly and easily obtain information critical to supporting business decisions and controlling daily shop floor activities. This feature provides you with the flexibility to record your activities and view status and production performance information, while maintaining security to protect sensitive data.

Using the Discrete Workstation, production operators working on discrete jobs can quickly and easily obtain frequently-used information (such as performance measurements, component, and resource requirements), and perform common shop floor transactions, without having to return to the Work in Process menu.

## Discrete Workstation

---



(N) Discrete > Discrete Workstation (B) Launch

### Discrete Workstation Display

You can launch the workstation by selecting a department or department and resource. On the left pane, the list of job operations is those assigned to the department or department and resource combination that you selected.

The workstation interface displays information on graphs and tables for fast access and easy readability. You can monitor the utilization, efficiency, productivity, and load on a resource from all departments in a table and graph format.

### Dispatch Lists

The Immediate Dispatch List includes those job operations, assigned to the department and resource that currently have quantity in queue, run, or to move intraoperation steps. The job status must be released or hold. (Hold jobs are red in color.)

The Upstream Dispatch List includes job operations that are directly preceding an operation assigned to the department and resource, and there is quantity in that operation. The upstream dispatch list includes jobs that will be in the Immediate Dispatch List very soon.

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Discrete Manufacturing > Discrete Workstation > Discrete Workstation Window

../ > Viewing the Tree

../ > Discrete Workstation Menus

../ > Discrete Workstation Toolbar

../ > Launching the Workstation

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Discrete Manufacturing > Discrete Workstation > Discrete Workstation Transactions

## Demonstration

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### Demonstration

**This demonstration covers the discrete workstation.**



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## Review Question

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### Review Question

#### True or False

- **Using the Discrete Workstation, production operators working on discrete jobs can quickly and easily obtain frequently used information (such as performance measurements, component, and resource requirements), and perform common shop floor transactions, without having to return to the Work in Process menu.**

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### Review Question Answer

#### True or False

- Using the Discrete Workstation, production operators working on discrete jobs can quickly and easily obtain frequently used information (such as performance measurements, component, and resource requirements), and perform common shop floor transactions, without having to return to the Work in Process menu.

**True**

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## Shop Floor Activity Reports

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Shop Floor Activity Reports	
Report	Function
Move Transaction	Review move transactions for a specific job or schedule or range of jobs or schedules.
Discrete Dispatch	Prioritize work in each department.
Repetitive Line	Prioritize work on a line.
WIP Location	Locate assemblies currently in work in process.
Job/Repetitive Schedule Data	View comprehensive job or schedule information, including work that remains to be done.
Discrete Job Listing	See which jobs to release and start work on.

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### Shop Floor Activity Reports

#### Prioritizing Shop Floor Activity

You can prioritize your shop floor activity to meet customer demands by using the reports described in the slide. You can use the View Move Transactions window to review move transactions online.

## Costing Move Transactions: Accounting Entries

---

### Costing Move Transactions: Accounting Entries

#### Backflush material transactions:

<u>Account</u>	<u>Debit</u>	<u>Credit</u>
WIP accounting class valuation accounts	XX	
Inventory valuation accounts		XX

#### Resource transactions:

<u>Account</u>	<u>Debit</u>	<u>Credit</u>
WIP accounting class resource valuation account	XX	
Resource absorption account		XX

<u>Account</u>	<u>Debit</u>	<u>Credit</u>
WIP accounting class overhead account	XX	
Overhead absorption account		XX

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### Costing Backflush Material Transactions

Move transactions can automatically launch backflush transactions and charge resources and overheads.

Backflush material transactions increase your work in process valuation and decrease your inventory valuation. The accounting entries for backflush material transactions are shown on the slide.

### Costing Move-Based Resource Transactions

Resource charges increase your work in process valuation. The accounting entries for resource transactions are shown on the slide.

### Costing Overhead Charges

Overhead charges increase your work in process valuation. The accounting entries for resource transactions are shown on the slide.

## Costing Move Transactions

---

### Costing Move Transactions

Costing Backward Move Transactions	
Charges	Reversed?
Backflush material charges	Reversed.
Resource charges	WIP Move resource charges only are reversed.
Overhead charges	Reversed if default basis is Item. Reversed if default basis is Lot only if the move results in zero net assemblies completed in the operation.

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## Overhead Charging

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### Overhead Charging

Charging Method	Default Basis	Overhead Charge
Move-based overhead charging	Item	Fixed amount per item
	Lot	Fixed amount for first unit completed
Resource-based overhead charging	Resource units	Fixed amount for each resource unit charged
	Resource value	Percentage of the resource value

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### Move-Based Overheads

Upon completion of an operation, Oracle Work in Process automatically charges move-based overheads at that operation. Move-based overheads are overheads that have a default basis of Item or Lot.

Upon uncompletion, overhead charges are reversed. For Lot-based overheads, charges are reversed when all assemblies have been uncompleted at the operation.

### Resource-Based Overheads

If the operation completion move resulted in automatic resource charges for WIP Move resources, and these resources have associated overheads, the overheads will be charged when the resource is charged. Therefore, a move transaction that completes an operation can result indirectly in resource-based overhead charges.

Resource-based overhead charges are reversed when the resource transaction is reversed.

## Review Question

---

### Review Question

Suppose that an operation for a discrete job has Autocharge set to No. It is used for rework, which requires extra components, so the operation has material requirements associated with it.

- A) What kinds of cost variances would you expect to see?
- B) What kinds of material planning problems might you anticipate?
- C) How could you adjust your requirements to alleviate some of those problems?

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### Review Question Solution

Suppose that an operation for a discrete job has Autocharge set to No. It is used for rework, which requires extra components, so the operation has material requirements associated with it.

**A) What kinds of cost variances would you expect to see?**

**Unless you manually transacted all assemblies through the No operation, or you reworked all of your assemblies, you would see a favorable material cost variance on the job.**

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### Review Question Solution

Suppose that an operation for a discrete job has Autocharge set to No. It is used for rework, which requires extra components, so the operation has material requirements associated with it.

**B) What kinds of material planning problems might you anticipate?**

**You would overplan the material; that is, you would have planned enough material for all of the assemblies to go through rework, but most likely not all of them will.**

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### Review Question Solution

Suppose that an operation for a discrete job has Autocharge set to No. It is used for rework, which requires extra components, so the operation has material requirements associated with it.

C) How could you adjust your requirements to alleviate some of those problems?

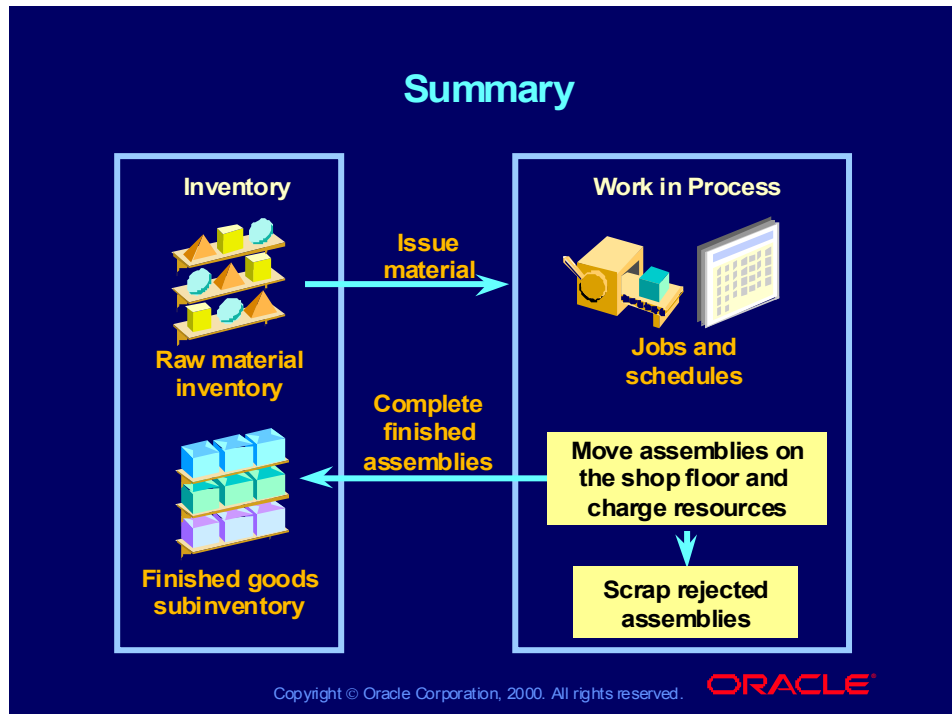
You could adjust your usage rate to reflect the percentage of assemblies that you anticipate having to rework. For example, if each assembly that is reworked used 1 of a component, and you expect to rework 30% of all assemblies, you could set the usage rate to 0.3.

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## Summary

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## Summary

### Moving Assemblies

- There are two kinds of moves: intraoperation and interoperation.
- Move transactions can create backflush transactions, resource charges, and overhead charges.
- To create such automatic transactions, a move transaction must complete one or more operations.
- Automatic transactions are reversed when an operation is uncompleted.
- You can use one of four data-entry methods to enter moves: the Move Transaction window, the Open Move Transaction Interface table, the Receipts window in Oracle Purchasing or the Discrete Workstation.
- You can perform overmove transactions.
- You can view shop floor activity in a variety of windows and reports using Oracle Work in Process.

## Practice 1-1 Overview

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### Practice 1-1 Overview

**In this exercise you will define a discrete job, issue material to the job, and move assemblies from Queue to Move.**

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### Practice 1-1

In this exercise you will define a discrete job, issue material to the job, and move assemblies from Queue to Move.

1. Define a discrete job. Use the Discrete Jobs window to define the job.
  - Organization: M1 Seattle Manufacturing
  - Assembly: Sentinel Deluxe AS18947
  - Status: Released
  - Quantity: 200
  - Class: Discrete
  - Start Date: Today's date
2. Issue all push material to the job. Use the WIP Material Transactions window to issue push components to the job.
  - Transaction Type: WIP Component Issue
  - Transact: All Material
3. Because Vision is a pull manufacturer, assemblies usually wait in the To Move intraoperation step of the previous operation before they are pulled to the Run step of the next operation. Perform move transactions that illustrate this type of scenario.

4. When you move assemblies to a Reject intraoperation step, you prevent them from being moved until they have been inspected. How do you implement such a scenario?
5. Five assemblies need to be rejected at the first operation. Move them to the appropriate operation/step. What do you need to do to move them out of that operation/step after they have been inspected?

## Practice 1-1 Solution

---

**Practice 1-1 Solution**

The screenshot shows the Oracle Discrete Jobs (M1) window. The job details are as follows:

Field	Value
Job	26160
Type	Standard
Assembly	AS18947
Class	Discrete
Status	Released
UOM	Ea
Quantities	Start: 200, MRP Net: 200
Dates	Start: 08-AUG-2000 00:00:00, Completion:
Supply Type	Based on Bill

At the bottom, there are buttons for Sales Orders, Operations, and Components. The Oracle logo and copyright notice are also visible.

### Practice 1-1 Solution

Define a discrete job. Use the Discrete Jobs window to define the job.

Oracle WIP (N) Discrete—>Discrete Jobs

1. Navigate to the Discrete Jobs window and define a job using the following information:

- Organization: M1 Seattle Manufacturing
- Assembly: Sentinel Deluxe AS18947
- Status: Released
- Start Quantity: 200
- Class: Discrete
- Start Date: Today's date

2. Save your work.

## Practice 1-1 Solution

---

**Practice 1-1 Solution**

WIP Material Transactions (M1)

Sales Order  Order Line

Line

Assembly   UOM

Job  Bill Revision

**Transaction**

Type

Date

Subinventory

Locator

Include ☐ All Material ☒ Specific Component

**Criteria**

Start Date

Schedule Days

Assembly Quantity

Operation Sequence

Department

Subinventory

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### Practice 1-1 Solution (continued)

Issue all push material to the job. Use the WIP Material Transactions window to issue push components to the job.

- Transaction Type: WIP Component Issue
- Transact: All Material

Oracle WIP (N) Material Transactions—>WIP Material Transactions

1. Use the WIP Material Transactions window to issue push components to the job.

- Transaction Type: WIP Component Issue
- Transact: All Material

Note: You may receive a Caution window with the message Quantity will drive inventory negative, click OK.

## Practice 1-1 Solution

**Practice 1-1 Solution**

**Move Transactions (M1)**

Sales Order:  Order Line:

Line:  Assembly: **AS18947** Sentinel Deluxe UOM: **Ea**

Job: **26160** Bill Revision: **A**

**Transaction Type**

☐ Move  
☒ Complete  
☐ Return

**Operations**

	Seq	Code	Department	Step
From	<b>10</b>	<b>SDAS</b>	<b>ASSEMBLY</b>	<b>Queue</b>
To	<b>10</b>	<b>SDAS</b>	<b>ASSEMBLY</b>	<b>To move</b>

**Transaction**

☐ Overcompletion

UOM: **Ea**

Available: **200**

Quantity: **200**

Date: **08-AUG-2000 12:49:57**

☐ Manual Resources Exist

**Scrap Account**

Alias:

Number:

Reason:

Reference:

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### Practice 1-1 Solution (continued)

Because Vision is a pull manufacturer, assemblies usually wait in the To Move intraoperation step of the previous operation before they are pulled to the Run step of the next operation. Perform move transactions that illustrate this type of scenario.

Oracle WIP (N) Move Transactions—>Move Transactions

1. Use the Move Transactions window. Move 200 assemblies from Queue to To Move.
2. Save your work.



## Practice 1-1 Solution



### Practice 1-1 Solution (continued)

When you move assemblies to a Reject intraoperation step, you prevent them from being moved until they have been inspected. How do you implement such a scenario?

Shop Floor Statuses

Oracle WIP (N) Move Transactions—>Shop Floor Statuses—>Shop Floor Statuses

Oracle WIP (N) Move Transactions—>Shop Floor Statuses—>Assign Shop Floor Statuses

You define a shop floor status that disallows moves (Shop Floor Statuses window) and you attach it to the Reject intraoperation step of each operation (Assign Shop Floor Statuses window).

## Practice 1-1 Solution

**Practice 1-1 Solution**

Move Transactions (M1)

Sales Order:  Order Line:

Line:  Assembly: **AS18947** Sentinel Deluxe UOM: **Ea**

Job: **26160** Bill Revision: **A**

**Transaction Type**

☐ Move  
☒ Complete  
☐ Return

**Operations**

	Seq	Code	Department	Step
From	<b>10</b>	<b>SDAS</b>	<b>ASSEMBLY</b>	<b>To move</b>
To	<b>10</b>	<b>SDAS</b>	<b>ASSEMBLY</b>	<b>Reject</b>

**Transaction**

☐ Overcompleting

UOM: **Ea**

Available: **200**

Quantity: **5**

Date: **08-AUG-2000 13:06:50**

☐ Manual Resources Exist

**Scrap Account**

Alias:

Number:

Reason:

Reference:  [  ]

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### Practice 1-1 Solution (continued)

Five assemblies need to be rejected at the first operation. Move them to the appropriate operation/step. What do you need to do to move them out of that operation/step after they have been inspected?

Oracle WIP (N) Move Transactions—>Move Transactions

Use the Move Transactions window. Move five assemblies from Move to Reject at the first operation.

To move them out of that step, you must remove the Shop Floor status that you previously created and attached to that step.

### **Managing Rejected Assemblies**

### Objectives

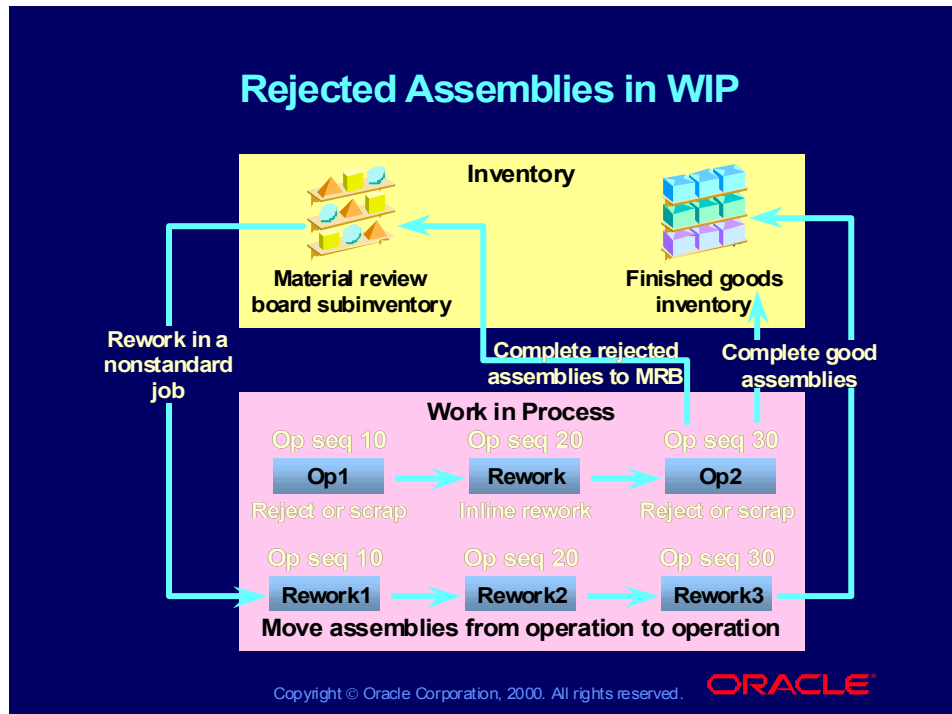
In this section you will cover the following:

- **Rejected assemblies in WIP**
- **Methods of managing rejected assemblies**
  - **Move rejected assemblies to reject**
  - **Scrap rejected assemblies**
  - **Add a rework operation**
  - **Rework inline**
  - **Use a nonstandard job to rework assemblies**

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## Rejected Assemblies in WIP



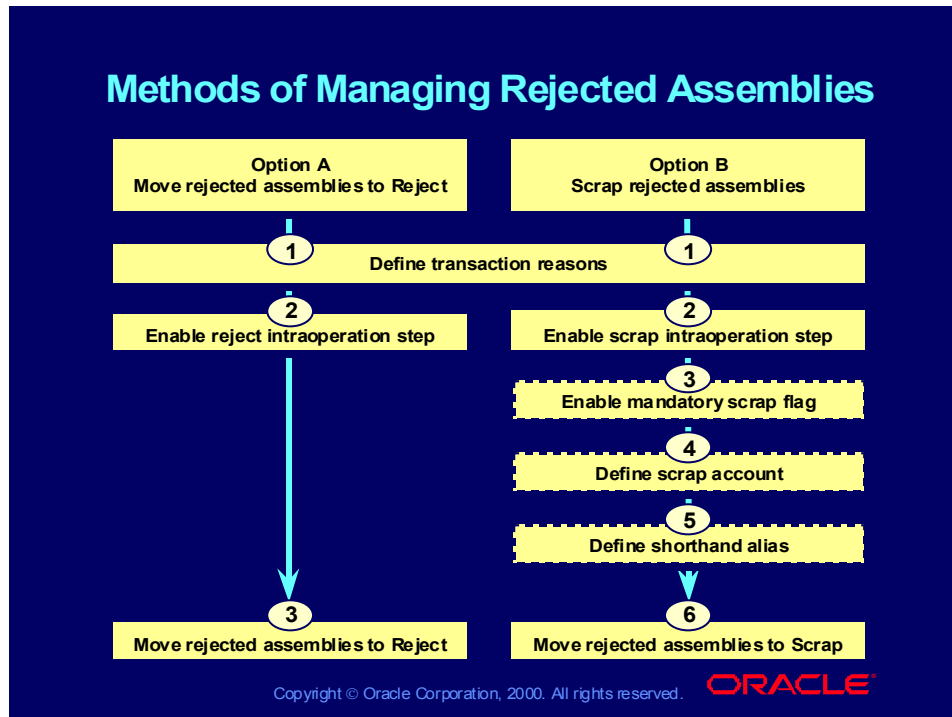
## Rejected Assemblies in WIP

### Definitions

- **Reject** is an intraoperation step in an operation at which you record assemblies that require rework or need to be scrapped.
- **Scrap** is an intraoperation step at which you move assemblies that cannot be reworked or completed.
- **Scrap account** is an account that you use to charge scrap transactions.
- **Shorthand alias** is a user-defined code or character string that represents a complete or partial flexfield value.

## Methods of Managing Rejected Assemblies

---

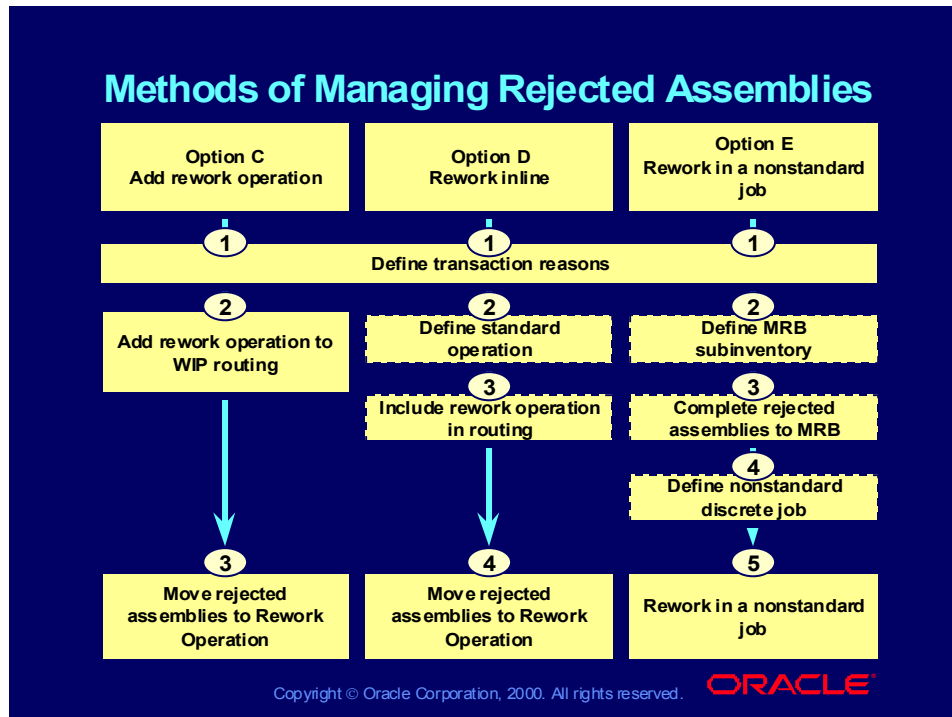


### Methods of Managing Rejected Assemblies

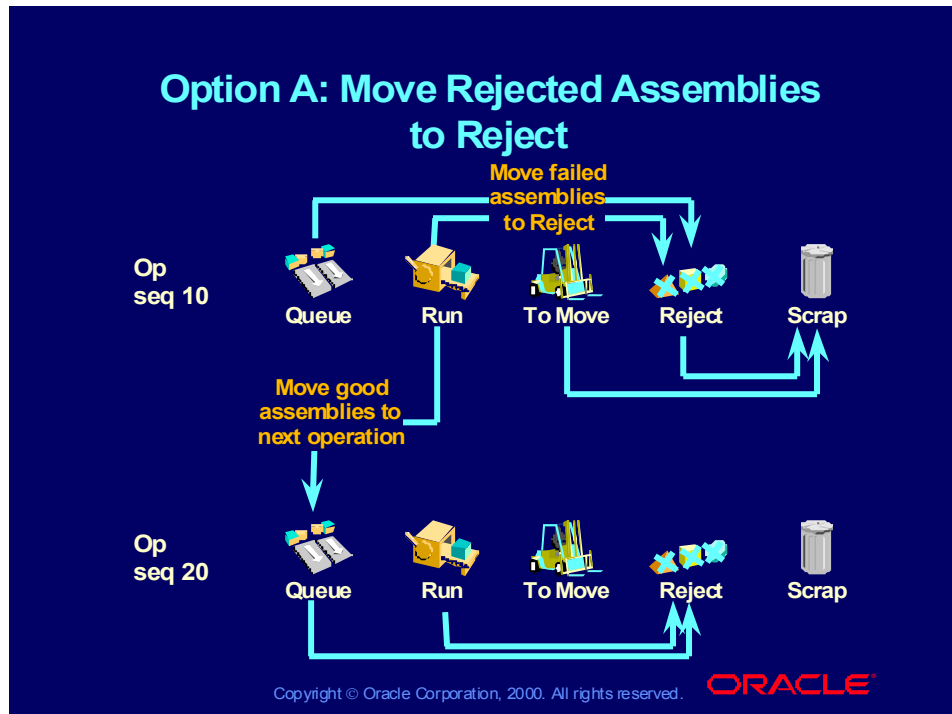
There are five ways you can manage rejected assemblies in Oracle Work in Process.

- Move rejected assemblies to Reject.
- Scrap rejected assemblies.
- Add rework operation.
- Inline rework.
- Rework in a nonstandard job.

## Methods of Managing Rejected Assemblies



## Option A: Move Rejected Assemblies to Reject



### Moving Rejected Assemblies

You can move rejected assemblies to the Reject intraoperation step to possibly rework them at that operation or later move them to Scrap.

### Using the Move Transaction Window

You can move rejected assemblies to the Reject intraoperation step of the operation they are currently in.

You can evaluate whether the assemblies can be reworked.

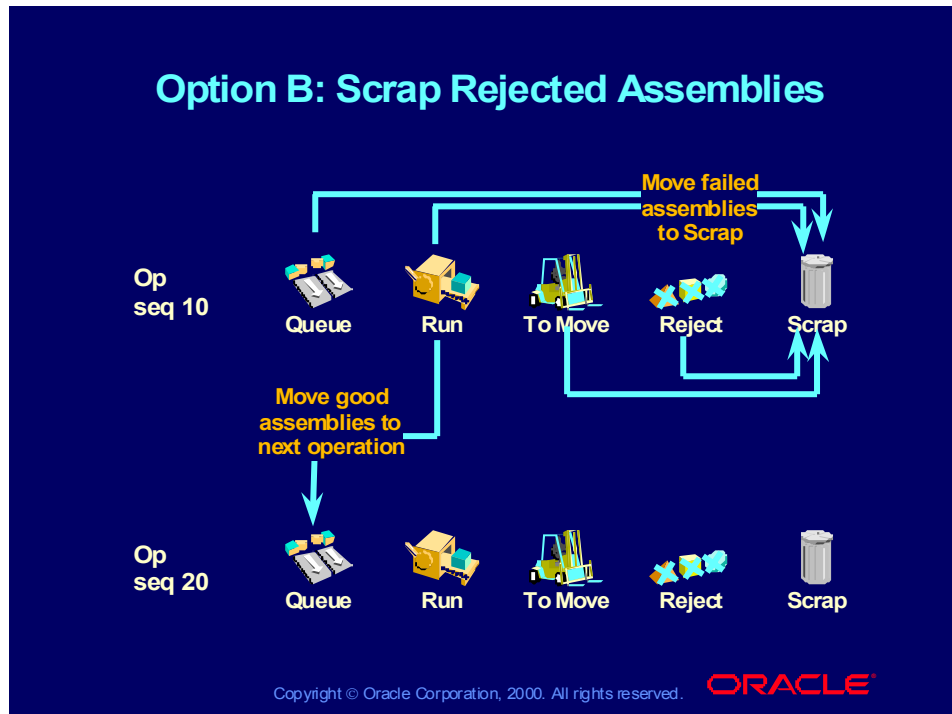
If they can be reworked, you can move them back to the Queue or Run intraoperation step. Otherwise, you can move them to Scrap (see Option B).

### Benefits of Option A

- Isolates questionable assemblies.
- Works well if there is space near the work center to temporarily store the questionable assemblies (same operation, same department).
- You have the option to scrap or recover the questionable assemblies.



## Option B: Scrap Rejected Assemblies



### Scrapping Rejected Assemblies

You can move assemblies that cannot be recovered to the Scrap intraoperation step.

### Using the Move Transaction Window

You can move rejected assemblies to the Scrap intraoperation step of the operation they are currently in.

Depending on the value of the Mandatory Scrap flag, you may have to enter a Scrap account during the move transaction.

You can enter a Scrap account that removes the scrap costs from the job immediately. Otherwise, the scrap costs stay in the job until it is closed.

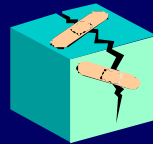
### Benefits of Option B

- Isolates material.
- Deducts from MRP supply on standard discrete jobs.
- Offers the option to write off scrap immediately instead of waiting for the job close (standard discrete and nonstandard asset jobs) or period close (repetitive and nonstandard expense jobs).
- Offers the option to undo the transaction later if necessary.

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Shop  
Floor Control > Shop Floor Management  
    ../ > Assembly Scrap  
    ../ > Scrap Assemblies

### Scrap Enhancements

**When scrapping an assembly, backflush assembly pull components from the current or a previous operation.**



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### Review Questions

#### True or False

- When you scrap assemblies on a discrete job, all assembly pull components required at or before the operation in which the scrap occurred are not fully costed.
- Prior to release 11i , the system relieved inventory only for the quantity that completed into inventory, and did not take scrapped assemblies into account.

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### Review Questions Answers

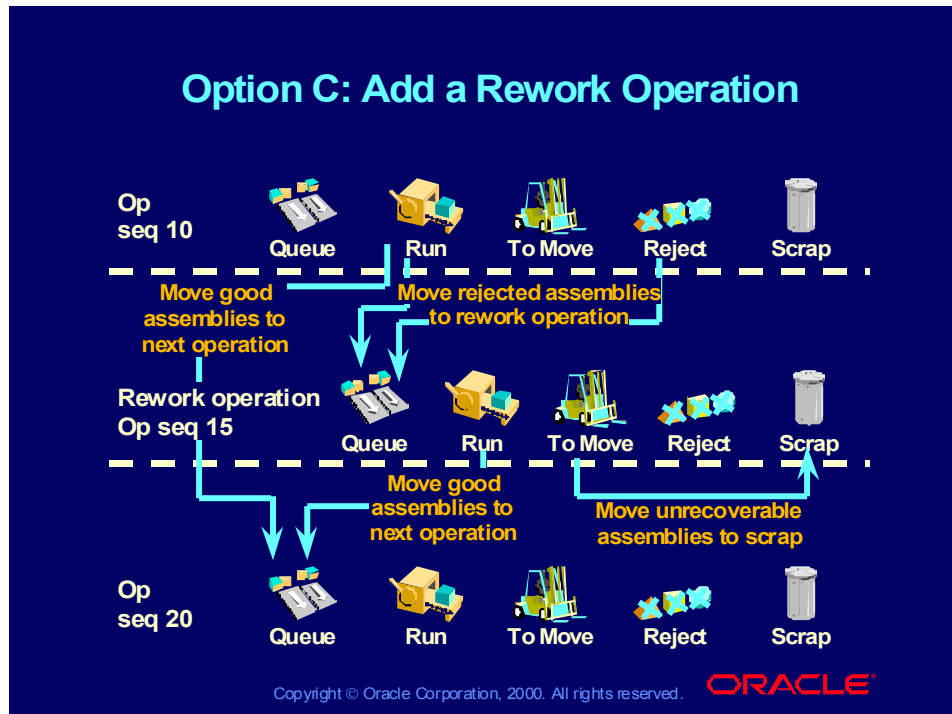
#### True or False

- When you scrap assemblies on a discrete job, all assembly pull components required at or before the operation in which the scrap occurred are not fully costed.  
**False**
- Prior to release 11i , the system relieved inventory only for the quantity that completed into inventory, and did not take scrapped assemblies into account.  
**True**

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## Option C: Add a Rework Operation



### Reworking Rejected Assemblies

You can rework rejected assemblies directly in the job by adding a rework operation in the WIP routing.

### Adding a Rework Operation

You can use the Operations window or the Move Transactions window to add the rework operation (the Enable Adding Operation flag must be set to Yes to add the operation in the Move Transactions window).

The rework operation should have a clear Count Point check box because you only want to record operation completions for the assemblies that actually move in and out of the operation. The resources may also have an autocharge type of Manual because the number of resource units you charge may vary with each assembly.

### Moving to the Rework Operation

- You can move the rejected assemblies to the rework operation to fix them.
- You can move assemblies that could not be reworked to Scrap.
- You can move assemblies that were successfully reworked to the next operation.

### Benefits of Option C

- You can use predefined rework operations for repeatable rework activities.
- You can add the rework operation when necessary.

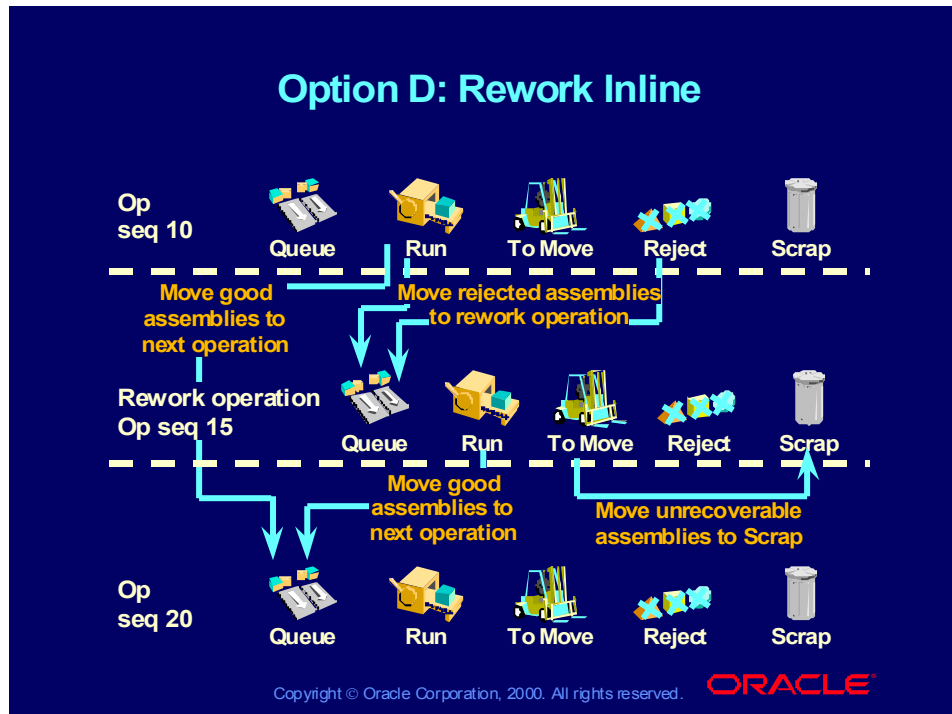
- You can easily charge incremental material, resource, and overhead costs at rework operation.
- This option works well to locate rejected assemblies if the rework area is not near the work center where the rejection occurs.
- The good assemblies do not need to be transacted through the rework operation because the Count Point check box is clear.

**Note**

Use Option D for repetitive schedules, because operations cannot be added to repetitive routings.

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Shop Floor Control > Shop Floor Management  
../ > Rework Production

## Option D: Rework Inline



### Reworking Rejected Assemblies

You can use a routing with a rework operation and rework rejected assemblies directly in the job or repetitive schedule.

### Assigning a Rework Operation to the Routing

If you expect a number of assemblies to be rejected during the manufacturing process, you can attach a rework operation when defining the routing.

The rework operation should be a standard operation with a clear Count Point check box and the resources charge type should be Manual.

### Moving to the Rework Operation

- You can move the rejected assemblies to the rework operation to fix them.
- You can move assemblies that could not be reworked to Scrap.
- You can move assemblies that were successfully reworked to the next operation.

### Benefits of Option D

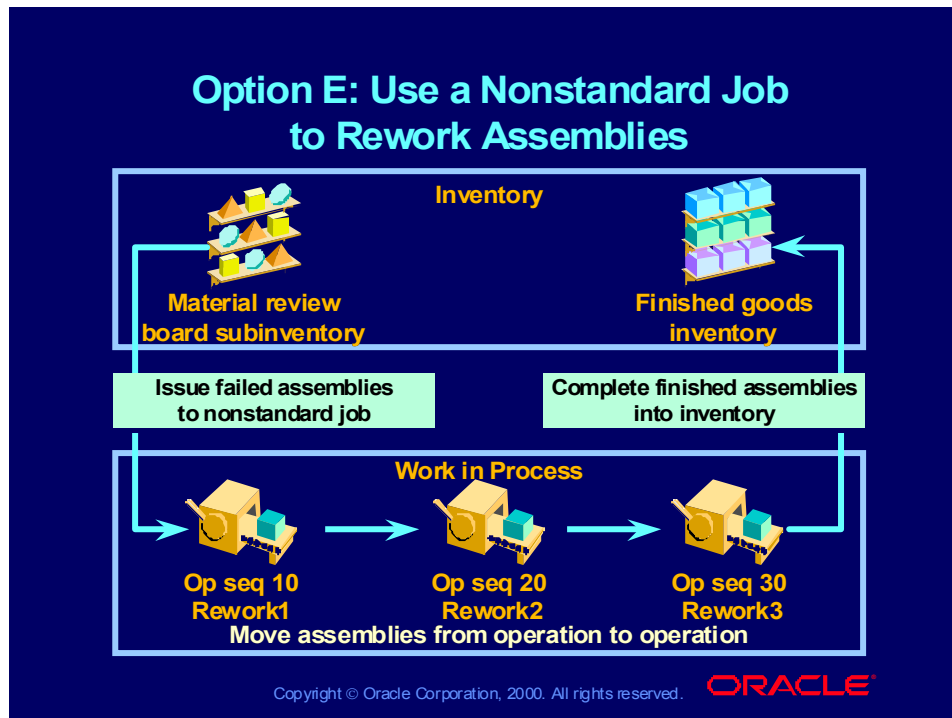
- This option allows process engineers to predefine and production staff to use the rework operation on the routing when rework is anticipated.
- Rework can be performed on a repetitive production line (Option C applies only to discrete jobs, because operations cannot be added to a repetitive routing).



- You can easily charge incremental material, resource, and overhead costs at rework operation.
- This option works well to locate rejected assemblies if the rework area is not near the work center where the rejection occurs.
- Good assemblies do not need to be transacted through the rework operation, because the Count Point check box is clear.

## Option E: Use a Nonstandard Job to Rework Assemblies

---



### Using a Nonstandard Job to Rework Assemblies

You can rework rejected assemblies currently in an MRB subinventory using a nonstandard job.

### Completing Rejected Assemblies

You can complete rejected assemblies from the current job to an MRB subinventory.

Optionally you can store the assemblies in that subinventory until you are ready to rework them.

### Defining a Nonstandard Job

- You can define a nonstandard job for the number of assemblies to be reworked.
- You can select an asset type nonstandard accounting class because the job is building up assets.
- You can enter the quantity that the planning process should expect as supply in the MRP Net Quantity field.

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Shop Floor Control > Shop Floor Management

../ > Rework Production

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Non-Standard Discrete Job > Business Scenarios > Rework Assemblies

## Review Question

---

### Review Question

**What are the methods to manage rejected assemblies in work in process?**

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### Review Question Solution

**What are the methods to manage rejected assemblies in work in process?**

**There are five ways you can manage rejected assemblies in Oracle Work in process:**

- **Move rejected assemblies to Reject**
- **Scrap rejected assemblies**
- **Add rework operation**
- **Inline rework**
- **Rework in a nonstandard job**

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## Summary

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### Summary

**You can manage rejected assemblies in Oracle Work in Process in five ways:**

- **Move rejected assemblies to Reject**
- **Scrap rejected assemblies**
- **Add rework operation**
- **Rework inline**
- **Rework in a nonstandard job**

**Choose the method that best meets your business needs.**

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## Practice 1-2 Overview

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### Practice 1-2 Overview

**in this exercise you will create a job and perform a scrap transaction.**

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### Practice 1-2

1. Create a job for a quantity of 10 for assembly AS62445, the Envoy Upgrade Pack.
2. Verify in the Material Requirements window that the CM22683 component on the work-in-process BOM has a supply type of assembly pull, which is created from the original BOM.
3. Move half of the quantity to the scrap step of operation 20. Use an existing alias such as SCRAP ADJ for the account number.

## Practice 1-2 Solution

---

**Practice 1-2 Solution**

The screenshot shows the Oracle Discrete Jobs (M1) form. The job details are as follows:

Field	Value
Job	26161
Assembly	AS62445
Class	Discrete
Status	Released
Type	Standard
UOM	Ea
Envoy Upgrade Pack	
Quantities	
Start	10
MRP Net	10
Dates	
Start	08-AUG-2000 00:00:00
Completion	

Below the main form, there are tabs for Bill, Routing, Job History, Schedule Group, Project, Scheduling, and More. The Bill tab is selected, showing fields for Reference, Alternate, Revision, and Revision Date. The Supply Type is set to Based on Bill.

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### Practice 1-2 Solution

#### Discrete Jobs

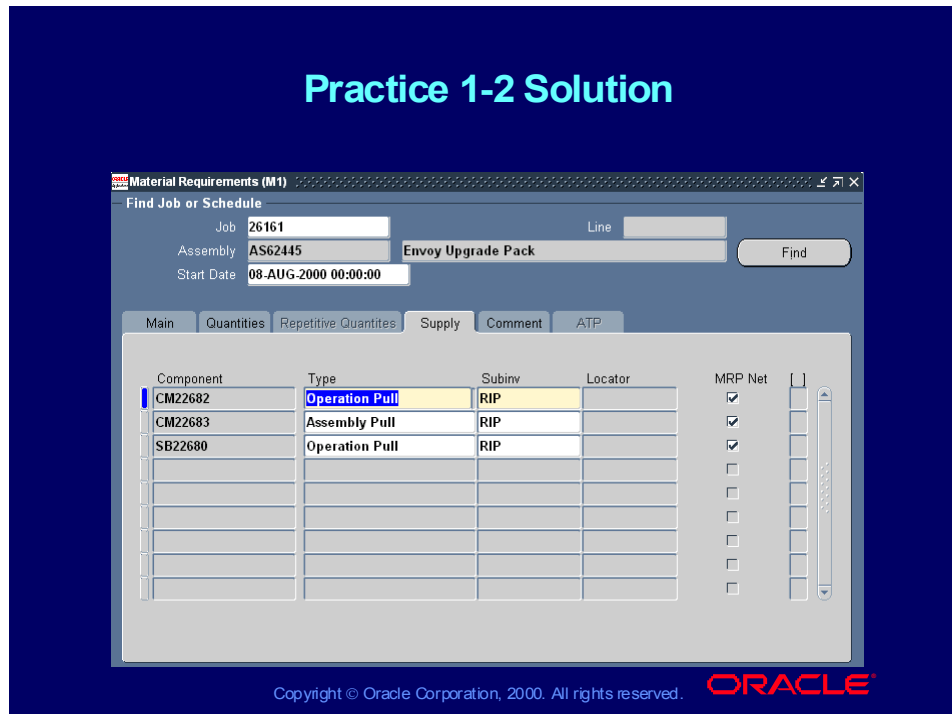
Create a standard job for a quantity of 10 for assembly AS62445, the Envoy Upgrade Pack.

Work in Process (N) Discrete —> Discrete Jobs

1. Create a standard job for a quantity of 10 for assembly AS62445. Make sure the job status is Released.
2. Save your work.



## Practice 1-2 Solution



### Practice 1-2 Solution (continued)

#### Material Requirements

Verify in the Material Requirements window that the CM22683 component on the work-in-process BOM has a supply type of assembly pull, which is created from the original BOM.

Work in Process (N) Job/Schedule Details—>Material Requirements

1. Type in the job number and click Find.
2. Go to the Supply tab and verify that the Envoy Upgrade Manual, item number CM22683, has a supply type of Assembly Pull.

## Practice 1-2 Solution

**Practice 1-2 Solution**

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### Practice 1-2 Solution (continued)

#### Move Transactions

Move half of the quantity to the scrap step of operation 20. Use an existing alias such as SCRAP ADJ for the account number.

Work in Process (N) Move Transactions—>Move Transactions

1. Move 5 Envoy Upgrade Packs to seq 20, step Scrap.
2. Save your work.

## Charging Resources

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**Charging Resources**

### Objectives

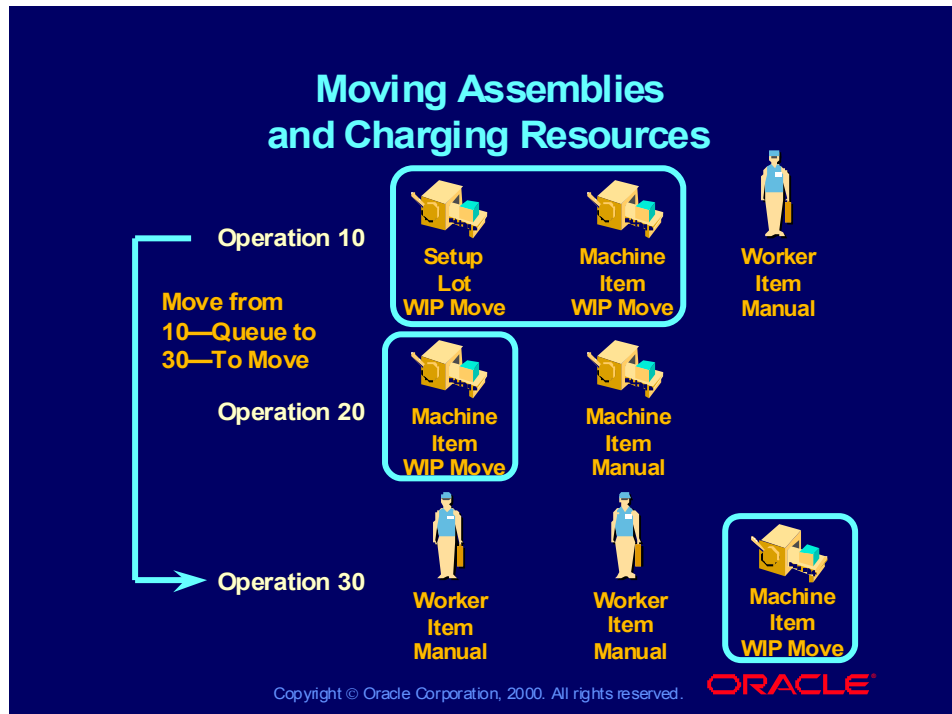
In this section you will cover the following:

- Data entry mechanisms
- Manually charging resources
- Charging resources with move transactions
- Automatically charging resources - backflushing
- Discrete workstation
- Viewing and pending resource transactions
- Processing resource requirements
- Charging multiple schedules and repetitive allocations
- Costing resource charges
- Resource transactions activity reports

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## Moving Assemblies and Charging Resources



### Concepts in Resource Transactions

#### Move Transaction

Resources are automatically charged during move transactions.

#### Resource

A resource is a thing of value, except material and cash, that is required to manufacture, cost, and schedule products. Resources include people, tools, machines, services purchased from a vendor, and physical space.

#### Resource Transaction

A resource transaction is a transaction in which you automatically or manually charge resource costs to a discrete job or repetitive schedule. Transacting a resource is synonymous with charging a resource.

#### Resource Basis

Resource basis is the basis for resource usage quantity that indicates whether that quantity is required per item or per lot.

#### Lot-Based Resources

Lot-based resources are resources whose usage quantity represents the amount you require per job or schedule.

For example, a lot-based resource could be the amount of time required to set up a machine at an operation to build the assemblies on a job, where time is constant regardless of the job or schedule quantity.

## **Item-Based Resources**

Item-based resources are resources whose usage quantity represents the amount you require per assembly you make.

For example, an item-based resource could be the amount of time required to process each assembly at an operation for the job.

## **Resource Units Applied**

Resource units applied is a quantity you charge to a discrete job or repetitive schedule for work performed by a resource. The quantity is expressed in the unit of measure of the resource.

For example, if the unit of measure of a resource is hours and the resource works 120 hours, you apply 120 units to the discrete job or repetitive schedule.

## **Autocharge**

Autocharge is a method of automatically charging a resource to a discrete job or repetitive schedule.

This is implemented in Oracle Work in Process through use of the autocharge type associated with each resource.

## **WIP Move Resource**

A WIP move resource is a resource that is automatically charged to a discrete job or repetitive schedule by a move transaction that completes an operation.

The autocharge type for this type of resource is WIP Move.

## **Manual Resource**

A manual resource is a resource that you manually charge to a discrete job or repetitive schedule.

The autocharge type for this type of resource is Manual.

## **Activity**

An activity is an action or task you perform in a business that uses a resource or incurs cost.

When resources are charged, Oracle Work in Process records the activity associated with that resource in the routing.

You can use activities to categorize the costs of certain manufacturing functions such as setup or teardown.

## **Efficiency**

Efficiency is a productivity measure that focuses on actual performance against a standard. Expressed by percentage, efficiency is calculated by dividing the actual resource time charged to a task by the standard resource requirements for the same task.

## **Efficiency Variance**

Efficiency variance is a quantity variance defined as the difference between the amount of a resource (typically in hours) required at standard and the actual amount you use to manufacture an assembly.

## **Charging Overheads**

You can charge resource-based overheads automatically as you charge a resource.

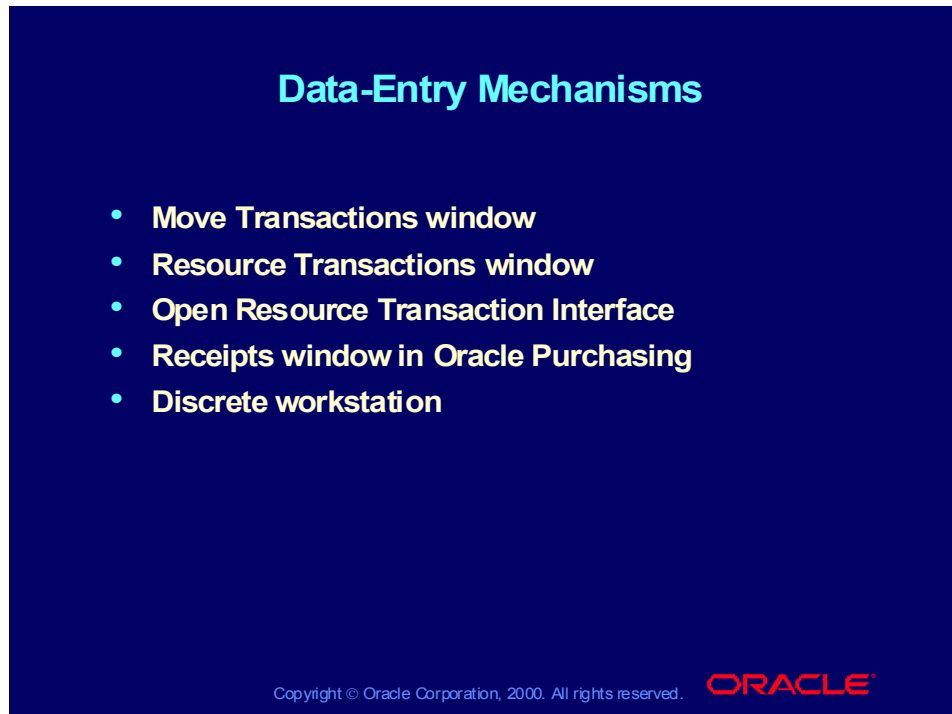
You can define overheads to be charged based on resource units or resource value of the resource with which overhead is associated.

Oracle Work in Process automatically charges appropriate overhead costs as you charge resources.

Oracle Work in Process reverses overhead charges when you reverse associated resource charges.

### **Note:**

You should remember that the overheads could also be tied directly to the move transactions. Such overheads have basis type Item or Lot instead of resource units or resource value.



### Where You Can Perform Resource Transactions

You can perform resource transactions using the most convenient data-entry mechanism.

- From the Move Transaction window
  - You can charge resources automatically or manually.
  - Oracle Work in Process optionally validates the transaction information online.
- From the Resource Transactions window
  - You can charge resources manually.
  - Oracle Work in Process optionally validates the transaction information online.
- Open Resource Transaction Interface
  - You can insert resource transactions into the Open Resource Transaction Interface table.
  - Oracle Work in Process validates and then processes the transactions.
  - Failed transactions are marked with an appropriate error code.
  - You can view, update, and resubmit the information in the Update WIP Transaction Interface window.



- Receipts window in Oracle Purchasing (for outside processing)
  - You can automatically charge outside resources for an outside operation as you receive the outside processed assembly back from the vendor.
- Discrete Workstation
  - You can enter time on the Discrete Workstation for a resource.
  - You can enter direct labor time using an actual labor rate.
  - You can enter down to the minute as opposed to the hour with the resource form.
  - The Time Charges tab is chosen.

## Manually Charging Resources

---

### Manually Charging Resources

**You can manually charge resources to a discrete job or repetitive assembly and line with or without an associated move transaction.**

- **Manually charging resources without a move**
- **Manually charging resources with a move**
- **Manually reversing resource charges**

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### **Manually Charging Resources with a Move**

- You can perform the move transaction.
- You can charge resources with an autocharge type of Manual assigned to the operations completed during the move (Oracle Work in Process displays those resources automatically).
- If the standard rate flag for a manual resource is No, and the resource is of type Person, you can charge the resource at the employee labor rate instead of the standard rate by specifying an employee identifier.
- This transaction is done from the Move Transactions window by choosing the Resources button.

### **Manually Charging Resources without a Move**

You can charge any resource assigned to an operation in a job or schedule.

You can charge any resource not previously assigned to an operation in a job or schedule. The resource must be defined for the department associated with the operation. It can have autocharge type Manual or WIP move.

This transaction is done by navigating to the Resource Transactions window.

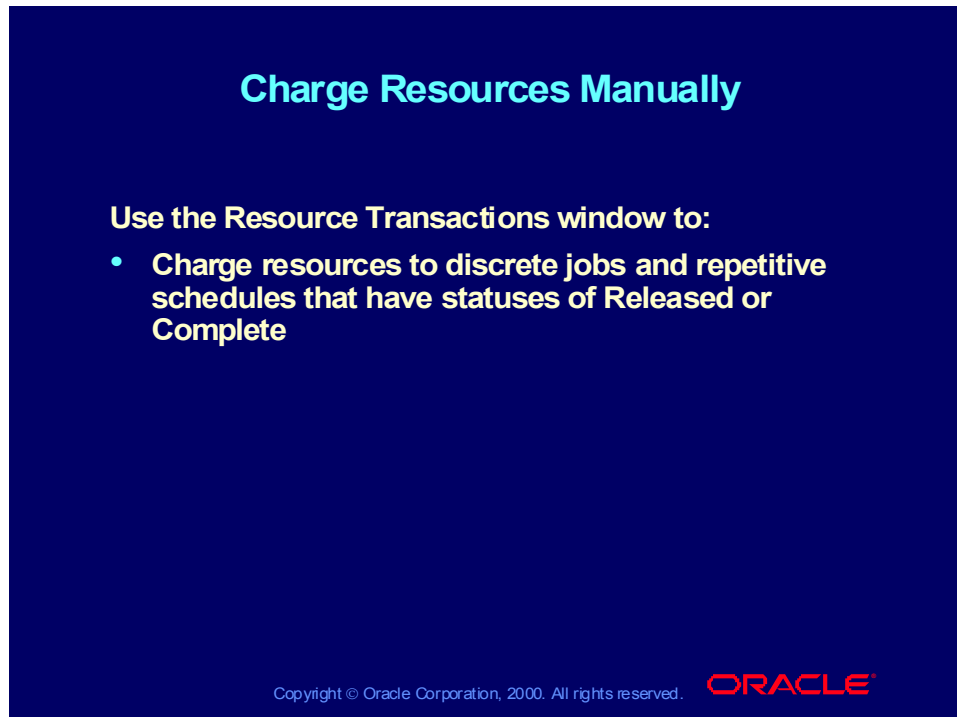
### **Manually Reversing Resource Charges**

You can manually reverse resource charges at any time by specifying negative resource units applied.

This transaction is done by navigating to the Resource Transactions window.

## Charge Resources Manually

---



### **Charge Resources Manually**

Resources are charged based on how they are defined at the operation they are assigned.

Oracle WIP (N) Resource Transactions > Resource Transactions

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Resource Management > Resource Transactions > Charging Resources Manually

## Example of Manual Resources

---

### Example of Manual Resources

Routing Summary				
Op Seq	Count Point Type	Resource	Autocharge	Standard Rate
10	Yes—autocharge	RES1	WIP Move	Yes
		RES2	Manual	No
20	Yes—autocharge	RES3	WIP Move	Yes
		RES4	WIP Move	Yes
30	No—direct charge	RES5	Manual	Yes
40	No—autocharge	RES6	WIP Move	Yes
50	Yes—autocharge	RES7	Manual	Yes

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### Manual Resources

If the Manual Resources Exist check box is selected, the Move Transactions window queries manual resource charges associated with the operation you are completing to make data entry easier when you choose the Resources button.

## Resource Charging Examples

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### Resource Charging Examples

Move Transaction	Manual Resources Displayed
20 Queue—>20 To Move	
10 Queue—>40 To Move	RES2
40 To Move—>50 To Move	RES7
10 To Move—>30 To Move	RES5
40 To Move—>20 Queue	

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## Review Question

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### Review Question

**How can you reverse manual resource charges?**

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### Review Question Solution

**How can you reverse manual resource charges?**

**You can manually charge the same resource to the job or schedule and enter a negative value in the Units Applied field.**

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## Charging Resources with Move Transactions

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### Charging Resources with Move Transactions

Use the Move Transactions window to:

- Charge manual resources with a move
- Add and charge resources not already associated with a job or repetitive schedule

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Oracle WIP (N) Move Transaction > Move Transactions (B) Resources

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Resource Management > Resource Transactions > Charging Resources with Move Transactions



## Example of WIP Move Resources

---

### Example of WIP Move Resources

Routing Summary				
Op Seq	Count Point Type	Resource	Autocharge	Standard Rate
10	Yes—autocharge	RES1	WIP Move	Yes
		RES2	Manual	No
20	Yes—autocharge	RES3	WIP Move	Yes
		RES4	WIP Move	Yes
30	No—direct charge	RES5	Manual	Yes
40	No—autocharge	RES6	WIP Move	Yes
50	Yes—autocharge	RES7	Manual	Yes

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## Example of Resource Charging

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### Example of Resource Charging

Move Transaction	Resources Charged Automatically
10 Queue—>10 Run	
10 Queue—>40 To Move	RES1, RES3, RES4, RES6
40 To Move—>50 To Move	
10 To Move—>50 Queue	RES3, RES4, RES6
40 To Move—>20 Queue	RES6, RES3, RES4 (unchanged)

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## Demonstration

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### Demonstration

**This demonstration covers manually charging resources.**



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## Review Question

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### Review Question

**How can you reverse WIP move resource charges?**

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### Review Question Solution

How can you reverse WIP move resource charges?

- You can manually charge the same resource to the job or schedule and enter a negative value in the Units Applied field.
- You can perform a backward move: Oracle Work in Process automatically reverses the WIP move resource charges.

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## Review Question

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### Review Question

**Why would you want to charge resources that are not assigned to an operation on a routing?**

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### Review Question Solution

**Why would you want to charge resources that are not assigned to an operation on a routing?**

**You might need to charge an unexpected resource to a job or schedule, such as a temporary worker that you hired for an overtime shift. Or you might have received an additional machine that you want to use to speed up the manufacturing process.**

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## Automatic Resource Transactions

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### Automatic Resource Transactions

- Automatically charging resources at standard rate
- Completing an operation and automatically charging resources
- Reversing resource charges

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#### **Automatically Charging Resources at Standard Rate**

You can automatically charge resources at their standard rate to a discrete job or repetitive assembly and line while performing a move transaction.

- Completing an operation and automatically charging resources
- Reversing resource charges

#### **Completing an Operation and Automatically Charging Resources**

Oracle Work in Process charges all resources with an autocharge type of WIP move at their standard rate.

WIP move resources with a basis type of Item are charged upon completion of each assembly at the operation the resource is tied to.

WIP move resources with a basis type of Lot are charged upon completion of the first assembly at the operation the resource is tied to.

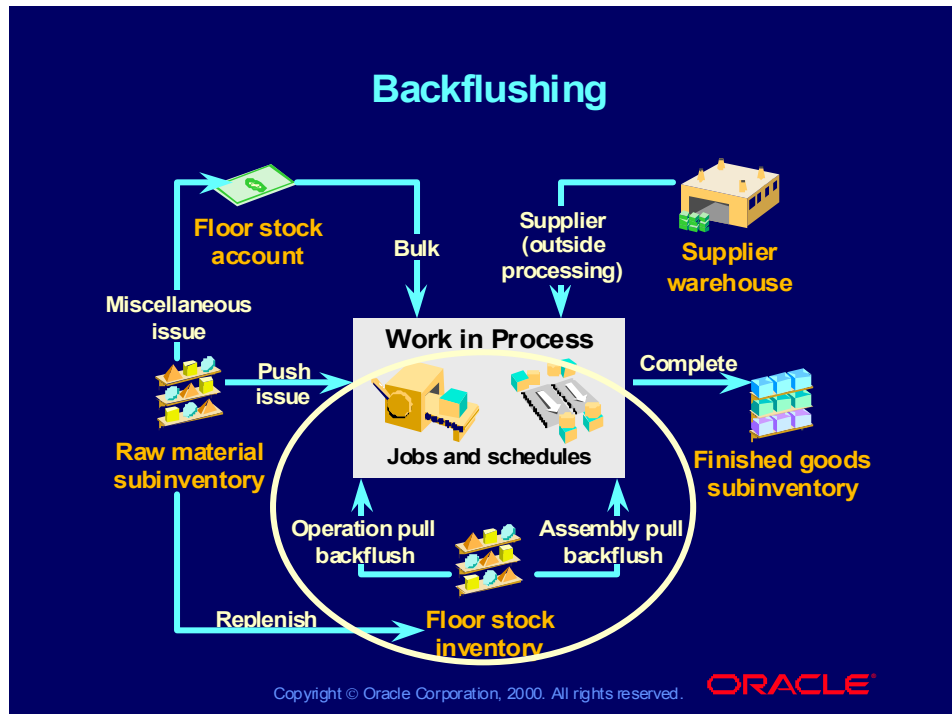
#### **Reversing Resource Charges**

If you perform an uncompletion, Oracle Work in Process automatically reverses any resource charges associated with the completion for WIP move resources.

If a WIP move resource has a basis type of Lot, Oracle Work in Process reverses the resource charges only if you uncomplete all assemblies at the operation.



# Backflushing



## Backflushing Components

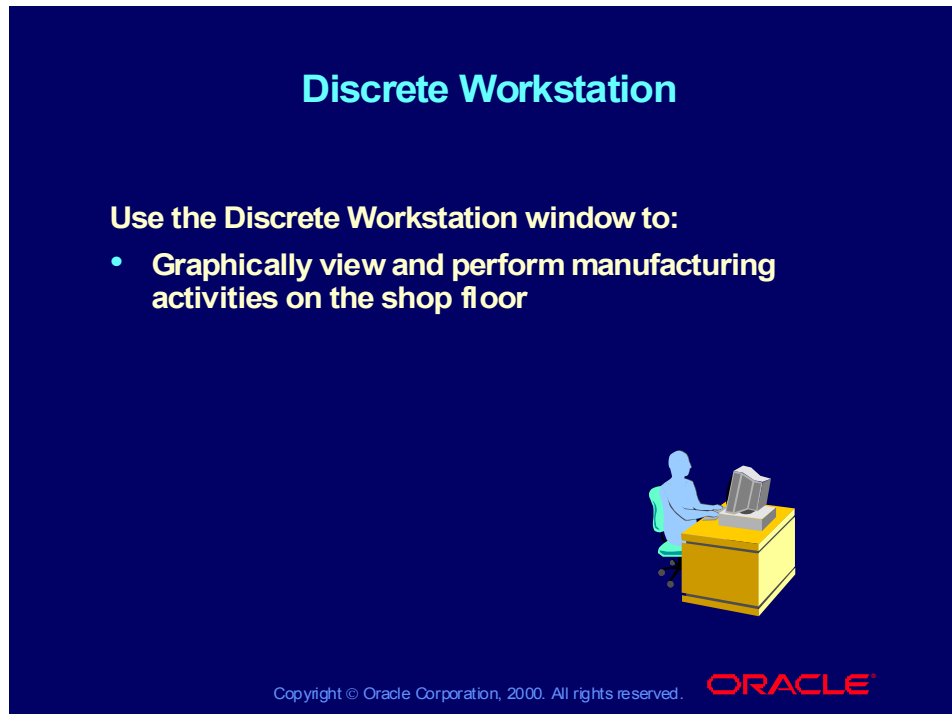
You can initiate a backflush from several sources. You can automatically launch backflush transactions when moving or completing assemblies.

## Backflush Sources

- Move Transactions window
- Completion Transactions window
- Enter Receipts window in Oracle Purchasing (for outside processing)
- Oracle Inventory Material Transaction interface
- Open Move Transaction interface

## Discrete Workstation

---



(N) Discrete > Discrete Workstation (B) Launch

### **Discrete Workstation Display**

You can launch the workstation by selecting a department or department and resource. On the left pane, the list of job operations is those assigned to the department or department and resource combination that you selected.

The workstation interface displays information on graphs and tables for fast access and easy readability. You can monitor the utilization, efficiency, productivity, and load on a resource from all departments in a table and graph format.

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Discrete Manufacturing > Discrete Workstation > Discrete Workstation Transactions > Charge Resources

## Viewing Resource Transactions

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### Viewing Resource Transactions

Use the View Resource Transactions window to:

- Find and view resource transactions for an individual job or a repetitive line and assembly
- View resource transactions across jobs and schedules

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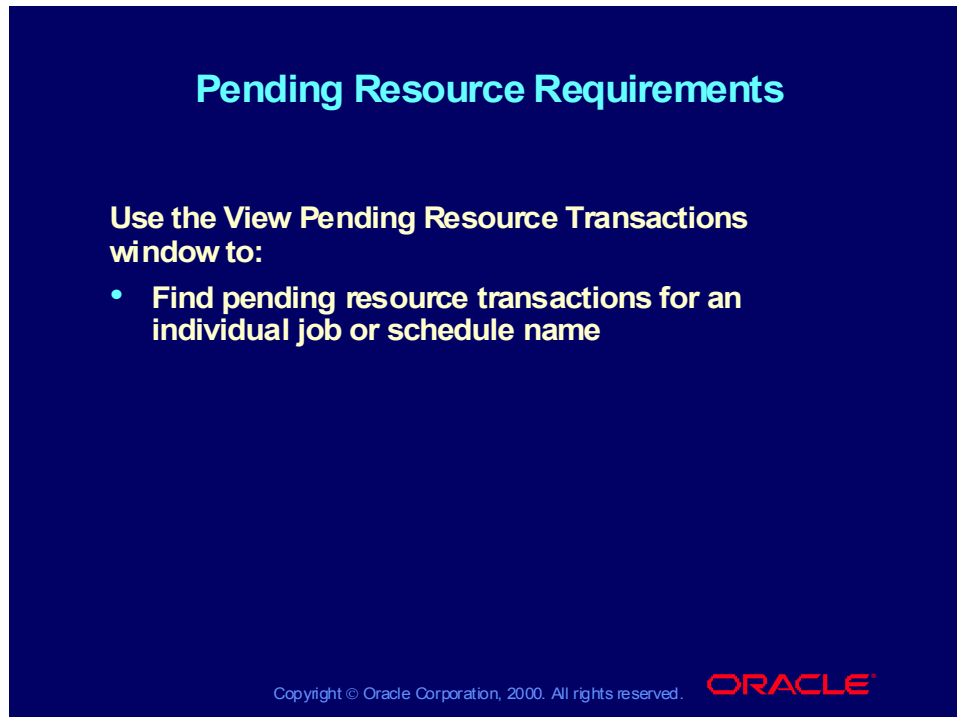
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Oracle WIP (N) Resource Transactions > View Resource Transactions

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Resource Management > Resource Transactions > Viewing Resource Transactions

## Pending Resource Requirements

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**Pending Resource Requirements**

**Use the View Pending Resource Transactions window to:**

- **Find pending resource transactions for an individual job or schedule name**

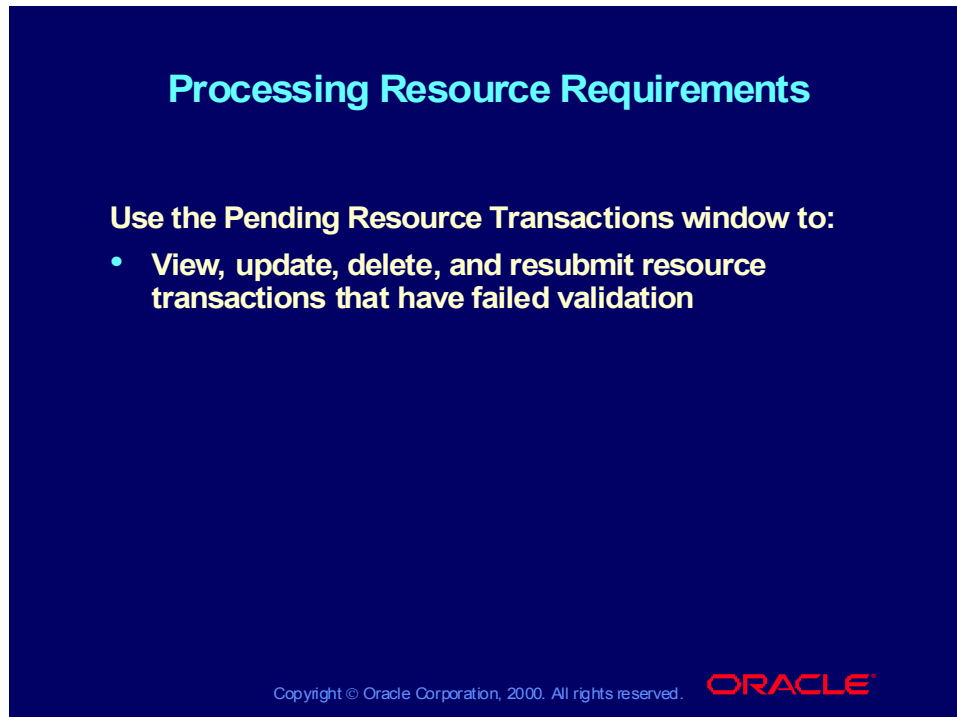
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Oracle WIP (N) Resource Transactions > Pending Resource Transactions

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Resource Management > Resource Transactions > Finding Pending Resource Transactions

## Processing Resource Requirements

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Oracle WIP (N) Resource Transactions > Pending Resource Transactions

(Help) Oracle Manufacturing Applications > Oracle Work in Process > Resource Management > Resource Transactions > Processing Pending Resource Transactions

## Charging Multiple Schedules

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### Charging Multiple Schedules

#### Example of Repetitive Allocation

Transaction	Allocate to Schedule 1	Allocate to Schedule 2
Transact 300 assemblies	300	0
Transact 200 assemblies	100	100
Transact 100 assemblies	0	100

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### Charging Multiple Schedules

Flow charging is a repetitive transaction method in which you charge material, move, resource, and overhead transactions to a specific assembly on a line rather than a specific repetitive schedule.

If more than one schedule has a status that allows charges, you can perform transactions against the consolidated sum of all the schedules.

For example, if there are three schedules for 100 units each with status Released for the same assembly and line combination, you could move up to 300 units with one transaction.

### Advantages of Flow Charging

Flow charging means that shop floor data entry can be performed by charging against the assembly and line. The person who enters shop floor data does not need to be able to identify which schedule an assembly belongs to.

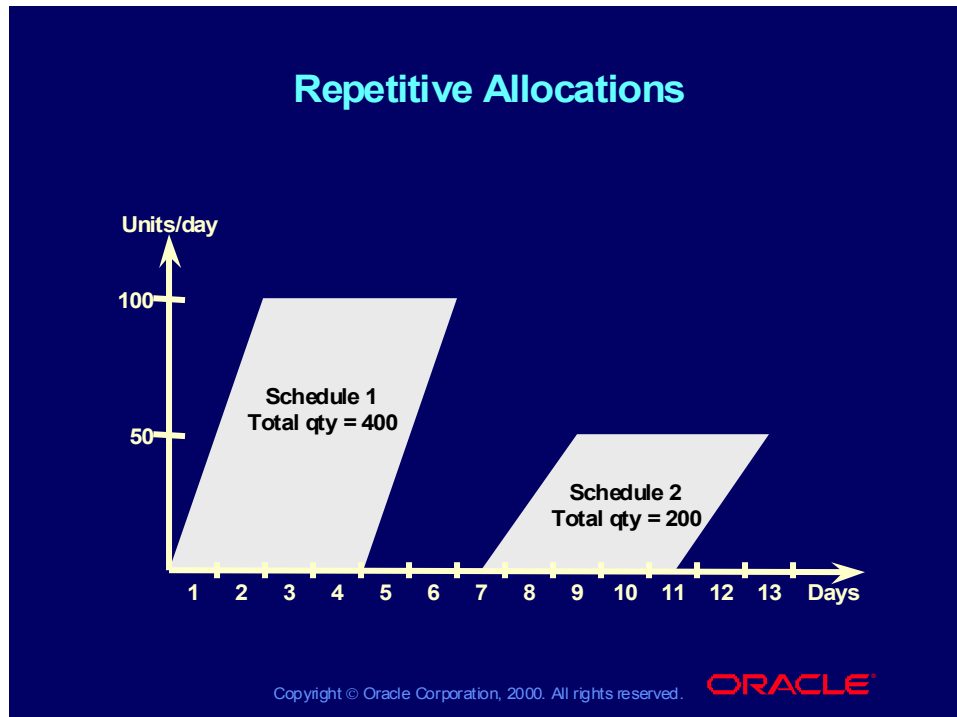
Flow charging means that you can batch all your transactions against an assembly on a line and then enter all of them in one transaction. For example, if you run three schedules per day building the same assembly on the same line, you can enter all your transactions against the assembly and line at the end of the day without worrying about which schedule was building the assemblies.

Flow charging supports the idea of a schedule being less of an individual entity than a discrete job is. As long as two schedules build the same assembly on the same line, Oracle Work in Process does not distinguish between them for transaction purposes.

**Note:** Many Oracle Work in Process repetitive reports also consolidates quantities across schedules for the same assembly on the same line.

## Repetitive Allocations

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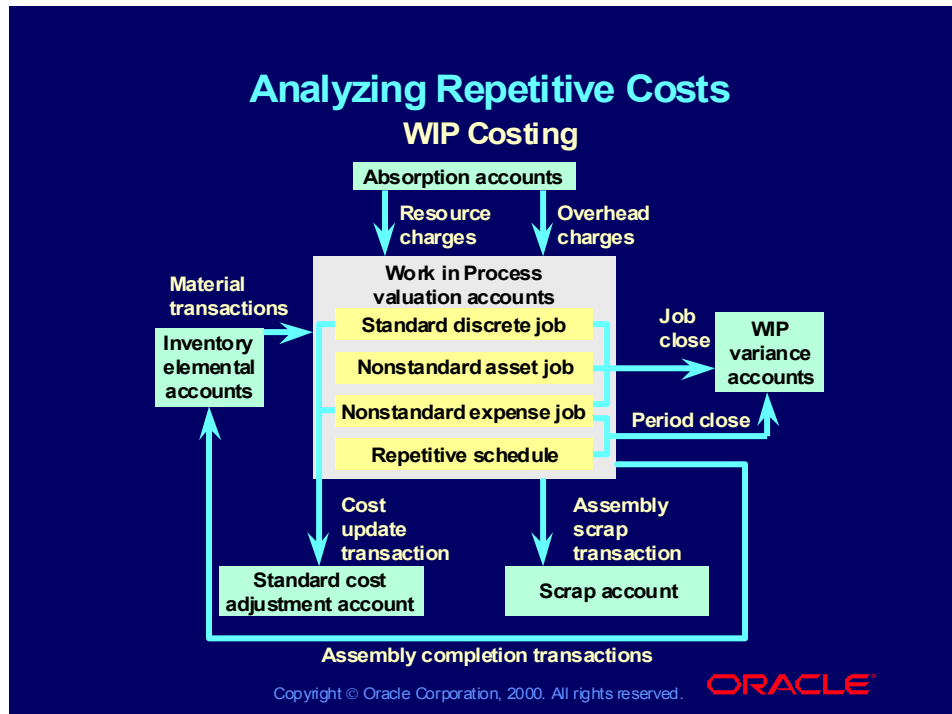
### Repetitive Allocation

Repetitive allocation is a system technique for applying transaction quantities and costs across several repetitive schedules that are building the same repetitive assembly on the same line.

The repetitive allocation algorithm allows Oracle Work in Process to allocate the transactions that were flow charged to particular schedules.



## Analyzing Repetitive Costs



### Flow Charging

When you enter repetitive transactions, you charge the repetitive assembly and line rather than a specific job. Therefore you can also see repetitive costs consolidated across all schedules for an assembly on a line.

### Period Costing

- You can use the Inventory Accounting Period window in Oracle Inventory to close a period and perform period costing for your repetitive production.
- Period costs for an assembly are calculated by totaling the charges made during the period and dividing that number by the number of assemblies completed in the period.
- The difference between the period cost and the standard cost is called a variance.
- Oracle Work in Process writes variances to the variance accounts associated with the WIP accounting classes assigned to the assembly/line combination for which a repetitive schedule was defined.
- You can use the parameter Recognize Repetitive Variances to control whether your variances at period end are based only on completed and canceled schedules or on all schedules.

## Costing Resource Charges at Resource Standard

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### Costing Resource Charges at Resource Standard

- Resource charges increase your work in process valuation. The accounting entries for resource transactions are:

<u>Account</u>	<u>Debit</u>	<u>Credit</u>
WIP accounting class resource valuation account	XX	
Resource absorption account		XX

- The accounting entries for negative manual resource transactions and backward moves for WIP move resources are:

<u>Account</u>	<u>Debit</u>	<u>Credit</u>
Resource absorption account	XX	
WIP accounting class resource valuation account		XX

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### Cost Resource Transactions

You can cost resource transactions at standard, average, or actual.

## Costing Labor Charges at Actual

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### Costing Labor Charges at Actual

The accounting entries at transaction time are:

<u>Account</u>	<u>Debit</u>	<u>Credit</u>
WIP accounting class resource valuation account	XX	
Resource absorption account		XX

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### Costing Labor Charges at Actual

For labor charges using an actual or employee rate for a resource with the Standard Rate check box clear, the job or schedule is debited at the actual or employee rate. The employee rate used needs to be set up at the organization level.

The absorption account is credited at the same rate. The variance between actual and standard is captured at the time of accounting close.

The accounting entries at transaction time are shown on the slide.

If you enter an actual rate for a resource with the Standard Rate check box selected, Oracle Work in Process charges the job or repetitive schedule at standard. It also charges the variance account of the resource for the difference between the standard and the actual at transaction time.

## Costing Resource Transactions

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### Costing Resource Transactions

If the actual rate is greater than the standard rate, the accounting entries are:

<u>Account</u>	<u>Debit</u>	<u>Credit</u>
WIP accounting class resource valuation account	XX	
Resource rate variance account	XX	
Resource absorption account		XX

If the actual rate is less than the standard rate, the accounting entries are:

<u>Account</u>	<u>Debit</u>	<u>Credit</u>
WIP accounting class resource valuation account	XX	
Resource rate variance account		XX
Resource absorption account		XX

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## Weighted Average Costing

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### Weighted Average Costing

- You can charge material to WIP at average cost.
- You can charge resources to WIP at actual or average cost.
- You can define outside processing resources under average costing.
- You can calculate the average cost of completed assemblies in WIP.

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### Weighted Average Costing

- You can issue items from inventory to jobs and return components from a job back to inventory at the item's current average cost.
- You can charge resources to WIP jobs either at actual rate or at an average rate. How you define them is determined by the method you choose for charging labor and nonlabor resources to WIP.
- You can define outside processing resources under average costing in the same way you would in a standard cost organization.
- When you complete assemblies from WIP to a subinventory, they can be costed in one of the following ways:
  - A predefined cost in a user-designated cost type
  - An algorithm based on actual job charges that calculates the unit cost to be relieved from the job and charged to inventory for each unit completed

For more information, see *Oracle Cost Management Release 11i*.

## Resource Transactions Activity Windows

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### Resource Transactions Activity Windows

Window	Description
Operations	Use this window to add, change, or delete resource requirements on a job or schedule.
View Resource Requirements	Use this window to review resource transactions online.

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## Resource Transactions Activity Reports

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### Resource Transactions Activity Reports

Report	Description
Resource Transaction	Review resource transactions for a specific job or schedule or a range of jobs or schedules.
Resource Performance	Review resource efficiency by resource or department.
WIP Account Distribution	Review the resource and overhead transactions against an account charged by job or schedule.
WIP Account Summary	List the account summary of resource and overhead transactions.

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## Resource Transactions Activity Reports

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### Resource Transactions Activity Reports

Report	Description
WIP Offsetting Account	List the resource and overhead transactions for a specific account.
Discrete Job Value	Review the status of resource and resource-based overhead charges for a job.
Repetitive Value	Review the status of resource and resource-based overhead charges for an assembly on a line during an accounting period.

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### Summary

- You can let Oracle Work in Process charge resources automatically based on moves, or you can manually charge resources with or without a move.
- You can use one of four data-entry methods to charge resources: the Material Transactions window, the Resource Transactions window, the Open Resource Transaction Interface table, or the Receipts window in Oracle Purchasing.
- You can charge resources at standard, at average, at an employee rate, or (through the open interface) at actual.
- You can monitor resource transactions activity with a variety of windows and reports.

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## Practice 1-3 Overview

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### Practice 1-3 Overview

**In this exercise you will create a discrete job, move assemblies and charge resources.**

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### Practice 1-3

1. Create a new job for a quantity of 100 for assembly AS54888, the Sentinel Standard Desktop.
2. Move 100 assemblies from Queue to To move.
3. Manually charge resources with the move. Charge 5 hours to Ms. Catherine Baker.

## Practice 1-3 Solution

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**Practice 1-3 Solution**

The screenshot displays the 'Discrete Jobs (M1)' window in Oracle. The job details are as follows:

Field	Value
Job	26163
Assembly	AS54888
Class	Discrete
Status	Released
Type	Standard
UOM	Ea
Firm	<input type="checkbox"/>

**Quantities**

Field	Value
Start	100
MRP Net	100

**Dates**

Field	Value
Start	08-AUG-2000 00:00:00
Completion	

**Supply Type**

Field	Value
Supply Type	Based on Bill

At the bottom, there are buttons for 'Sales Orders', 'Operations', and 'Components'. The Oracle logo and copyright notice 'Copyright © Oracle Corporation, 2000. All rights reserved.' are also visible.

### Practice 1-3 Solution

Create a new job for a quantity of 100 for assembly AS54888, the Sentinel Standard Desktop.

Oracle WIP (N) Discrete—>Discrete Jobs

1. Navigate to the Discrete Jobs window and define a standard job for 100 assemblies of AS54888. The status of the job should be released.
2. Save your work.

## Practice 1-3 Solution

**Practice 1-3 Solution**

Move Transactions (M1)

Sales Order:  Order Line:

Line:  Assembly:  Job:

UOM:  Bill Revision:

Transaction Type:

- ☒ Move
- ☐ Complete
- ☐ Return

Operations:

Seq	Code	Department	Step
From 10	SDAS	ASSEMBLY	Queue
To 20	SBAS	ASSEMBLY	To move

Transaction:

- ☐ Overcompletion
- UOM:
- Available:
- Quantity:
- Date:
- ☐ Manual Resources Exist

Scrap Account:

Alias:

Number:

Reason:

Reference:

Statuses Resources Save

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### Practice 1-3 Solution (continued)

Move 100 assemblies from Queue to To move.

Work in Process (N) Move Transactions—>Move Transactions

1. Move 100 assemblies from Operation Seq 10 Queue to Operation Seq 20 To move.
2. Do not save your work yet. Click on the Resources button to do step 3 of the practice.

## Practice 1-3 Solution

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**Practice 1-3 Solution**

Operation Seq	Department	Resource Seq	Resource	Employee	UOM	Quantity	Activity
10	ASSEMBLY	10	LBR-DTASSY	Baker, Ms. Catherine	HR	5	Move

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### Practice 1-3 Solution (continued)

Manually charge resources with the move. Charge 5 hours to Ms. Catherine Baker.

Work in Process (N) Move Transactions—>Move Transactions (B) Resources

1. Charge 5 hrs to Ms Catherine Baker (employee ID is 40) at Operation Seq 10.
2. Save your work.

## Summary

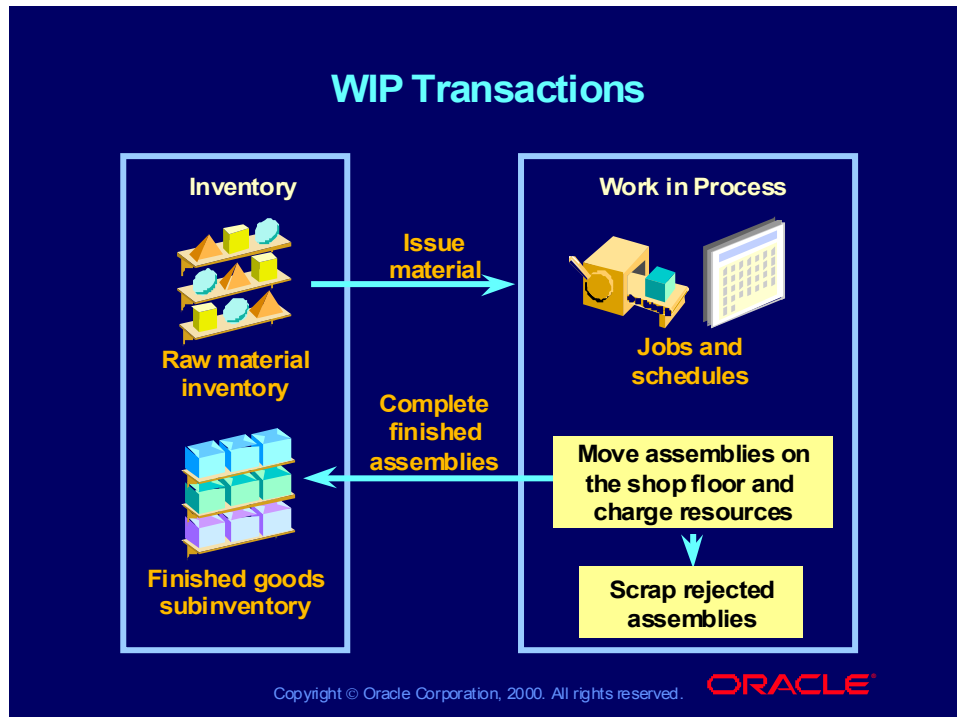
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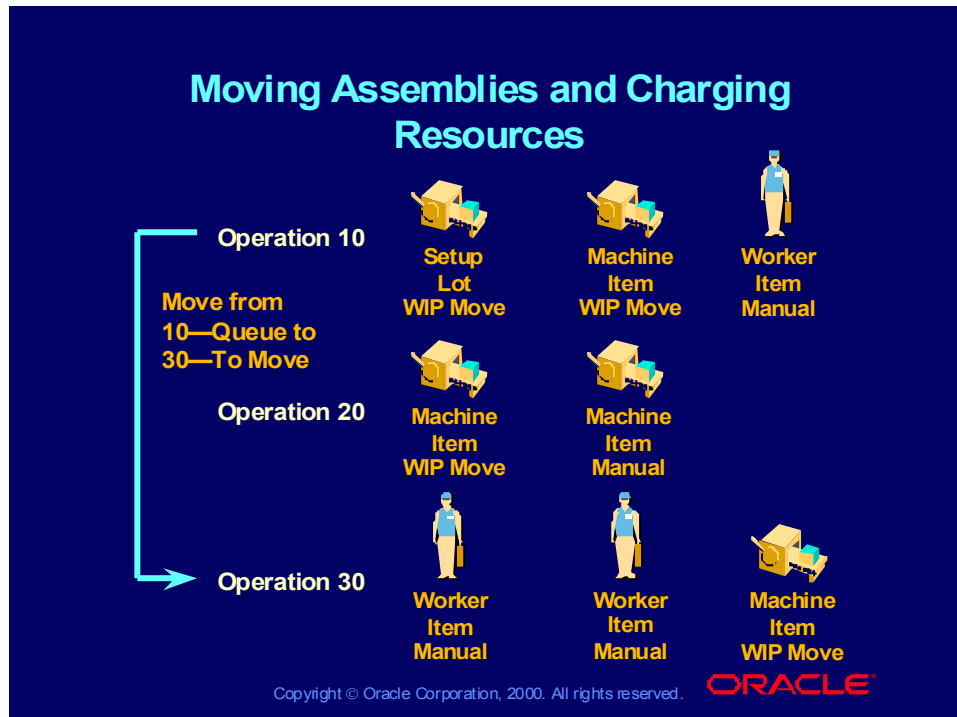
**Summary**

## WIP Transactions

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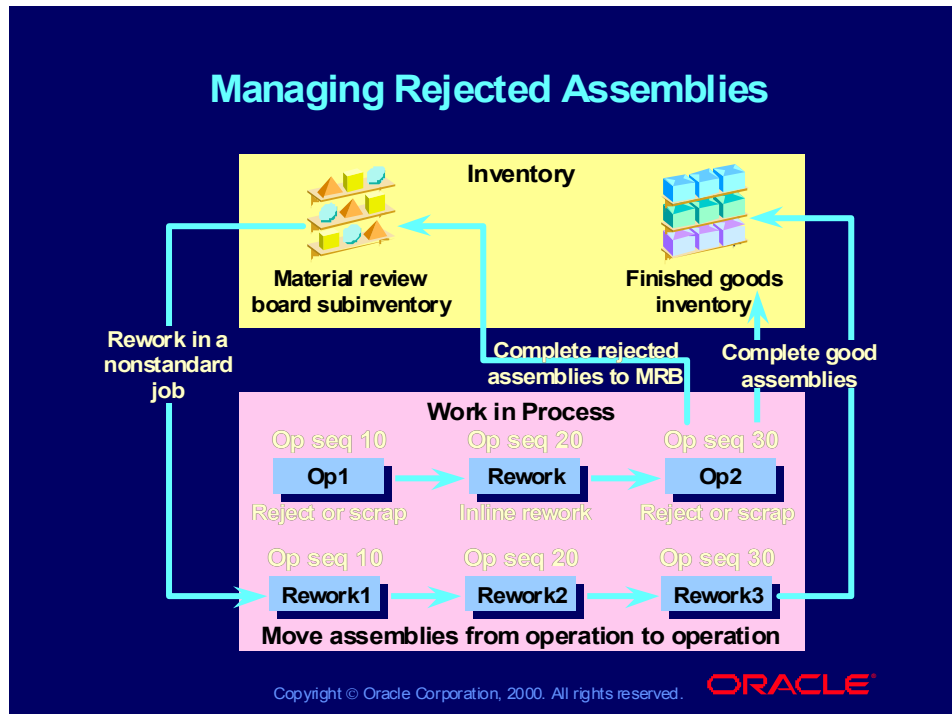


## Moving Assemblies and Charging Resources



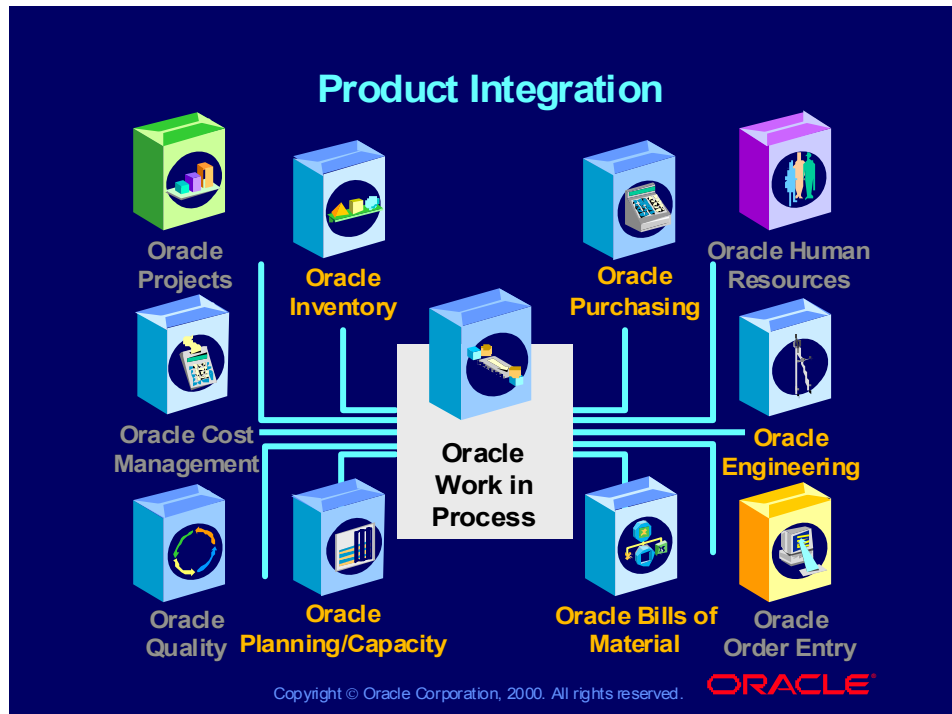


## Managing Rejected Assemblies



## Product Integration

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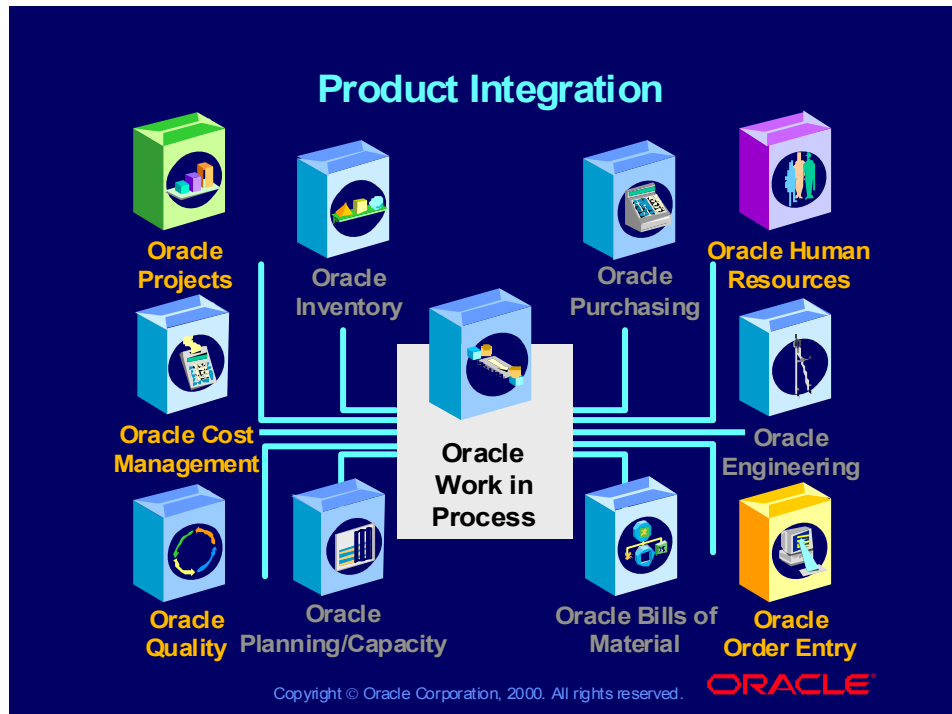
### Product Integration

Oracle Work in Process interacts with Oracle's other applications products by sharing common information.

- Oracle Inventory
  - From: UOM, item information, and on-hand information
  - To: WIP activity and ATP supply information
- Oracle Bills of Material
  - From: Product structure information, routing information, and resource information
- Oracle Engineering
  - From: Engineering change information and product structure information
- Oracle Purchasing
  - From: Receipts deliveries
  - To: Subcontract requisitions
- Oracle Planning
  - From: Planned jobs and schedules
  - To: Open jobs, schedules, and repetitive assembly and line information
- Oracle Capacity
  - To: Existing resource load

## Product Integration

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### Product Integration (continued)

- Oracle Cost Management
  - From: Cost information
  - To: Transaction costs
- Oracle Projects
  - From: Project tasks and IDs
  - To: Job cost information
- Oracle Quality
  - To: Quality data
- Oracle Human Resources
  - From: Employee information
- Oracle Order Entry
  - From: Final assembly orders

### Course Summary

**In this component, you should have learned how to:**

- **Move assemblies on the shop floor**
- **Track assembly movements on the shop floor**
- **Report shop floor activity**
- **Manage rejected assemblies in work in process**
- **Charge resources to jobs or schedules**
- **Monitor resource transaction activity**



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