

Guide  
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WORLD SOFTWARE

# Product Costing and Manufacturing Accounting

Release  
A8.1

JD Edwards®



Item # A81CEAMA



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## Where Do I Look?



## Guides





## **Important Note for Students in Training Classes**

This guide is a source book for online helps, training classes, and user reference. Training classes may not cover all the topics contained here.



# Welcome

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## About this Guide

This guide provides overviews, illustrations, procedures, and examples for the current release of J.D. Edwards software. Forms (screens and windows) shown are only examples. If your company operates at a different software level, you might find discrepancies between what is shown in this guide and what you see on your screen.

This guide includes examples to help you understand how to use the system. You can access all of the information about a task using either the guide or the online help.

Before using this guide, you should have a fundamental understanding of the system, user defined codes, and category codes. You should also know how to:

- Use the menus
- Enter information in fields
- Add, change, and delete information
- Create and run report versions
- Access online documentation

## Audience

This guide is intended primarily for the following audiences:

- Users
- Classroom instructors
- Client Services personnel
- Consultants and implementation team members

## Organization

This guide is divided into sections for each major function. Sections contain chapters for each task or group of related tasks. Each chapter contains the information you need to accomplish the task, run the program, or print the

report. Chapters normally include an overview, form or report samples, and procedures.



When it is appropriate, chapters also might explain automatic accounting instructions, processing options, and warnings or error situations. Some chapters include self-tests for your use outside the classroom.

This guide has a detailed table of contents and an index to help you locate information quickly.

## Conventions Used in this Guide

The following terms have specific meanings when used in this guide:

- *Form* refers to a screen or a window.
- *Table* generally means “file.”

We assume an “implied completion” at the end of a series of steps. That is, to complete the procedure described in the series of steps, either press Enter or click OK, except where noted.

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# Overview



## Overview

Maintaining accurate and complete records on the value of inventory is one of the major concerns of most businesses today. Keeping too much of an unprofitable stock, or using inappropriate methods of costing certain inventory items, can quickly deplete your profits.

The Product Costing system allows you to store and retrieve cost information. It also helps you to manage your costs by providing informational inputs to your company's business plan. With accurate product costing, you can evaluate the following manufacturing processes to determine the impact to your company's bottom line:

- Manufacturing budgets (direct labor, indirect labor, and overhead)
- Product design (design and manufacturing engineering)
- Accounting (gross margin by product line or item)

After you establish costs in the Product Costing system, the Manufacturing Accounting system tracks the costs, reports on variances, and posts manufacturing transactions to the general ledger.



Please note that the term work order is used throughout this guide. In general, however, transactions that affect work orders also affect rate schedules.

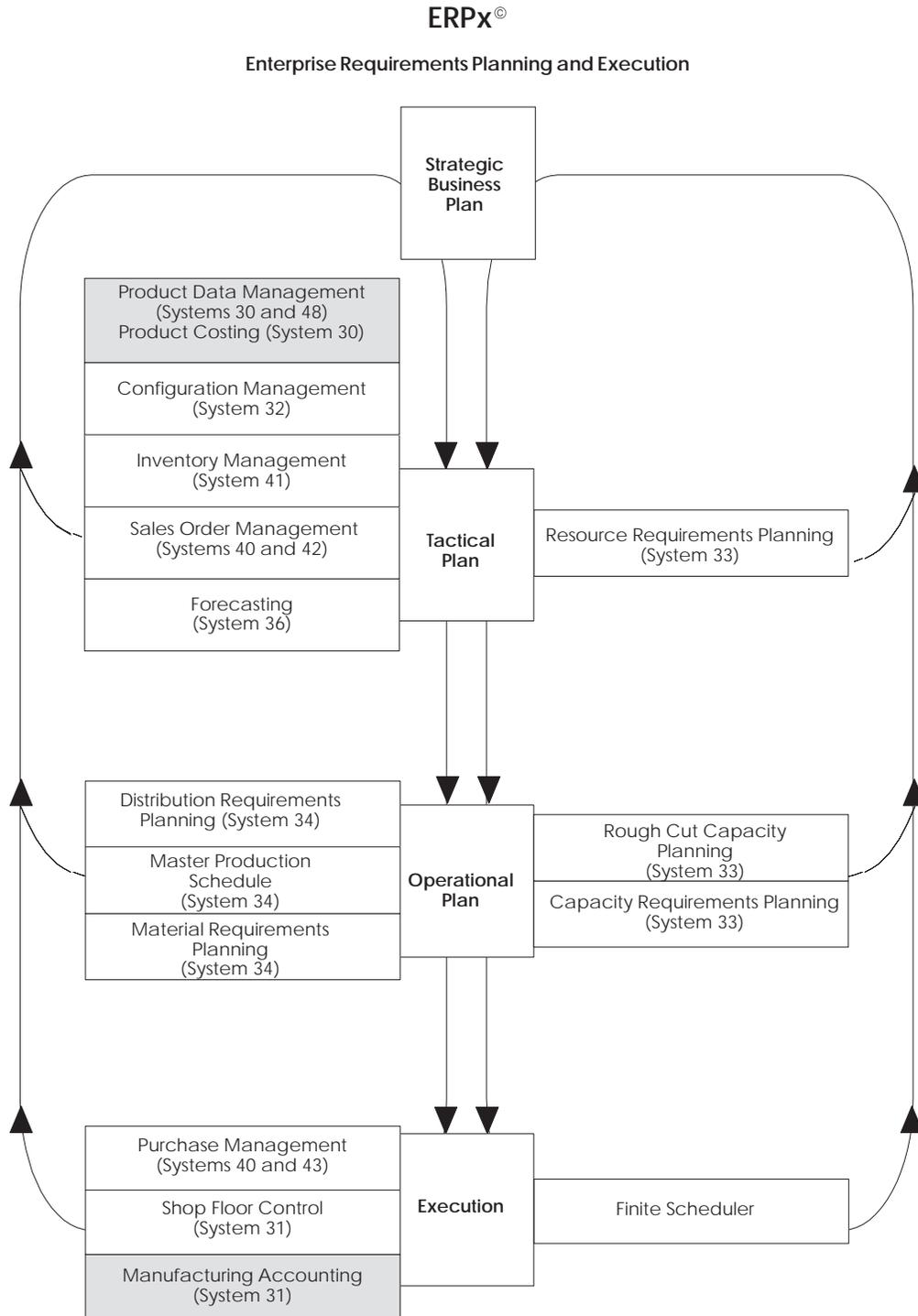
## System Integration

Product Costing and Manufacturing Accounting are two of the systems that are included in the Enterprise Requirements Planning and Execution (ERP<sub>x</sub>) system.

ERP<sub>x</sub> is a closed-loop manufacturing system that formalizes company and operations planning, and the implementation of those plans. Use the ERP<sub>x</sub> system to coordinate your inventory and labor resources to deliver products according to a managed schedule.



The following diagram shows the systems that make up ERPx and the sequence in which they are implemented.



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## Features

The Product Costing and Manufacturing Accounting systems provide flexibility to accommodate your manufacturing environment. Some of the benefits and features of these systems are:

<b>User defined cost add-ons</b>	Define and maintain an unlimited number of cost components for tracking specific costs, such as freight, taxes, duty, and electricity.
<b>User defined cost rollup methods</b>	Define an unlimited number of cost methods to use in cost simulation analyses.
<b>User defined cost factors and rates</b>	Allocate cost factors and rates to a specific item. Used with cost add-ons to calculate additional costs.
<b>Cost variances</b>	Print a complete set of reports to compare old costs with new costs before implementing any changes.
<b>Bill of material rollup</b>	Calculate the total material cost by retrieving the bill of material for all items and adding the total cost of the components.
<b>Cost simulation</b>	Run a complete simulation of costs before any live data is updated as the frozen standard.
<b>Multi-facility costing</b>	Maintain cost information at the branch/plant level to allow for cost variances at different locations for identical manufactured items.
<b>Variances</b>	Review four kinds of variances: <ul style="list-style-type: none"><li>• Engineering</li><li>• Planned</li><li>• Actual (material and labor)</li><li>• Other</li></ul>
<b>Journal entries for variances</b>	Create detailed or summary journal entries for work order variances.
<b>Journal entries for work order transactions</b>	Create detailed or summary journal entries for work in process or completions.
<b>Automatic accounting instruction (AAI) tables</b>	Charge dollar amounts to specified accounts.

### Reports

Print reports listing detailed costs and variances for work orders.

## Product Costing and Manufacturing Accounting Integration

Product costing plays a significant role in the manufacturing environment. Before you can implement your Manufacturing Accounting system, you must set up frozen standard cost component values for the products you produce. To calculate these cost component values, you must consider the following aspects in the manufacturing environment:

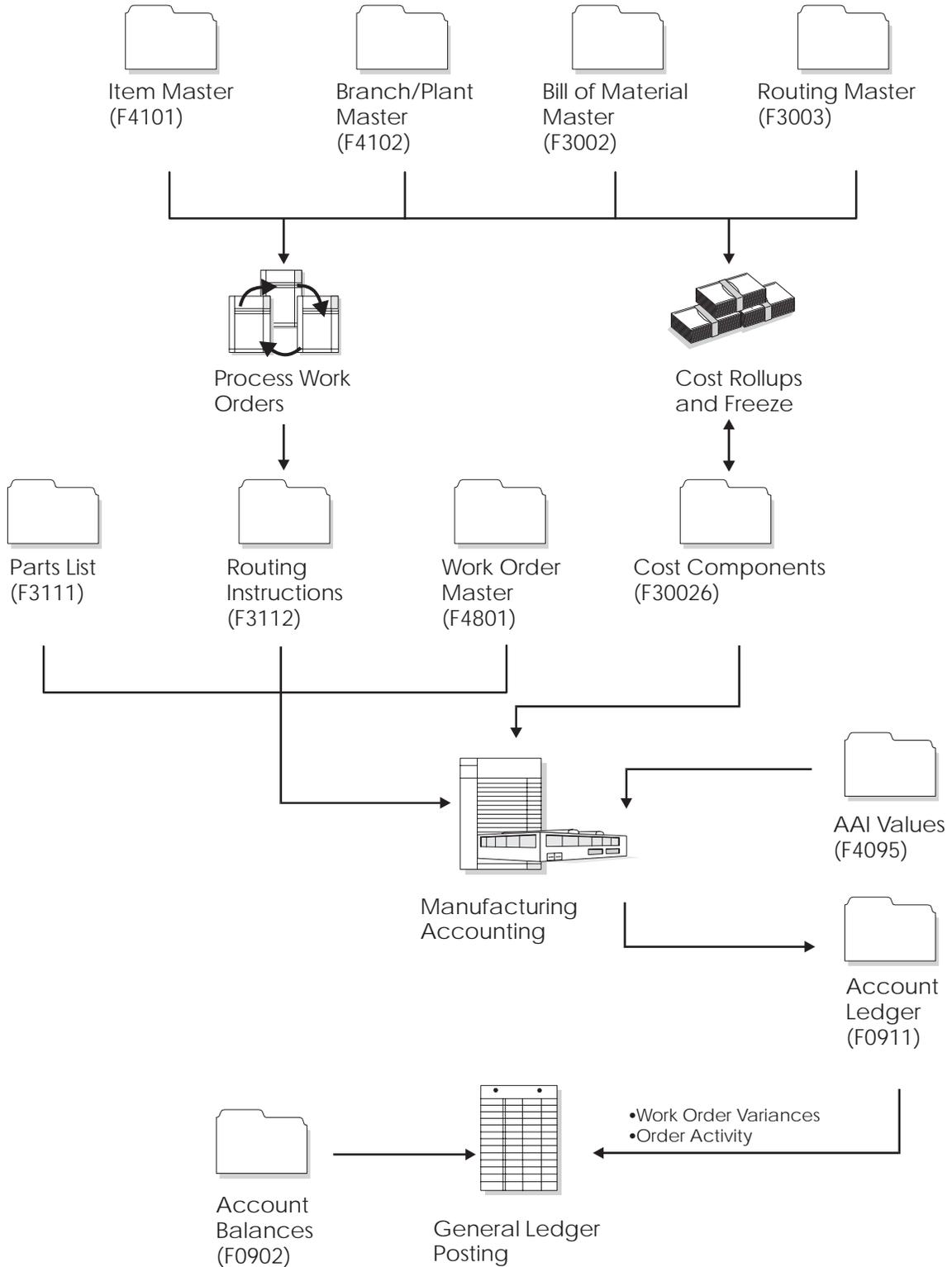
- Cost reporting (what does the item really cost to produce?)
- Variance reporting (the actual versus standard costs)
- Product and job costing (detailed information)
  - Materials
  - Labor
  - Overhead

After you calculate your cost component values in a simulated mode and are satisfied with the results, you must establish frozen standard cost components. All shop floor transactions use these frozen standards for calculations, which, in turn, create transactions in your general ledger and are the basis of your inventory valuation.

Certain functions within the Product Costing and Manufacturing Accounting systems overlap with other Manufacturing and Distribution systems, such as Product Data Management and Shop Floor Control. Therefore, it is important that you have a basic understanding of the following tables and how they interact with other systems:

- Item Master (F4101)
- Manufacturing Data (F41027)
- Branch/Plant Master (F4102)
- Bill of Material Master (F3002)
- Routing Master (F3003)
- Work Center Master (F30006)

The following illustration demonstrates the interaction of tables within the Product Costing and Manufacturing Accounting systems.



### Achieving Effective Cost Management

Most of the major areas or departments within your manufacturing company contribute information to your product costing activities and, therefore, affect the overall accuracy of your manufacturing budget.

The following table lists examples of departments within your company and the aspects of the Product Costing system which are affected by that department.

<b>Design Engineering</b>	<p>The Design Engineering group is responsible for ensuring that:</p> <ul style="list-style-type: none"><li>• The bill of material is complete</li><li>• The make-buy information is accurate</li><li>• The engineering change orders (ECOs) have been taken into account</li></ul>
<b>Sales</b>	<p>The sales force contributes important information regarding target markets, as well as the latest trends in manufacturing. For effective cost management, it is important that your sales force provide timely and reasonable forecasts.</p>
<b>Manufacturing Engineering</b>	<p>The Manufacturing Engineering group is responsible for identifying:</p> <ul style="list-style-type: none"><li>• Correct processes</li><li>• Changes to existing processes</li><li>• Manufacturing overhead</li><li>• Accurate information about work centers</li></ul>
<b>Purchasing</b>	<p>Your Purchasing department must provide:</p> <ul style="list-style-type: none"><li>• Accurate supplier costs</li><li>• Accurate transportation costs</li></ul>
<b>Manufacturing</b>	<p>Manufacturing operations provide vital information to the product costing effort. For example, they must:</p> <ul style="list-style-type: none"><li>• Input their data in a timely and accurate manner</li><li>• Identify any discrepancies in the bills of material and routings</li></ul>
<b>Accounting</b>	<p>Your Accounting staff must:</p> <ul style="list-style-type: none"><li>• Ensure that all items have costs</li><li>• Identify general and administrative overhead</li><li>• Produce timely variance reports (standard costs versus current costs)</li></ul>

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Several other issues should be considered as you define and manage your manufacturing costs, including:

- When (and how often) do you change standard costs?
- How do you limit access?
- When are new items reflected in the standard?
- How do you account for labor rates and work center overhead?

You might also encounter these typical circumstances as you define costs and perform rollups:

- Not all standards are available before your initial cost rollup.
- You have used incorrect units of measure.
- Your company inaccurately reports labor hours and costs.
- New products are not updated in a timely manner.
- Standards are updated too frequently.
- Items have been added to or deleted from the bill of material since the last cost update.
- Steps in the routing master have been changed since the last cost update.

## Tables

<b>Cost Components (F30026)</b>	Contains all cost methods and cost elements for each method for all items.
<b>Cost Ledger (F4105)</b>	Contains the costs of all items as of the last frozen update.
<b>Manufacturing Constants (F3009)</b>	Stores variables that indicate whether to include efficiency in the cost rollup and which overhead values to use.
<b>Manufacturing Data (F41027)</b>	Stores the accounting cost quantity, which the system uses to determine the allocation of fixed setup costs for an item.
<b>Routing Master (F3003)</b>	Stores routing information, including operation sequence, work center, run time, setup time, and machine time. The system uses this information to calculate labor, machine, and overhead costs.

<b>Bill of Material Master (F3002)</b>	Contains information at the business unit level about bills of material, such as quantities of components. The system uses this information to calculate material costs.
<b>Work Center Rates (F30008)</b>	Contains all rates for each work center, such as overhead and labor.
<b>Work Center Master (F30006)</b>	Contains detailed data about all defined work centers, including efficiency.
<b>Item Ledger (F4111)</b>	Contains transactions that indicate changes in inventory value.
<b>Account Master (F0901)</b>	Contains account definitions, including numbers and descriptions.
<b>Account Ledger (F0911)</b>	Contains detailed transactions in the general ledger.
<b>Account Balances (F0902)</b>	Contains net postings for each period and prior year balances (net and cumulative). There is one record per account, ledger type, subledger, fiscal year, and transaction currency table.
<b>User Defined Codes (F0005)</b>	Contains user defined codes and their descriptions. User defined codes in product costing and manufacturing accounting include: <ul style="list-style-type: none"><li>• Cost methods</li><li>• Cost components</li><li>• Cost buckets</li><li>• Operation buckets</li><li>• Standard rate codes</li><li>• Standard factor codes</li></ul>
<b>Batch Control (F0011)</b>	Contains system-generated batch header information, including the batch number, batch status, and batch entry date.
<b>Automatic Accounting Instruction (AAI) Values (F4095)</b>	Contains account numbers that are used to create journal entries and charge dollars to those accounts.
<b>Work Order Master (F4801)</b>	Contains all work order header information. The data from this table appears on shop floor paperwork. The system updates this table when completion transactions occur against a work order.

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<b>Parts List (F3111)</b>	Contains the parts list that is attached to a work order. It contains one record for each part. The system creates this table interactively or when you run the Process Work Orders program.
<b>Routing Instructions (F3112)</b>	Contains the routing steps that are attached to a work order. It contains one record for each operation sequence number and work center. The system creates this table interactively or when you run the Process Work Orders program.
<b>Work Order Variances (F3102)</b>	Contains the amounts used for work order variance calculations. The system updates this table by the Process Work Orders program and by the Journal Entries for Work in Process or Completions program.
<b>Item Master (F4101)</b>	Stores basic information about each defined inventory item, such as item numbers, descriptions, category codes, and units of measure.
<b>Branch/Plant Master (F4102)</b>	Defines and maintains warehouse or plant level information, such as branch level category codes.
<b>Address Book (F0101)</b>	Contains a variety of information, including information about customers, suppliers, employees, and prospects.
<b>Business Unit Master (F0006)</b>	Identifies information about business units, such as company names and category codes assigned to the business unit.

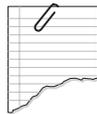
## Menu Overview

J.D. Edwards systems are menu driven. Menus are organized according to function and frequency of use.

### Product Costing

Access Product Costing functions from the Product Data Management menus.

Manufacturing Systems G3  
Product Data Management G30



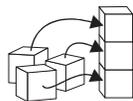
#### Daily Processes

- Daily Product Costing G3014



#### Periodic Processes

- Periodic Product Costing G3023



#### Setup Processes

- Product Costing Setup G3042

### Fast Path Commands

The following table illustrates the fast path commands you can use to move among the Product Costing menus.

Command	Menu	Title
DPC	G3014	Daily Product Costing
PPC	G3023	Periodic Product Costing
SPC	G3042	Product Costing Setup

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## Manufacturing Accounting

Access Manufacturing Accounting functions from the Shop Floor Control menus.

Manufacturing Systems G3  
Shop Floor Control G31



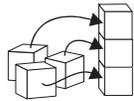
### Daily Processes

- Daily Manufacturing Accounting G3116



### Periodic Processes

- Periodic Manufacturing Accounting G3123



### Setup Processes

- Shop Floor Control Setup G3141

### Fast Path Commands

The following table illustrates the fast path commands you can use to move among the Manufacturing Accounting menus.

Command	Menu	Title
MA	G3116	Daily Manufacturing Accounting
PMA	G3123	Periodic Manufacturing Accounting
SSFC	G3141	Shop Floor Control Setup



# Product Costing





# Product Costing

## Objectives

- To understand product costing and its overall importance in a manufacturing environment
- To learn about standard and user defined cost methods
- To learn about the differences between frozen and simulated costs

## About Product Costing

Working with the Product Costing system consists of the following tasks:

- Reviewing bills of material and routings
- Setting up product costing
- Creating simulated costs
- Working with simulated cost components
- Updating frozen costs
- Reviewing costing information
- Working with additional costing features

## What Are Standard Costs?

You can work with a variety of cost methods in the Product Costing system. However, the Manufacturing Accounting system uses the standard cost method (07). This method represents the expected (target) cost of an item for a specific period of time, such as quarterly, semi-annually, or annually.

With standard costing, you estimate costs for each end item assembly and manufactured part on a level-by-level basis before production begins. These cost estimates are based on both past performance and analysis of future conditions.



<b>Standard Cost</b>	
<b>Net Added Cost</b>	<b>Total Cost</b>
Includes: <ul style="list-style-type: none"> <li>• Labor</li> <li>• Overhead</li> <li>• Outside Operations</li> <li>• Extra Costs</li> <li>• Materials (for purchased parts only)</li> </ul>	Includes: <ul style="list-style-type: none"> <li>• This item's net added cost</li> <li>• Total cost of lower-level components</li> </ul>

The net added cost represents the cost to manufacture an item at this level in the bill of material. For manufactured parts, the cost includes labor, outside operations, and cost extras, but not materials (lower-level items). For purchased parts, the net added cost includes the cost of materials. The total cost of an item represents the sum of the net added cost and all lower-level component item costs.

## Why Maintain Standard Costs?

By defining and monitoring product costs, you can measure your company's current manufacturing performance against your standard (target) costs. Product costing provides information about the dollar investments tied to your materials, work in process, and physical inventory. You can use this information to determine pricing on end items and service components.

## Simulated versus Frozen Costs

Simulated costs represent a "what if" analysis for a given cost method. You might want to calculate simulated costs because of changing factors in the business environment, such as labor rates or the cost of raw materials. You can simulate cost change scenarios (rollups) as many times as needed before you finalize the changes.

You finalize the changes by performing a frozen update for the given cost method. A frozen update copies your simulated values and makes them your frozen costs, and updates the Cost Ledger table (F4105) with the total cost. These costs remain in effect until you update them with another frozen update.

You can simulate costs using the standard cost method or any other cost method. However, the Manufacturing Accounting system uses only the standard cost method to establish costs for shop floor transactions.

---

## What Are Cost Components?

Cost components represent the individual costs that make up an item, for example, material, labor, overhead, and extras. Material, labor, and overhead costs are automatically calculated by the system. Extra costs, such as electricity, are manually controlled.

Use cost components to maintain complete item costing information. You can use them to set up simulated cost scenarios to help plan for future cost changes, and to display the simulated or frozen net added and total component costs for any item.

In addition, you can:

- Allow for extra add-on costs related to the manufacturing of a product, such as electricity, insurance, water, or warehouse space.
- Review specific calculations used to determine cost amounts for any item.
- Maintain costs by branch for multi-facility processing. Multi-facility processing allows for different costing values based on regional or business variations.
- Set up costing rates that represent cost elements.
- Define additional cost factors to include in product costing calculations.

### See Also

- *Setting Up Cost Components (P30026)*
- *Assigning Values to User Defined Cost Components (P30026)*



# Review Bills of Material and Routings

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## Reviewing Bills of Material and Routings for Product Costing

The bill of material and routing for an item contain important information that affects costing. To ensure that this information is set up correctly:

- Review product costing in bills of material
- Review routings for product costing

## Reviewing Product Costing in Bills of Material



From Product Data Management (G30), choose Daily PDM Discrete

From Daily PDM Discrete (G3011), choose Enter/Change Bill

Review your bills of material to understand the bills' input to your material product costs. Only items with a bill type of M are costed.

### See Also

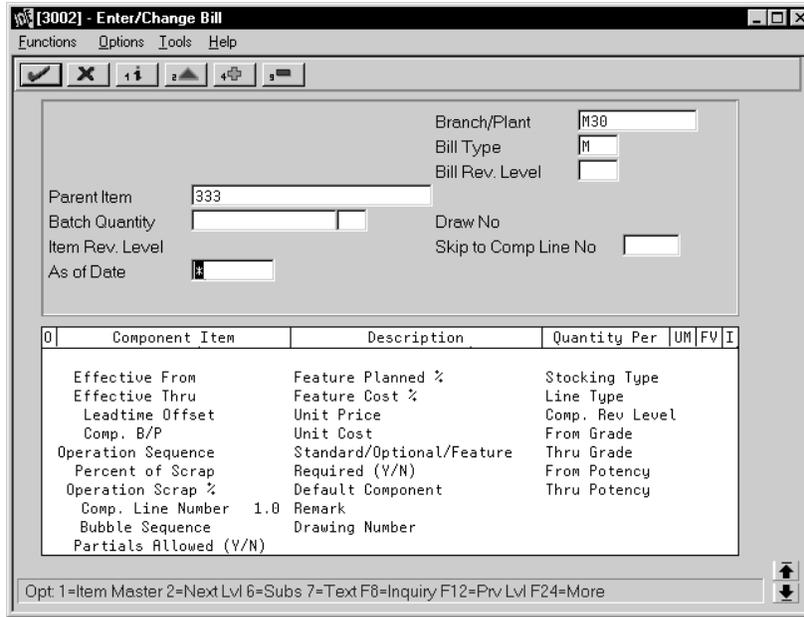
- *Working with Bills of Material (P3002)* in the *Product Data Management Discrete Manufacturing Guide*

► **To review bill of material information**

On Enter/Change Bill

0	Component Item	Description	Quantity Per	UM	FV	I
---	----------------	-------------	--------------	----	----	---

1. Review the following fields:
  - Component Item
  - Quantity Per
  - Unit Of Measure
  - Fixed or Variable
2. Access the detail area.



3. Review the following fields:

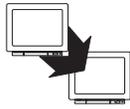
- Feature Cost Percent
- Percent of Scrap
- Operation Scrap Percent

Field	Explanation
Component Item	<p>A number that the system assigns to an item. It can be in short, long, or 3rd item number format.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Header: The Parent field contains the item number of the parent item.</p> <p>Detail: The Component Item field contains the item number of the component item.</p>
Quantity Per	<p>The number of units to which the system applies the transaction.</p> <p>..... <i>Form-specific information</i> .....</p> <p>A number that indicates how many components you use to manufacture the parent item. A quantity of zero is valid. The default value is 1.</p>
UM	<p>The default value comes from the component and production units of measure from the Item Master table.</p>

Field	Explanation
F V	<p>Indicates if the quantity per assembly for an item on the bill of material varies according to the quantity of the parent item produced or is fixed regardless of the parent quantity. This value also determines if the component quantity is a percent of the parent quantity. Valid values are:</p> <ul style="list-style-type: none"> <li>F Fixed Quantity</li> <li>V Variable Quantity (Default)</li> <li>% Quantities are expressed as a percentage and must total 100%</li> </ul> <p>For fixed quantity components, the Work Order and MRP systems do not extend the component's quantity per assembly value by the order quantity.</p> <p>For Process Manufacturing, the system stores percent components. Therefore, the system treats zero batch sizes like variable quantity components, and treats batch sizes greater than zero like fixed quantity components.</p>
Feature Cost %	<p>A percentage used by the Simulate Cost Rollup program to calculate the cost of a feature or option item as a percentage of the total cost of the parent.</p> <p>Enter the percentage as a whole number: 5% as 5.0</p>
Percent of Scrap	<p>Scrap is the percentage of unusable component material created during the manufacture of a particular parent item. During DRP/MPS/MRP generation, the system increases gross requirements for the component item to compensate for the loss.</p> <p>Note: Shrink is the expected loss of parent items (and hence, components) due to the manufacturing process. Shrink and scrap are compounded to figure the total loss in the manufacture of a particular item. Accurate shrink and scrap factors can help to produce more accurate planning calculations.</p> <p>Enter percents as whole numbers: 5% as 5.0</p> <p>..... <i>Form-specific information</i> .....</p> <p>The Shop Floor Control and Material Requirements Planning systems inflate component requirements by this percentage. This scrap percent is unique to the relationship of one parent and one component.</p>

Field	Explanation
Operation Scrap %	The system uses this value to increase or decrease the amount of materials to account for loss within the operation. The system updates this value on Enter/Change Bill of Material when you run the Planned Yield Update program. The system calculates this value by compounding the yield percentages from the last operation to the first operation. Use a processing option in Enter/Change Routing to enable the system to calculate the component scrap percent.

### Reviewing Routings for Product Costing



From Product Data Management (G30), choose Daily PDM Discrete

From Daily PDM Discrete (G3011), choose Enter/Change Routing

Review your routings to understand their input to your labor and overhead costs.

#### See Also

- *Working with Routings (P3003)* in the *Product Data Management Discrete Manufacturing Guide*

► **To review routing information**

On Enter/Change Routing

0	Work Center	Oper Seq No	Description	. Run Mach	Hours Labor	Setup Hours	Cons Prod
	200-203	10.00	Assemble shelf unit		4.60	.50	Cons
	200-204	20.00	Check glue joints				
	200-4344	25.00	Outside treatment				Cons
	200-204	30.00	Finish sand/spray		1.50	.25	Cons
	200-204	35.00	NOTE: TACK RAG B4 SPRAYING				
	200-204	40.00	Final inspection		1.00	.30	Cons

1. Review the following fields:

- Work Center
- Machine Run Hours
- Labor Run Hours
- Setup Hours

2. Access the detail area.

3. Review the following fields:

- Time Basis
- Crew Size
- Cost Type
- Type Oper
- Yield Percent
- Cumulative Percent

Field	Explanation
Work Center	A number that identifies a branch, plant, work center, or business unit.  ..... <i>Form-specific information</i> .....
	For Equipment users, this is the craft/resource responsible for completing the maintenance activity.
Mach	This is the standard machine hours expected to be incurred in the normal production of this item.

Field	Explanation
Labor	<p>This is the standard hours of labor expected in the normal production of this item.</p> <p>The run labor hours in the Routing Master table (F3003) are the total hours it takes the specified crew size to complete the operation. The hours are multiplied by the crew size during shop floor release and product costing.</p> <p>..... <i>Form-specific information</i> .....</p> <p>For Equipment/Plant:</p> <p>This is the estimated number of hours needed to complete a maintenance activity.</p>
Hours	<p>The standard setup hours you expect to incur in the normal completion of this item.</p>
Time Basis	<p>A user defined code (system 30, type TB) that identifies the time basis or rate for machine or labor hours entered for any routing step. You can set rates per unit, per 10, per 1000, and so on.</p> <p>The system uses the values in the Description-2 field on the User Defined Codes form for costing and scheduling calculations. The description is what the code represents, but is not used in calculations.</p>
Crew Size	<p>The number of people who work in the specified work center or routing operation.</p> <p>The system multiplies the Run Labor value in the Routing Master table (F3003) by crew size during costing to generate total labor dollars.</p> <p>If the Prime Load Code is L or B, the system uses the total labor hours for backscheduling. If the Prime Load Code is C or M, the system uses the total machine hours for backscheduling without modification by crew size.</p> <p>..... <i>Form-specific information</i> .....</p> <p>For Shop Floor Control:</p> <p>The Crew Size field on the Routing Revisions form displays the value set on the Enter/Change Work Centers form (P3006). You can override the value by changing this field on the Routing Revisions form. However, the Enter/Change Work Centers form will not reflect this change.</p>

Field	Explanation
Cost Type	<p>This code designates each element of cost for an item. An example of the coding structure is:</p> <ul style="list-style-type: none"> <li>A1 Purchased raw material</li> <li>B1 Direct labor routing sheet rollup</li> <li>B2 Setup labor routing sheet rollup</li> <li>C1 Variable burden routing sheet rollup</li> <li>C2 Fixed burden routing sheet rollup</li> <li>Dx Usually used for outside processing routing sheet rollup</li> <li>Xx Usually used for extra add-ons, such as electricity, water, and so forth</li> </ul> <p>The optional add-on computations usually operate with the type "X" extra add-ons. This cost structure allows you to use an unlimited number of cost components to calculate alternative cost rollups. The system then associates these cost components with one of six user defined summary cost buckets.</p>
Typ Op	<p>A user defined code (system 30, type OT) that indicates the type of operation. For example:</p> <ul style="list-style-type: none"> <li>A Alternate routing</li> <li>TT Travel time</li> <li>IT Idle time</li> <li>T Text (Enter text at Description)</li> </ul> <p>..... <i>Form-specific information</i> .....</p> <p>For Product Costing:</p> <p>Only operations with a "blank" type operation code are costed.</p>
Yield %	<p>Represents the planned output yield percent for a step. The Planned Yield Update program uses this value to update the Cumulative Percent in the bill of material and the Operation Scrap Percent in the routing. Materials Requirements Planning uses the step scrap percent and the existing component scrap percent to plan component demand.</p>
Cum %	<p>Represents the cumulative planned output yield percent for a step. The system uses this value to adjust the operation step scrap percent for the components at that operation step. This enables the MRP system to use the operation step scrap percent along with the existing component scrap percent to plan component demand.</p>



# Set Up Product Costing

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## Setting Up Product Costing

You can customize the Product Costing system to meet your specific manufacturing environment needs. The system uses the values you define to determine your product costs.

Setting up product costing consists of the following:

- Setting up accounting cost quantities
- Setting up item cost levels
- Converting item cost levels
- Setting up item costs
- Setting up cost components
- Setting up manufacturing constants for product costing
- Setting up simulated rates for a work center

## Setting Up Accounting Cost Quantities



From Inventory Management (G41), choose Item Revisions

From Item Revisions (G4112), choose Manufacturing Data under the Item Branch/Plant Information heading

The system uses accounting cost quantities to determine the allocation of fixed setup costs for an item. Accounting cost quantities represent the average quantity of a work order for this item. During cost rollup, the system divides the fixed setup costs by the accounting cost quantity you specify to determine a unit setup and fixed cost.

### ▶ **To set up an accounting cost quantity**

---

On Manufacturing Data

The screenshot shows a software window titled "[41027] - Manufacturing Data". It contains a grid of fields for configuring manufacturing data for item 333. The "Accounting Cost Qty" field is highlighted with a value of 10. Other fields include Item Number (333), Branch/Plant (M30), Order Policy Code (1), Issue Type Code (I), Planning Code (1), MFG Leadtime Quantity, Planning Fence Rule (S), Accounting Cost Qty (10), Fixed/Variable (F), Planning Fence (15), Freeze Fence, Message Display Fence, Level Leadtime (3), Manufacturing Leadtime (7), Time Basis (1), Cumulative Leadtime (19), Total Queue/Move Hours (12.08), Leadtime Per Unit (.74), Setup Labor (1.05), Replenishment Leadtime, Issue and Receipt (0), Shrink Factor, Shrink Factor Method (%), ECO Reason, ECO Number, Drawing Rev. Level, ECO Date, Item Revision Level, Potency Control (N), Grade Control (N), Standard Potency, Standard Grade, and From - Thru Potency. The bottom of the window has keyboard shortcuts: F3=Exit, F12=Previous, F24=More Keys.

Complete or review the following field:

- Accounting Cost Quantity

Field	Explanation
Accounting Cost Qty	An amount that the system uses in the cost rollup program to determine the allocation of setup costs. The system totals the setup costs and divides the sum by this quantity to determine a unit setup cost. The default is 1.

## Setting Up Item Cost Levels



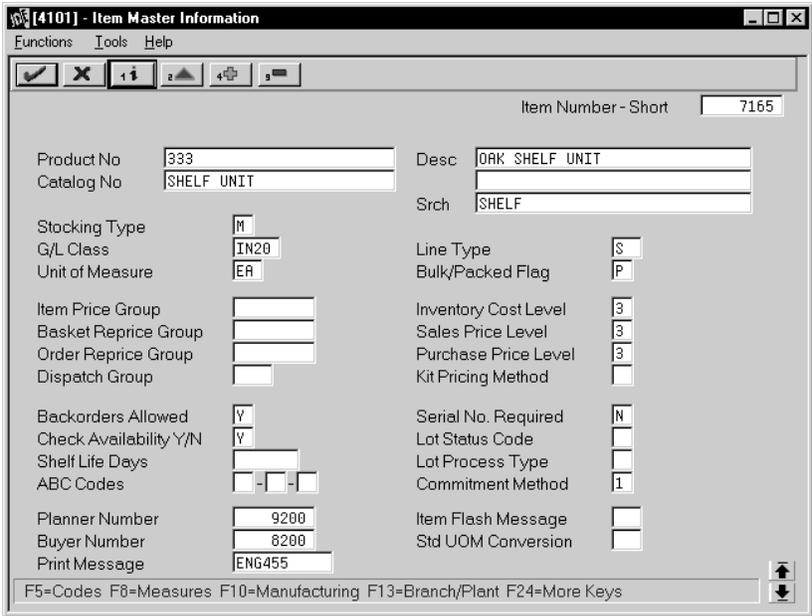
From Inventory Management (G41), choose Inventory Master/Transactions

From Inventory Master/Transactions (G4111), choose Item Master Information

The cost level you assign to an item indicates the level at which the system maintains costs. You determine whether the system maintains one overall cost for an item (cost level 1) or a different cost for the item in each branch/plant (cost level 2). The system can also maintain a different cost for each location and lot within a branch/plant (cost level 3). However, in the Product Costing system, costs at cost level 3 are informational only. All items used in a manufacturing environment should have cost levels of 1 or 2, except configured items, which must be cost level 3.

► To set up an item cost level

On Item Master Information



Complete or review the following field:

- Inventory Cost Level

Field	Explanation
Inventory Cost Level	<p>A code that indicates whether the system maintains one overall inventory cost for the item, a different cost for each branch/plant, or a different cost for each location and lot within a branch/plant. The system maintains inventory costs in the Cost Ledger table (F4105).</p> <p>Valid codes are:</p> <ul style="list-style-type: none"> <li>1 Item level</li> <li>2 Item/Branch level</li> <li>3 Item/Branch/Location level (not recognized by the Manufacturing system, except for configured items)</li> </ul>

### Converting Item Cost Levels



From Inventory Management (G41), enter 27

From Inventory Advanced & Technical Ops (G4131), choose Item Cost Level Conversion

After you have entered cost information, you might need to change an item's cost level. You must use the Item Cost Level Conversion program to change an item's cost level after cost information has been entered.

If you run this program, it deletes all existing cost records for the item in the Cost Ledger table (F4105) and creates new cost records that correspond to the level. The system uses the sales/inventory cost method for the item to create the new cost records.

The program does not change the cost valuation of items and does not create journal entries. For example, if you change an item's cost level from branch/plant and location to branch/plant, all existing cost records for the branch/plant and location must contain the same sales/inventory cost method and cost.

You can run Item Cost Level Conversion in proof mode or final mode. When you run the program in proof mode, the system generates the Item Cost Level Conversion report, showing errors that need correction. You should always run the program in proof mode first and correct any discrepancies.

When you run the program in final mode, the system updates the following tables:

- Inventory Cost Level field in the Item Master (F4101)
- Cost Ledger (F4105)



Changing your item cost levels changes data throughout the system. You should restrict access to this program.

#### Before You Begin

- Back up your data tables completely before you begin the data conversion process. If the results of the conversion are unsatisfactory, you can use the backup tables to restore data tables to their original format.
- Verify that no users are accessing the Item Master or Cost Ledger tables when this program is running in final mode.

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J.D. Edwards & Company  
Item Cost Level Conversion

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Date - 4/10/98

\*\*\* Proof Mode \*\*\*

Item Number	Branch	Location	Lot	L	CM	Unit Cost	Remark
E001		30			3 01	6.6378	Basing comparison on this record
E001		30 DAMAGED			3 01	6.4100	Cost not the same
P002		10			3 01	30.7500	Basing comparison on this record
P002		10 1 B 1			3 02	30.3750	Costing Method/Cost not the same
P002		20			3 01	31.4333	Basing comparison on this record
P002		20 1 B 1			3 02	30.8417	Costing Method/Cost not the same
P002		30			3 01	30.1049	Basing comparison on this record
P002		30 1 B 1			3 02	30.2500	Costing Method/Cost not the same
P002		40			3 02	30.5610	Basing comparison on this record
P002		40 D			3 02	30.2500	Cost not the same
P002		40 R			3 02	30.2500	Cost not the same
P002		40 1 B 1			3 02	30.2500	Cost not the same
P002		40 3 E			3 02	30.2500	Cost not the same
TS002		10			3 01	43.1200	Basing comparison on this record
TS002		10 1 C 1			3 02	43.5000	Costing Method/Cost not the same
TS002		20			3 01	43.1200	Basing comparison on this record
TS002		20 1 C 1			3 02	43.5000	Costing Method/Cost not the same
TS002		30			3 01	66.0000	Basing comparison on this record
TS002		30 1 C 1			3 01	43.9573	Cost not the same
TS002		40			3 02	43.7336	Basing comparison on this record
TS002		40 R			3 02	43.5000	Cost not the same
TS002		40 1 C 1			3 02	43.5000	Cost not the same
TS002		40 2 C 1			3 02	43.5000	Cost not the same
V001		10			3 01	16.1500	Basing comparison on this record
V001		10 1 A 1	9310140004		3 01	16.0000	Cost not the same
V001		10 1 A 2	9310140002		3 01	16.0000	Cost not the same
V001		20			3 01	16.1500	Basing comparison on this record
V001		20 1 A 1	9310140005		3 01	16.0000	Cost not the same
V001		20 1 A 2	9310140003		3 01	16.0000	Cost not the same
V001		30			3 01	16.1500	Basing comparison on this record
V001		30 1 A 1	00000006		3 01	16.0000	Cost not the same
V001		30 1 A 2	00000005		3 01	16.0000	Cost not the same
V001		40			3 02	16.1455	Basing comparison on this record
V001		40 D	00000007		3 02	16.0000	Cost not the same
V001		40 R	00000007		3 02	16.0000	Cost not the same
V001		40 1 A 1	00000007		3 02	16.0000	Cost not the same
V001		40 1 A 2	00000007		3 02	16.0000	Cost not the same
V001		40 3 F	00000007		3 02	16.0000	Cost not the same

See Also

- *Setting Up Item Cost Levels (P4101)*

Processing Options for Item Cost Level Conversion

PROCESS CONTROL:

1. Enter the cost level to update to. \_\_\_\_\_
2. If updating to cost level '1', enter the branch to default the costs from. If updating from a cost level '3', the costs will default from the primary location. \_\_\_\_\_
3. Enter a '1' to run in final mode and update files. If blank, no file updates will occur. \_\_\_\_\_

PROCESS CONTROL (cont.):

4. Enter a '1' to print only exceptions on the edit report. A blank will print all items.

## Setting Up Item Costs

You must provide cost information for each of your items for the system to track inventory costs. You specify the cost method that the system uses to determine an item's cost for:

- Sales/inventory transactions
- Purchase orders

For example, in a distribution environment, you can have the system use the weighted average cost method to determine the inventory cost for an item and use the last-in cost method to determine the item's unit cost for purchase orders. However, in a manufacturing environment, you must use the standard cost method to determine the inventory cost.

For each cost method you assign to an item, you must also specify a cost. For example, to use the last-in cost method for an item, you must enter an initial cost for that cost method. The system updates the last-in cost based on the cost of the item as of the last receipt date.

For purchased items and outside operations, the main inputs to product costing are entered on Cost Revisions or Cost Components.

To set up item costs, complete the following tasks:

- Set up new cost methods
- Assign cost methods

### See Also

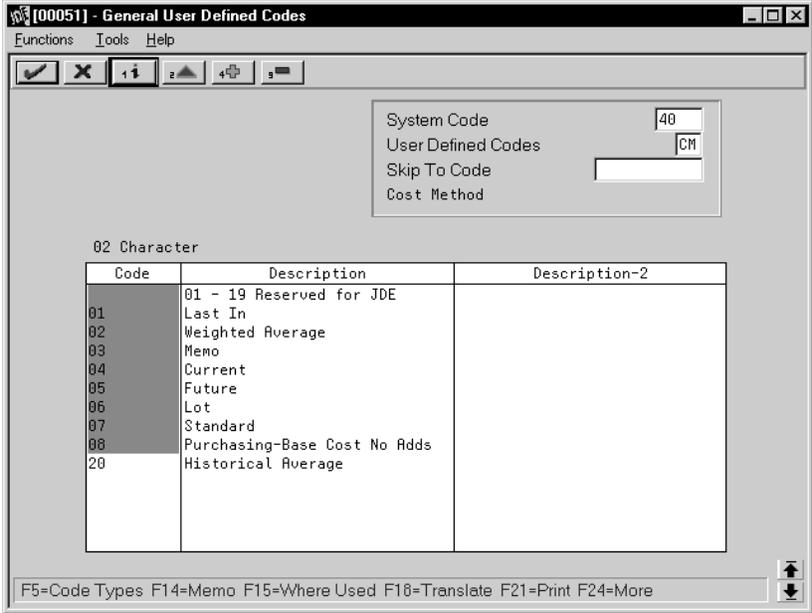
- *Updating Product Costs*

#### **To set up a new cost method**

---

You can set up user defined codes (40/CM) to define your own cost methods. For example, you might want to establish a cost method to maintain a history of last year's costs. Codes 01 through 08 are hard-coded and cannot be altered. Codes 09 through 19 are reserved for J.D. Edwards use.

On User Defined Code Revisions



Complete the following fields:

- Code
- Description
- Description-2

Field	Explanation
Code	This column contains a list of valid codes for a specific user defined code list. The number of characters that a code can contain appears in the column title.
Description	A user defined name or remark.
Description-2	Additional text that further describes or clarifies a field in J.D. Edwards systems.

What You Should Know About

- Code** This code defines cost methods that are used in the cost rollup and assigned to items. This is a two-character, alphanumeric field.
- Description 1** Identifies the cost method.

**Description 2** Identifies additional information about the cost method.

► **To assign cost methods**



From Product Data Management (G30), choose Daily Product Costing

From Daily Product Costing (G3014), choose Enter/Change Item Costs

Each time you add an item on this form, the program displays all cost methods set up in the user defined code table 40/CM. This includes eight predefined methods that the program provides and any additional methods you create. You specify which methods to apply to an item by assigning a unit cost for each method.

On Cost Revisions (Enter/Change Item Costs)

Cost Method	Unit Cost
01 Last In	.0000
04 Current	172.7900
05 Future	172.7900
07 Standard	260.5662

4. Complete the following field for each applicable cost method:
  - Unit Cost
5. Enter the appropriate cost methods in the following fields:
  - Sales/Inventory
  - Purchasing

Field	Explanation
Unit Cost	<p>Depending on the cost method, this data can come from various sources, for example, purchasing or the cost rollup.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The cost for one unit of this item, based on the corresponding cost method.</p>
Sales/Inventory	<p>A code (table 40/CM) that indicates the cost method that the system uses to calculate the cost of goods sold for the item. Cost methods 01-08 are hard-coded.</p> <p>..... <i>Form-specific information</i> .....</p> <p>If you maintain costs at the item level, the system retrieves the default value for this field from the data dictionary. If you maintain costs at the item and branch/plant level, the system retrieves the default value from Branch/Plant Constants.</p>
Purchasing	<p>A code (table 40/CM) that indicates the cost method that the system uses to determine the cost of the item for purchase orders. Cost methods 01-08 are hard-coded.</p> <p>..... <i>Form-specific information</i> .....</p> <p>If you maintain costs at the item level, the system retrieves the default value for this field from the data dictionary. If you maintain costs at the item and branch/plant level, the system retrieves the default value from Branch/Plant Constants.</p>

## What You Should Know About

**Assigning a cost method without specifying a cost** If you assign a cost method for sales/inventory or purchasing that is not set up with a cost amount, a warning message appears. If you do not enter a cost amount for the cost method, the system assigns a zero cost.

**Changing unit costs** You can change the dollar amount for any cost method at any time. If you change the amount for the cost method you used to track costs of goods sold, the system applies the new amount to your on-hand quantity of the item. It also creates journal entries to account for the difference between the old and the new amounts.

### Updating unit costs

Certain programs update the dollar amount for cost methods 01–08. For example:

- Last-in method — The system interactively updates this unit cost based on the last cost of the item at the time of a purchase order receipt or after an inventory adjustment.
- Weighted average method — The system calculates and updates this amount by adding transaction quantities, adding transaction costs, and dividing the total cost by the total quantity.
- Purchase method — same as last-in method, but without landed costs.
- Standard, current, and future methods — updated by the Frozen Update program.

If you include additional costing methods, you must update them manually.

### Removing a cost method

You can remove a cost method for an item if it is no longer applicable. If you try to remove your sales/inventory or purchasing cost method, the system displays a warning message. The system does not delete the cost method, but updates it to a zero cost.

## Processing Options for Item Cost Revisions

### DISPLAY CONTROL:

1. Enter a '1' for Speed Cost Update.  
If left blank, the screen will default to Item Cost Revisions.

\_\_\_\_\_

### DEFAULT VALUES:

2. Enter the default cost method to display when the Speed Cost Update format is selected.

\_\_\_\_\_

### PROCESS CONTROL:

3. Enter a '1' to prevent the standard cost from being changed.

\_\_\_\_\_

## Setting Up Cost Components



From Product Data Management (G30), enter 29

From Product Data Management Setup (G3041), choose Product Costing Setup

From Product Costing Setup (G3042), choose Cost Components

Use cost components to identify and track each element or type of cost for an item. Cost components that begin with A, B, and C are hard-coded by J.D. Edwards and cannot be changed. You can define an unlimited number of additional cost components to account for extra costs for an item, such as electricity or research and development. These user defined cost components can begin with any letter except A, B, or C. J.D. Edwards recommends, but does not require, that you use cost component D for outside operations. You can assign separate cost components by categories that are applicable to your business.



Although it might appear that you can set up extra cost components that begin with A, B, or C, the Simulate Cost Rollup program actually deletes these cost components. J.D. Edwards recommends that you define extra costs with an “X” for easy identification.

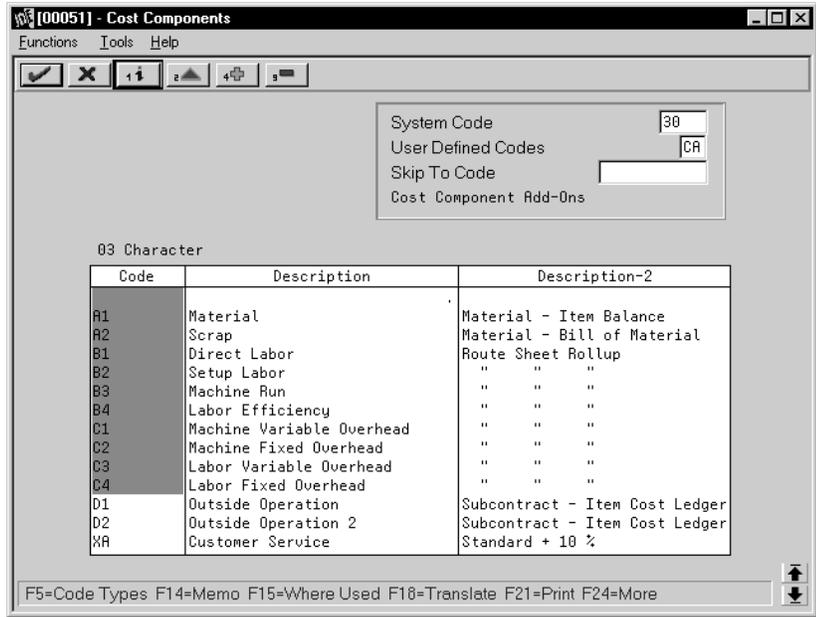
### See Also

- *Assigning Values to User Defined Cost Components (P30026)*
- *Appendix A — Calculations in Cost Rollup*

### ▶ **To set up a cost component**

---

On User Defined Code Revisions



Complete the following fields:

- Code
- Description
- Description-2

Field	Explanation
Code	This column contains a list of valid codes for a specific user defined code list. The number of characters that a code can contain appears in the column title.
Description	A user defined name or remark.
Description-2	Additional text that further describes or clarifies a field in J.D. Edwards systems.

### What You Should Know About

- Code** Use this code to identify all of the possible cost components that can be used in the cost rollup for an item.
- Description** Identifies what each cost component represents.
- Description 2** Additional text that further describes or clarifies the cost components.

## Setting Up Manufacturing Constants for Product Costing



From Product Data Management (G30), enter 29

From Product Data Management Setup (G3041), choose Product Costing Setup

From Product Costing Setup (G3042), choose Manufacturing Constants

You must establish information that is unique to your branch/plant. Use manufacturing constants to set options that determine:

- How to calculate overhead costs
- Whether to consider work center efficiency when calculating direct labor and overhead
- Whether overheads are calculated as percents or rates

### See Also

- *Setting Up Manufacturing Constants (P3009)* in the *Product Data Management Discrete Manufacturing Guide*

### ► To set up manufacturing constants for Product Costing

#### On Manufacturing Constants

Branch		M30 Memphis Mfg. Plant	
Log Bill of Material Changes	<input type="checkbox"/> N	Backflush Options	<input type="checkbox"/> 1
On-Line BOM Validation (Y/N)	<input checked="" type="checkbox"/> Y	Master Routings (Y/N)	<input type="checkbox"/> N
		Commitment Control	<input type="checkbox"/> 3
		Hard/Soft Commit	<input type="checkbox"/> 1
Overheads as Percents or Rates	<input type="checkbox"/> P	Percent Bill Validation	<input type="checkbox"/>
Modify cost by Work Center Eff	<input checked="" type="checkbox"/> Y	Status for Changes	<input type="checkbox"/>
Include Efficiency in Overhead	<input checked="" type="checkbox"/> Y	Work Hours Per Day	8.00
Include Var. Labor Overhead in cost	<input checked="" type="checkbox"/> Y	Hours	Shift Code / Desc
Calculate Var. on Direct Labor	<input checked="" type="checkbox"/> Y	8.00	<input type="checkbox"/>
Calculate Var. on Setup Labor	<input checked="" type="checkbox"/> Y		<input type="checkbox"/>
Include Fixed Labor Overhead in cost	<input checked="" type="checkbox"/> Y		<input type="checkbox"/>
Calculate Fixed on Direct Labor	<input checked="" type="checkbox"/> Y		<input type="checkbox"/>
Calculate Fixed on Setup Labor	<input checked="" type="checkbox"/> Y		<input type="checkbox"/>
Include Var. Machine Overhead in cost	<input checked="" type="checkbox"/> Y		<input type="checkbox"/>
Include Fixed Machine Overhead in cost	<input checked="" type="checkbox"/> Y		<input type="checkbox"/>

F24=More Keys

Complete the following fields:

- Overheads as Percents or Rates
- Modify cost by Work Center Efficiency
- Include Work Center Efficiency in Overhead
- Include Variable Labor Overhead in Cost
- Calculate Variable on Direct Labor
- Calculate Variable on Setup Labor
- Include Fixed Labor Overhead in Cost
- Calculate Fixed on Direct Labor
- Calculate Fixed on Setup Labor
- Include Variable Machine Overhead in Cost
- Include Fixed Machine Overhead in Cost

Field	Explanation
Overheads as Percents or Rates	<p>Determines how values for overhead fields (cost components C1 through C4) in the Work Center Rate Revisions table (F30061) are expressed. Valid codes are:</p> <p>R Express overhead values as rates (currency values). For example, enter five dollars as 5.00.</p> <p>P Express overhead values as percents. Enter percents as whole numbers. For example, enter five percent as 5.00.</p>
Modify cost by Work Center Eff	<p>Controls whether the cost rollup creates cost component B4 (for labor efficiency) based on the direct labor value (cost component B1) and the Work Center Efficiency percent from the Work Center Revisions table (F3006). Valid values are:</p> <p>Y Yes. Create cost component B4.</p> <p>N No. Do not create cost component B4.</p>
Include Efficiency in Overhead	<p>If you specified that you want to modify costs by work center efficiency, this field determines whether the cost rollup includes work center efficiency when calculating overhead values. Valid values are:</p> <p>Y Include work center efficiency.</p> <p>N Exclude work center efficiency.</p>
Include Var. Labor Overhead in cost	<p>Controls whether the cost rollup creates cost component C3 (for variable labor overhead) in the Cost Components table (F30026). Valid values are:</p> <p>Y Yes. Create cost component C3.</p> <p>N No. Do not create cost component C3.</p>

<b>Field</b>	<b>Explanation</b>
Calculate Var. on Direct Labor	Determines whether the cost rollup includes direct labor expenses (cost component B1) in the total used to calculate variable labor overhead (cost component C3). Valid values are: Y Include direct labor expenses. N Exclude direct labor expenses.
Calculate Var. on Setup Labor	Determines whether the cost rollup includes setup labor expenses (cost component B2) in the total used to calculate variable setup overhead (cost component C3). Valid values are: Y Include setup labor expenses. N Exclude setup labor expenses.
Include Fixed Labor Overhead in cost	Controls whether the cost rollup creates cost component C4 (for fixed labor overhead) in the Cost Components table (F30026). Valid values are: Y Yes. Create cost component C4. N No. Do not create cost component C4.
Calculate Fixed on Direct Labor	Determines whether the cost rollup includes direct labor expenses (cost component B1) in the total used to calculate fixed labor overhead (cost component C4). Valid values are: Y Include direct labor expenses. N Exclude direct labor expenses.
Calculate Fixed on Setup Labor	Determines whether the cost rollup includes setup labor expenses (cost component B2) in the total used to calculate fixed setup overhead (cost component C4). Valid values are: Y Include setup labor expenses. N Exclude setup labor expenses.
Include Var. Machine Overhead in cost	Controls whether the cost rollup creates cost component C1 (for variable machine overhead) in the Cost Components table (F30026). Valid values are: Y Yes. Create cost component C1. N No. Do not create cost component C1.
Include Fixed Machine Overhead in cost	Controls whether the cost rollup creates cost component C2 (for fixed machine overhead) in the Cost Components table (F30026). Valid values are: Y Yes. Create cost component C2. N No. Do not create cost component C2.

## Setting Up Simulated Rates for a Work Center



From Manufacturing Systems (G3), choose Product Costing

From Daily Product Costing (G3014), choose Enter/Change Work Center Rate

You can effectively manage changes to a work center by tracking rates for labor and machine costs. You can update simulated rates for machine and labor hours by work center and cost method. The system uses these values in other manufacturing calculations, such as costed routings, labor rate variance reports, and direct labor efficiency reports.

### Before You Begin

- You must set up your work centers on Enter/Change Work Centers before you can assign rates. See *Entering Work Centers* in the *Product Data Management Discrete Manufacturing Guide* for complete information on setting up work centers.

### See Also

- *Entering Costing and Accounting Information (P30061)* in the *Product Data Management Discrete Manufacturing Guide*

### ▶ To set up simulated rates for a work center

On Enter/Change Work Center Rate

	Simulated	Frozen
Direct Labor	5.25	5.25
Setup Labor	4.25	4.25
Labor Var. Overhead	60.00	60.00
Labor Fixed Overhead	50.00	50.00
Machine Run	3.25	3.25
Machine Var. O/H	125.00	125.00
Machine Fixed O/H	105.00	105.00

\* Overhead values are shown as percents

Complete the following fields:

- Work Center
- Cost Method
- Simulated Direct Labor
- Simulated Setup Labor
- Simulated Labor Variable Overhead
- Simulated Labor Fixed Overhead
- Simulated Machine Run
- Simulated Machine Variable Overhead
- Simulated Machine Fixed Overhead

Field	Explanation
Work Center	A number that identifies a branch, plant, work center, or business unit.
Cost Method	A user defined code (system 40, type CM) that identifies a cost method. Cost methods 01 through 08 are hard-coded. ..... <i>Form-specific information</i> ..... This code was entered on Branch/Plant Constants.
Direct Labor	This rate, in cost per hour, is the rate used to calculate the current labor cost as of the last simulation and update.
Setup Labor	This rate, in cost per hour, is the rate used to calculate the current setup labor cost as of the last simulation and update.
Labor Var. Overhead	This rate, in cost per hour or percent of labor, is the rate used to calculate the current variable labor overhead cost as of the last simulation and update.
Labor Fixed Overhead	This rate, in cost per hour or percent of labor, is the rate used to calculate the current fixed labor overhead cost as of the last simulation and update.
Machine Run	This rate, in cost per hour, is the rate used to calculate the current machine cost as of the last simulation and update.
Machine Var. O/H	This rate, in cost per hour or percent of labor, is the rate used to calculate the current variable machine overhead cost as of the last simulation and update.
Machine Fixed O/H	This rate, in cost per hour or percent of labor, is the rate used to calculate the current fixed machine overhead cost as of the last simulation and update.



**Exercises**

See the exercises for this chapter.

# Create Simulated Costs

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## Creating Simulated Costs

You can use the Product Costing system to calculate costs on a “what if” basis. You can view the effect of any changes you want to incorporate without altering the frozen standard costs. In addition, you can simulate cost change scenarios (rollups) as many times as needed before you finalize the changes during the frozen update process.

For example, you can use simulated rollups to:

- Simulate an increase in material costs
- Forecast the impact of changes to labor rates
- Develop strategies for pricing, contractual, or labor negotiation

Creating simulated costs consists of the following:

- Creating the Costing Exceptions report
- Creating a simulated rollup

The simulated rollup uses information from the following tables to generate costs:

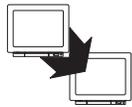
<b>Manufacturing Constants (F3009)</b>	Values from Manufacturing Constants indicate whether overhead should be included in cost component calculations.
<b>Work Center Rates (F30008)</b>	The rollup program uses dollar amounts and percentages for the calculation of labor, machine, and overhead costs.
<b>Routing Master (F3003)</b>	Hours required for each operation and crew size values are from the Routing Master table.
<b>Bill of Material Master (F3002)</b>	The Bill of Material table provides information on the material required at each level of the bill.

## Cost Ledger (F4105)

The Cost Ledger table provides costs for purchased items and outside operations.

The Simulate Cost Rollup program sums the costs of all the components in each level of the parent item's bill of material to arrive at a total cost for the parent item.

## Creating the Costing Exceptions Report



From Daily Product Costing (G3014), choose Periodic Product Costing

From Periodic Product Costing (G3023), choose Costing Exceptions

Before you roll up simulated costs, run the Costing Exceptions program. The program generates a report, which lists any problems associated with an item. An example of a problem is an item without a routing. You should correct the problems and run the Costing Exceptions program again before creating a simulated rollup.

Item	Item Description	T	Plant	Work Center	Oper	Description
30801			J.D. Edwards & Company			Page - 2
			Costing Exceptions			Date - 6/19/98
ACE	Acetone Bulk	B	DEPOT1			30 - No Cost Component 07- material cost
ADD	Fuel Additive	B	DEPOT1			30 - No Cost Component 07- material cost
ADD	Fuel Additive	B	DEPOT2			30 - No Cost Component 07- material cost
AEROSOL CANS	Industrial Gases	S	27			50 - Manufactured item with no BOM
						50 - Manufactured item with no routing
AR101278	Engine Oil Filter	P	YARD			30 - No Cost Component 07- material cost
AR86745	Fuel Filter	P	YARD			30 - No Cost Component 07- material cost
AT105663	Hydraulic Oil Filter	P	YARD			30 - No Cost Component 07- material cost
AT105664	Transmission Oil Filter	P	YARD			30 - No Cost Component 07- material cost
AT58368	Pump Return Filter (HFWD)	P	YARD			30 - No Cost Component 07- material cost
AT60645	Front Axle Filter (HFWD)	P	YARD			30 - No Cost Component 07- material cost
AT75035	Air Filter - Primary	P	YARD			30 - No Cost Component 07- material cost
AT75036	Air Filter - Secondary	P	YARD			30 - No Cost Component 07- material cost
A200	Acetone-200LT Drum	S	DEPOT1			50 - Manufactured item with no BOM
						50 - Manufactured item with no routing
A3T30	A3T Series Fuse 30 AMP	P	YARD			30 - No Cost Component 07- material cost
A3T40	A3T Series Fuse 40 Amp	P	YARD			30 - No Cost Component 07- material cost
A3T50	A3T Series Fuse 50 Amp	P	YARD			30 - No Cost Component 07- material cost
BASEA	Base Oil Bulk	B	DEPOT1			30 - No Cost Component 07- material cost
BASEB	Base Oil Bulk	B	DEPOT1			30 - No Cost Component 07- material cost
BB303	Ball Bearing Fafnir 303KD	P	YARD			30 - No Cost Component 07- material cost
BB310	Ball Bearing Fafnir 301KD	P	YARD			30 - No Cost Component 07- material cost
BB311	Ball Bearing Fafnir 311KD	P	YARD			30 - No Cost Component 07- material cost
BIKE	Bike Parent	K	10			50 - Manufactured item with no routing
BIKE10	10 Speed Bike	M	10			50 - Manufactured item with no routing
BIKE10B	10 Speed Bike-Blue	P	10			30 - No Cost Component 07- material cost
BIKE10G	10 Speed Bike-Green	P	10			30 - No Cost Component 07- material cost
BIKE15	15 Speed Bike	M	10			50 - Manufactured item with no routing
BIKE15B	15 Speed Bike-Blue	P	10			30 - No Cost Component 07- material cost
BIKE15G	15 Speed Bike-Green	P	10			30 - No Cost Component 07- material cost
BINDER	Spiral Binder	P	M55			30 - No Cost Component 07- material cost
BINDER	Spiral Binder	P	M56			30 - No Cost Component 07- material cost
BINDER	Spiral Binder	P	M80			30 - No Cost Component 07- material cost
BINDER	Spiral Binder	P	M95			30 - No Cost Component 07- material cost
BINDERST01	Spiral Binder	P	M55			30 - No Cost Component 07- material cost

## Processing Options for Costing Exceptions

### ERROR MESSAGES:

1. Enter the minimum message level to appear on the report. \_\_\_\_\_  
The error messages for this report are stored in the Vocabulary Overrides File (F0020). You may define the message severity level.
2. Enter the cost method to base costing errors on (ie., 01, 02). \_\_\_\_\_  
If left blank, cost method 07 (standard) will be used.

### What You Should Know About Processing Options

Indicate in the processing options the minimum level of error messages that you want to include in the report. You can define severity levels and error messages specific to your company by using Vocabulary Overrides. For example, if *labor hours are zero* is important to your company, then you might want to assign this error message a higher severity level.

The text of the message can also be changed, but it must maintain the same meaning as the original message defined by J.D. Edwards. For example, you could change the message text *labor hours are zero* to *no labor hours*.

The following are examples of errors on which the system searches and the severity level to which they are assigned by J.D. Edwards.

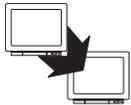
Severity	Message Text
50	Manufactured item with no BOM
40	No rates for work center
30	No labor rate (for selected cost method)
30	No cost component – material cost
30	No setup labor rate (for selected cost method)
30	No variable overhead rate (for selected cost method)
30	No fixed overhead rate (for selected cost method)
30	No work center machine run rate (for selected cost method)
30	No work center machine variable overhead rate (for selected cost method)
30	No work center machine fixed overhead rate (for selected cost method)
20	Purchased part with BOM

20	BOM component with no quantity per
10	Setup hours are zero
10	Machine hours are zero
10	Labor hours are zero
10	Extras at standard and not at current or future or vice versa
10	No accounting lot size set up (future)

### See Also

- *Working with Vocabulary Overrides (P9220)* in the *Technical Foundation Guide* for more information on changing the text of error messages

## Creating a Simulated Rollup



From Manufacturing Systems (G3), choose Product Costing

From Daily Product Costing (G3014), choose Simulate Standard Rollup

Use the Simulate Cost Rollup program to calculate costs on a “what if” basis. Then, you can view the results on Enter/Change Cost Components.

You can perform simulated rollups and frozen updates for any cost method. However, the Manufacturing Accounting system only uses frozen standard costs (cost method 07).

To choose a bill of material and routing, the program searches first for a bill whose batch quantity matches the accounting cost quantity. If no such bill is found, the program uses the zero batch bill.

## Cumulative Yield

Cumulative yield, defined on the routing, affects labor and machine hours in the rollup calculations. There must be enough hours expended to obtain 100% yield at the last operation. In a series of routings, the hours must be adjusted accordingly. The following example illustrates how costing of hours is affected by cumulative yield:

$$\text{Cumulative Yield} = 85\% (0.85)$$

	Labor	Machine	Setup
<b>Without Yield</b>	5	5	5
<b>With Yield</b>	5.88	5.88	5

For each operation, the labor and machine hours are adjusted by dividing the hours by the cumulative yield. Setup hours are not affected.

## Operation Scrap

Operation scrap, defined on the bill of material, affects material cost calculations in the rollup. There must be enough material at each operation in order to obtain 100% yield at the last operation. When material cost is calculated, the quantity of the components is adjusted accordingly. The following example illustrates the effect of operation scrap on costing:

Parent = A

Component = B

Quantity per = 3

Cost of B = 5.00

Operation scrap = 8%

Cost of B rolled into parent item A =  $3 \times 1.08 \times 5 = 16.20$ .

## Before You Begin

- Create the Costing Exceptions report

## What You Should Know About

### Master Routings

The program uses the master routing for the item from the Routing Master table (F3003) if all of the following are true:

- The Master Routing field on the Manufacturing Constants form is set to Y for the branch.
- The parent item has a cross-reference item defined for master routing. (The cross-reference item must be defined with a cross-reference type of MR and the Address field must be blank.)
- The cross-reference item has an item routing defined.

### **Unit of Measure Conversions**

The program converts all units of measure to the primary unit of measure for the purpose of the rollup.

When one of the units of measure is a potent unit of measure, the conversion equation includes the standard potency value from Branch/Plant Manufacturing Data. The following example illustrates a conversion involving a potent unit of measure:

- Component = B
- Quantity per = 3
- Primary unit of measure = GA (physical gallons)
- Component unit of measure = GP (potent gallons)
- Standard potency = 50%
- Cost of B = 50.00 (from the Cost Ledger table)
- Cost rolled into parent item =  $[(3 / .5) \times 50] = 300.00$

When converting from potent units to physical units, the program divides by the standard potency. When converting from physical to potent units, the program multiplies by the standard potency.

### **Outside Operations**

If your item has an outside operation set up in the routing, verify the following before running the Simulate Cost Rollup program:

- You have set up a branch/plant record for the \*OP item
- There is a valid cost in the Cost Ledger table (F4105) for the method specified in the Outside Operations processing option of the Simulate Cost Rollup program

### **Bulk Products**

All costing is based on quantities at standard temperatures. If you enter issues or completions quantities at ambient temperatures, the program converts them to standard.

## See Also

- *Updating Frozen Costs (P30835)*
- *Appendix A — Calculations in Cost Rollup*

## Processing Options for Cost Simulation

### AS OF DATE:

1. Enter the "As of" Date (If left blank the current date defaults). \_\_\_\_\_

### COST ROLLUP MODE:

2. Enter the cost method to use for the roll up (ie., 01, 02, 03).  
If left blank, cost method 07 (standard) will be defaulted. \_\_\_\_\_
3. Enter a '1' to simulate ONLY the Items selected and not explode the BOM to simulate all components. \_\_\_\_\_

COST ROLLUP BRANCH:

4. Enter the Branch the Cost Rollup is to process. ("\*" equals all). \_\_\_\_\_  
- This is used to associate Bill of Material Items with Item Balance Items.

COST SIMULATION PRINT INFORMATION:

5. Enter one of the following: \_\_\_\_\_  
- A '1' to print all items.  
- A '2' to print changed items.  
(Default of blanks will not print a report.)

ROUTING CALCULATION INFORMATION:

6. Enter one of the following: \_\_\_\_\_  
- A '1' to clear and recalculate Labor and Overhead for Manufactured items only.  
- A '2' to clear and recalculate Labor and Overhead for ALL items.  
- A '3' to clear Labor and Overhead for ALL items, but recalculate Labor and Overhead for Manufactured items ONLY.  
- Blanks will not recalculate Labor and Overhead.

OUTSIDE OPERATIONS (SUB-CONTRACTS) INFO:

7. Enter the cost method (ie., 01, 02, 03) to move from the Cost Ledger File to the Costing File. \_\_\_\_\_  
(Blanks will not move cost.)

PURCHASED ITEM INFORMATION:

8. Enter the cost method (ie., 01, 02, 03) to move from the Cost Ledger File to the Costing File. \_\_\_\_\_  
(Blanks will not move cost.)

PROCESS MANUFACTURING:

9. Enter a '1' to calculate costs of Co/By-Products. If left blank, it is assumed that Co/By-Products are not used, and cost rollup will not be performed for them. \_\_\_\_\_

DEFAULT DISPLAY DECIMALS:

10. Enter the number of decimals to use for display (0-4) in the cost simulation report (P30825). If left blank, 4 decimals will be used. \_\_\_\_\_

### What You Should Know About Processing Options

**Selected item rollup (3)** This processing option allows you to simulate costs for a selected item or items, without recosting everything else in the bill of material. For example, you might have a new part that needs to be costed, but you do not want to recost everything else. If this processing option is set, the program uses the costs of the lower-level components to roll up the cost for the new part, but does not recost the lower-level components themselves.

**Routing calculations (6)** If a part changes from manufactured to purchased, select the option to clear labor and overhead for all items, but recalculate labor and overhead for manufactured items only. This ensures that labor and overhead are cleared for the changed items when you run the rollup.

Leave this processing option blank to manually enter B1–C4 costs. Otherwise, the Simulate Cost Rollup program overwrites manually entered costs.

See also *Assigning Values to User Defined Cost Components (P30026)*.



#### Exercises

See the exercises for this chapter.

# Work with Simulated Cost Components

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## Working with Simulated Cost Components

After you have created simulated costs, review costing information to determine the effects of the current rollup scenario. Revise the costing information as necessary. When costs are correct, run the Frozen Update program.

Working with simulated cost components includes the following:

- Reviewing and revising simulated cost components
- Setting up standard rate and factor codes
- Assigning values to user defined cost components
- Reviewing the Standard Cost Simulation report
- Setting up cost bucket codes for costed bills of material
- Reviewing costed bills of material
- Setting up operation bucket codes for costed routings
- Reviewing a costed routing

## Reviewing and Revising Simulated Cost Components



From Manufacturing Systems (G3), choose Product Costing

From Daily Product Costing (G3014), choose Enter/Change Cost Components

You review costing information and set up simulated cost scenarios to help plan for future cost changes.

You can change only simulated costs. You can set a processing option if you want to manually maintain the routing cost components (B and C) and protect them from being overwritten.

For the system to calculate B and C cost components, all of the following conditions must be met:

- A routing operation must have a work center with rates in the Work Center Master table for the cost component to display.
- The type operation code on the routing must indicate a normal operation (that is, the type operation code is blank).
- The effective dates on the routing must be valid. The default for As Of date is today's date.

## See Also

- *Creating Simulated Costs (P30820)*
- *Appendix A — Calculations in Cost Rollup*

On Enter/Change Cost Components

The screenshot shows a software window titled "[30026] - Enter/Change Cost Components". It contains a form with the following fields:

- Item Number: 333
- Branch/Plant: M30
- Cost Method: 07 Standard
- Stocking Type: M Manufactured
- Simulated: 260.5662
- Frozen: 260.5662
- Cost Ledger: 260.5662

Below the form is a table titled "Optional Add-On Computations" with the following data:

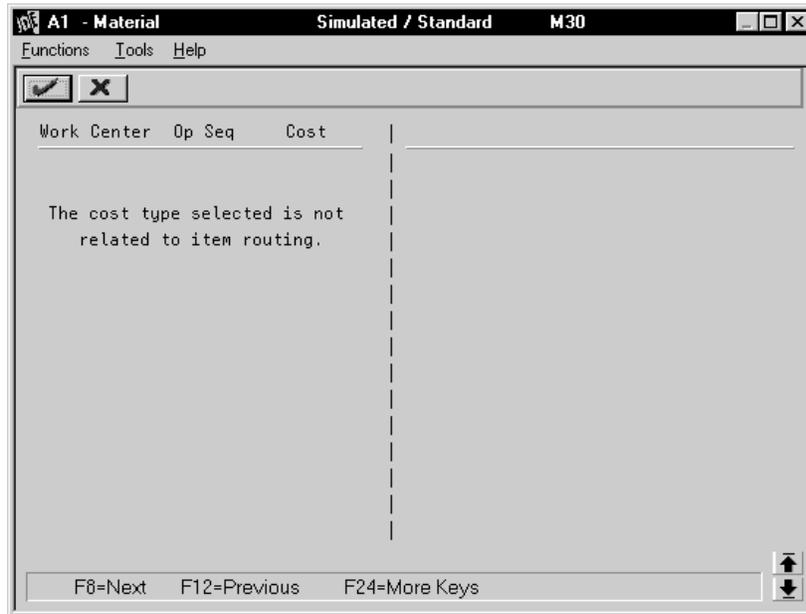
Cst Typ		Simulated Cost		Factor	Rate
		Net Added	Total		
A1	Material		160.8400		
A2	Scrap	6.3843	6.3843		
B1	Direct Labor	3.7275	6.6677		
B2	Setup Labor	.4463	7.2005		
B3	Machine Run		12.5606		
B4	Labor Efficiency	.8663	1.6012		
C1	Machine Variable		14.1500		
C2	Machine Fixed 0		12.5728		
C3	Labor Variable	3.0241	9.3251		
C4	Labor Fixed One	2.5200	7.7964		
D1	Outside Operati	4.4700	4.4700		
X2	Electricity	.8526	.8526	HP1 1.4700	E .5800

At the bottom of the window, there is a legend: F4=Detail F12=Rtn to Process F13=Rates F15=Frz/Sim F21=Factors F24=More

1. Review or revise the following fields:

- Item Cost Total – Simulated
- Item Cost Total – Cost Ledger
- Cost Method
- Cost Type
- Simulated Cost Net Added
- Simulated Cost Total

2. Access the detail calculations for net added value of a routing cost component.



You might want to view the detail calculations for one of the net added values. These values are calculated from work center data, work center rates, and manufacturing constants.

The detailed calculation at the right indicates how the program calculates the cost component value for the operation sequence that is highlighted.

The detail calculations form shows real-time costs. These costs might be different from those shown on the Enter/Change Cost Components form, if you have changed the item's routing, work center rates, or manufacturing constants since you last ran the Simulate Cost Rollup program.

Field	Explanation
Cost Method	A user defined code (system 40, type CM) that identifies a cost method. Cost methods 01 through 08 are hard-coded.

Field	Explanation
Cst Type	<p>This code designates each element of cost for an item. An example of the coding structure is:</p> <ul style="list-style-type: none"> <li>A1 Purchased raw material</li> <li>B1 Direct labor routing sheet rollup</li> <li>B2 Setup labor routing sheet rollup</li> <li>C1 Variable burden routing sheet rollup</li> <li>C2 Fixed burden routing sheet rollup</li> <li>Dx Usually used for outside processing routing sheet rollup</li> <li>Xx Usually used for extra add-ons, such as electricity, water, and so forth</li> </ul> <p>The optional add-on computations usually operate with the type "X" extra add-ons. This cost structure allows you to use an unlimited number of cost components to calculate alternative cost rollups. The system then associates these cost components with one of six user defined summary cost buckets.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The field to the right of the code describes the cost.</p>
Net Added	<p>Used to calculate cost during the simulation process.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This is the cost to build this item at this level in the bill of material. This cost does not include materials (lower-level components). The heading above the Net Added and Total columns indicates if the costs are simulated or frozen values.</p>
Simulated Cost	<p>For the designated cost method, used to calculate the cost of all the lower levels during the simulation process.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This is the sum of the net added cost at this level plus the sum of the total costs of the item's direct components (which includes those items' lower-level component costs.) The heading above the Net Added and Total columns indicates if the costs are simulated or frozen values.</p>

## What You Should Know About

### Item cost totals

The Item Cost Total values are the total costs of all cost components as of the last cost simulation for simulated values, and as of the last frozen update for frozen values. Simulated and frozen values are from the Item Cost Components table.

If the program finds a discrepancy between the Frozen Total and Cost Ledger Total fields, it highlights both fields.

See also *Reviewing the Cost Integrity Report* for more information on comparing frozen and cost ledger values.

### Deleting costs

You must delete costs at the bill of material level at which they occur. For example, you cannot delete costs for lower-level components by locating the parent item. Instead, locate the component item number and remove the costs for the component. The system does not make the corresponding cost change to the higher level components and parent item until you run the Simulate Cost Rollup program.

To delete outside processing costs (usually cost component Dx), delete the cost component from the routing. Then, delete the cost component and net added value from Enter/Change Cost Components.

## Processing Options for Enter/Change Cost Components

### INPUT PROCESSING:

1. Enter a '1' to allow input into the routing calculated Cost Types.  
(i.e. Cost Types: B1, B2, B3, B4,  
C1, C2, C3, C4 )

### OUTSIDE OPERATIONS (SUB-CONTRACT) INFO:

2. Enter the cost method to be used for Sub-contracted items \*OPxx  
(i.e., 01,02,03 ). If left blank will use same method as for parent.

### What You Should Know About Processing Options

#### **Input processing (1)**

If you want to maintain B1–C4 cost components manually, set this processing option to 1. If you do not set this processing option, you cannot enter data into the B1–C4 fields. The fields are instead calculated by the Simulate Cost Rollup program.

If you do maintain these components manually, the values are overwritten by the Simulate Cost Rollup program, unless you have set the processing options for that program to not calculate labor and overhead.

See also *Creating a Simulated Rollup*.

### Setting Up Standard Rate and Factor Codes



From Product Data Management (G30), enter 29

From Product Data Management Setup (G3041), choose Product Costing Setup

From Product Costing Setup (G3042), choose Standard Rates or Standard Factors

Standard rate and factor codes represent overhead costs or other indirect costs that cannot be attributed directly to a certain production process or operation, but must be accounted for in product costing for an item. These types of costs include utilities, insurance, research and development costs, rent or lease costs, or other overhead or general operating costs. Rate and factor codes are user defined.

The Simulate Cost Rollup program uses the rates and factors you define to calculate some of the costs that appear on Enter/Change Cost Components.

#### **See Also**

- *Assigning Values to User Defined Cost Components (P30026)*



#### **To set up standard rate and factor codes**

---

On Standard Rates or Standard Factors

**[00191] - Standard Rates**

Functions Options Tools Help

System Code   
 User Defined Codes   
 Skip To Code   
 Costing Rates

04 Characters

Code	Description	Rate
E	Electricity (\$/KWH)	.5800
I	Insurance (\$/M)	.0150
L1	Labor Type 1	14.0000
M1	Machine 1	45.0000
R&D	R & D Charge	.0200
WHS	Warehouse Space	.0220
WTR	Water	.0010

F3=Exit F5=Record Types F9=Previous F21=Print F24=More Keys

**[00191] - Standard Factors**

Functions Options Tools Help

System Code   
 User Defined Codes   
 Skip To Code   
 Costing Factors

04 Characters

Code	Description	Rate
ELF1	Electrical	.0020
HP1	1 - 10 HP Motors	1.4700
HP2	11- 99 HP Motors	1.9400
R1	Risk Class 1	44.2500
R2	Risk Class 2	100.0000
TOOL	Special Tooling Charge	200.0000
WTR	Water	.0010

F3=Exit F5=Record Types F9=Previous F21=Print F24=More Keys

Complete the following fields:

- Code
- Description
- Rate

Field	Explanation
Code	This column contains a list of valid codes for a specific user defined code list. The number of characters that a code can contain appears in the column title.
Description	A user defined name or remark.
Rate	A code used to define rate information in the General Rate/Message Records table (F00191).

### What You Should Know About

<b>Code</b>	A rate or factor code used to define the value in the Rate field, as follows: <ul style="list-style-type: none"><li>• Rate code — On Enter/Change Cost Components, the value is used in conjunction with the Factor Code and Factor Amount fields to calculate extra costs.</li><li>• Factor code — On Enter/Change Cost Components, the value is used in conjunction with the Rate Code and Rate Amount fields to calculate extra costs.</li></ul>
<b>Description</b>	A description of the rate code or factor code.
<b>Rate</b>	This rate is used to calculate extra costs.

### Assigning Values to User Defined Cost Components



From Manufacturing Systems (G3), choose Product Costing

From Daily Product Costing (G3014), choose Enter/Change Cost Components

You can define net added values for user defined extra costs in one of the following ways:

- Assign a net added value manually
- Assign a predefined value
- Assign a calculated value based on another component's total value
- Assign a calculated value based on another component's net added value
- Assign a calculated value by multiplying a rate and factor

You can also change cost information or delete extra cost components.

See Also

- *What Are Cost Components? (P30026)*
- *Setting Up Cost Components (P00051, 30/CA)*

Cst Typ	Simulated Cost		Factor		Rate	
	Net Added	Total	Code	or Amt	Code	or Amt
A1 Material		160.8400				
A2 Scrap	6.3843	6.3843				
B1 Direct Labor	3.7275	6.6677				
B2 Setup Labor	.4463	7.2005				
B3 Machine Run		12.5686				
B4 Labor Efficiency	.8663	1.6012				
C1 Machine Variable		14.1500				
C2 Machine Fixed 0		12.5728				
C3 Labor Variable	3.0241	9.3251				
C4 Labor Fixed Over	2.5200	7.7964				
D1 Outside Operation	4.4700	4.4700				
X2 Electricity	.8526	.8526	HP1	1.4700	E	.5800

► **To assign a net added value manually**

On Enter/Change Cost Components

Complete the following fields:

- Cost Component
- Simulated Cost Net Added



The program writes manually entered costs to the Total field when you run the Simulate Cost Rollup program.

► **To assign a predefined value**

Use user defined rate codes and factor codes to identify net added costs. For example, to calculate the value for cost component X5, the program uses the amount defined for rate code R&D.

On Enter/Change Cost Components

Complete the following fields:

- Cost component
- Factor Code
- Factor Amount
- Rate Code
- Rate Amount

Field	Explanation
or Amt	A generic factor number used to calculate data.
Code	A code used to retrieve factor information from the Generic Rate File (F00191).  System Code 30  Record Type CF
Rate or Amt	A code used to define rate information in the General Rate/Message Records table (F00191).

---

**► To assign a calculated value based on another component's total value**

---

The system can calculate the net added value based on the total for an existing cost component. The system calculates this value when you enter the data on Enter Cost Components. The costs are then rolled up into the cost of the item when you run Simulate Cost Rollup.

On Enter/Change Cost Components

1. Complete the following field:
  - Cost component
2. Enter an ampersand (&) followed by the cost component code in the following field:
  - Factor Code
3. Complete one of the following fields:
  - Rate Code
  - Rate Amount

The program retrieves the total value for the cost component and multiplies it by the rate value indicated.

▶ **To assign a calculated value based on another component's net added value**

---

The system can calculate the net added value based on the net added value for an existing cost component. The system calculates this value when you enter the data on Enter Cost Components. The costs are then rolled up into the cost of the item when you run Simulate Cost Rollup.

On Enter/Change Cost Components

1. Complete the following field:
  - Cost Component
2. Enter an asterisk (\*) followed by the cost component code in the following field:
  - Factor Code
3. Complete one of the following fields:
  - Rate Code
  - Rate Amount

The program retrieves the net added value for the cost component and multiplies it by the rate value indicated.

▶ **To assign a calculated value by multiplying a rate and factor**

---

The system can calculate the net added value by multiplying a rate amount and factor amount. If you enter both amounts, the system multiplies the two numbers to calculate the net added cost for that cost component for that item.

On Enter/Change Cost Components

1. Complete the following field:
  - Cost Component
2. Complete one or both of the following fields:
  - Factor Amount
  - Rate Amount

## Reviewing the Standard Cost Simulation Report

The Simulate Cost Rollup program generates the Standard Cost Simulation report. The report shows the previous cost of the item, the simulated rolled up cost, and the variance between the two.

After reviewing the simulated costs, you revise incorrect information and create simulated costs again to include the changes.

30825			J.D. Edwards & Company				Page	-	3
		Standard Cost Simulation				Date	-	2/20/98	
Branch . . . . .		M30 Memphis Mfg. Plant							
Cost Method. . . . .		07 Standard							
Item Number	Item Description	Cst Typ Cost Dsc.	Frozen Cost . . . . .		Simulated Cost. . . . .		Variance . . . . .		Percent
			Net Added	Total	Net Added	Total	Net Added	Total	
1001	Pen & Pencil Set	B1 Direct Lab	.0979	.0979	.0979	.0979			
		B2 Setup Labo	24.8000	24.8000	24.8000	24.8000			
		B3 Machine Ru	.0338	.0338	.0338	.0338			
		B4 Labor Effi	.0184	.0184	.0096	.0096	.0088-	.0088-	47.826-
		C1 Machine Va	.0271	.0271	.0271	.0271			
		C2 Machine Fi	.0294	.0294	.0294	.0294			
		C3 Labor Vari	23.6307	23.6307	23.6255	23.6255	.0052-	.0052-	.022-
		C4 Labor Fixe	24.8594	24.8594	24.8550	24.8550	.0044-	.0044-	.017-
	UOM. . EA	2nd Item Number. . . . .	73.4967	73.4967	73.4783	73.4783	.0184-	.0184-	.025-
1008A	Drawer Labels	A1 Material	.0344	.0344	.0100	.0100	.0244-	.0244-	70.930-
	UOM. . EA	2nd Item Number. . . . .	.0344	.0344	.0100	.0100	.0244-	.0244-	70.930-
1122	CRT AS/400 Compati	A1 Material		362.5410		362.5410			
		B1 Direct Lab	24.1500	156.1813	24.1500	31.4938		124.6875-	79.835-
		B2 Setup Labo	10.6250	69.0750	10.6250	31.2500		37.8250-	54.759-
		B3 Machine Ru	1.6250	12.7400	1.6250	7.9950		4.7450-	37.244-

## Setting Up Cost Bucket Codes for Costed Bills of Material



From Product Data Management (G30), enter 29

From Product Data Management Setup (G3041), choose Product Costing Setup

From Product Costing Setup (G3042), choose Cost Buckets

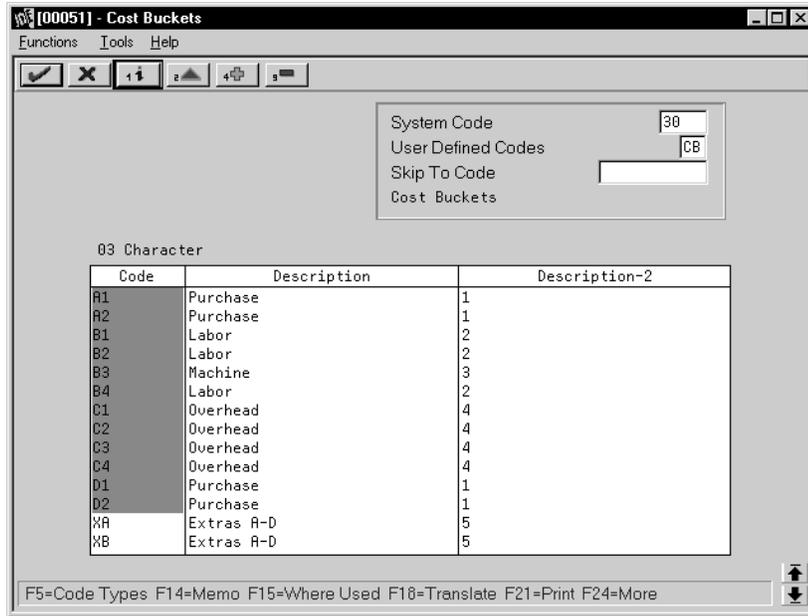
Use cost bucket codes to combine the material and value-added cost for each item into one group. With cost buckets, you can total cost components by groups according to their use. In addition, you can assign a cost bucket sequence number to each cost component to tell the system how to group the costs on costed bill inquiries and reports.

Each cost bucket can contain several defined cost components. Column sequence is defined by the number in the Description field. For example, you might define the columns (buckets) and user defined codes as follows:

Bucket #	Title	Cost Components Included in Buckets
Column 1	Purchase	Cost components A1 (material), A2 (scrap), and D1 (outside operations)
Column 2	Labor	Cost components B1 (direct labor), B2 (setup labor), and B4 (labor efficiency)
Column 3	Machine	Cost component B3 (machine run)
Column 4	Overhead	Cost components C1 (machine variable) and C2 (machine fixed)
Column 5	Extras	Cost components X1 (taxes) and X2 (electricity)

▶ **To set up a cost bucket code**

On User Defined Code Revisions



Complete the following fields:

- Code — Cost Component
- Description — Sequence Number
- Description-2

Field	Explanation
Code	This column contains a list of valid codes for a specific user defined code list. The number of characters that a code can contain appears in the column title.
Description	A user defined name or remark.
Description-2	Additional text that further describes or clarifies a field in J.D. Edwards systems.

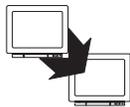
**What You Should Know About**

**Code — Cost Component** Designates the cost components to be grouped.

**Description — Sequence Number** The name that you want to appear as the heading for the cost bucket column on costed bill inquiries and reports. You only need to enter this title once for each sequence number. If the program finds more than one name for a bucket, it uses the name defined for the last cost component that it accumulates into the cost bucket.

**Description-2** Specifies in what column (bucket) each cost component is grouped.

## Reviewing Costed Bills of Material



From Manufacturing Systems (G3), choose Product Costing

From Daily Product Costing (G3014), choose Costed Bill Inquiry

Effective cost and profit projection depend on accurate and comprehensive item cost information. Use Costed Bill Inquiry to view costs for both parent items and components to assist you in budgeting resources and planning for future cost of items.

The program displays summarized costs for the direct components of a parent item, and net added and total costs for the parent item:

- For the parent item, the costs displayed are the net added cost components from the Cost Components table.
- For each component, the costs displayed are calculated based on the as of date from the bill of material and the cost method used. The program uses the as of date to ignore obsolete component lines in the bill of material.

For example, you can view all costs of manufacturing a parent item, including assembly, subassembly, and component costs. In addition, the manufacturing cost of a component is divided into five user defined categories for precise costing calculations:

- Purchase
- Labor
- Machine
- Overhead
- Extras



The program can accumulate purchase costs for up to 500 components on each bill of material. Components beyond 500 are not included in the costing process.

► To review a costed bill of material

On Costed Bill Inquiry

Component Item	Purchase	Labor	Machine	Overhead	Extras 1	Total
333	10.85	9.05		5.54	16.98	42.44
212	26.00	.09	2.11	3.71		31.92
121	26.00	.03	1.35	2.32		29.70
424	52.00	.25	9.10	21.21		82.56
444	52.00	10.05		11.05		73.10
123	4.00					4.00
122	.84					.84
Standard Totals	171.69	19.48	12.56	43.84	16.98	264.58

1. Review the following fields:

- As of
- Cost Method
- Requested Quantity
- Unit Of Measure
- Skip to Sequence Number
- Component Item
- Purchase
- Labor
- Machine
- Overhead
- Extras
- Total (row)
- Total (column)

2. Access the detail area.

**[30206] - Costed Bill Inquiry**

Functions Options Tools Help

Branch/Plant M30  
 As of 07/09/97  
 Cost Method 07 Standard  
 ORK SHELF UNIT

Parent Item 333  
 Requested Quantity ER  
 Stocking Type M Manufactured Skip To Seq No  
 Batch Quantity ER

0	Component Item	Simulated Component Costs					Total
		Purchase	Labor	Machine	Overhead	Extras 1	
	333	10.85	9.05		5.54	16.98	42.44
	212	26.00	.09	2.11	3.71		31.92
	Effective From 10/07/91 Desc ORK SHELF SIDES Qty 2 ER						
	Effective Thru 12/31/10 Component Br/Pl M30 Stocking Type M						
	Feature Cost % 100.00 Operation Scrap % .00 % of Scrap 20.00						
	121	26.00	.03	1.35	2.32		29.70
	Effective From 10/07/91 Desc ORK SHELF TOP/BOTTOM Qty 2 ER						
	Effective Thru 12/31/10 Component Br/Pl M30 Stocking Type M						
	Feature Cost % 100.00 Operation Scrap % .00 % of Scrap						
	Standard Totals	171.69	19.48	12.56	43.84	16.98	264.58

Opt 1=Detail 2=Next Level F11=Columns F12=Prev Level F14=Routing F24=More

3. Review the following fields:

- Effective – From Date
- Effective – To Date
- Feature Cost Percent
- Operation Scrap Percent
- Quantity
- Percent of Scrap

4. Access the costed bill information for the components.

**[30206] - Costed Bill Inquiry**

Functions Options Tools Help

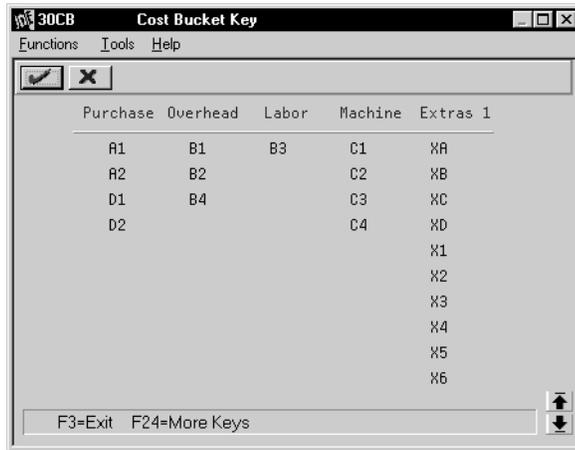
Branch/Plant M30  
 As of 07/09/97  
 Cost Method 07 Standard  
 ORK SHELF SIDES

Parent Item 212  
 Requested Quantity ER  
 Stocking Type M Manufactured Skip To Seq No  
 Batch Quantity ER

0	Component Item	Simulated Component Costs					Total
		Purchase	Labor	Machine	Overhead	Extras 1	
	212		4.65	1.05	1.85		7.56
	111	13.00					13.00
	Effective From 10/07/91 Desc 1x10x6' ORK S4S Qty 1 ER						
	Effective Thru 12/31/10 Component Br/Pl M30 Stocking Type P						
	Feature Cost % 100.00 Operation Scrap % .00 % of Scrap						
	Standard Totals	13.00	4.65	1.05	1.85		20.56

Opt 1=Detail 2=Next Level F11=Columns F12=Prev Level F14=Routing F24=More

5. Toggle to review frozen or simulated costs.
6. Access Cost Bucket Key (Columns) to review an item's cost buckets.



Field	Explanation
As of	<p>This field is used for effectivity checking. Enter a specific date to display documents (orders, bills of material, routings, as applicable) that are effective on or after that date. The current system date is the default, but you can enter any future or past date.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The system uses the bill of material that is effective as of this date.</p>
Component Item	<p>A number that the system assigns to an item. It can be in short, long, or 3rd item number format.</p> <p>..... <i>Form-specific information</i> .....</p> <p>In the header, this is the item number of the parent. In the detail area, these are the item numbers of the components.</p>
Requested Quantity	<p>The number of parent items you want to process. The system calculates lower-level values in quantity per the number of parent items requested. For example, if 3 components are needed for a parent item, and the requested quantity is 10, the system plans for 30 components.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This is the number of parent items for which you want to view cost breakdowns. Costs are figured in quantity per the parent item.</p>

Field	Explanation
Skip To Seq No	<p>A number that indicates the sequence of the components on a bill of material. It initially indicates the relative sequence in which a component was added to a kit or single level bill of material. You can modify this number to change the sequence in which the components appear on the bill of material.</p> <p>Skip To fields allow you to enter a component line number that you want to begin the display of information.</p> <p>..... <i>Form-specific information</i> .....</p> <p>You can enter a component line number with which to begin the display.</p>
Purchased	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This is cost bucket No. 1 as defined for user defined code 30/CB, Cost Buckets. You can view the cost components assigned to the cost bucket. Cost extras must be defined in cost buckets to be included in the amounts in this display. The total of this column appears at the bottom of the screen in the "Totals" row. The heading above the columns indicates which costs are displayed: frozen or simulated. You can toggle between simulated and frozen values.</p>
Labor	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Cost bucket No. 2 as defined for user defined code 30/CB, Cost Buckets. You can view the cost components assigned to the cost bucket. Cost extras must be defined in cost buckets to be included in the amounts in this display. The total of this column appears at the bottom of the screen in the "Totals" row. The heading above the columns indicates which costs are displayed: frozen or simulated. You can toggle between simulated and frozen values.</p>
Setup	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Cost bucket No. 3 as defined for user defined code 30/CB, Cost Buckets. You can view the cost components assigned to the cost bucket. Cost extras must be defined in cost buckets to be included in the amounts in this display. The total of this column appears at the bottom of the screen in the "Totals" row. The heading above the columns indicates which costs are displayed: frozen or simulated. You can toggle between simulated and frozen values.</p>

Field	Explanation
Overhead	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Cost bucket No. 4 as defined for user defined code 30/CB, Cost Buckets. You can view the cost components assigned to the cost bucket. Cost extras must be defined in cost buckets to be included in the amounts in this display. The total of this column appears at the bottom of the screen in the "Totals" row. The heading above the columns indicates which costs are displayed: frozen or simulated. You can toggle between simulated and frozen values.</p>
Extras	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Cost bucket No. 5 as defined for user defined code 30/CB, Cost Buckets. You can view the cost components assigned to the cost bucket. Cost extras must be defined in cost buckets to be included in the amounts in this display. The total of this column appears at the bottom of the screen in the "Totals" row. The heading above the columns indicates which costs are displayed: frozen or simulated. You can toggle between simulated and frozen values.</p>
Total	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Contains system calculated totals for item costs, that is, for each component and parent item.</p>
Effective From	<p>A date that indicates one of the following:</p> <ul style="list-style-type: none"> <li>• When a component part goes into effect on a bill of material</li> <li>• When a routing step goes into effect as a sequence on the routing for an item</li> <li>• When a rate schedule is in effect</li> </ul> <p>The default is the current system date. You can enter future effective dates so that the system plans for upcoming changes. Items that are no longer effective in the future can still be recorded and recognized in Product Costing, Shop Floor Control, and Capacity Requirements Planning. The Material Requirements Planning system determines valid components by effectivity dates, not by the bill of material revision level. Some forms display data based on the effectivity dates you enter.</p>
Qty	<p>The number of units to which the system applies the transaction.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This is the quantity per assembly and indicates how many of a component are used in the parent.</p>

Field	Explanation
Effective Thru	<p>A date that indicates one of the following:</p> <ul style="list-style-type: none"> <li>• When a component part is no longer in effect on a bill of material</li> <li>• When a routing step is no longer in effect as a sequence on the routing for an item</li> <li>• When a rate schedule is no longer active</li> </ul> <p>The default is December 31 of the default year defined in the Data Dictionary for Century Change Year. You can enter future effective dates so that the system plans for upcoming changes. Items that are no longer effective in the future can still be recorded and recognized in Product Costing, Shop Floor Control, and Capacity Requirements Planning. The Material Requirements Planning system determines valid components by effectivity dates, not by the bill of material revision level. Some forms display data based on the effectivity dates you enter.</p>
Feature Cost %	<p>A percentage used by the Simulate Cost Rollup program to calculate the cost of a feature or option item as a percentage of the total cost of the parent.</p> <p>Enter the percentage as a whole number: 5% as 5.0</p>
Operation Scrap %	<p>The system uses this value to increase or decrease the amount of materials to account for loss within the operation. The system updates this value on Enter/Change Bill of Material when you run the Planned Yield Update program. The system calculates this value by compounding the yield percentages from the last operation to the first operation. Use a processing option in Enter/Change Routing to enable the system to calculate the component scrap percent.</p>
% of Scrap	<p>Scrap is the percentage of unusable component material created during the manufacture of a particular parent item. During DRP/MPS/MRP generation, the system increases gross requirements for the component item to compensate for the loss.</p> <p>Note: Shrink is the expected loss of parent items (and hence, components) due to the manufacturing process. Shrink and scrap are compounded to figure the total loss in the manufacture of a particular item. Accurate shrink and scrap factors can help to produce more accurate planning calculations.</p> <p>Enter percents as whole numbers: 5% as 5.0</p>

## What You Should Know About

### **Displayed costs**

This program calculates the cost associated with each cost component in the same way as the Simulate Cost Rollup program.

See also *Appendix A — Calculations in Cost Rollup*.

The top line (the parent) is the net added cost of the parent from the Cost Components table. The lines for the components are the cost breakdown for all next level components. The totals across the bottom are the total costs of the parent item from the Cost Components table. The rightmost bottom total is the total of all costs for the parent item.

The costs on Costed Bill Inquiry are real-time costs, so they can change if you update the bill of material or routing for an item. The Enter/Change Cost Components form displays the costs computed when you run Simulate Cost Rollup. As a result, the values might differ from those on Costed Bill Inquiry if you have changed the bill of material, routing, or manufacturing constants since you last ran the rollup.

### **See Also**

- *Setting Up Cost Bucket Codes for Costed Bills of Material (P00051)*

### **Processing Options for Costed Bill of Material**

#### DEFAULT DISPLAY DECIMALS:

1. Enter the number of decimals to use for display (0-4). If left blank, 4 decimals will be used.

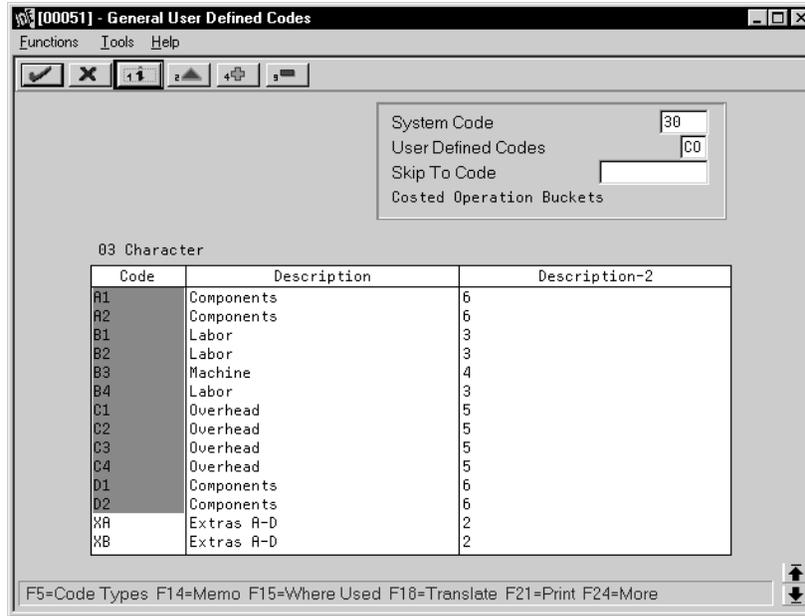
## **Setting Up Operation Bucket Codes for Costed Routings**

Use operation bucket codes to combine component costs in each step in the routing. That is, you can group operation costs into totals that appear on costed routing inquiries and reports.

For example, you might track labor costs by separate cost components that represent setup, run, and overhead labor for an item. You could combine these cost components into one total cost for labor on the costed routing inquiry or report for the item by assigning the same sequence number to each cost component.

► **To set up an operation bucket code**

On User Defined Code Revisions



Complete the following fields:

- Code — Cost Component
- Description — Sequence Number
- Description-2

Field	Explanation
Code	This column contains a list of valid codes for a specific user defined code list. The number of characters that a code can contain appears in the column title.
Description	A user defined name or remark.
Description-2	Additional text that further describes or clarifies a field in J.D. Edwards systems.

**What You Should Know About**

**Code - Cost Component** Designates the cost components to be grouped.

**Description – Sequence Number** The name that you want to appear as the heading for the operation bucket column on costed routing inquiries and reports. You only need to enter this title once for each sequence number. If the program finds more than one name for a bucket, it uses the name defined for the last cost component that it accumulates into the operation bucket.

**Description 2** Specifies in what column (bucket) each cost component is grouped.

### Reviewing a Costed Routing



From Manufacturing Systems (G3), choose Product Costing

From Daily Product Costing (G3014), choose Costed Routing Inquiry

Use Costed Routing Inquiry to review the summarized costs of an item for each operation in the routing. This information can help you effectively manage production costs. For example, you can:

- View the work center responsible for an operation
- Determine if a work center performs multiple operations
- Display simulated or frozen costs for labor values for cost methods
- Calculate the totals for all costs by cost categories



The program can accumulate purchase costs for up to 500 components on each bill of material. Components beyond 500 are not included in the costing process.

► **To review a costed routing**

On Costed Routing Inquiry

The screenshot shows a window titled "30208 - Costed Routing Inquiry" with a menu bar (Functions, Options, Tools, Help) and a toolbar. The main area contains several input fields:

- Branch/Plant: M30
- As of: 07/09/97
- Cost Method: 07 Standard
- Item Number: 333
- Requested Quantity: 1 ER
- Stocking Type: M Manufactured
- Routing Batch Qty: ER
- BOM Batch Qty: ER
- Extras 1-3: .8856
- Extras 4-7: 16.1040

Below the input fields is a table with the following data:

0	Work Center	Op Seq	Labor	Machine	Overhead	Components	16.1040
	200-203	10.00	5.1438		3.5544	7.1056	15.8038
	200-4344	25.00				3.7054	3.7054
	200-204	30.00	2.0075		1.1564	38.6121	41.7760
	200-204	40.00	1.9050		.8333	4.8400	7.5783
			9.0563		5.5441	54.2631	68.8635

At the bottom of the window, there is a status bar with the text: "Opt: 3=W/C Rates 5=Detail F13=Cost Comp F14=Bill F15=Sim/Frozen F24=More".

- Review the following fields:
  - As of Date
  - Cost Method
  - Requested Quantity
  - Unit Of Measure
  - Up to Operation Sequence
  - Extras 1-3
  - Extras 4-7
  - Work Center
  - Operation Sequence Number
  - Labor
  - Machine
  - Overhead
  - Components
  - Total (row)
  - Total (column)
- Access the Detail form.

The screenshot shows a window titled "[30200w] - Detail" with a menu bar (Functions, Tools, Help) and a toolbar. Below the toolbar, it displays "Operation Sequence No 10.00 Assemble shelf unit". The main area contains a table with the following data:

Category	Type	Description	Cost
Labor	B1	Direct Labor	2.4150
	B2	Setup Labor	2.1250
	B4	Labor Efficiency	.6038
	C3	Labor Variable Overhead	1.9388
Overhead	C4	Labor Fixed Overhead	1.6156
	A1	Material	31.9214
Components	A2	Scrap	6.3842

At the bottom, there are function keys: F3=Exit and F24=More.

3. On Detail, review the following fields:
  - Category
  - (Cost) Type
  - Description
  - Cost
4. On Costed Routing Inquiry, toggle to review frozen or simulated costs.
5. To review an item's operation buckets, access Operation Bucket Key.

The screenshot shows a window titled "[30CD] - Operation Bucket Key Window" with a menu bar (Functions, Tools, Help) and a toolbar. The main area contains a grid with the following data:

Labor	Machine	Overhead	Components	Extras 1-3	Extras 4-7
B1	B3	C1	A1	X1	XA
B2		C2	A2	X2	XB
B4		C3	D1	X3	XC
		C4	D2		XD
					X4
					X5
					X6
					X7

At the bottom, there is a function key: F24=More Keys.

Field	Explanation
As of	<p>This field is used for effectivity checking. Enter a specific date to display documents (orders, bills of material, routings, as applicable) that are effective on or after that date. The current system date is the default, but you can enter any future or past date.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The routing that is effective as of this date is used.</p>

Field	Explanation
Requested Quantity	<p>The number of parent items you want to process. The system calculates lower-level values in quantity per the number of parent items requested. For example, if 3 components are needed for a parent item, and the requested quantity is 10, the system plans for 30 components.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This is the number of parent items for which you want to see cost breakdowns. Costs are figured in quantity per the parent item.</p>
Op Seq	<p>In routings, this number is used to sequence the fabrication or assembly steps in the manufacture of an item. You can track costs and charge time by operation.</p> <p>In bills of material, this number designates the routing step in the fabrication or assembly process that requires a specified component part. You define the operation sequence after you create the routing for the item. The Shop Floor Control system uses this field in the backflush/preflush by operation process.</p> <p>In engineering change orders, this number is used to sequence the assembly steps for the engineering change.</p> <p>Skip To fields allow you to enter an operation sequence that you want to begin the display of information.</p> <p>You can use decimals to add steps between existing steps. For example, use 12.5 to add a step between steps 12 and 13.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Top of form: A processing option controls whether “Skip to” or “Up to” operation sequence mode is in effect.</p> <p>In “Skip to” mode, the system uses an entered operation sequence number as the starting point when displaying operations, and displays the total from that point forward on the total line.</p> <p>In “Up to” mode, the system uses an entered operation sequence number as the cutoff for displaying operations. The total for all operations up to and including the operation sequence number entered appears on the total line.</p> <p>Bottom of form: The Op Seq field contains a number that indicates the order of each step in the manufacturing operation.</p>

Field	Explanation
Purchased	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Cost bucket No. 1 as defined for user defined code 30/CO, Operation Buckets. A processing option controls whether the system adds cost buckets 1 and 2 (at the top of the form) into the grand total of all costs for the parent item at the bottom of the form.</p>
Work Center	<p>A number that identifies a branch, plant, work center, or business unit.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This is the business unit assigned to the work center for the operation sequence listed.</p>
Labor	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Cost bucket No. 3 as defined for user defined code 30/CO, Operation Buckets. The total of this column appears at the bottom of the form in the "Totals" row. The heading above the columns indicates which costs are displayed: frozen or simulated. You can toggle between simulated and frozen values.</p> <p>You also can view a detailed breakdown of the cost components added to determine the total for the work center.</p>
Machine	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Cost bucket No. 4 as defined for user defined code 30/CO, Operation Buckets. The total of this column appears at the bottom of the screen in the "Totals" row. The heading above the columns indicates which costs are displayed: frozen or simulated. You can toggle between simulated and frozen values.</p> <p>You also can view a detailed breakdown of the cost components added to arrive at the total for the work center.</p>

Field	Explanation
Overhead	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Cost bucket No. 5 as defined for user defined code 30/CO, Operation Buckets. The total of this column appears at the bottom of the screen in the “Totals” row. The heading above the columns indicates which costs are displayed: frozen or simulated. You can toggle between simulated and frozen values.</p> <p>You can also view a detailed breakdown of the cost components added to arrive at the total for the work center.</p>
Total	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This column contains system-calculated totals for each row of costs, that is, for each operation sequence.</p> <p>The totals across the bottom of the form are the totals of each cost bucket.</p> <p>The rightmost bottom total is the total of all costs for the routing for an item.</p>

## What You Should Know About

### Displayed costs

This program calculates the cost associated with each cost component in the same way as the Simulate Cost Rollup program.

See also *Appendix A — Calculations in Cost Rollup*.

The costs on Costed Routing Inquiry are real-time costs, so they can change if you update the bill of material or routing for an item. The Enter/Change Cost Components form displays the costs computed when you run Simulate Cost Rollup. As a result, the values might differ from those on Costed Routing Inquiry if you have changed the bill of material, routing, or manufacturing constants since you last ran the rollup.

### Master routings

The program uses the master routing for the item from the Routing Master table (F3003) if all of the following are true:

- The Master Routing field on the Manufacturing Constants form is set to Y for the branch.
- The parent item has a cross-reference item defined for master routing. (The cross-reference item must be defined with a cross-reference type of MR and the Address field must be blank.)
- The cross-reference item has an item routing defined.

### See Also

- *Setting Up Operation Bucket Codes for Costed Routings (P00051)*

### Processing Options for Costed Routing

#### OUTSIDE OPERATIONS (SUB-CONTRACTS) INFO:

1. Enter the cost method (ie., 01, 02, 03) to be used for Sub-Contracted Items.  
(Blanks will default to a "01")

#### PURCHASED ITEM INFORMATION:

2. Enter the cost method (ie., 01, 02, 03) to be used for Purchased Items.  
(Blanks will default the cost from the Mode, ie., Standard Cost.)

#### OPERATION SEQUENCE DISPLAY:

3. Enter a '1' to display the costs 'UP TO' and including the operation sequence entered in the 'Skip to' video field. If left blank, the costs will be displayed beginning with the entered operation's costs.

#### TOTALING OPTIONS:

4. Enter a '1' to include cost buckets 1 and 2 in the total. If left blank, the total will only include cost buckets 3-6.

#### COSTED RESOURCES/CO/BY PRODUCTS OPTION:

5. Enter the number of decimals to display (0-4) in the Costed Resources/Co/By Products window. If left blank, 4 decimals will be used.



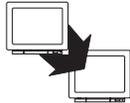
### Exercises

See the exercises for this chapter.

# Update Frozen Costs

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## Updating Frozen Costs



From Manufacturing Systems (G3), choose Product Costing

From Daily Product Costing (G3014), choose Frozen Update or Frozen Update/WIP Revaluation

After you perform simulated rollups to determine the effect of changes, you can update your frozen costs with simulated values by running a frozen update. Most companies run this program at the beginning of a new fiscal year to create their manufacturing costs for the next fiscal period.

You can perform simulated rollups and frozen updates for any cost method. However, the Manufacturing Accounting system uses frozen standard costs (method 07).



This program uses the costs generated by the most recent version of the Simulate Cost Rollup program. If you have changed information since the last simulated cost rollup, those changes will not be reflected by the frozen update.

The Frozen Update program uses the costs that were generated by the Simulate Cost Rollup program to:

- Update unit costs in the Cost Ledger table (F4105) for the cost method selected
- Update frozen costs in the Cost Components table (F30026) for the cost method selected
- Update labor and overhead rates in the Work Center Master table (F30006)
- Print report totals by company, branch/plant, and G/L category code
- For on-hand balances, create an Item Balance (IB) record in the Item Ledger table (F4111) if the cost method selected matches the sales/inventory cost method for an item
- For on-hand balances, write journal entries to the Account Ledger table (F0911) in either detail or summary format

An item ledger record is written if the cost method selected for update is the standard (07) cost method or the sales/inventory cost method. The item ledger record indicates a change in inventory value for the updated

items. The number of item ledger records written depends on the cost level of the item, which is defined in the Item Master table (F4101). For example, items at cost level 2 would have an item ledger record for each branch/plant at which they are defined, because costs can differ by branch/plant.

In addition, if you set the processing option, the program does the following for work in process (WIP):

- Adjusts inventory values in the Work Order Variances table (F3102)
- Writes journal entries to the Account Ledger table (F0911) in either detail or summary format

Costs in the Work Order Variances table (F3102) are updated for those open work orders affected by a cost change. In other words:

- The program creates a journal entry only if a work order has an outstanding WIP balance.
- WIP costs are only updated for open work orders (variance flag is not 3, that is, Journal Entries for Variances has not yet been run).
- The work order is updated only if it contains an item selected for cost update.

Standard, completed, and scrapped costs are updated using the new parent frozen costs. Current, planned, and actual costs are updated using the new component costs and work center rates (simulated in proof mode and frozen in final mode).

### Journal Entries for On-Hand Balances

The program creates journal entries in either detail or summary format that match in amount with the item ledger records. Thus the program maintains integrity between the Item Ledger and the Account Ledger. Use the Item Ledger/Account Integrity report to verify this integrity.

The process flow is as follows:

- The program creates a journal entry only if an item ledger record has been written.
- An item ledger record is written only if an item cost ledger record has been updated.
- An item cost ledger record is updated only if a cost component record has been updated.

The program accesses the following AAIs to obtain the object account.

AAI table number	Description	Use
4134	Inventory	Debit to show increase in item cost Credit to show decrease in item cost
4136	Expense or COGS	Debit to show expense or loss Credit to show income or gain

### Detail Journal Entries

If you choose detail format, the program creates matching debit and credit account ledger records for every item ledger record created. Use the detail format when you want a detailed audit trail. However, consider that the potential volume is large, possibly causing disk space problems.

### Summary Journal Entries

If you choose summary format, the program creates debit and credit records by subtotals of company, general ledger category code, and transaction type. Use the summary format to reduce the amount of detail in the general ledger. You can still run a report as a detailed audit trail.

## Journal Entries for WIP

The program creates journal entries in either detail or summary format that match in amount with the work order costs. Thus the program maintains integrity between the WIP balances and the Account Ledger. Use Variance Inquiry to verify this integrity.

The program accesses the following AAIs to obtain the object account.

AAI table number	Description	Use
4136	Expense or COGS	Debit to show expense or loss Credit to show income or gain
3120	WIP	Debit to show increase in WIP costs Credit to show decrease in WIP costs

### Detail Journal Entries

If you choose detail format, the program creates matching debit and credit account ledger records for every updated work order. Use the detail format when you want a detailed audit trail. However, consider that the potential volume is large, possibly causing disk space problems.

### Summary Journal Entries

If you choose summary format, the program creates debit and credit records by subtotals of company, general ledger category code, and transaction type. Use the summary format to reduce the amount of detail in the general ledger. You can still run a report as a detailed audit trail.

### Before You Begin

- Ensure that you have set up item cost levels on the initial Item Master Information form. See *Setting Up Item Cost Levels*.

### Reports

The program produces the following reports:

#### **Item Cost Ledger Exception report**

The program produces this report if it finds any general ledger errors while formatting the journal entries. The report lists an error message once for the same combination of AAI number, account number, and G/L category code. Correct any errors and run the Frozen Update program again.

#### **Frozen Standard Update report**

This report shows the effect of the inventory revaluation based on the changes made to the cost revisions records for the inventory items. You can print all items or only those that have a cost change. You can run the report in proof mode or final mode. The report provides the following information:

- Old and new costs for each updated item
- Variances between old and new costs
- Item quantity on hand
- Net amount of change in cost
- Summary of the amount changed by item general ledger category (facilitates any manual journal entries required)
- G/L exception errors
- Whether G/L transactions have been written
- Either G/L subtotals by company and G/L category code or G/L category code only

#### **WIP Revaluation Exception report**

If you choose to do WIP revaluation, the program produces this report if it finds any general ledger errors while formatting the journal entries. An error message is printed once for the same combination of AAI number, account number, and G/L category code. Correct any errors and run the Frozen Update program again.

**WIP Revaluation Update report**

If you choose to do WIP revaluation, this report shows the effect of the inventory revaluation based on the changes made to the cost revisions records for the inventory items. The report lists all open work orders that use any of the items whose costs have changed. You can run the report in proof mode or final mode. The report provides the following information:

- Old and new WIP balance for each work order
- Variances between old and new WIP balance
- Net amount of change in WIP
- G/L transactions, if requested, in either detail or summary format

```

30834                                     J.D. Edwards & Company
                                           Item Cost Ledger Update - Final Mode
                                           G/L Exception Report
                                           Page - . . . 1
                                           Date - . . . 4/03/98

Batch Number . . . 129171
Batch Date . . . 04/03/98

Account Number      G/L      AAI  Do G/L
                   Da
                   Date   Numb Ty Cat      Error Messages
-----
                                           No Errors Found
    
```

# Product Costing and Manufacturing Accounting

30835

J.D. Edwards & Company  
Item Cost Ledger Update - Final Mode

Page - 3  
Date - 4/03/98

Batch Number . . . FINAL  
Batch Date . . .  
J/E Mode . . . . Detailed  
Cost Method. . . . 07 Standard

Item Number	Branch	Location	Lot	G/L Cat	Old Cost	New Cost	Variance	Qty on Hand	Net Change
111	M30			IN20	13.0000	13.0000	.0000		
121	M30			IN20	14.8527	14.8527	.0000	140960	
122	M30			IN20	.0700	.0700	.0000	597336	
123	M30			IN20	4.0000	4.0000	.0000		
212	M30			IN20	15.9607	15.9607	.0000		
333	M30			IN20	261.6500	260.5662	1.0838-	5931	6428.02-

30837 J.D. Edwards & Company Page - . . . 1  
WIP Re-Valuation Update Date - . . . 2/12/97  
G/L Exception Report

Batch Number . . . PROOF  
Batch Date . . .

Account Number	G/L Date	AAI Numb	Do Ty	G/L Cat	Error Messages			
No Errors Found								
30838					J.D. Edwards & Company WIP Re-Valuation Update			
					Page - 1 Date - 2/12/97			
Batch Number . . . PROOF								
Batch Date . . .								
J/E Mode . . . Detailed								
Cost Method . . . 07 Standard								
Document	Item Number	Co	Branch	G/L Cat	Old Total WIP Cost	New Total WIP Cost	WIP Variance	Original Quantity
00157147	772481-PC3	12020	12-20	IN20	55.50	59.50	4.00	2.0000
Report Total . . .					55.50	59.50		

30838 J.D. Edwards & Company Page - 2  
WIP Re-Valuation Update Date - 2/12/97

Batch Number . . . PROOF  
Batch Date . . .  
J/E Mode . . . Detailed  
Cost Method . . . 07 Standard  
G/L RECAP

Do Ty	Document	G/L Date	Co	Account Description Explanation	G/L Account	Amounts		LT
						Debit	Credit	
IB	157147	02/12/97	12020	Material	12-20.1710.A1	6.00		AA
				WIP Revaluation				
IB	157147	02/12/97	12020	Labor	12-20.1720.B1	7.00		AA
				WIP Revaluation				
IB	157147	02/12/97	12020	Machine	12-20.1720.B3	2.00-		AA
				WIP Revaluation				
IB	157147	02/12/97	12020	Fixed Machine	12-20.1730.C2	7.00-		AA
				WIP Revaluation				
IB	157147	02/12/97	12020	Physical Inventory & Adjs	12-20.6310			4.00- AA
				WIP Revaluation				
Doc. Total						4.00	4.00-	
Number of Documents, if Detailed . . . .				1				

See Also

- *Creating Journal Entries (P31802)* for more information on detail and summary journal entries
- *Reviewing the Item Ledger/Account Integrity Report (P41543)*

Processing Options for Frozen Update

UPDATE INFORMATION:

1. Enter a '1' to update costs. \_\_\_\_\_  
Blanks assume 'Proof Mode' and no updating will occur.
2. Enter the cost method to update in \_\_\_\_\_

the Cost Components and Item Cost Ledger files (ie., 01, 02, 03).  
If left blank, cost method 07 (standard) will be defaulted.

3. Enter a '1' to update ONLY the Items selected and not explode the BOM to update all components. \_\_\_\_\_
4. Enter a '1' to update the Work Center Rates in the Work Center Rates File. (Default of blanks will not update the Rates.) \_\_\_\_\_
5. Enter the Branch to be processed. ("\*" equals all.) \_\_\_\_\_

### PROCESS MANUFACTURING:

6. Enter a '1' to update costs of Co/By-Products. If left blank, it is assumed that Co/By-Products are not used, and frozen cost update will not be performed for Co/By-Products. \_\_\_\_\_

### ACCOUNT LEDGER INFORMATION:

7. Enter one of the following: \_\_\_\_\_  
A '1' to write Detailed G/L transactions (by Item).  
A '2' to write Summarized G/L transactions (by Account).  
If left blank, no G/L transactions will be written.
8. Enter the General Ledger Date. \_\_\_\_\_  
Blanks default to the current date.

### REPORT OPTIONS:

9. Enter one of the following: \_\_\_\_\_  
A '1' to print all items.  
A '2' to print changed items only.  
If left blank all items will print.

### WIP RE-VALUATION:

10. Enter a '1' to adjust WIP according to new costs \_\_\_\_\_
11. Enter the document type. \_\_\_\_\_  
If left blank 'IB' will be used
12. Enter one of the following: \_\_\_\_\_  
A '1' to write Detailed G/L transactions (by document)  
A '2' to write Summarized G/L transactions (by Account).  
If left blank, no G/L transactions will be written.
13. Enter a '1' to default production document number into the Sub-Ledger Field. \_\_\_\_\_

## What You Should Know About Processing Options

**Work Center Rates (4)** The program updates work center rates only if you run it in final mode.

**WIP Revaluation (10)** This processing option allows you to revalue WIP inventory. The program selects all active work orders and updates their items' costs. If you do not revalue WIP, there might be misleading variances for these work orders. The variances would be caused by the difference between the frozen standard costs before and after the frozen update, and not by an over- or under-statement of inventory values.



### Exercises

See the exercises for this chapter.



# Review Costing Information

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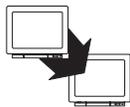
## Reviewing Costing Information

After you run the Frozen Update program to revalue your inventory, you should review the updated costing information. These costs stay in effect until you run the update again.

Complete the following tasks:

- Review frozen cost components
- Review the item ledger
- Review the Single Level Costed Bill of Material report
- Review the Multi-Level Costed Bill of Material report
- Review the Cost Components report
- Review the Cost Integrity report

## Reviewing Frozen Cost Components



From Manufacturing Systems (G3), choose Product Costing

From Daily Product Costing (G3014), choose Enter/Change Cost Components

After you run the Frozen Update program to revalue your inventory, review the frozen costs.

### **▶ To review frozen cost components**

---

On Enter/Change Cost Components

[30026] - Enter/Change Cost Components

Functions Tools Help

Item Number: 333 EA Branch/Plant: M30  
 OAK SHELF UNIT ... Item Cost Total ...  
 Cost Method: 07 Standard Simulated: 260.5662  
 Stocking Type: M Manufactured Frozen: 260.5662  
 Cost Ledger: 260.5662

Data Optional Add-On Computations

Cst Typ	... Simulated Cost ...		.Factor. .		.Rate. .	
	Net Added	Total	Code	or Amt	Code	or Amt
A1 Material		160.8400				
A2 Scrap	6.3843	6.3843				
B1 Direct Labor	3.7275	6.6677				
B2 Setup Labor	.4463	7.2005				
B3 Machine Run		12.5686				
B4 Labor Efficiency	.8663	1.6012				
C1 Machine Variable		14.1500				
C2 Machine Fixed 0		12.5728				
C3 Labor Variable	3.0241	9.3251				
C4 Labor Fixed Over	2.5200	7.7964				
D1 Outside Operation	4.4700	4.4700				
X2 Electricity	.8526	.8526	HP1	1.4700	E	.5800

F4=Detail F12=Rtn to Process F13=Rates F15=Frz/Sim F21=Factors F24=More

1. Review the following field:
  - Item Cost Total Frozen
2. Access the detail area.

[30026] - Enter/Change Cost Components

Functions Tools Help

Item Number: 333 EA Branch/Plant: M30  
 OAK SHELF UNIT ... Item Cost Total ...  
 Cost Method: 07 Standard Simulated: 260.5662  
 Stocking Type: M Manufactured Frozen: 260.5662  
 Cost Ledger: 260.5662

Data Optional Add-On Computations

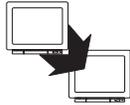
Cst Typ	... Simulated Cost ...		.Factor. .		.Rate. .	
	Net Added	Total	Code	or Amt	Code	or Amt
A1 Material		160.8400				
Frozen		160.8400				
A2 Scrap	6.3843	6.3843				
Frozen	6.3843	6.3843				
B1 Direct Labor	3.7275	6.6677				
Frozen	3.7275	6.6677				
B2 Setup Labor	.4463	7.2005				
Frozen	.4463	7.2005				
B3 Machine Run		12.5686				
Frozen		12.5686				
B4 Labor Efficiency	.8663	1.6012				
Frozen	.8663	1.6012				

F4=Detail F12=Rtn to Process F13=Rates F15=Frz/Sim F21=Factors F24=More

3. Toggle to review frozen or simulated costs.

<b>Field</b>	<b>Explanation</b>
Frozen	The accumulated standard cost rolled up from lower levels.

## Reviewing the Item Ledger



From Manufacturing Systems (G3), choose Product Costing

From Daily Product Costing (G3014), choose Item Ledger

Use Item Ledger to view Item Balance (IB) transactions for an item. The Frozen Update program transfers IB transactions to the item ledger if all of the following are true:

- The frozen cost changes in the Cost Ledger table (F4105) for a given cost method
- That cost method is used as the sales/inventory cost method
- A quantity on hand exists

You can view ledger information in five formats, depending on the processing options you choose:

- Real-time history (standard format)
- Running quantity balance (to review transactions with running quantity balances as of a specified general ledger date)
- Running amount balance (to review transactions with running amount balances as of a specified general ledger date)
- Location item ledger format (for warehouse management)
- Lot status, grade, potency item ledger format (for bulk inventory)

► To review the item ledger

On Item Ledger

Item Ledger

Item Number: 833  
 Branch/Plant: \*  
 Location: \*  
 Lot/SN: \*

Quantity on Hand: 5931 EA  
 Value: 1,545,418.13

0	Document	Ty	Date	Branch/Plant	Quantity	UM	Unit Cost	Ext. Cost
	30835	IB	03/29/95	M30		EA	70.7866	419,835.32

Opt 5=Details F5=Item Search F10=Ledger/Running Balance F24=More Keys

1. Enter IB in the following field:
  - Document Type
2. To review running quantity balances, access Running Balance.

Running Balance

Item Number: 833  
 Branch/Plant: \*  
 Location: \*  
 Lot/SN: \*

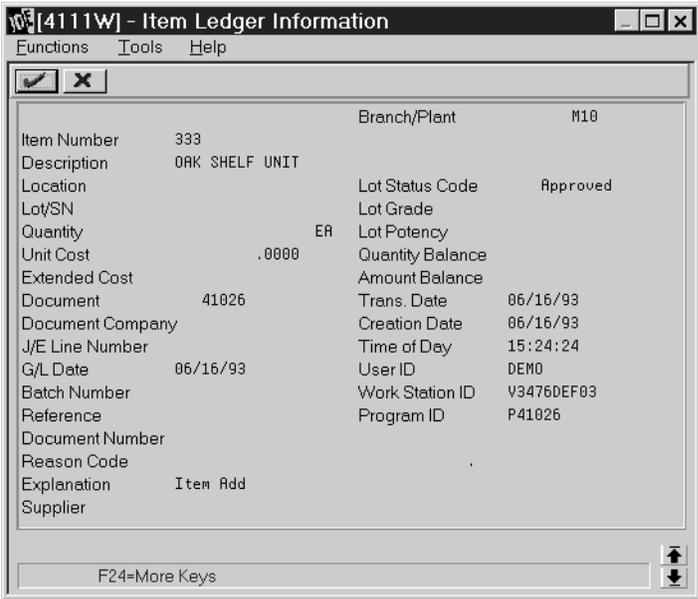
Dt From/G/L: 07/21/97  
 Dt Thru/G/L: \*

0	Document	Ty	Date	Branch/Plant	Unit Cost	Quantity	Quantity Balance
	BF		07/21/97	*			

Opt 5=Details F5=Item Search F10=Ledger/Running Balance F24=More Keys

Use this format to tie inventory balances to the general ledger or to view balance information as of a period or fiscal year end. The program calculates the balance and displays item ledger records by general ledger date in ascending order.

- 3. On Running Balance, review the following fields:
  - Date From G/L and Date Through G/L
  - Quantity Balance
- 4. Access the Details form.



For manufacturing transactions (document types IM and IC), the G/L date and batch number do not appear until you process journal entries for manufacturing accounting. These transactions do not appear in the running balance until you run Journal Entries for Work in Process or Completions.

Field	Explanation
Document Type	<p>A user defined code (system 00/type DT) that identifies the origin and purpose of the transaction.</p> <p>J.D. Edwards reserves several prefixes for document types, such as vouchers, invoices, receipts, and timesheets.</p> <p>The reserved document type prefixes for codes are:</p> <ul style="list-style-type: none"> <li>P Accounts payable documents</li> <li>R Accounts receivable documents</li> <li>T Payroll documents</li> <li>I Inventory documents</li> <li>O Order processing documents</li> <li>J General ledger/joint interest billing documents</li> </ul> <p>The system creates offsetting entries as appropriate for these document types when you post batches.</p>
Dt From/Trans	The beginning date in the date range. This is the date from which you want the system to display information.
Dt Thru/Trans	The ending date in the date range. This is the date through which you want the system to display information. If you leave this field blank, the system uses the current period.
Quantity Balance	The total quantity requested.

### Processing Options for Item Ledger Inquiry

DISPLAY OPTIONS:

1. Enter the format to be displayed: \_\_\_\_\_
  - 1 = Running Quantity Balance format.
  - 2 = Running Dollar Balance format.
  - 3 = Cost Item Ledger format.
  - 4 = Location Item Ledger format.
  - 5 = Lot Status/Grade/Potency Item Ledger format.

If left blank, the Cost Item Ledger format will be displayed.

DEFAULT VALUES:

2. Enter the default document type upon entering the video. If left blank, a '\*' will default for all document types. \_\_\_\_\_
3. Enter a '1' to display Item Ledger entries in ascending date and time order. If left blank, the entries will be displayed in descending date and time order. (This option does NOT apply to Running Balance formats.) \_\_\_\_\_

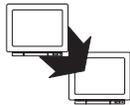
4. Enter a '1' to search by Original Document Type. If left blank, the search will be done by G/L Document Type.

DREAM WRITER VERSIONS:

Enter a DREAM Writer Version for the following programs. (ZJDE0001) is the default.

5. Load & Delivery Ledger Inq P49511

## Reviewing the Single Level Costed Bill of Material Report



From Daily Product Costing (G3014), choose Periodic Product Costing

From Periodic Product Costing (G3023), choose Costed Bill

Use the Costed Bill program to create a report that lists the total cost of parent items detailed by component costs. Use this information to develop more accurate financial plans by monitoring product costs.

You can customize this report to help you in your analysis. For example, you can:

- Process the report using any valid cost method
- Process the report for simulated or frozen costs
- Specify a date for the program to use as a criterion when accessing information
- Print all product costs and user defined categories on the report
- Print the report for one branch, selected branches, or all branches

This report presents the component costs in five user defined cost buckets. In addition, the program totals the cost buckets for each item. Each cost bucket can contain several cost components, depending on how you set up your user defined codes.

30440	J.D. Edwards & Company		Page	-	1
	Costed Bill - Current Cost		Date	-	1/31/98
Cost Method . . . . . 07 Standard					
Requested Quantity . . . . . 1					
. . . . . Simulated Costs . . . . .					
Item Number/Description	Branch	Quantity	UM Purchase	Labor	Machine Overhead Extras Total
-----					
212	M30	1	EA	4.6500	1.0575 1.8567 7.5642
OAK SHELF SIDES					
111	M30	1	EA	13.0000	13.0000
1x10x6' OAK S4S					
Parent Item Number . . . . .			13.0000	4.6500	1.0575 1.8567 20.5642
Batch Quantity . . . . .			EA		
Accounting Cost Qty. . . . .			100	EA	

See Also

- *Setting Up Cost Bucket Codes for Costed Bills of Material (P00051, 30/CB)*

Processing Options for Costed Bill of Material Report

BILL EFFECTIVITY:

1. Enter the "As of" date for the Bill of Material. If left blank the current date will be used. \_\_\_\_\_

COSTING OPTIONS:

2. Enter the Cost Method to be used (ie., 01, 02, 03). Blanks will default to 07 cost method (standard). \_\_\_\_\_
3. Enter the Costs to be printed.  
1 = Simulated  
2 = Frozen \_\_\_\_\_
4. Enter the number of units to Cost. (i.e. 10,000) Bottom \_\_\_\_\_

## Reviewing the Multi-Level Costed Bill of Material Report



From Daily Product Costing (G3014), choose Periodic Product Costing

From Periodic Product Costing (G3023), choose Multi-Level Costed Bill

Use the Multi-Level Costed Bill program to create a report that lists the total cost of parent items detailed by component costs. Use this information to develop more accurate financial plans by monitoring product costs.

You can customize this report to help you in your analysis. For example, you can:

- Specify the number of units that the program costs when you run the report
- Process the report using any valid cost method
- Process the report for simulated or frozen costs
- Specify a date for the program to use as a criterion when accessing information
- Print all product costs and user defined categories on the report
- Print the report for one branch, selected branches, or all branches

This report presents the component costs in five user defined cost buckets. In addition, the program totals the cost buckets for each item. Each cost bucket can contain several cost components, depending on how you set up your user defined codes.

# Product Costing and Manufacturing Accounting

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J.D. Edwards & Company  
Multi-Level Costed Bill Report

Page - 1  
Date - 2/21/98

Cost Method . . . . . 07 Standard

Requested Quantity . . . . . 1

Level	Item Number/Branch	Description	S I . . . . . Frozen Costs . . . . .					Total
			B T	Purchase	Labor	Machine	Overhead	
0	2214	CRT Keyboard Fea F I						
	M30	Unit Cost						
1	2215	CRT 3180 Style K P I		42.0000				42.0000
	M30 Qty P	1 EA Unit Cost		42.0000				42.0000
1	2216	CRT AT Style Key P I		42.0000				42.0000
	M30 Qty P	1 EA Unit Cost		42.0000				42.0000
	Batch Quantity . . . . .	EA						
	Accounting Cost Qty. . . . .	1 EA						
0	5120	Oak Desk With Ch M I		677.3400	368.1829	24.7071	595.1073	1665.3373
	M30	Unit Cost			23.0380		25.3419	309.4224
1	4277	FRAMING KIT, 30x P I		47.3900				47.3900
	M30 Qty P	1 EA Unit Cost		47.3900				47.3900
1	4133	SIDE ASSY, 30x30 M I		140.0000	206.8332	1.5340	364.3240	712.6912
	M30 Qty P	4 EA Unit Cost			8.0313		8.8344	16.8657
.2	3390	LEG OAK, 1.5x1.5 M I		22.2800	41.5520	.3250	79.7746	143.9316
	M30 Qty P	2 EA Unit Cost			20.7760	.1625	39.8873	60.8258
.3	2611	OAK BOARD, 2x2x1 P I		10.2300				10.2300
	M30 Qty P	1 EA Unit Cost		10.2300				10.2300
.3	2417	LEG CAP, 1.5x1.5 P I		.9100				.9100
	M30 Qty P	1 EA Unit Cost		.9100				.9100
.2	3386	SIDE PANEL, OAK, M I		12.7200	2.1250	.0585	2.4720	17.3755

## See Also

- *Setting Up Cost Bucket Codes for Costed Bills of Material (P00051, 30/CB)*

## Processing Options for Multi-Level Costed Bill Report

### BILL EFFECTIVITY:

1. Enter the "As of" date for the Bill of Material. If left blank the current date will be used. \_\_\_\_\_

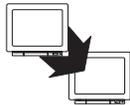
### COSTING OPTIONS:

2. Enter the Cost Method to be used (ie., 01, 02, 03). Blanks will default to cost method 07 (standard). \_\_\_\_\_
3. Enter the Costs to be printed.  
1 = Simulated  
2 = Frozen \_\_\_\_\_
4. Enter the number of units to Cost. (i.e. 10,000) More \_\_\_\_\_

### PRINT OPTIONS:

5. Enter a '1' to print an indented Costed Bill Report. \_\_\_\_\_
6. Enter a '1' to print a "Unit Cost" line of detail. If left blank, only one line of detail will be printed for each item. \_\_\_\_\_

## Reviewing the Cost Components Report



From Daily Product Costing (G3014), choose Periodic Product Costing

From Periodic Product Costing (G3023), choose Cost Components

Use the Cost Components program to create a report that displays the component costs and total cost for each item. This information comes from the Enter/Change Cost Components form.

You can customize this report to meet your specific needs. For example, you can:

- Process the report using any valid cost method.
- Review the cost type and description by item number.
- Identify items.
- Define the exact information to appear on the report from data selection options. For example, you can select specific items and choose whether to include factors or rates for add-on and extra costs.
- Print the report for a single item, several items, or all items.

You can include any of the cost components you define for an item in the cost bucket that you specify.

# Product Costing and Manufacturing Accounting

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J.D. Edwards & Company  
Cost Components

Page - 2  
Date - 6/19/98

Item Number	Item Description	Cst Type	Cost Description	Net	Simulated Cost Added	Total	Optional Add-On Code	Factor	Component Code	Rate
Cost Method . . . 04 Current		Branch . . . . .		M30						
1007	MAHOGANY, 8x10x.50in	A1	Material	4.2200	4.2200	4.2200				
			2nd Item Number . . . . .	4.2200	4.2200	4.2200				
1008	PLYWOOD, 30x60x.50, ACA	A1	Material	3.9300	3.9300	3.9300				
			2nd Item Number . . . . .	3.9300	3.9300	3.9300				
111	1x10x6' OAK S4S	A1	Material	13.0000	13.0000	13.0000				
			2nd Item Number . . . . .	13.0000	13.0000	13.0000				
1122	CRT AS/400 Compatible	A1	Material			362.5410				
		B1	Direct Labor			.0197				
		B2	Setup Labor			.1949				
		B3	Machine Run			.0112				
		B4	Labor Efficiency			.0035				
		C1	Machine Variable Overhea			.0140				
		C2	Machine Fixed Overhead			.0117				
		C3	Labor Variable Overhead			.1588				
		C4	Labor Fixed Overhead			.1490				
			2nd Item Number . . . . .			363.1038				
1127	OAK BOARD, 12x24x.75	A1	Material	5.2800	5.2800	5.2800				
			2nd Item Number . . . . .	5.2800	5.2800	5.2800				
121	OAK SHELF TOP/BOTTOM	A1	Material			13.0000				
		B2	Setup Labor	.0155	.0155	.0155				
		B3	Machine Run	.0007	.0007	.0007				
		C1	Machine Variable Overhea	.0005	.0005	.0005				
		C2	Machine Fixed Overhead	.0006	.0006	.0006				
		C3	Labor Variable Overhead	.0147	.0147	.0147				
		C4	Labor Fixed Overhead	.0155	.0155	.0155				
			2nd Item Number . . . . .	.0475	.0475	13.0475				

## See Also

- *Setting Up Cost Bucket Codes for Costed Bills of Material (P00051, 30/CB)*

## Processing Options for Cost Component Print

Select one of the following for printing  
 Enter a '1' for Simulated Cost  
 Enter a '2' for Frozen Cost

## Reviewing the Cost Integrity Report



From Daily Product Costing (G3014), choose Periodic Product Costing

From Periodic Product Costing (G3023), choose Cost Integrity

Use the Cost Integrity program to create a report that compares the sum of the frozen standard cost components on the Enter/Change Cost Components form and the unit cost in the Cost Ledger table (F4105) and lists variances. For cost level 3 items, the program uses the unit cost for the primary location of the item in the Cost Ledger table.

Branch	Item Number	Description	Stock Type	Cost Mthd	Cost Rollup	Cost Ledger	Variance
M30	1122	CRT AS/400 Compatible	K Manuf	04	363.1038	363.1038	
	1122	CRT AS/400 Compatible	K Manuf	05	363.1038	363.1038	
	1122	CRT AS/400 Compatible	K Manuf	07	363.1038	363.1038	
	2434	CRT Chassis Subassembly	M Manuf	04	294.1038	294.1038	
	2434	CRT Chassis Subassembly	M Manuf	05	294.1038	294.1038	
	2434	CRT Chassis Subassembly	M Manuf	07	294.1038	294.1038	
	2954	AS/400 Mother Board 22314	M Manuf	04	57.7360	57.7360	
	2954	AS/400 Mother Board 22314	M Manuf	05	57.7360	57.7360	
	2954	AS/400 Mother Board 22314	M Manuf	07	57.7360	57.7360	
	2556	Printed Circuit Board 12227	P Purch	04	18.3700	18.3700	
	2556	Printed Circuit Board 12227	P Purch	05	18.3700	18.3700	
	2556	Printed Circuit Board 12227	P Purch	07	18.3700	18.3700	
	1990	Board Sockets 88339	P Purch	04	2.0200	2.0200	
	1990	Board Sockets 88339	P Purch	05	2.0200	2.0200	
	1990	Board Sockets 88339	P Purch	07	2.0200	2.0200	
	1827	Dip Swith, 192177 CRT	P Purch	04	5.3200	5.3200	
	1827	Dip Swith, 192177 CRT	P Purch	05	5.3200	5.3200	
	1827	Dip Swith, 192177 CRT	P Purch	07	5.3200	5.3200	
	1552	Audible Alarm, CRT Mother	P Purch	04	16.3700	16.3700	
	1552	Audible Alarm, CRT Mother	P Purch	05	16.3700	16.3700	
	1552	Audible Alarm, CRT Mother	P Purch	07	16.3700	16.3700	
	2403	Crt Graphics Card	P Purch	04	17.9000	17.9000	
	2403	Crt Graphics Card	P Purch	05	17.9000	17.9000	
	2403	Crt Graphics Card	P Purch	07	17.9000	17.9000	
	2899	AS/400 CRT Chassis Frame	M Manuf	04	201.9799	201.9799	
	2899	AS/400 CRT Chassis Frame	M Manuf	05	201.9799	201.9799	
	2899	AS/400 CRT Chassis Frame	M Manuf	07	201.9799	201.9799	
	2298	AS/400 Chassis Main Frame	M Manuf	04	26.7090	26.7090	
	2298	AS/400 Chassis Main Frame	M Manuf	05	26.7090	26.7090	
	2298	AS/400 Chassis Main Frame	M Manuf	07	26.7090	26.7090	
	1999	Sheet Metal 12.7 X 16.2	P Purch	04	26.5510	26.5510	
	1999	Sheet Metal 12.7 X 16.2	P Purch	05	26.5510	26.5510	
	1999	Sheet Metal 12.7 X 16.2	P Purch	07	26.5510	26.5510	
	1770	AS/400 Chassis Frame Supports	M Manuf	04	87.5924	87.5924	
	1770	AS/400 Chassis Frame Supports	M Manuf	05	87.5924	87.5924	
	1770	AS/400 Chassis Frame Supports	M Manuf	07	87.5924	87.5924	

### Processing Options for Cost Component/Ledger Integrity

REPORT OPTIONS:

1. Enter a '1' to see report detail for all items processed. If left blank, only items with cost discrepancies will be printed.



# Work with Additional Costing Features

---

## Working with Additional Costing Features

You can use several additional features to work with costing information. You can copy costs for an item from one cost method to another. You can reset your simulated costs to their frozen values. You can update the costs in your sales orders with the most current cost values. You can update costs for an item globally, using an amount or a percentage change.

Working with additional costing features consists of:

- Copying costs
- Copying frozen costs to simulated costs
- Updating sales order price/cost
- Updating product costs

## Copying Costs



From Daily Product Costing (G3014), choose Periodic Product Costing

From Periodic Product Costing (G3023), choose Copy Costs

Use Copy Costs to copy the simulated or frozen costs and work center rates from one cost method to the simulated costs for another cost method. You can also copy work center rates between cost methods within the same work center.

Based on the processing option values, the program copies information in the Cost Components table (F30026) and the Work Center Rates table (F30008) to update costs for the cost method and branches you specify. You can only replace simulated costs, not frozen costs, in the *copy to* branch. Run the Frozen Update program to update frozen costs.



To ensure acceptable results, J.D. Edwards recommends that you plan your choices carefully and write them down before you enter them. This program does not generate a report of the updated costs.

### Processing Options for Copy Cost Values

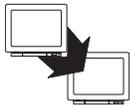
COPY FROM INFORMATION:

- 1. Enter the Branch/Plant to copy: \_\_\_\_\_
- 2. Select the Cost Method to copy: \_\_\_\_\_  
(ie., 01, 02, 03)  
Blanks will not copy costs.
- 3. Select the Costs to copy: \_\_\_\_\_  
1 = Simulated  
2 = Frozen

COPY TO INFORMATION:

- 4. Enter the Branch/Plant to update: \_\_\_\_\_
- 5. Select the Cost Method to update: \_\_\_\_\_  
(ie., 01, 02, 03)  
Blanks will not update costs.

### Copying Frozen Costs to Simulated Costs



From Daily Product Costing (G3014), choose Periodic Product Costing

From Periodic Product Costing (G3023), choose Reset Simulated Costs

For the cost method and branches you choose, use Reset Simulated Costs to reset simulated costs to their frozen values. Resetting costs allows you to begin a simulation again.

### Processing Options for Cost Simulation – Refresh

- 1. Enter the Branch for Cost Reset processing ('\*' for all branches). \_\_\_\_\_
- 2. Enter a '1' to reset rates for Cost Centers also. This will reset ALL Cost Centers that have rates for the selected cost method(s). (A blank will not reset Cost Center rates.) \_\_\_\_\_

## Updating Sales Order Price/Cost



From Sales Order Management (G42), choose End of Day Processing

From End of Day Processing (G4213), choose Update Sales Price/Cost

Use the Update Sales Price/Cost program to update the unit and extended cost in your sales orders with the most current cost values specified in the Cost Ledger table (F4105). If multi-currency processing is active in the system, the program updates the Foreign Unit and Extended Cost fields as well. Use data selections to designate particular information to be processed.



When you run this program, the system updates your live sales order detail information. Therefore, J.D. Edwards recommends extreme caution in setting up data selections.

### See Also

- *Updating Prices for a Customer (P42950)* in the *Sales Order Management Guide*

### Processing Options for Update Sales Order Cost/Price

UPDATE OPTIONS:

1. Enter '1' to update Sales Order with the most current unit cost. If left blank, will not update cost. \_\_\_\_\_
2. Enter '1' to update the currency exchange rate. Please note that only the domestic amounts will be re-calculated, the foreign amounts will remain the same. If left blank the currency exchange rate will remain the same. \_\_\_\_\_
3. Enter '1' to update the inter-company currency exchange rate. Foreign amounts will not be re-calculated. If left blank, will not update the inter-company exchange rate. \_\_\_\_\_

UPDATE PRICE OPTIONS:

4. Enter '1' to recalculate the unit price of the sales order. If left blank, the unit price will remain the same. \_\_\_\_\_
5. Enter '1' to recalculate the Transfer Price for inter-branch sales. The pricing method specified when the order was entered will be used. \_\_\_\_\_
6. Specify the date on which all base price and advanced price adjustment recalculations will be based: \_\_\_\_\_

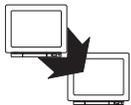
' ' - Transaction/Order Date

- '1' - Requested Ship Date
- '2' - Promised Ship Date
- '3' - Original Promised Date
- '4' - Actual Ship Date
- '5' - System Date
- '6' - Invoice Date
- '\*' - Use System Constants value
- 'P' - Use Based-on Date Preference

NOTE: Processing options 7 thru 9 are supported only by the Advanced Price Adjustment Module (45).

7. Enter the Line Type of the new sales detail line item. This line item will contain the difference between the old sales price and the newly recalculated price. If left blank, will update the new price directly to the item. This must be a non-inventory Line Type. \_\_\_\_\_
8. If you have specified in the last processing option to create a sales detail record to record the price difference, enter the override next status of the detail line. If left blank, will use the original detail line's next status. \_\_\_\_\_
9. Enter '1' to base recalculation on the original order quantity. If left blank, the system will recalculate based on the current quantities of the order. \_\_\_\_\_

## Updating Product Costs



From Inventory Management (G41), choose Inventory Price/Cost Updates

From Inventory Price & Cost Updates (G4123), choose Speed Cost Maintenance

Use Speed Cost Maintenance to update costs for purchased items in the branch/plants, locations, and lots you choose. You can increase or decrease costs by a percentage or dollar amount, or you can specify a new dollar amount. You also specify the cost method for which you want to update costs.

### See Also

- *Setting Up Item Costs (P4105)*
- *Updating Item Costs (P4105)* in the *Inventory Management Guide*

► **To update a product's cost**

On Speed Cost Maintenance

0	Location	Lot	Unit Cost	On Hand	Extended Cost
.	.	.	16.1500	17950	289,892.50
1 .A .1	.1	00000004	16.1500	1-	16.15-
1 .A .1	.1	00000006	16.0000		
1 .A .2	.2	00000005	16.0000	10	160.00
Weighted Average			16.1499	17959	290,036.35

1. To locate current cost information for an item, complete the following fields:
  - Item Number
  - Branch/Plant (if applicable)
  - Cost Method to Update
2. Complete the following fields:
  - Increase/Decrease Amount
  - Amount Type (A % \*)
  - Unit Cost

Field	Explanation
Increase / Decrease Amount:	<p>The dollar amount or percentage by which you want to increase or decrease unit costs for items. You can also indicate a different amount to override current unit costs. The value you specify in the Amount Type field determines whether you enter an amount or a percentage.</p> <p>Note: Enter percentages as whole numbers. For example, enter 10 to increase costs by 10%. To decrease costs, enter a negative sign before the number. For example, enter -10 to decrease costs by 10%.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The system changes all costs for all locations.</p>
Unit Cost	<p>Depending on the cost method, this data can come from various sources, for example, purchasing or the cost rollup.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The cost for one unit of this item, based on the corresponding cost method.</p>
Amount Type (A % *)	<p>A code that indicates whether the number in the Increase/Decrease Amount field is an actual amount or a percentage value. Valid codes are:</p> <ul style="list-style-type: none"> <li>A Amount</li> <li>% Percentage</li> <li>* Cost Override Amount</li> </ul>

### What You Should Know About

**Displayed information** The information that appears on Speed Cost Maintenance depends on the cost level for the item. For example, if an item has a cost level of 2, the system displays costs for all branch/plants. If an item has a cost level of 3, the system displays costs for all locations at the branch/plant you specify.

See *Setting Up Item Cost Levels*.

## Processing Options for Item Cost Revisions

DISPLAY CONTROL:

1. Enter a '1' for Speed Cost Update.  
If left blank, the screen will  
default to Item Cost Revisions.

\_\_\_\_\_

DEFAULT VALUES:

2. Enter the default cost method to  
display when the Speed Cost Update  
format is selected.

\_\_\_\_\_

PROCESS CONTROL:

3. Enter a '1' to prevent the  
standard cost from being changed.

\_\_\_\_\_



# Product Costing in ERPx Environments





# Product Costing in ERPx Environments

## Objectives

- To learn how batches must be set up to calculate costs correctly
- To understand how kit items are costed
- To understand how co-/by-products are costed at an operation level
- To understand how configured items are costed

## About Product Costing in ERPx Environments

If you use the Product Costing system in any special environment (using batches, kits, rate schedules, processes, or configured items), the system calculates product costs differently.

Understanding product costing in ERPx environments requires the following:

- Understanding batch product costing
- Understanding product costing for kit items
- Working with process industry costing
- Understanding configured items





# Understand Batch Product Costing

---

## About Batch Product Costing

For bills of material and routings, you can have a batch quantity for products that are normally built in specific batch sizes, such as chemicals, food, or petroleum.

To obtain a correct rollup when you use a batch quantity, the accounting cost quantity, the bill of material batch size, and the routing batch size must match, as follows:

- Labor and overhead costs are rolled up only if the accounting cost quantity and the routing batch size match.
- Material costs are rolled up only if the accounting cost quantity and the bill of material batch size match.

The following table illustrates these possibilities.

<b>Accounting Cost Quantity</b>	<b>Bill Batch Size</b>	<b>Routing Batch Size</b>	<b>Rollup</b>
10,000	10,000	10,000	Complete
5,000	10,000	10,000	None
10,000	5,000	10,000	Labor and Overhead Only
10,000	10,000	5,000	Material Only

If the Simulate Cost Rollup program does not find a bill of material whose batch quantity matches the accounting cost quantity, it uses the zero batch bill.

## What You Should Know About

### **Displayed quantities**

Quantities displayed on Costed Bill and Enter/Change Cost Components are expressed per each unit of measure, not batch quantity.

### See Also

- *Working with Bills of Material (P3002) in the Product Data Management Discrete Manufacturing Guide*

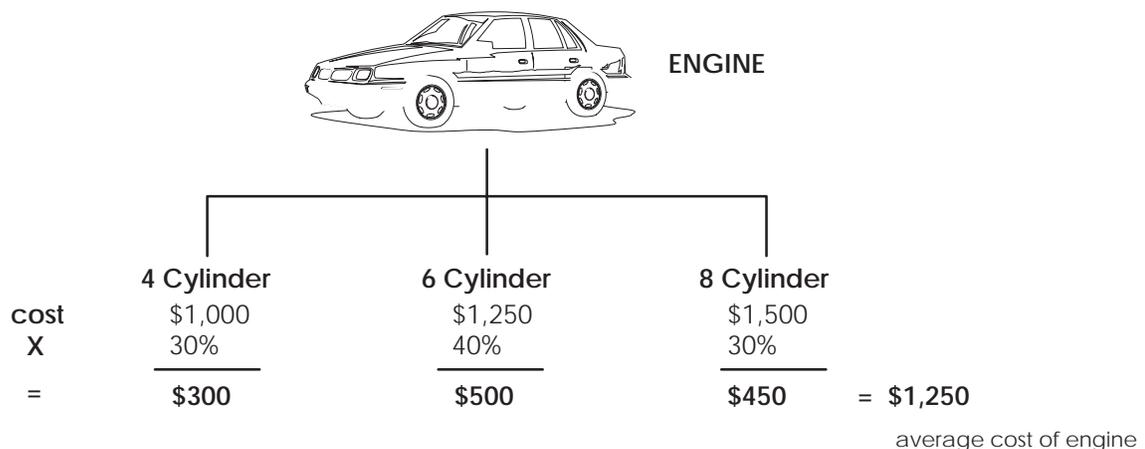
# Understand Product Costing for Kit Items

## About Product Costing for Kit Items

When you use kit items with options, the Simulate Cost Rollup program calculates the average cost of the parent phantom based on the feature costing percentage, as follows:

- The parent phantom must have a stocking type of M (manufactured). The options can be manufactured or purchased.
- The feature costing percentages of the components are user defined on the bill of material.
- The Simulate Cost Rollup program multiplies the feature costing percentage by the cost of the option (from the branch/plant table) to determine the option's share of the parent phantom's average cost.
- The program then adds dollar amounts for each option to determine the average cost for the parent phantom.

The following diagram illustrates an example of product costing for a kit item.



### See Also

- *Entering Planning Bills (P3002)* in the *Forecasting Guide*



# Work with Process Industry Costing

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## Working with Process Industry Costing

Process manufacturing creates a product by mixing, separating, forming, or performing chemical reactions. This is usually a two-step procedure, which consists of a mixing or blending step, followed by a filling or packaging step. This type of manufacturing can also include intermediate steps, such as curing, baking, or fermenting.

Process manufacturing companies create a variety of items, including:

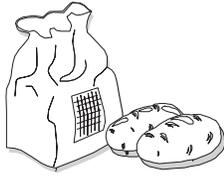
- Liquids
- Fibers
- Powders
- Gases

Pharmaceuticals, foods, and beverages are specific examples.

A process includes ingredients (equivalent to parts on a work order) and a process routing or recipe. The output from a process includes intermediates, by-products, and co-products.

<b>Intermediate</b>	The output from an operation that is used as the input to the next operation. There is no cost associated with an intermediate.
<b>By-Product</b>	The material produced incidental to or as a residual of the process.
<b>Co-Product</b>	An end item produced as a result of the process. There are usually two or more co-products from a process.

The following illustrates an example of a process.



**Process – Potato Chips**

Ingredients	Routing	Co-product and By-product
Potato Slices	10 Starch wash potatoes	
	20 Drain water	BY → Waste Water
	30 Add water, soak	
	40 Drain water	BY → Waste Water
Frying Oil	50 Deep fry	BY → Used Frying Oil
Seasoning	60 Add seasoning	
	70 Package	
Nitrogen	80 Add preservatives	CO → Potato Chips

You define a process item with ingredient relationships. These relationships also determine co-products, by-products, intermediates, and substitutions.

You define the steps that are required to produce a manufactured item with process routings. These routings also determine work centers and labor standards.

Working with process industry costing consists of:

- Reviewing product costing for processes
- Reviewing product costing for intermediates
- Reviewing product costing for ingredients
- Reviewing product costing for co-/by-products
- Reviewing a costed process
- Setting up the co-/by-products planning table
- Reviewing percent bills of material, if applicable

See Also

- *About Process Manufacturing in the Shop Floor Control Process Manufacturing Guide*

## Reviewing Product Costing for Processes



From Product Data Management (G30), choose Daily PDM Process

From Daily PDM Process (G3012), choose Enter/Change Process

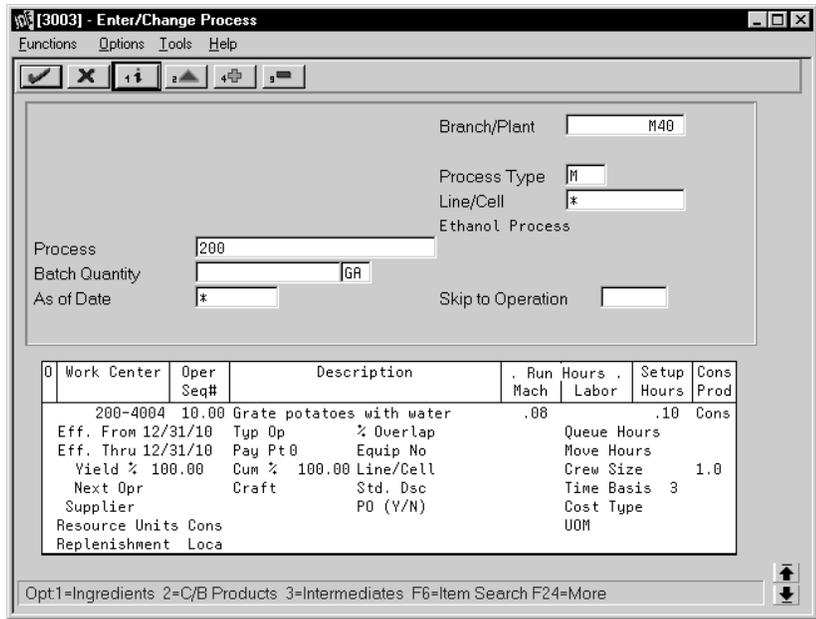
Review process manufacturing to note the differences from discrete manufacturing in the input and output of costing.

▶ **To review product costing for a process**

On Enter/Change Process

0	Work Center	Oper Seq#	Description	Run Mach	Hours Labor	Setup Hours	Cons Prod
	200-4004	10.00	Grate potatoes with water	.08		.10	Cons
	200-4004	20.00	Add liquids from other process		.10		Cons
	200-4011	30.00	Transfer liquid to vats		.20		
	200-4011	40.00	Add yeast killer		.01		Cons
	200-4013	50.00	Transfer to fermentation	3.00			Cons
	200-4012	60.00	Separate solids from liquids		1.00		Prod
	200-4014	70.00	Distillation of liquids	6.00			
	200-4014	80.00	Add contaminants		.30		Cons

1. Review the following fields:
  - Machine Run Hours
  - Labor Run Hours
  - Setup Hours
2. Access the detail area.



3. Review the following fields:

- Time Basis
- Crew Size
- Cost Type
- Type of Operation
- Yield Percent
- Cumulative Percent

Field	Explanation
Yield %	Represents the planned output yield percent for a step. The Planned Yield Update program uses this value to update the Cumulative Percent in the bill of material and the Operation Scrap Percent in the routing. Materials Requirements Planning uses the step scrap percent and the existing component scrap percent to plan component demand.
Cum %	Represents the cumulative planned output yield percent for a step. The system uses this value to adjust the operation step scrap percent for the components at that operation step. This enables the MRP system to use the operation step scrap percent along with the existing component scrap percent to plan component demand.

## Reviewing Product Costing for Intermediates



From Product Data Management (G30), choose Daily PDM Process

From Daily PDM Process (G3012), choose Enter/Change Process

An intermediate is the product of an operation. This product is not the end item of the process, but an input to the next operation. You define intermediates when you need to express them in a unit of measure different from that of the parent item, or when you need to track the quantity of materials at each operation. Only one intermediate is allowed per operation. You cannot define an intermediate for the last operation, because the output of the last operation is the end item of the process.

An example of an intermediate is fermented liquid. The liquid ferments for an extended period of time before being distilled. The resulting liquid is not a finished product. Rather, it proceeds to the next operation.

If you define an intermediate item at a particular operation, you also establish a ratio between the intermediate quantity and the parent quantity. The system uses this ratio for costing the operation. A direct relationship exists among hours, the time basis, parent batch quantity, and intermediate operation quantity.

The system uses intermediate quantities to cost only direct labor hours (cost component B1) and direct machine hours (B3) from the routing. These hours are then used to calculate efficiency (B4) and overhead (C1–C4).

The labor and machine hours at an operation with an intermediate are the hours to produce one unit of measure of the intermediate. The hours are then adjusted in the rollup by the total quantity of intermediates produced at that operation. The following example illustrates the effect of intermediates on costing:

Operation 10  
 Labor Hours = 5  
 Intermediate quantity produced = 50 pounds  
 Hours for costing = 5 x 50 = 250

### See Also

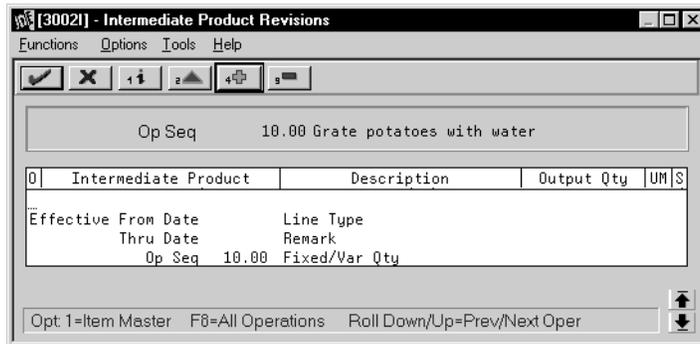
- *Attaching the Intermediate Items (P31111) in the Shop Floor Control Process Manufacturing Guide*



**To review product costing for an intermediate**

On Enter/Change Process

1. Access Intermediate Product Revisions.



2. On Intermediate Product Revisions, review the following fields:

- Output Quantity
- Operation Sequence Number

Field	Explanation
Output Qty	<p>The number of units to which the system applies the transaction.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The quantity of an intermediate produced at the current step in the process.</p>
Op Seq	<p>In routings, this number is used to sequence the fabrication or assembly steps in the manufacture of an item. You can track costs and charge time by operation.</p> <p>In bills of material, this number designates the routing step in the fabrication or assembly process that requires a specified component part. You define the operation sequence after you create the routing for the item. The Shop Floor Control system uses this field in the backflush/preflush by operation process.</p> <p>In engineering change orders, this number is used to sequence the assembly steps for the engineering change.</p> <p>Skip To fields allow you to enter an operation sequence that you want to begin the display of information.</p> <p>You can use decimals to add steps between existing steps. For example, use 12.5 to add a step between steps 12 and 13.</p> <p>..... <i>Form-specific information</i> .....</p> <p>In the process industry, the sequence number that produces the intermediate product.</p>

## Reviewing Product Costing for Ingredients



From Product Data Management (G30), choose Daily PDM Process

From Daily PDM Process (G3012), choose Enter/Change Process

Ingredients are the components of a process. You attach an ingredients list to a process (in the same way that you attach a parts list to a routing) as part of setup.

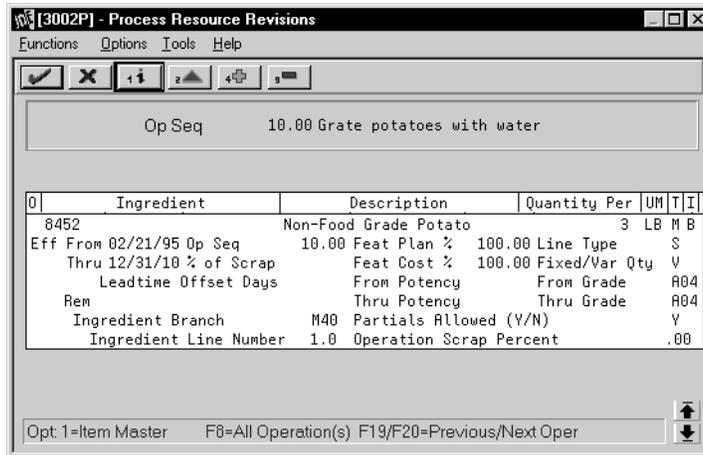
### ▶ To review product costing for ingredients

On Enter/Change Process

1. Access Process Resource Revisions for Ingredients.

Op Seq	Ingredient	Description	Quantity Per	UM	T	I
0	8452	Non-Food Grade Potato	3	LB	M	B
	8455	Peelings	16	OZ	M	B

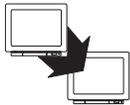
2. On Process Resource Revisions, review the following fields:
  - Ingredient
  - Quantity Per
  - Unit Of Measure
3. Access the detail area.



4. Review the following fields:

- Fixed or Variable
- Feature Cost Percent
- Percent of Scrap
- Operation Scrap Percent

## Reviewing Product Costing for Co-/By-Products



From Product Data Management (G30), choose Daily PDM Process

From Daily PDM Process (G3012), choose Enter/Change Process

Co-products are produced, usually together, as a result of a process routing. They are normally the main products (end items) that are then sold to customers.

A by-product is a material of value produced incidental to or as a residual of the production process. By-products can be recycled, sold as-is, or used for other purposes.

Co-products and by-products are costed using the Feature Cost Percent field.

### Example: Feature Cost Percent and Co-/By-Product Costing

In the following example:

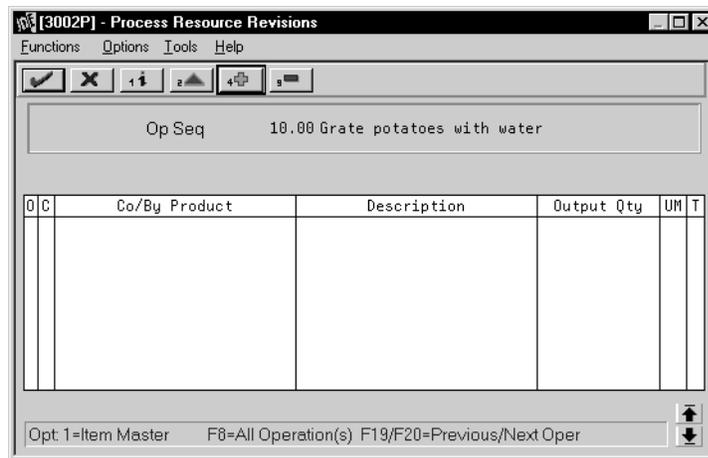
- Cumulative cost = cost this operation + cost of previous operation – cost of the co-/by-product produced in the previous operation.
- The total of all percentages at an operation cannot exceed 100%.
- The total of all percentages at the last operation must equal 100%.

Operation	Co-/By-Product	%	Cost This Operation	Cumulative Cost	Co-/By-Product Cost
10	By 1	10	100.00	100.00	10.00
20	Co 1	30	100.00	$100.00 + (100.00 - 10.00) = 190.00$	57.00
	Co 2	20			38.00
30			100.00	$100.00 + (190.00 - 95.00) = 195.00$	
40	Co 1	60	100.00	$100.00 + 195.00 = 295.00$	177.00
	Co 2	30			88.50
	Co 3	10			29.50

► **To review product costing for co-/by-products**

On Enter/Change Process

1. Access Process Resource Revisions for Co-/By-products.



2. On Process Resource Revisions, review the following fields:
  - Output Quantity
  - Unit Of Measure
  - Feature Cost Percent
  - Resource Percent

Field	Explanation
Output Qty	<p>This value is the normal production quantity that is usually manufactured. An item can have multiple batch quantities, for example, liquids that are manufactured in different size vats.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This value specifies the quantity of each co-/by-product that the process produces. If you use batch bills, this is the quantity that the batch produces.</p>
UM	<p>A user defined code (00/UM) that indicates the quantity in which to express an inventory item, for example, CS (case) or BX (box).</p>
Feat Cost %	<p>A percentage used by the Simulate Cost Rollup program to calculate the cost of a feature or option item as a percentage of the total cost of the parent.</p> <p>Enter the percentage as a whole number: 5% as 5.0</p> <p>..... <i>Form-specific information</i> .....</p> <p>This value is used in Cost Rollup to calculate what percent of the cost, up to and including the operation, that the co-/by-product comes out of, is apportioned to the co-/by-products at that step.</p> <p>The total of all percentages at an operation cannot exceed 100%. The total of all percentages at the last operation must equal 100%.</p>
Resource %	<p>If this option is chosen, this value indicates what percent of the ingredients should be issued separately to co-products and by-products.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This is used to issue ingredients separately to co-/by-products at work order completion, rather than a total issue for each ingredient.</p> <p>For co-/by-products at the final operation, their resource percent must equal 100 to issue all ingredients.</p>

## Reviewing a Costed Process



From Manufacturing Systems (G3), choose Product Costing

From Daily Product Costing (G3014), choose Costed Process

Use Costed Process to review the summarized costs of an item for each operation in the process. This information can help you effectively manage production costs. For example, you can:

- View the work center responsible for an operation.
- Determine if a work center performs multiple operations.
- Display simulated or frozen costs for labor values for cost methods.
- Calculate the totals for all costs by cost categories.
- View the costs of the ingredients.
- View the costs of the co- and by-products.
- View the costs for different quantities and units of measure. This feature allows you to simulate different scenarios and view the costing effect.



The program can accumulate purchase costs for up to 500 components on each bill of material. Components beyond 500 are not included in the costing.

► To review a costed process

On Costed Process

The screenshot shows a window titled '[30208] - Costed Process'. It contains several input fields and a table. The fields include: Branch/Plant (M40), As of (07/09/97), Cost Method (07 Standard), Process (777), Requested Quantity (1 LB), Stocking Type (R Manufactured), Routing Batch Qty (LB), Process Quantity (LB), Extras 1-3, and Extras 4-7. The table below shows a cost breakdown for various work centers and operation sequences.

0	Work Center	Op Seq	Labor	Machine	Overhead	Components	Total
	200-4007	10.00		.0029		.2376	.2405
	200-4007	20.00	.0001				.0001
	200-4007	30.00		.0029			.0029
	200-4007	40.00	.0001				.0001
	200-4008	50.00	.0253	.0003		.1403	.1659
	200-4015	60.00	.0001			.3157	.3158
	200-4016	70.00					
	200-4016	80.00				.3000	.3000
			.0256	.0061		.9936	1.0253

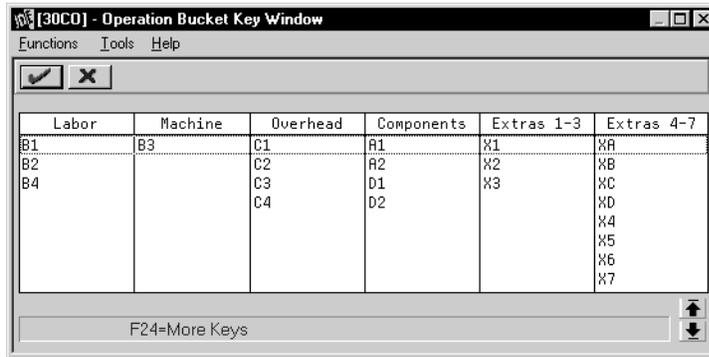
At the bottom of the window, there is a status bar with the text: Opt 1=Ingredients 2=Co/By 5=Detail F8=All Ingrid. F10= All Co/By F24=More

1. Review the following fields:

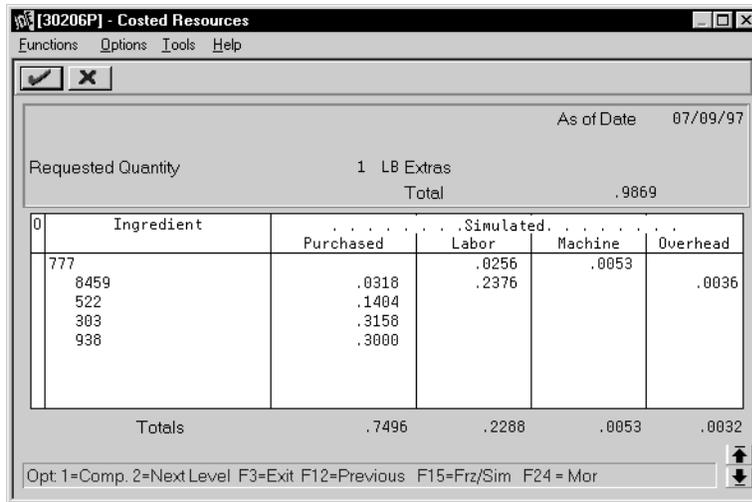
- As of Date
- Cost Method
- Requested Quantity
- Unit Of Measure
- Up to Operation Sequence
- Extras 1-3
- Extras 4-7
- Work Center
- Operation Sequence Number
- Labor
- Machine
- Overhead
- Components
- Total (row)
- Total (column)

Labor costs are real-time. They are calculated each time you access this form.

2. Toggle to review frozen or simulated costs.
3. Access Operation Bucket Key to review the item's operation buckets.



4. On Costed Process, access Costed Resources for Ingredients.



You can view ingredient costs for a single operation or for all ingredients across all operations in the process. These costs are from the Cost Components table and reflect the last simulated rollup. Thus the costs might differ from those on Costed Process if you have changed the process since the last rollup.

5. On Costed Process, access Costed Resources for Co-/By-Products.

As of Date 07/09/97

Requested Quantity 1 LB Extras  
Total 1.3827

Co/By Product	Simulated			
	Purchased	Labor	Machine	Overhead
5215	.1251	.1593	.0027	.0018
5215	.1251	.1593	.0027	.0018
5225	.0639	.0381	.0011	.0004
7771	.6622	.0378	.0014	
Totals	.9763	.3945	.0079	.0040

Opt 1=Cost Components F3=Exit F15=Frozen/Simulated F24=More

You can view co-/by-product costs for a single operation or for all co-/by-products across all operations. If the co-/by-product is made from more than one process, the costs shown are for all processes. These costs are from the Cost Components table and reflect the last simulated rollup. Thus the costs might differ from those on Costed Process if you have changed the process since the last rollup.

- On Costed Process, access Detail to view all costs associated with an operation.

Operation Sequence No 10.00 Starch wash potatoes

Category	Type	Description	Cost
Machine	B3	Machine Run	.0029
Overhead	C1	Machine Variable Overhead	
Overhead	C2	Machine Fixed Overhead	
Components	A1	Material	.2732

F3=Exit F24=More

Labor costs displayed are real-time. The cost components are grouped using cost buckets.

Field	Explanation
As of	<p>This field is used for effectivity checking. Enter a specific date to display documents (orders, bills of material, routings, as applicable) that are effective on or after that date. The current system date is the default, but you can enter any future or past date.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The routing that is effective as of this date is used.</p>
Cost Method	<p>A user defined code (system 40, type CM) that identifies a cost method. Cost methods 01 through 08 are hard-coded.</p>
Requested Quantity	<p>The number of parent items you want to process. The system calculates lower-level values in quantity per the number of parent items requested. For example, if 3 components are needed for a parent item, and the requested quantity is 10, the system plans for 30 components.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This is the number of parent items for which you want to see cost breakdowns. Costs are figured in quantity per the parent item.</p>

Field	Explanation
Op Seq	<p>In routings, this number is used to sequence the fabrication or assembly steps in the manufacture of an item. You can track costs and charge time by operation.</p> <p>In bills of material, this number designates the routing step in the fabrication or assembly process that requires a specified component part. You define the operation sequence after you create the routing for the item. The Shop Floor Control system uses this field in the backflush/preflush by operation process.</p> <p>In engineering change orders, this number is used to sequence the assembly steps for the engineering change.</p> <p>Skip To fields allow you to enter an operation sequence that you want to begin the display of information.</p> <p>You can use decimals to add steps between existing steps. For example, use 12.5 to add a step between steps 12 and 13.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Top of form: A processing option controls whether “Skip to” or “Up to” operation sequence mode is in effect.</p> <p>In “Skip to” mode, the system uses an entered operation sequence number as the starting point when displaying operations, and displays the total from that point forward on the total line.</p> <p>In “Up to” mode, the system uses an entered operation sequence number as the cutoff for displaying operations. The total for all operations up to and including the operation sequence number entered appears on the total line.</p> <p>Bottom of form: The Op Seq field contains a number that indicates the order of each step in the manufacturing operation.</p>
Purchased	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Cost bucket No. 1 as defined for user defined code 30/CO, Operation Buckets. A processing option controls whether the system adds cost buckets 1 and 2 (at the top of the form) into the grand total of all costs for the parent item at the bottom of the form.</p>

Field	Explanation
Extras	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Cost bucket No. 2 as defined for user defined code 30/CO, Operation Buckets. A processing option controls whether the system adds cost buckets 1 and 2 (at the top of the form) into the grand total of all costs for the parent item at the bottom of the form.</p>
Work Center	<p>A number that identifies a branch, plant, work center, or business unit.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This is the business unit assigned to the work center for the operation sequence listed.</p>
Labor	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Cost bucket No. 3 as defined for user defined code 30/CO, Operation Buckets. The total of this column appears at the bottom of the form in the "Totals" row. The heading above the columns indicates which costs are displayed: frozen or simulated. You can toggle between simulated and frozen values.</p> <p>You also can view a detailed breakdown of the cost components added to determine the total for the work center.</p>
Machine	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Cost bucket No. 4 as defined for user defined code 30/CO, Operation Buckets. The total of this column appears at the bottom of the screen in the "Totals" row. The heading above the columns indicates which costs are displayed: frozen or simulated. You can toggle between simulated and frozen values.</p> <p>You also can view a detailed breakdown of the cost components added to arrive at the total for the work center.</p>

<b>Field</b>	<b>Explanation</b>
Overhead	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Cost bucket No. 5 as defined for user defined code 30/CO, Operation Buckets. The total of this column appears at the bottom of the screen in the "Totals" row. The heading above the columns indicates which costs are displayed: frozen or simulated. You can toggle between simulated and frozen values.</p> <p>You can also view a detailed breakdown of the cost components added to arrive at the total for the work center.</p>
Total	<p>Work Amount field for the Manufacturing System.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This column contains system-calculated totals for each row of costs, that is, for each operation sequence.</p> <p>The totals across the bottom of the form are the totals of each cost bucket.</p> <p>The rightmost bottom total is the total of all costs for the routing for an item.</p>

### What You Should Know About

<b>Displayed costs</b>	This program calculates the cost associated with each cost component in the same way as the Simulate Cost Rollup program.
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### See Also

- *Appendix A — Calculations in Cost Rollup (P30820)*
- *Setting Up Operation Bucket Codes for a Costed Routing (P00051)*
- *Setting Up Cost Bucket Codes for Costed Bills of Material (P00051)*

## Processing Options for Costed Process

### OUTSIDE OPERATIONS (SUB-CONTRACTS) INFO:

1. Enter the cost method (ie., 01, 02, 03) to be used for Sub-Contracted Items.  
(Blanks will default to a "01")

### PURCHASED ITEM INFORMATION:

2. Enter the cost method (ie., 01, 02, 03) to be used for Purchased Items.  
(Blanks will default the cost from the Mode, ie., Standard Cost.)

### OPERATION SEQUENCE DISPLAY:

3. Enter a '1' to display the costs 'UP TO' and including the operation sequence entered in the 'Skip to' video field. If left blank, the costs will be displayed beginning with the entered operation's costs.

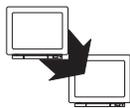
### TOTALING OPTIONS:

4. Enter a '1' to include cost buckets 1 and 2 in the total. If left blank, the total will only include cost buckets 3-6.

### COSTED RESOURCES/CO/BY PRODUCTS OPTION:

5. Enter the number of decimals to display (0-4) in the Costed Resources/Co/By Products window.  
If left blank, 4 decimals will be used.

## Setting Up the Co-/By-Products Planning Table



From Product Data Management (G30), enter 29

From Product Data Management Setup (G3041), choose Product Costing Setup

From Product Costing Setup (G3042), choose Co-/By-Products Planning Table

You use the Co-/By-Products Planning Table to determine:

- What percentage of the demand for co-products is satisfied from process work orders
- What percentage is satisfied from work orders for the co-products themselves

Normally, all demand for co-/by-products is satisfied from process work orders. However, for special circumstances, you can specify, for example, 50% from process work orders and 50% from co-product work orders. To do so, enter less than 100% in the table. The remainder is automatically satisfied by co-product work orders.

You can also have a co-product that is produced by more than one process. It is possible, for example, to have a 75% to 25% relationship between the two processes. Both processes appear on the Co-/By-Products Planning Table form when you locate the co-product.

Even if all demand for co-/by-products is satisfied from process work orders, you must set up the co-/by-products planning table with a feature cost percent equal to 100. This ensures that the rollup calculates the costs of co- and by-products correctly.

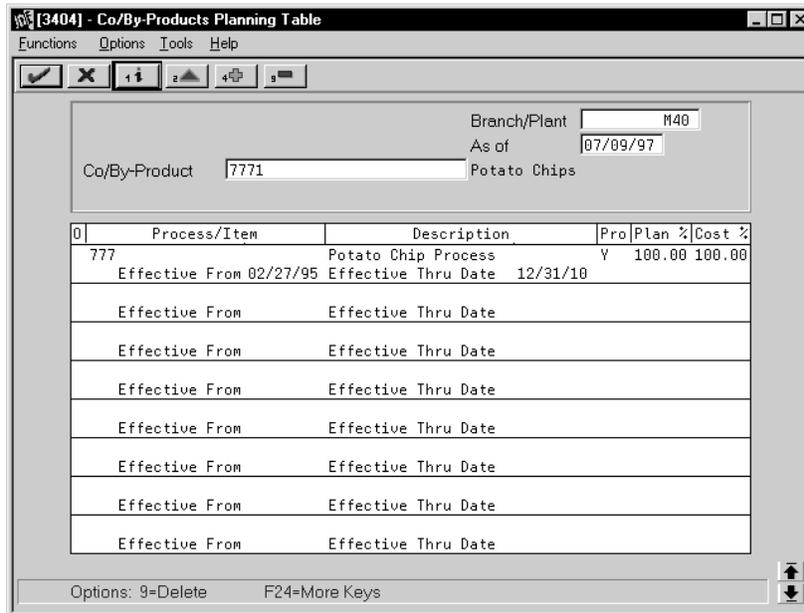
### ► To set up the co-/by-products planning table

On Co-/By-Products Planning Table

Process/Item	Description	Pro	Plan %	Cost %
777	Potato Chip Process	Y	100.00	100.00

1. Complete the following fields:
  - Co-/By-Product Item Number
  - Process/Item
  - Process
  - Feature Planned Percent
  - Feature Cost Percent

2. Access the detail area.



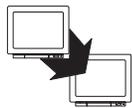
3. Complete the following fields:

- Effective From Date
- Effective Through Date

Field	Explanation
Co/By-Product	A number that the system assigns to an item. It can be in short, long, or 3rd item number format.
Process Item	This field indicates whether this is a process from which the co- or by-product is produced or a regular parent item.
Plan %	<p>The percentage of demand for a specified feature based on projected sales. For example, a company might sell 35% of their computers with a standard keyboard and 65% of them with an extended keyboard, based on customer demand.</p> <p>The Material Planning system uses this percentage to accurately plan for a feature's component items. Enter percents as whole numbers: 5% as 5.0. The default value is 100%.</p>

Field	Explanation
Cost %	<p>A percentage used by the Simulate Cost Rollup program to calculate the cost of a feature or option item as a percentage of the total cost of the parent.</p> <p>Enter the percentage as a whole number: 5% as 5.0</p> <p>..... <i>Form-specific information</i> .....</p> <p>Used to calculate the cost of a co-/by-product when it can be produced from more than one process, or from a combination of a process and a work order. This value determines what percent of the cost of the co-/by-product is allocated to the selected process.</p>

### Reviewing Product Costing for Percent Bills of Material



From Product Data Management (G30), choose Daily PDM Discrete

From Daily PDM Discrete (G3011), choose Enter/Change Bill

You use a percent bill of material to express the ingredients as a percentage of the process quantity.

If you use percent bills of material, the system calculates costs based on the quantities specified in the percent bill.

#### See Also

- *Working with Components (P3002)* in the *Product Data Management Discrete Manufacturing Guide*

► **To review a percent bill of material**

On Enter/Change Bill

The screenshot shows a software window titled "[3002] - Enter/Change Bill". It contains several input fields and a table. The fields include: Parent Item (2424), Branch/Plant (M30), Bill Type (M), Bill Rev. Level, Carbonated Fruit Drink, Batch Quantity (5 GA), Draw No, Item Rev. Level, Skip to Comp Line No, and As of Date (\*). Below these fields is a table with columns: Component Item, Description, Quantity Per, UM, FV, and I. The table contains three rows of data.

Component Item	Description	Quantity Per	UM	FV	I
3535	Powder Drink Mix	2	OZ	%	I
4646	Sugar	5	OZ	%	I
5757	Carbonated Water	93	QT	%	I

At the bottom of the window, there is a status bar with the text: "Opt: 1=Item Master 2=Next Lvl 6=Subs 7=Text F8=Inquiry F12=Prv Lvl F24=More".

Review the following fields:

- Quantity Per
- Fixed or Variable

Field	Explanation
Quantity Per	<p>The number of units to which the system applies the transaction.</p> <p>..... <i>Form-specific information</i> .....</p> <p>A number that indicates how many components you use to manufacture the parent item. A quantity of zero is valid. The default value is 1.</p>

Field	Explanation
F V	<p data-bbox="688 254 1341 443">Indicates if the quantity per assembly for an item on the bill of material varies according to the quantity of the parent item produced or is fixed regardless of the parent quantity. This value also determines if the component quantity is a percent of the parent quantity. Valid values are:</p> <ul data-bbox="721 447 1321 569" style="list-style-type: none"><li data-bbox="721 447 971 478">F Fixed Quantity</li><li data-bbox="721 480 1105 512">V Variable Quantity (Default)</li><li data-bbox="721 514 1321 569">% Quantities are expressed as a percentage and must total 100%</li></ul> <p data-bbox="688 590 1341 684">For fixed quantity components, the Work Order and MRP systems do not extend the component's quantity per assembly value by the order quantity.</p> <p data-bbox="688 705 1341 827">For Process Manufacturing, the system stores percent components. Therefore, the system treats zero batch sizes like variable quantity components, and treats batch sizes greater than zero like fixed quantity components.</p>



# Understand Configured Items

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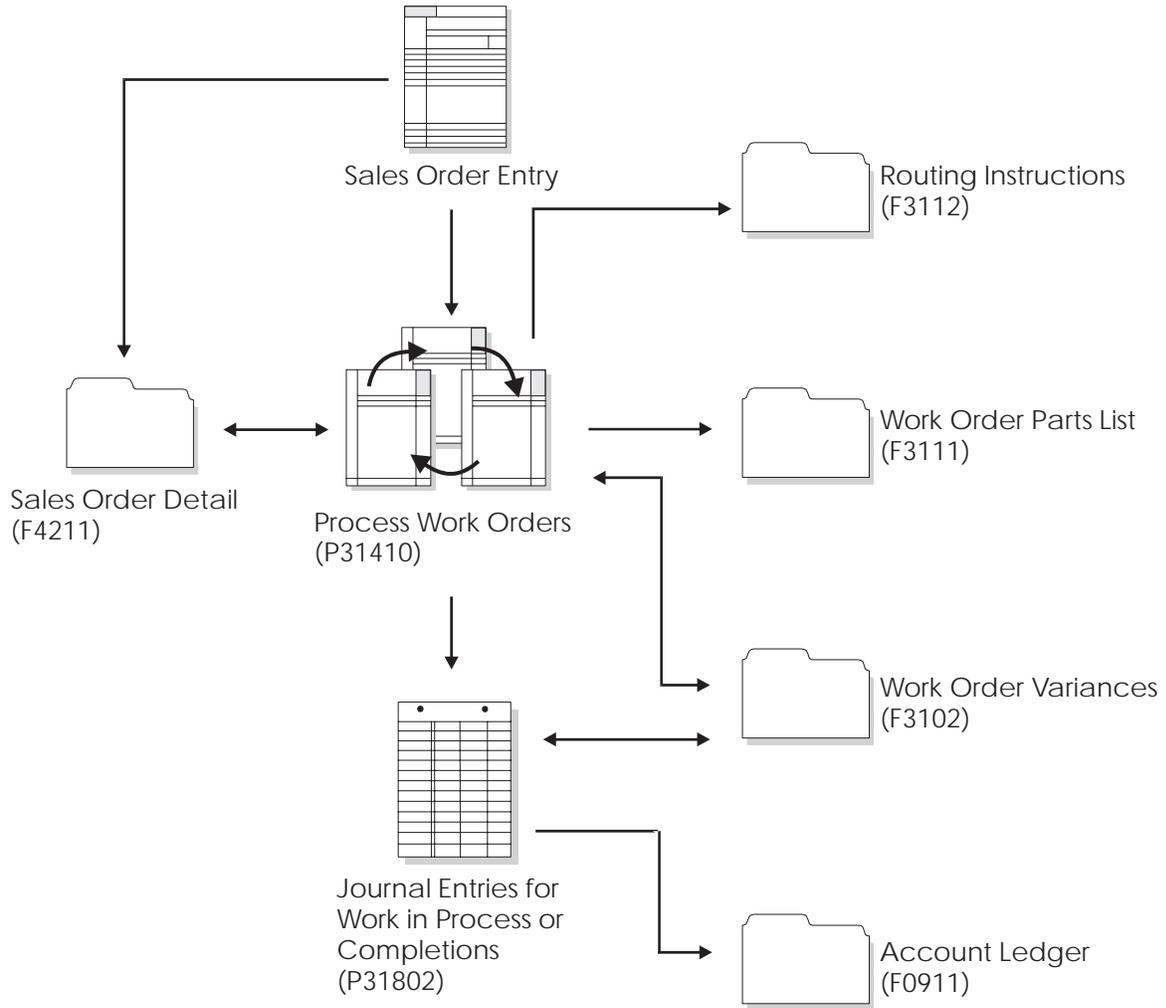
## About Costing for Configured Items

Costing for configured items is different from costing for non-configured items, because configured items do not have a standard bill of material or routing. Because there is no standard configuration, costing cannot be established before you enter the sales order. In other words, there are no standard costs for configured items.

The Process Work Orders program performs a cost rollup when it attaches a parts list and routing to a work order for a configured item. A processing option instructs the program to calculate the costs. When the costs are calculated, they are stored in the Work Order Variances table, not the Cost Components table.

When these costs have been established, the system updates the unit cost and extended cost on the sales order for the top-level configured item only.

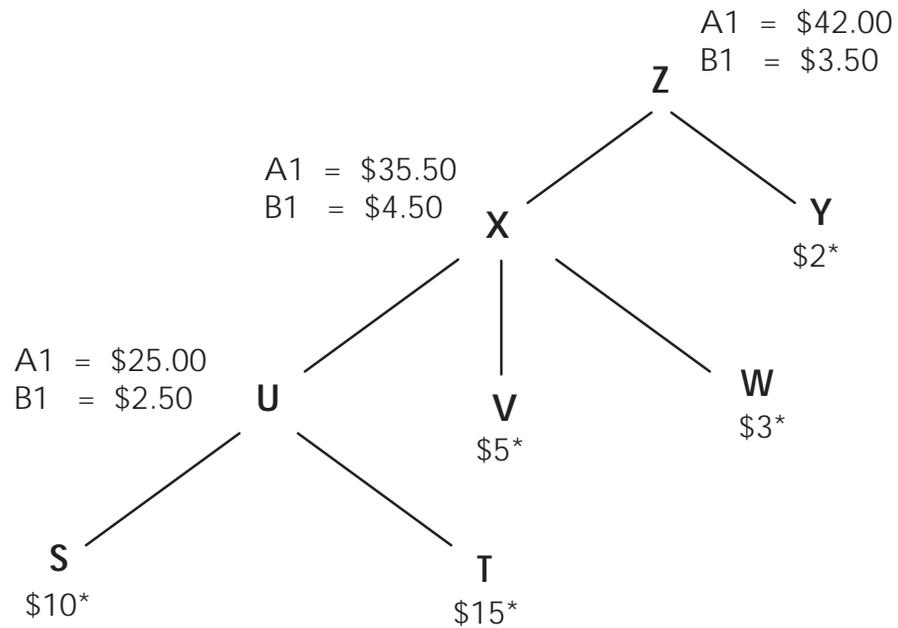
The following graphic illustrates costing for configured items.



### Example: Costing a Configured Item

The following example illustrates how the frozen standard costs are calculated for a configured item.

A basic assumption is that you have done a cost rollup for the non-configured items and that frozen standard costs exist on the Cost Components table for those items.

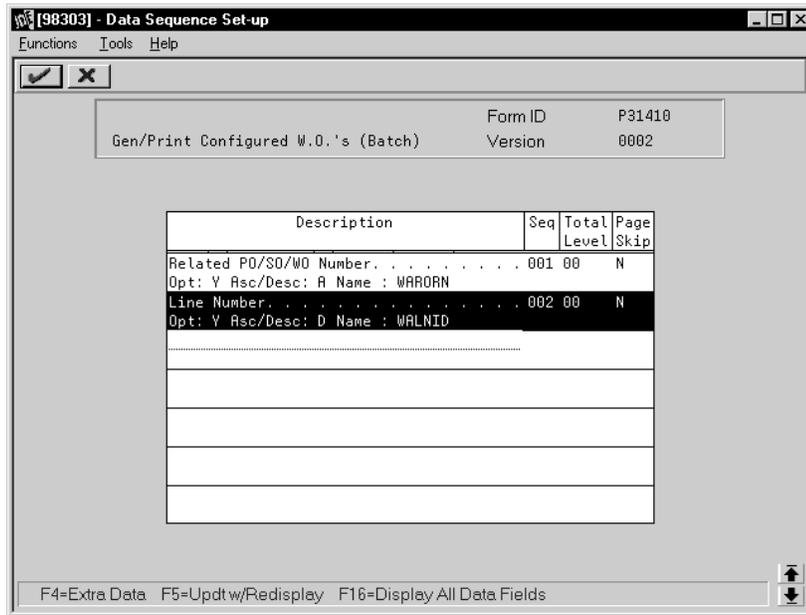


\* component's total cost from sum of all cost components  
 A1 material cost calculated from the total cost of the direct components  
 B1 direct labor cost calculated from that item's routing

## Process Work Orders Program

For the rollup to occur correctly, the data sequence for Process Work Orders must be set as follows.

### Example: Process Work Orders Data Sequence Setup



The sales order number displays first, and then the sales order line number.

On the sales order, the lowest level components have the highest line number. Thus when you specify a descending sequence for the line numbers in the data sequence setup, Process Work Orders runs on the lowest level components first.

To ensure that the costs roll up properly, you must process work orders on the lowest level items first. In the example, you must process the work order for item U before the work order for item X, and the work order for item X before the work order for item Z.

### See Also

- *About Configuration Management* in the *Configuration Management Guide*

# Manufacturing Accounting





# Manufacturing Accounting

## Objectives

- To review the basic concepts of manufacturing accounting
- To review the basic concepts of posting to the general ledger
- To understand how the general ledger and the account code structure relate to manufacturing accounting
- To understand what happens when work order transactions take place
- To learn what calculations are performed in the Manufacturing Accounting system
- To understand how work order variances are calculated and how to interpret variance reports
- To identify the available manufacturing accounting reports

## About Manufacturing Accounting

The Manufacturing Accounting system works with the General Accounting system to help you manage the general ledger functions for your organization.

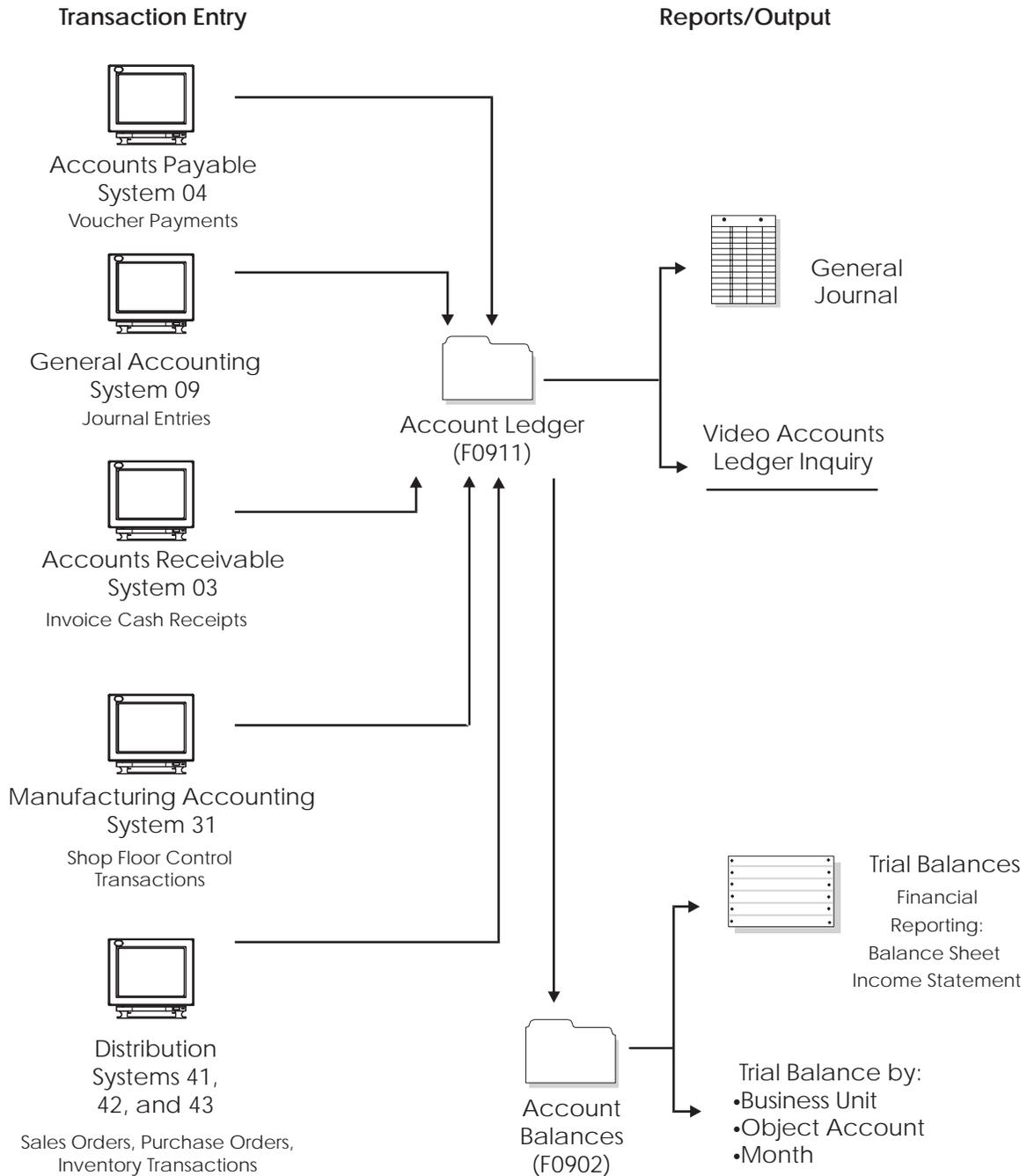
Working with the Manufacturing Accounting system consists of:

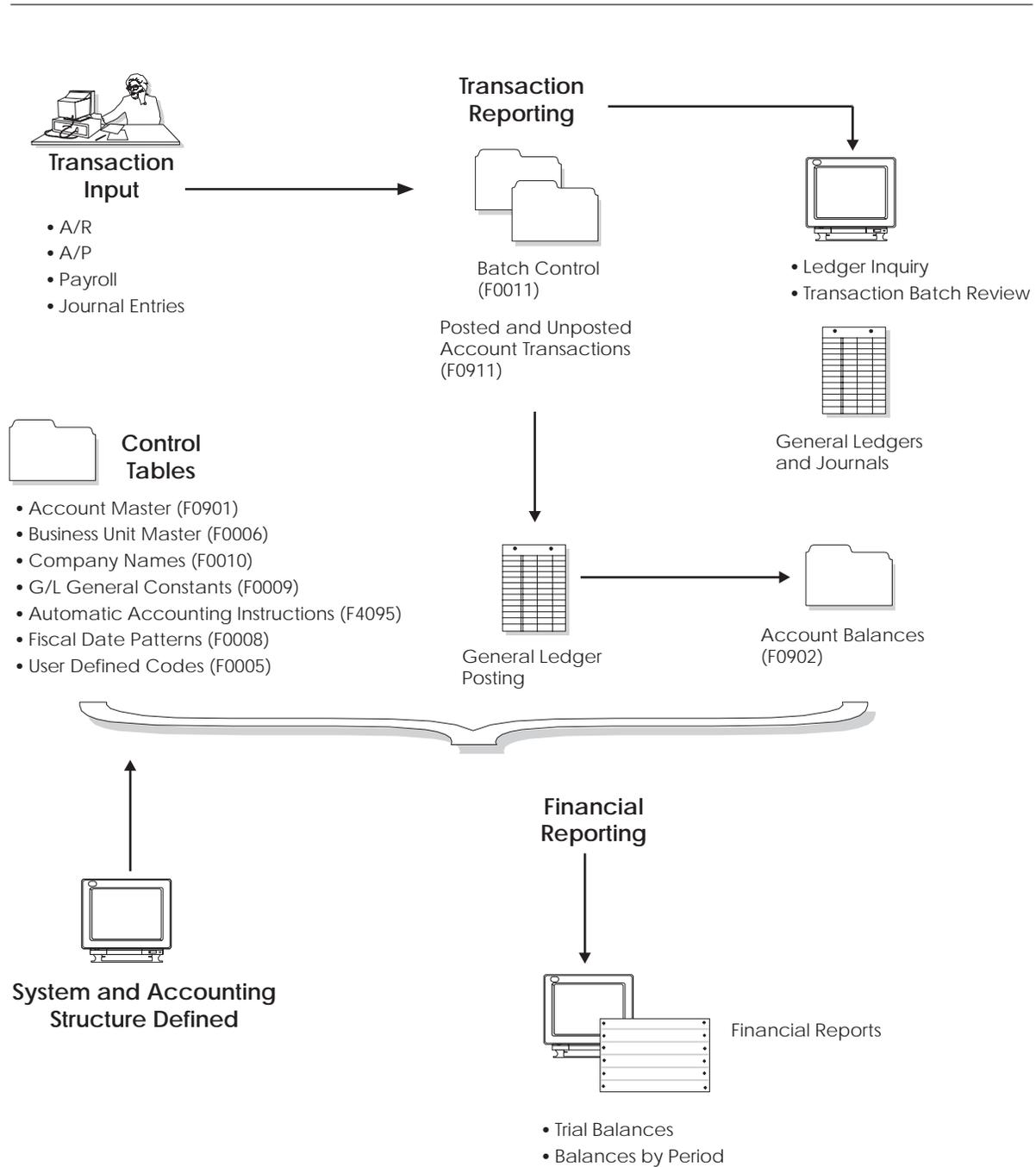
- Setting up manufacturing accounting
- Understanding work orders in accounting
- Working with work orders
- Creating journal entries
- Reviewing general ledger batches
- Posting to the general ledger



# Product Costing and Manufacturing Accounting

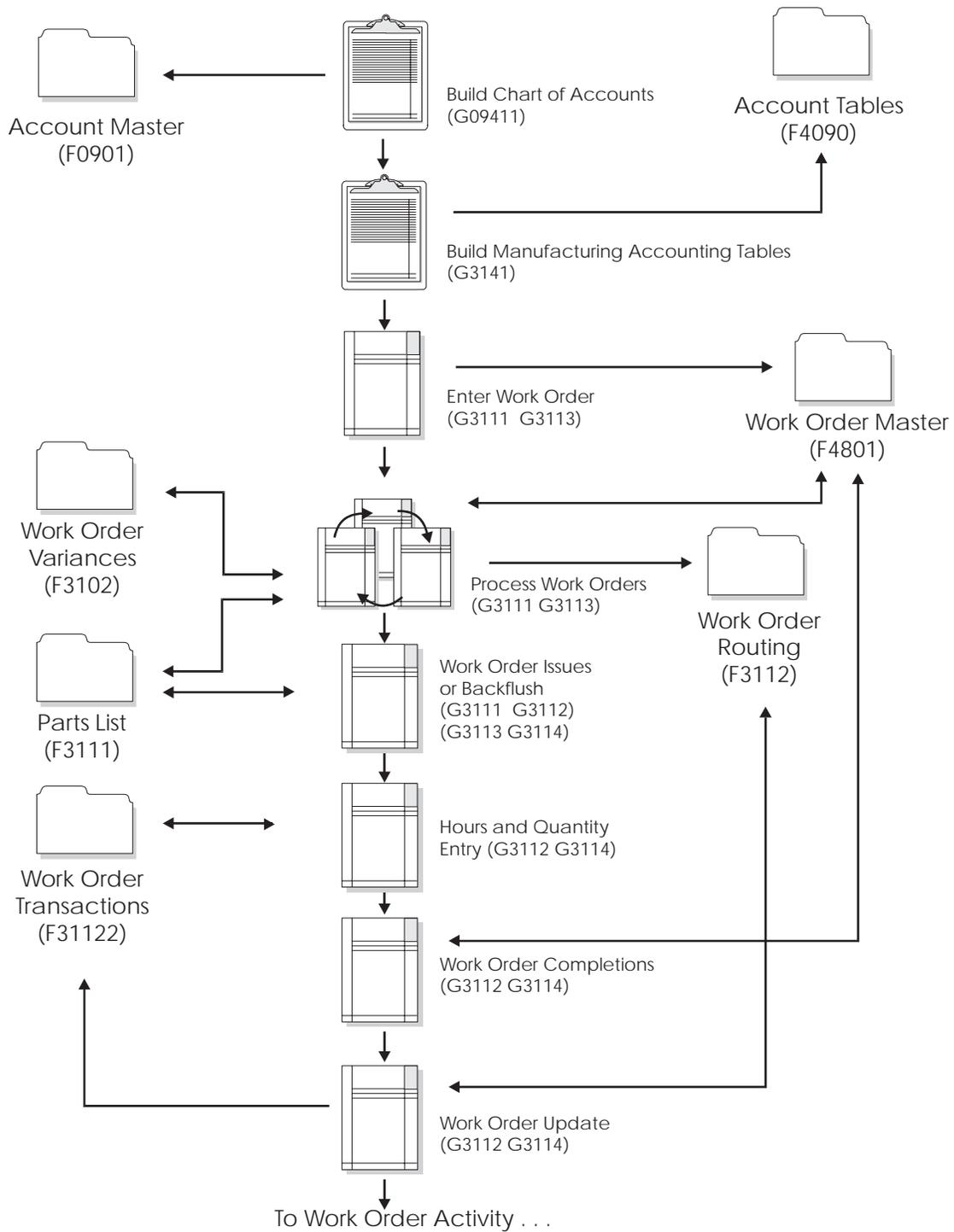
The following two graphics illustrate the interaction between the Manufacturing Accounting system and the General Accounting system.



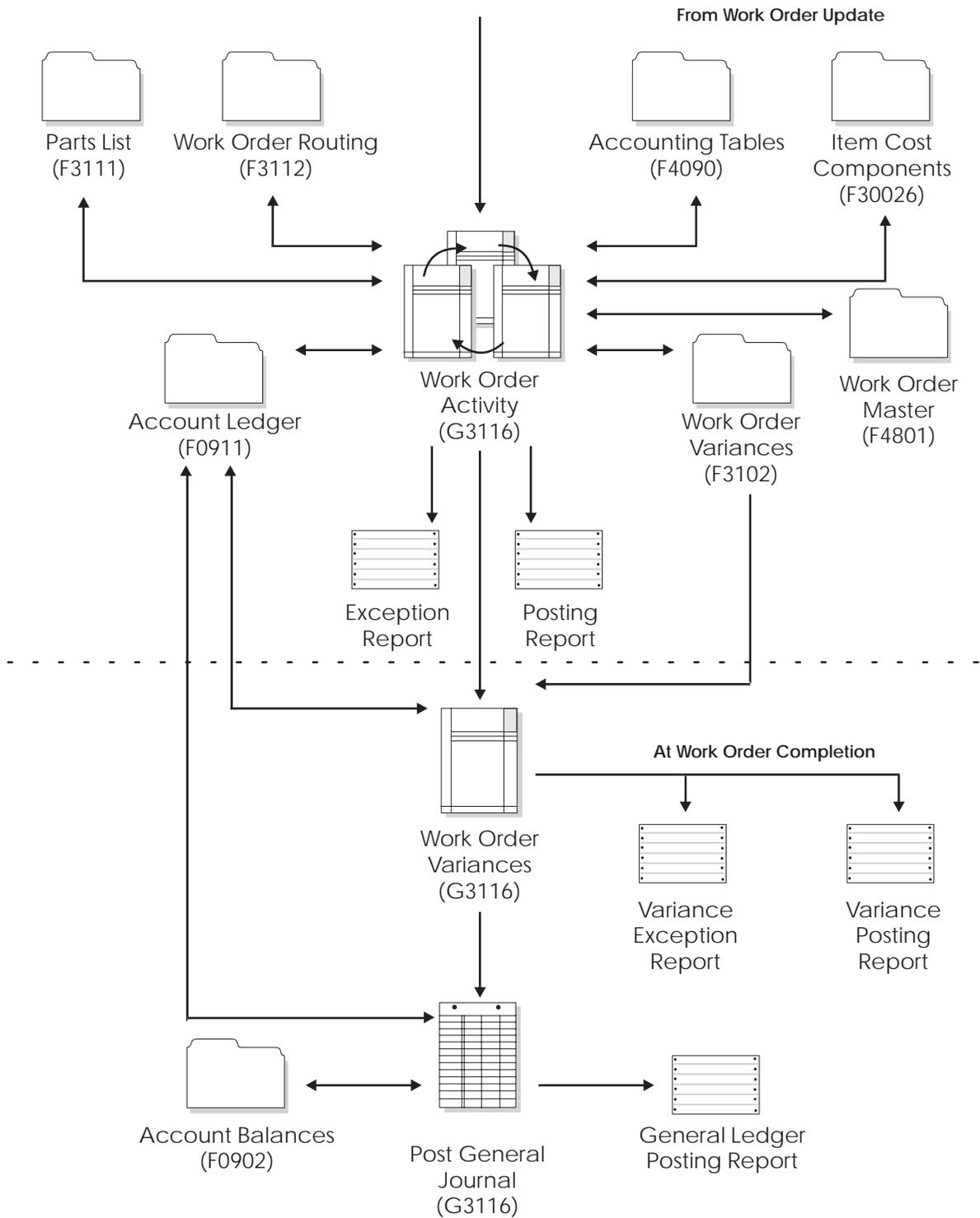


# Product Costing and Manufacturing Accounting

The following graphic (in two parts) illustrates the flow of the Manufacturing Accounting system.



... Work Order Activity



## Accounting Fundamentals

Before you set up your company's Manufacturing Accounting system, you must have a basic understanding of the general ledger and accounting concepts. After you understand the underlying framework, you can use the Manufacturing Accounting system to:

- Create and generate work orders
- Run work order variances

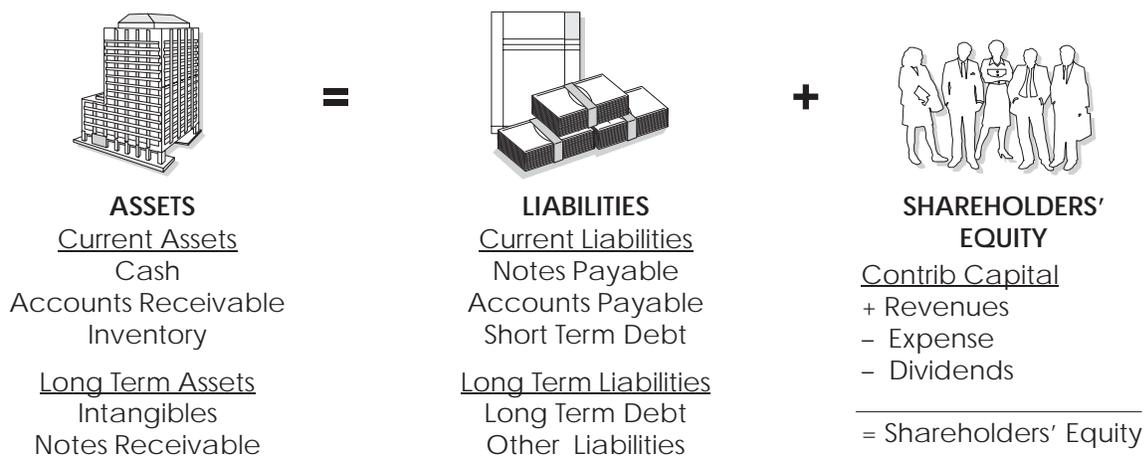
### The Accounting Equation

To determine a company's net worth, you must review the results at the end of the previous fiscal period and then take into account changes that have occurred during the year.

You calculate these changes with this basic accounting equation:



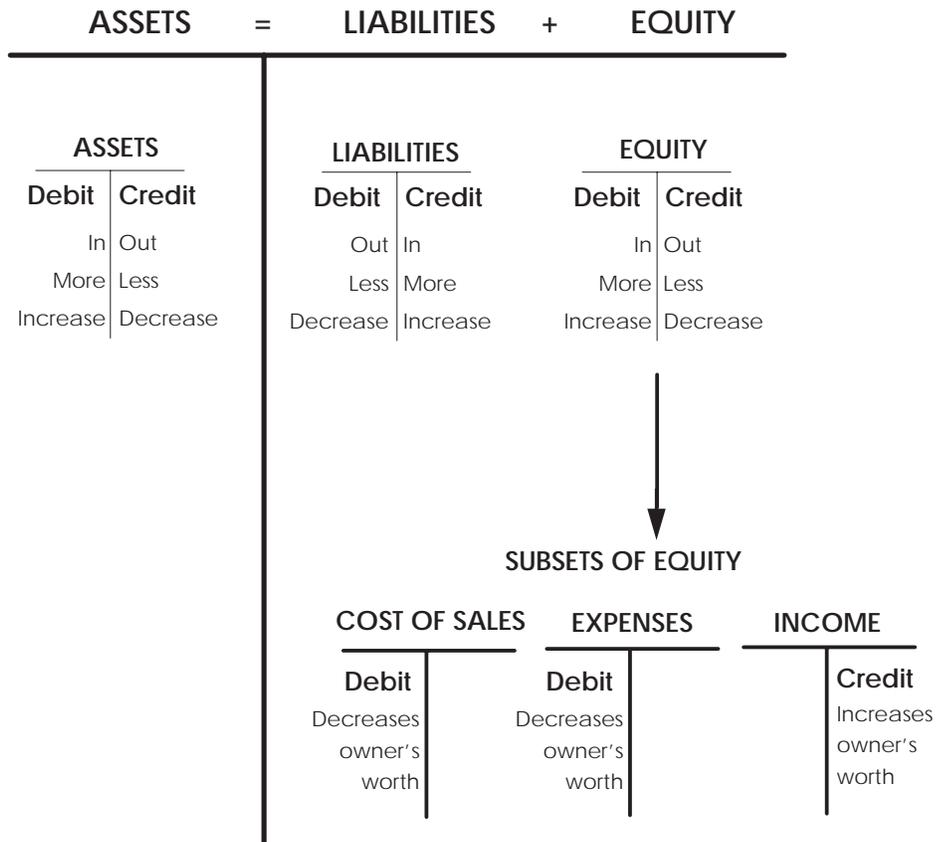
To extend this equation, Shareholders' Equity is equal to the change in contributed capital plus revenues, minus expenses and dividends. The complete equation is illustrated below:



## T-Accounts

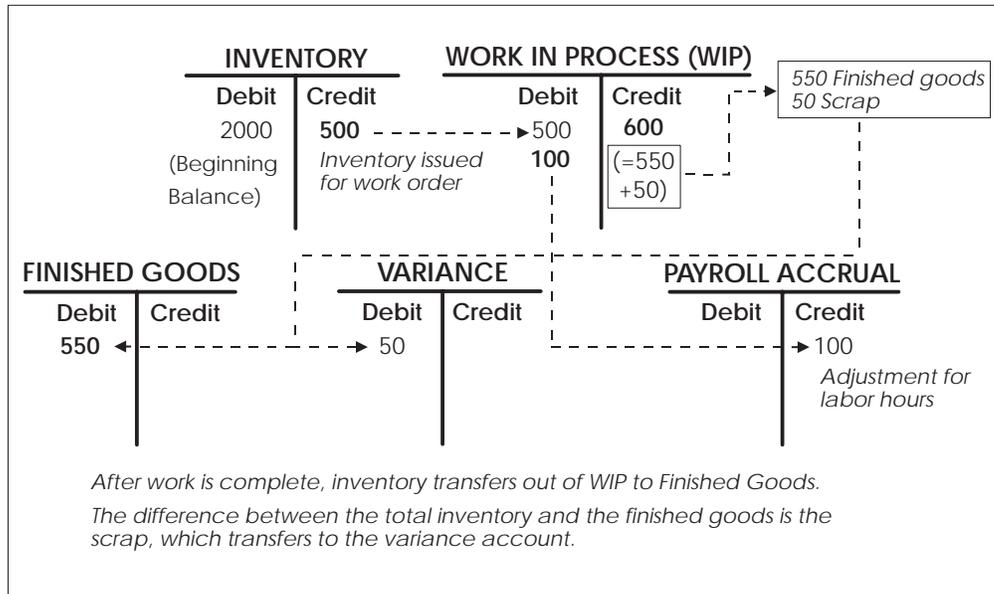
The basis of all accounting systems is the T-account. This bookkeeping device is where you record the increases and decreases of a specific type of asset or liability caused by a business transaction.

T-accounts consist of two types of transactions — debits and credits. In the general ledger, “debit” and “credit” refer only to the position of the columns on the account. For example, you record an increase to an asset account as a debit and an increase to a liability account as a credit. Conversely, you record an increase to a revenue account as a credit and an increase to an expense account as a debit.



### General Ledger Transactions

The following example shows how transactions are recorded in the general ledger.



### Accounts and Account Numbers

The account code structure provides a method for the system to record transactions to the general ledger. When you set up your system, you must:

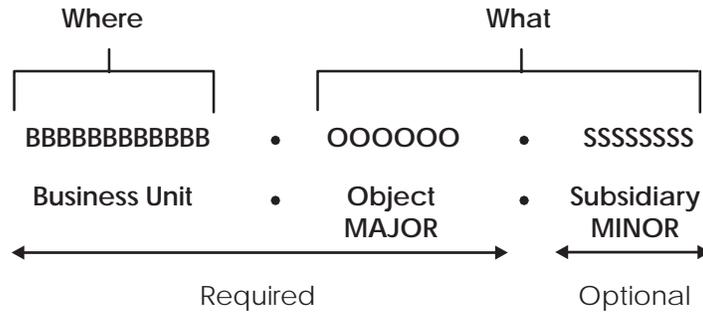
- Assign business unit/object/subsidiary codes
- Determine how amounts are posted
- Assign levels of detail that the system uses to structure accounts to roll up balances

### Business Units

Business units are an important part of the basic account structure. Business units identify where general ledger activity occurs. They are the lowest organizational level within your business and the level at which you account for all revenues, expenses, assets, liabilities, and equity.

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Business units of 12 alphanumeric characters are set up in the following format:



A company can have several revenue and expense business units, for example:

- Department
- Machine shop
- Drill press

## Object and Subsidiary Accounts

Every business unit you define must have an object and, optionally, subsidiary accounts. The object and subsidiary accounts define the kind of transaction you are working with (for example, rent, paper supplies, and so on). These items make up your chart of accounts.

### Object - "Major Account"

The object, or major account, describes the type of transaction with which you are working. The system requires objects for each transaction entry, such as:

- Rent expense
- Service sales
- Finished goods inventory

You use up to six alphanumeric characters in this field. To make data entry more efficient, you should consider using only numbers in the object.

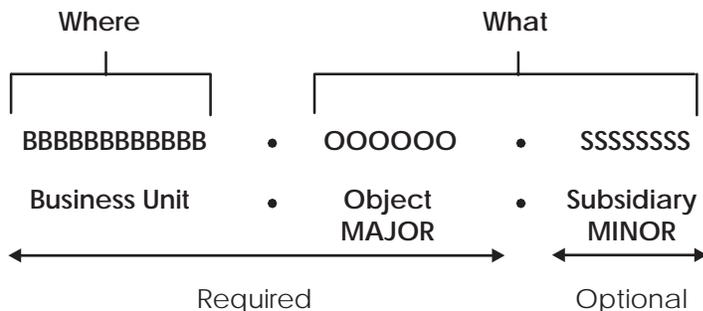
### Subsidiary - "Minor Account"

Subsidiary accounts are subdivisions of object accounts. Use a subsidiary account when you need more detailed accounting activity for an object account.

You can use up to eight alphanumeric characters in this field.

## Account Numbers

An account number includes both the business unit and object.subsidiary codes. You can use periods (the default), commas, or other user defined symbols to separate the components of the account number.



For example, you can categorize the “Cash in Banks” object (account 1110) into the following subsidiary accounts:

- 1110.BEAR                      Bear Creek National Bank
- 1110.FIB                        First Interstate Bank
- 1110.FRANCE                  First Bank of France

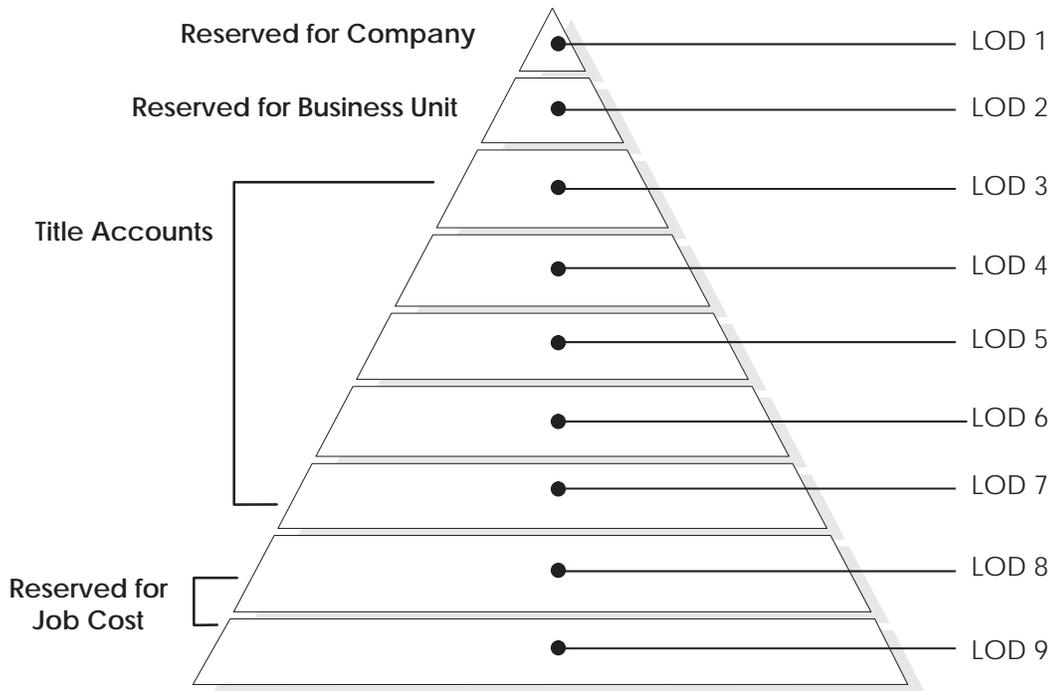
### See Also

- *Creating a Flexible Format (P0907)* in the *General Accounting II Guide* for other methods for numbering accounts.

## Level of Detail

You assign levels of detail (LODs) to control which accounts are subtotaled during the rollup process. The system also displays the level of detail you view online and in printed reports.

Use LOD 3 through 9 for accounts. LOD 1 is reserved for companies and LOD 2 for business units. The system underlines LOD 3 on balance sheet reports and LODs 3 and 4 on income statement reports.



The following guidelines apply when you assign levels of detail to accounts:

- Assign LODs sequentially and do not skip a level of detail. Non-sequential levels of detail cause rollup errors in financial reports that run at a level you did not use.
- Assign LOD 3 to balance sheet title accounts for assets, liabilities, and equity.
- Assign either LOD 3 or LOD 4 to major title accounts on the income statement. For example:
  - Revenues
  - Direct costs
  - General and administrative expenses
  - Other income and expenses

## What Is Subledger Accounting?

In addition to the regular business unit.object.subsidiary method of account coding, you can use subledger accounting. Subledgers are “subdivisions” of account details for categories that you do not want in the permanent chart of accounts.

The subledger and subledger type for a general ledger account work together to provide detailed accounting to the Account Master table (F0901). The subledger numbers become the audit trail for the posted subledger transactions.

You can group and report transactions posted to a general ledger account with subledger types. Subledger types allow you to view account totals in more detail. You can also report on subledgers across accounts (for example, all accounting activity by asset ID or by work order number).

Subledgers differ from subsidiary accounts in the following ways:

- Subledgers do not create additional records in the Account Master table (F0901).
- You enter and post transactions to the same account using different codes in the Subledger and Subledger Type fields rather than to different accounts.
- Subledgers can create additional records in the Account Balances table (F0902). You control this using the posting edit code on the Account Master table.

### Subledger Types

There are eight predefined, hard-coded subledger types. Each one edits or validates the subledger number against a master table.

#### Core Subledger Types

- A** Address Book number. This number is edited against the Address Book Master table (F0101). It is the most commonly used subledger type and is used for the detail method of intercompany settlements.
- C** Business Unit number. This number is edited against the Business Unit Master table (F0006).

#### Other Subledger Types

- E** Equipment Item number. This number is edited against the Equipment Master table (F1201).
- L** Lease Item number. This number is edited against the Lease Master table (F1501).
- I** Item number (short). This number is edited against the Item Master table (F4101).
- O** Sales Order number. This number is edited against the Sales Order Master table (F4211).

- 
- S** Structure Subledger. This item is edited against the Chart of Accounts Format table (F0909).
  - W** Work order number. This number is edited against the Work Order Master table (F4801).
  - M** Summarized work order number. This number is used for summarized journal entries.

In addition, there are three subledger types (X, Y, and Z) that you can define with user defined codes (system 00, type ST). These types are not edited against any tables. You set up these types if you want the system to edit values against a format requirement rather than a specific value.

## Posting Edit Codes

Use posting edit codes (PECs) to designate which accounts use subledgers and how the system posts accounts. These codes define how the system updates the general accounting tables and the type of information on which you can search or print a report.

Set the PEC on the Account Master table for all accounts that use subledger accounting. For subledger accounting, use one of the following PECs.

- S** Summary. Posts subledgers in summary format on every transaction that references the account. You see only subledger detail in the Account Ledger table.  
  
This code requires subledger entry.
- L** Long. Posts subledgers in detailed format. The system stores the subledger in detail in both the Account Ledger and Account Balances tables.  
  
This code requires subledger entry.
- X** Does not allow subledger entry for the account.
- Blank** Allows all posting. The system posts the subledger in detailed format. A blank code does not require subledger entry.

### What Is the Chart of Accounts?

The chart of accounts is a record of the valid accounts you assign to the business units within your company's reporting structure. When you set up your chart of accounts, you define the location of the accounts using automatic accounting instructions (AAIs) that indicate which number ranges represent assets, liabilities, and so on.

The chart of accounts begins with the major headings of your transactions and continues with detailed transaction descriptions:

<b>Assets</b>	(Balance Sheet)
<b>Liabilities</b>	(Balance Sheet)
<b>Owners' Equity</b>	(Balance Sheet)
<b>Revenues</b>	(Income Statement)
<b>Expenses</b>	(Income Statement)

The chart of accounts displays the following elements:

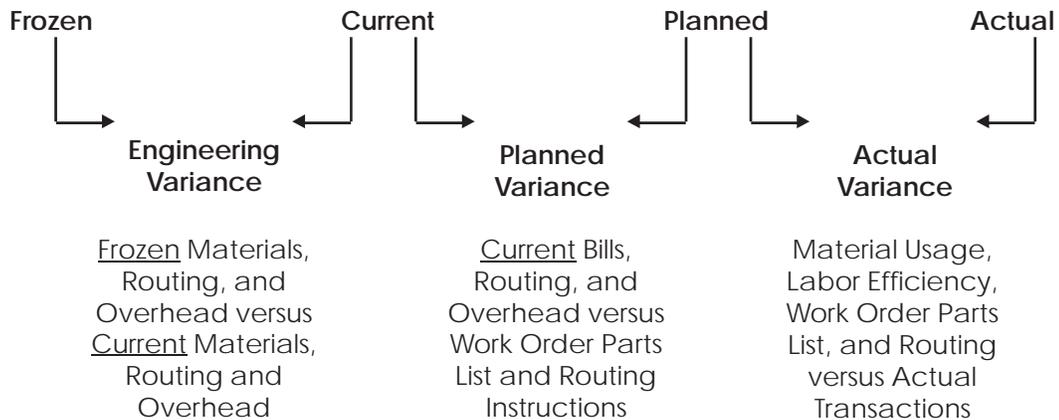
- The account number
- The posting edit codes
- The level of detail assigned to the account
- Which accounts are assigned to which business units

## Example: Chart of Accounts

Acct	Description	Post Edit	LOD	B/S BU100	DEN BU210
<b>1000</b>	<b>Assets</b>	<b>N</b>	<b>3</b>	<b>X</b>	
1001	Current Assets	N	4	X	
1100	Cash	N	5	X	
1110	Cash in Bank	N	6	X	
1130	Short-Term Investments	N	7	X	
1200	Accounts Receivable	N	5	X	
1210	Trade Accounts Receivable	M	6	6	
1215	Allow for Doubtful Accounts	M	5	X	
1400	Inventory		5	X	
1800	Prepaid Expenses		6	X	
1810	Prepaid insurance	N	6	X	
1890	Other Prepaid Expenses	N	6	X	
<b>2000</b>	<b>Fixed Assets</b>	<b>N</b>	<b>4</b>	<b>X</b>	
2001	Property and Equipment	N	5	X	
2020	Buildings		6	X	
2060	Furniture & Office Equipment	N	6	X	
2100	Accumulated Depreciation		6	X	
2160	Accum Depr - Buildings		5	X	
2170	Accum Depr -		6	X	
3900	Office Furniture/Equipment		6	X	
	Accum Depr - Computer		6	X	
	Other Assets	N	5	X	

## What Are Work Order Variances?

Variances occur when the frozen standard costs differ from other user defined cost methods, such as current costs. These variances can be due to differences in labor or overhead, or changes to the bill of material or routing.



The following describes each variance type.

**Engineering**

The difference between the frozen standard costs (material, labor, and overhead) at the beginning of the accounting period and the current costs derived from the bills of material, routings, and overhead rates.

**Planned**

The difference between the current costs derived from the bills of material, routings, and overhead rates and the costs based on the work order parts list and routing instructions. Planned variances can occur when you revise a work order.

**Actual**

The difference between the cost values derived from the work order parts list and routing, and the material and labor that were actually reported against that work order. Actual variances can occur when you:

- Issue material
- Record hours and quantities
- Record completions

**Labor Efficiency (Actual)**

The difference between the planned and actual labor costs, based on the work order routing.

**Material Usage (Actual)**

The difference between the planned and actual material costs, based on the work order parts list.

# Set Up Manufacturing Accounting

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## Setting Up Manufacturing Accounting

You can customize the Manufacturing Accounting system to meet your specific manufacturing environment needs.

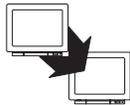
Setting up manufacturing accounting consists of the following:

- Setting up general ledger (G/L) class codes
- Reviewing manufacturing AAI's



Because the system generates journal entries based on how you set them up, you should define these options carefully.

## Setting Up General Ledger (G/L) Class Codes



From Inventory Management (G41), choose Inventory Master/Transactions

From Inventory Master/Transactions (G4111), choose Item Branch/Plant Information

G/L class codes are used by the AAI's to determine to which accounts the system posts transactions.

► **To set up G/L class codes**

On Item Branch/Plant Information

Item Branch/Plant Information	
Item Number	333
Branch/Plant	M30
Stocking Type	M
G/L Class	IN20
Line Type	
Item Price Group	
Sales Taxable	Y
Basket Reprice Group	
Purchasing Taxable	Y
Order Reprice Group	
Backorders Allowed	Y
Serial No. Required	N
Check Availability Y/N	Y
Lot Status Code	
Shelf Life Days	
Lot Process Type	
ABC Codes	- -
Commitment Method	1
Margin Maintenance (%)	
Mix Lots/Serial Number	
Country of Origin	USA
Planner Number	9200
Dobson, Jane	
Buyer Number	8200
Wright, Allen	
Supplier	
Print Message	ENG455
Engineering Changes Number	455

F5=Codes F6=Cost F9=Price F10=Manufacturing F15=Bulk Info F24=Keys

Complete the following field:

- G/L Class

Field	Explanation
G/L Class	<p>A user defined code that identifies the G/L offset to use when the system is searching for the account to which it will post the transaction. If you do not want to specify a class code, you can enter **** (four asterisks) in this field.</p> <p>The table of Automatic Accounting Instructions (AAIs) allows you to predefine classes of automatic offset accounts for the Inventory, Purchase, and Sales Order Management systems. G/L categories might be assigned as follows:</p> <p style="padding-left: 40px;">IN20 Direct Ship Orders IN60 Transfer Orders IN80 Stock Sales</p> <p>The system can generate accounting entries based upon a single transaction. As an example, a single sale of a stock item can trigger the generation of accounting entries similar to these:</p> <p style="padding-left: 40px;">Sales-Stock (Debit) xxxxx.xx A/R Stock Sales (Credit) xxxxx.xx Posting Category: IN80 Stock Inventory (Debit) xxxxx.xx Stock COGS (Credit) xxxxx.xx</p> <p>Although this field is four characters, the system uses only the last two characters of the Category and the last character of the Document Type to find the AAI.</p>

## Reviewing Manufacturing AAIs



From any Shop Floor Control menu, enter 29

From Shop Floor Control Setup (G3141), choose Automatic Accounting Instructions

Each transaction that creates journal entries has automatic accounting instructions (AAIs) that instruct the program to post to specific G/L accounts. User defined AAIs connect manufacturing accounting, your chart of accounts, and financial reporting. You should create AAIs for each unique combination of company, transaction, document type, and G/L class that you anticipate using.

To create G/L entries for transactions, the AAIs access the following information to find the account number to use:

- Company number
- Document type
- G/L class code

- Cost component
- Branch or business unit

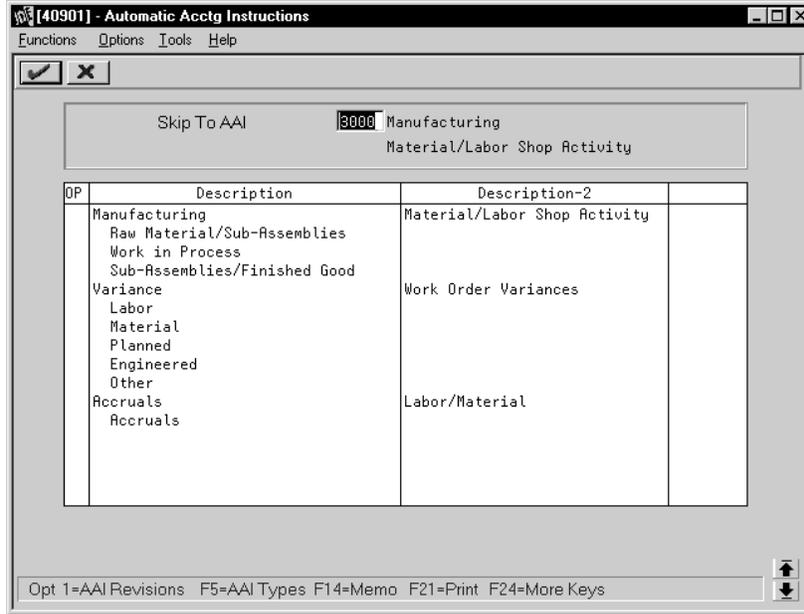
Each AAI or record type points to a specific G/L account consisting of a business unit, an object, and a subsidiary code. J.D. Edwards defines manufacturing AAIs at the 3000 level, as follows:

<b>3110 Raw Materials/Subassemblies</b>	Specifies which balance sheet G/L accounts are used when issuing raw materials or parts from inventory to work in process. Also used to issue completed subassemblies from inventory back into work in process.
<b>3120 Work in Process</b>	For debit transactions, increases the material value of work in process by issuing raw materials and parts to work orders. Also records increases in direct labor, setup labor, machine time, and overhead by applying them to issued materials.  For credit transactions, records the transfer of work order material costs from work in process inventory to some other inventory accounts because of work order completion. Also records the transfer of direct labor, setup labor, and overhead from work in process when work orders are complete.
<b>3130 Subassemblies/Finished Goods</b>	Specifies which balance sheet G/L accounts are used when receiving subassemblies or finished goods from work in process into inventory.
<b>3220 Labor Variance</b> <b>3240 Material Variance</b> <b>3260 Planned Variance</b> <b>3270 Engineering Variance</b> <b>3280 Other Variance</b>	These five AAIs post debits when there is a difference between actual and standard costs associated with shop floor activities.  Variances are posted as positive or negative depending on whether they are favorable or unfavorable.
<b>3401 Accruals</b>	Specifies the profit and loss accounts that offset work in process labor transactions to work orders.

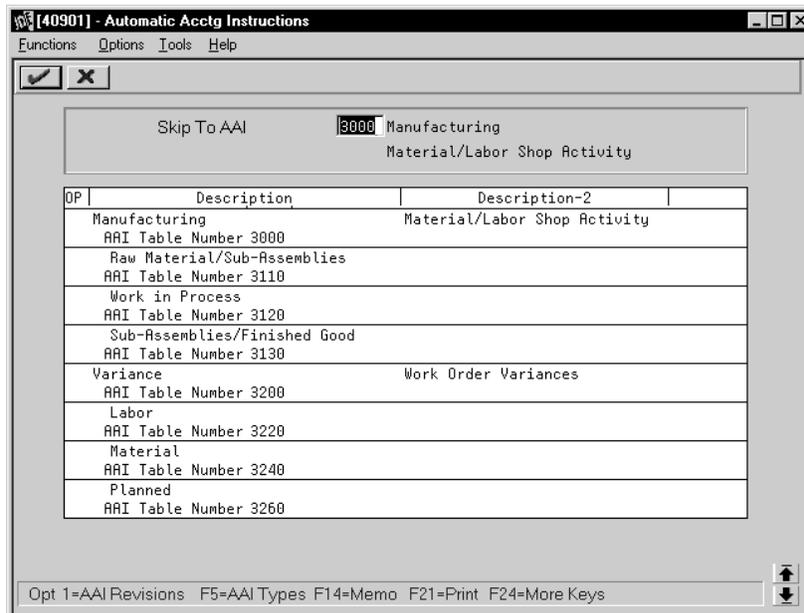
If you access the Automatic Accounting Instructions from any manufacturing menu, the system automatically enters 3000 (the beginning of the manufacturing AAIs) in the Skip To AAI field.

► To review AAI

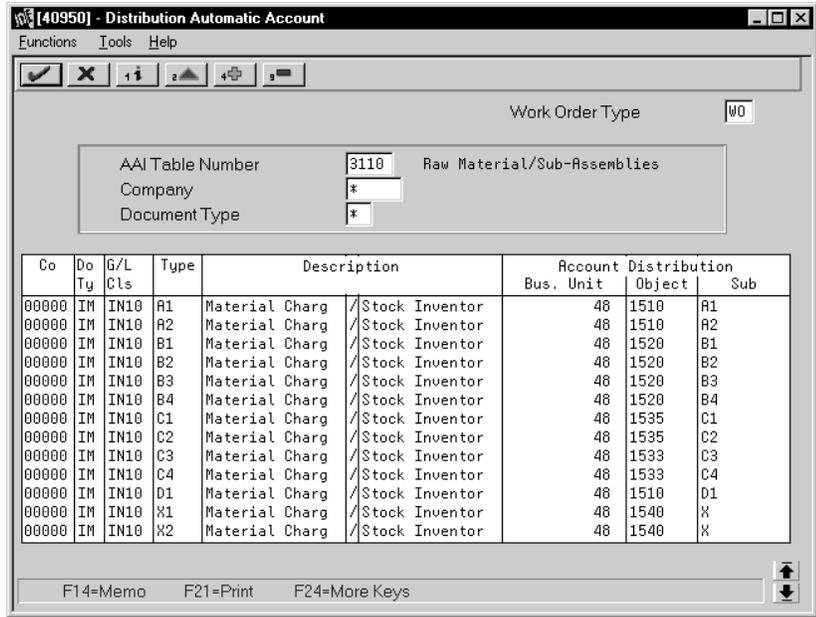
On Automatic Accounting Instructions



4. To view the AAI table number for each record, access the detail area.



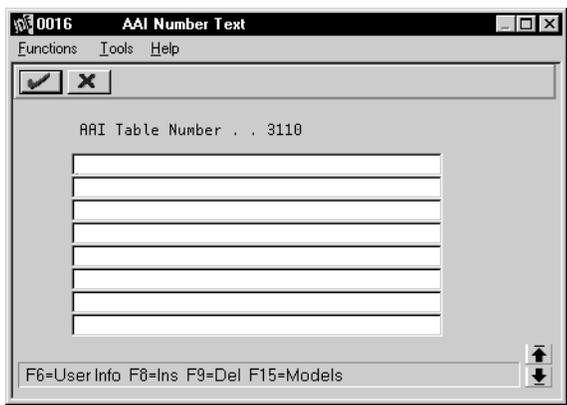
5. Select the record type for which you want to review AAI.
6. To access Manufacturing and Distribution Automatic Account, choose AAI Revisions.



7. On Manufacturing and Distribution Automatic Account, review the following fields:

- Work Order Type
- Company
- Document Type
- Company
- G/L Class Code
- Type
- Account Manufacturing and Distribution Business Unit
- Account Manufacturing and Distribution Object
- Account Manufacturing and Distribution Subsidiary

8. Access Memo Text.



9. On AAI Number Text, review memo text for a record type.

## What You Should Know About

### Selection of AAIs

To choose an AAI, the system searches first for an exact match between company and the G/L class code. If it does not find one, it then searches for the default company and the item's G/L class code. If it does not find a match there, it then searches for the company, and uses \*\*\*\* (four asterisks) for the G/L class code.

Field	Explanation
Work Order Type	<p>A user defined code (00/DT) that identifies the type of document. This code also indicates the origin of the transaction. J.D. Edwards has reserved document type codes for vouchers, invoices, receipts, and time sheets, which create automatic offset entries during the post program. (These entries are not self-balancing when you originally enter them.)</p> <p>The following document types are defined by J.D. Edwards and should not be changed:</p> <ul style="list-style-type: none"> <li>P     Accounts Payable documents</li> <li>R     Accounts Receivable documents</li> <li>T     Payroll documents</li> <li>I     Inventory documents</li> <li>O     Purchase Order Processing documents</li> <li>J     General Accounting/Joint Interest Billing documents</li> <li>S     Sales Order Processing documents</li> </ul>
Company	<p>A code that identifies a specific organization, fund, entity, and so on. This code must already exist in the Company Constants table (F0010). It must identify a reporting entity that has a complete balance sheet. At this level, you can have intercompany transactions.</p> <p>NOTE: You can use company 00000 for default values, such as dates and automatic accounting instructions (AAIs). You cannot use it for transaction entries.</p> <p>..... <i>Form-specific information</i> .....</p> <p>In the inquiry field at the top of the form, the asterisk (*) is the default value. It causes the system to display AAIs for all companies.</p>

Field	Explanation
Document Type	<p>A user defined code (system 00/type DT) that identifies the origin and purpose of the transaction.</p> <p>J.D. Edwards reserves several prefixes for document types, such as vouchers, invoices, receipts, and timesheets.</p> <p>The reserved document type prefixes for codes are:</p> <ul style="list-style-type: none"> <li>P Accounts payable documents</li> <li>R Accounts receivable documents</li> <li>T Payroll documents</li> <li>I Inventory documents</li> <li>O Order processing documents</li> <li>J General ledger/joint interest billing documents</li> </ul> <p>The system creates offsetting entries as appropriate for these document types when you post batches.</p> <p>..... <i>Form-specific information</i> .....</p> <p>In the inquiry field at the top of the form, the asterisk (*) is the default and causes the system to display all document types.</p>
Bus. Unit	<p>An alphanumeric field that identifies a separate entity within a business for which you want to track costs. For example, a business unit might be a warehouse location, job, project, work center, or branch/plant.</p> <p>You can assign a business unit to a voucher, invoice, fixed asset, and so on, for purposes of responsibility reporting. For example, the system provides reports of open accounts payable and accounts receivable by business units to track equipment by responsible department.</p> <p>Security for this field can prevent you from locating business units for which you have no authority.</p> <p>Note: The system uses this value for Journal Entries if you do not enter a value in the AAI table.</p> <p>..... <i>Form-specific information</i> .....</p> <p>If you leave this field blank, the system uses the business unit that you entered on the work order, in the Charge to Cost Center field.</p>
Object Account	<p>The object account portion of a general ledger account. The term “object account” refers to the breakdown of the Cost Code (for example, labor, materials, and equipment) into subcategories (for example, dividing labor into regular time, premium time, and burden). If you are using a flexible chart of accounts and the object is set to 6 digits, J.D. Edwards recommends that you use all 6 digits. For example, entering 000456 is not the same as entering 456, because the system enters three blank spaces to fill a 6-digit object.</p>

Field	Explanation
Sub	A subdivision of an object account. Subsidiary accounts include more detailed records of the accounting activity for an object account.  ..... <i>Form-specific information</i> .....
	If you leave this field blank, the system uses the value you entered on the work order in the Cost Code field.

### Processing Options for Manufacturing AAls

DEFAULT INFORMATION:

1. Enter the default skip to AAI Number: \_\_\_\_\_



# Understand Work Orders in Accounting

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## About Work Orders in Accounting

The Manufacturing Accounting system tracks costs associated with work orders, and creates journal entries for all shop floor transactions. Each step in the work order process can affect manufacturing accounting. The principal effect is that when you complete any step in the process, you create a transaction that can be the source of a variance. The system calculates the variances when you run Journal Entries for Variances.

### See Also

- *What Are Work Order Variances? (P3102)*

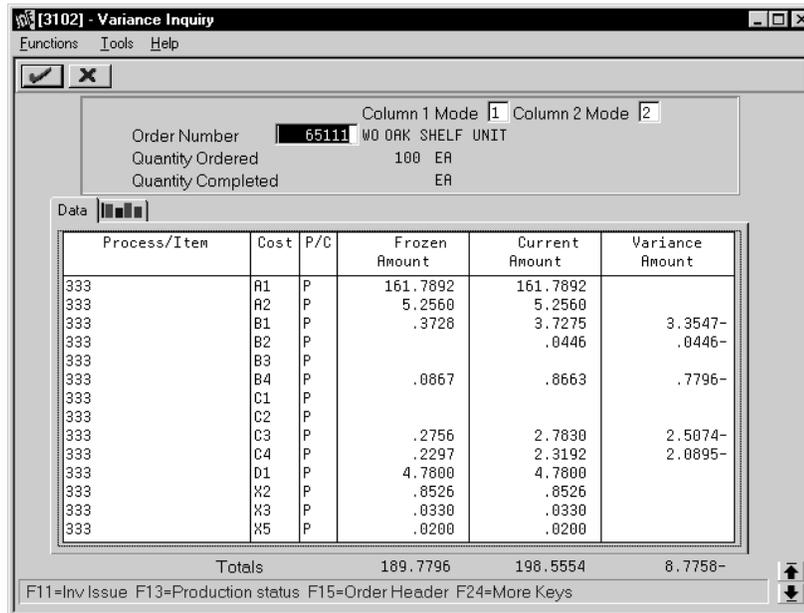
## What Is a Work Order?

A work order is a request to produce a certain quantity of an item by a given date.

A work order consists of:

- A header
- A parts list
- Routing instructions

The following graphic illustrates the work order structure.



The screenshot shows a software window titled "[3102] - Variance Inquiry". It has a menu bar with "Functions", "Tools", and "Help". Below the menu bar are two buttons: a checkmark and an 'X'. The window contains a header section with the following information:

- Column 1 Mode: 1
- Column 2 Mode: 2
- Order Number: 65111
- WO OAK SHELF UNIT
- Quantity Ordered: 100 EA
- Quantity Completed: EA

Below the header is a "Data" section with a table. The table has the following columns: Process/Item, Cost, P/C, Frozen Amount, Current Amount, and Variance Amount. The data rows are as follows:

Process/Item	Cost	P/C	Frozen Amount	Current Amount	Variance Amount
333	A1	P	161.7892	161.7892	
333	A2	P	5.2560	5.2560	
333	B1	P	.3728	3.7275	3.3547-
333	B2	P		.0446	.0446-
333	B3	P			
333	B4	P	.0867	.8663	.7796-
333	C1	P			
333	C2	P			
333	C3	P	.2756	2.7830	2.5074-
333	C4	P	.2297	2.3192	2.0895-
333	D1	P	4.7800	4.7800	
333	X2	P	.8526	.8526	
333	X3	P	.0330	.0330	
333	X5	P	.0200	.0200	
Totals			189.7796	198.5554	8.7758-

At the bottom of the window, there is a status bar with the text: "F11=Inv Issue F13=Production status F15=Order Header F24=More Keys".

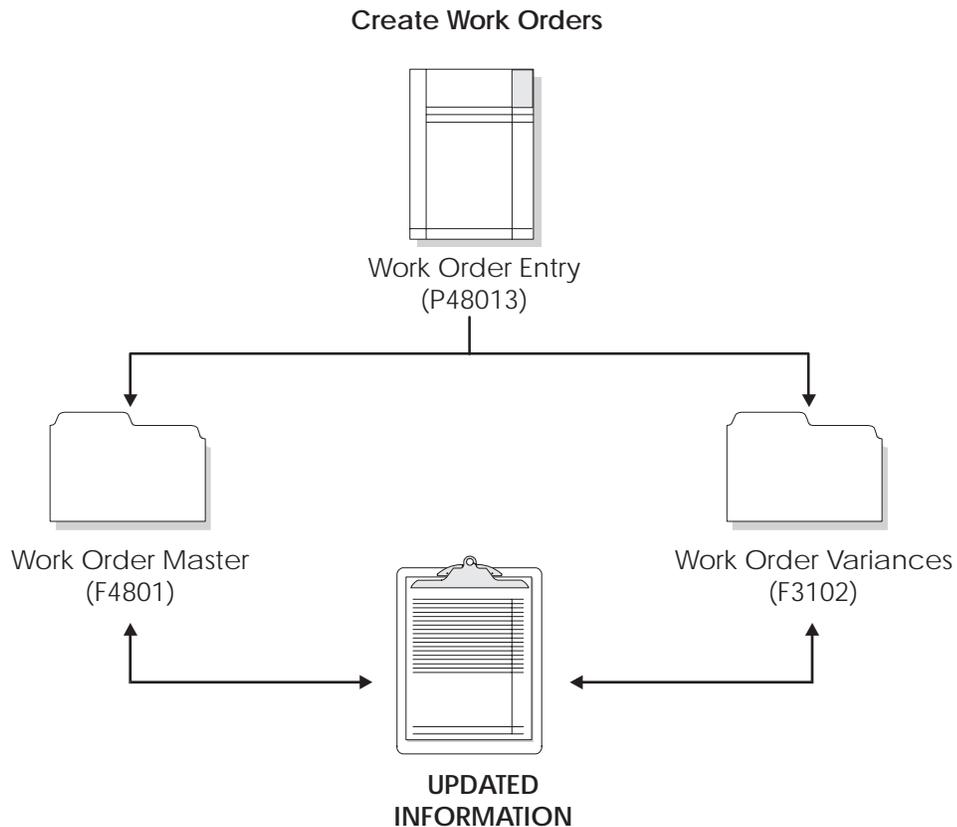
After you have determined what resources are required to produce an item, you can schedule the work order and begin the work. As you complete the work order, you must track the following:

- Completed items
- Materials used
- Quantities scrapped
- Hours of machine and personnel time used

### What Happens When You Create a Work Order?

To create a work order, you identify on the header the item, its branch/plant and quantity, and the requested date for the work order.

The following graphic illustrates the flow of information when you create a work order.



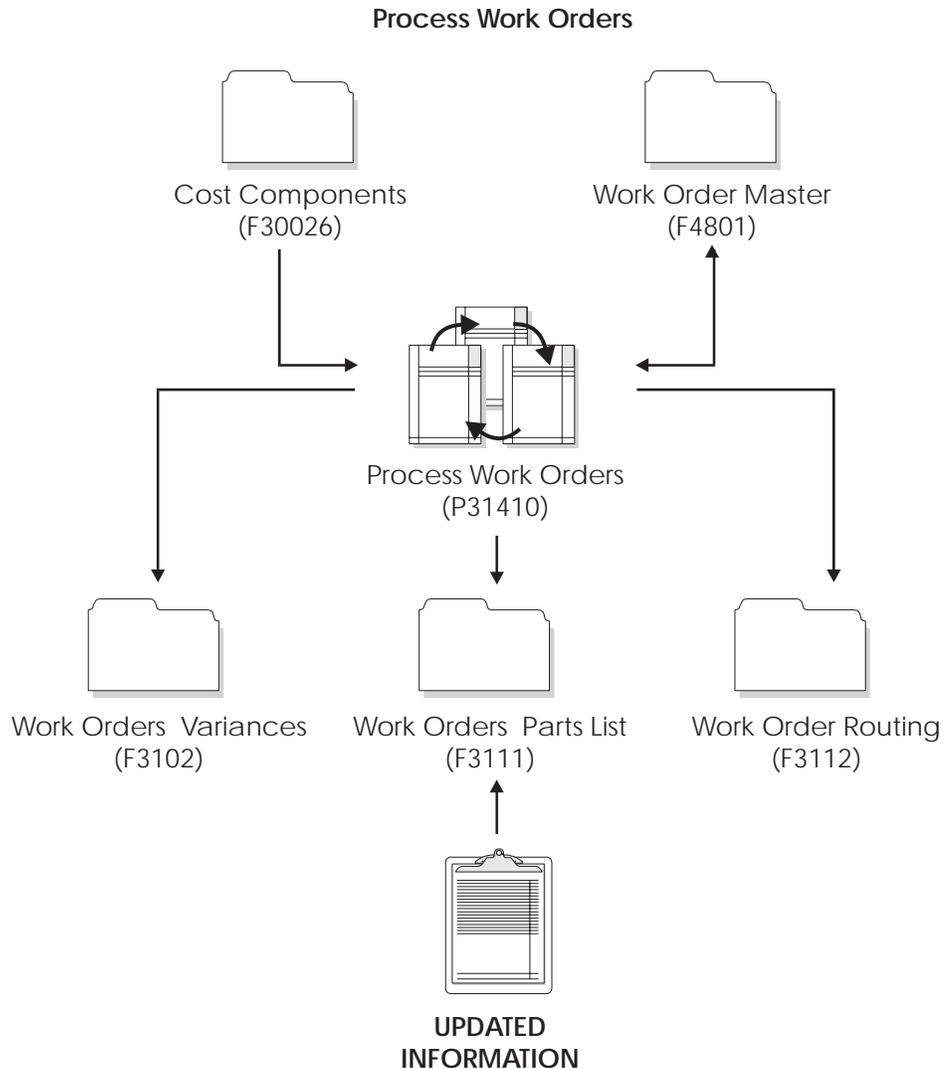
## About the Parts List and Routing

After you have created a work order header, you must attach a parts list and routing instructions to indicate the parts, personnel, machinery, and time required to make the items. You can attach the parts list and routing instructions in one of three ways:

- Manually.
- Interactively from Enter/Change Order. This method uses the data from the item's bill of material or routing as the default data for the parts list or routing instructions. You can modify the data.
- Automatically through the Work Order Generation program. This method makes copies of the item's bill of material and routing, and uses them for the initial parts list and routing instructions. You can modify the data. This method also allows you to attach the parts lists and routing instructions in a batch.

Regardless of the method you choose, the system compares the frozen standard costs to the current costs. The frozen standard costs come from the Cost

Components table (F30026), based on the original bill of material and routing. The current costs are calculated from the values in the Cost Components table, based on the current parts list and routing instructions. If a discrepancy exists between the frozen standard costs and the current costs, the amount of the discrepancy becomes the engineering variance.



You can view engineering variances after you attach a parts list and routing instructions to a work order.

## Example: Engineering Variance Inquiry

The screenshot shows a window titled "[3102] - Variance Inquiry" with a menu bar (Functions, Tools, Help). Below the menu bar, there are input fields for "Order Number" (65111) and "Quantity Ordered" (100). To the right, "Column 1 Mode" is set to 1 and "Column 2 Mode" is set to 2. The main data area is a table with the following columns: Item, Cost, P/C, Frozen Amount, Current Amount, and Variance Amount. The table contains 15 rows of data for items 333, with a total row at the bottom. Below the table, there are navigation buttons (checkmark, X) and a status bar with keyboard shortcuts: F11=Inv Issue, F13=Hour Stat, F14=Qty Stat, F15=Wrk Ord Head, F24=More Keys, and MW.

Item	Cost	P/C	Frozen Amount	Current Amount	Variance Amount
333	A1	P	161.7892	161.7892	
333	A2	P	5.2560	5.2560	
333	B1	P	.3728	3.7275	3.3547-
333	B2	P		.0446	.0446-
333	B3	P			
333	B4	P	.0867	.8663	.7796-
333	C1	P			
333	C2	P			
333	C3	P	.2756	2.7830	2.5074-
333	C4	P	.2297	2.3192	2.0895-
333	D1	P	4.7800	4.7800	
333	X2	P	.8526	.8526	
333	X3	P	.0330	.0330	
333	X5	P	.0200	.0200	
Totals			189.7796	198.5554	8.7758-

### See Also

- *Reviewing Variances (P3102)*

## What Happens When You Revise a Work Order?

After you create a work order and attach a parts list and routing, you might need to make revisions. If you revise the quantity requested, the parts list, or the routing, you might also revise the cost of the work order. These revised costs are called planned costs.

When you run Journal Entries for Variances, the system compares the current costs to these revised planned costs. The revised planned costs are calculated from the values in the Cost Components table, based on the revised parts list and routing instructions. If a discrepancy exists between the current costs and the revised planned costs, Journal Entries for Variances calculates a planned variance.

If you make no revisions to a work order, there is no planned variance.

### See Also

- *Creating Journal Entries for Work Order Variances (P31804)*

### What Are Unaccounted Units?

Unaccounted units represent the quantities and amounts of transactions that occur against a work order when you issue parts, or record labor or completions. You cannot view unaccounted units. They are stored by the system until you run Journal Entries for Work in Process or Completions. That program creates journal entries for the unaccounted units and then purges the unaccounted units.

The Parts List table (F3111) stores unaccounted units that are updated by work order issues.

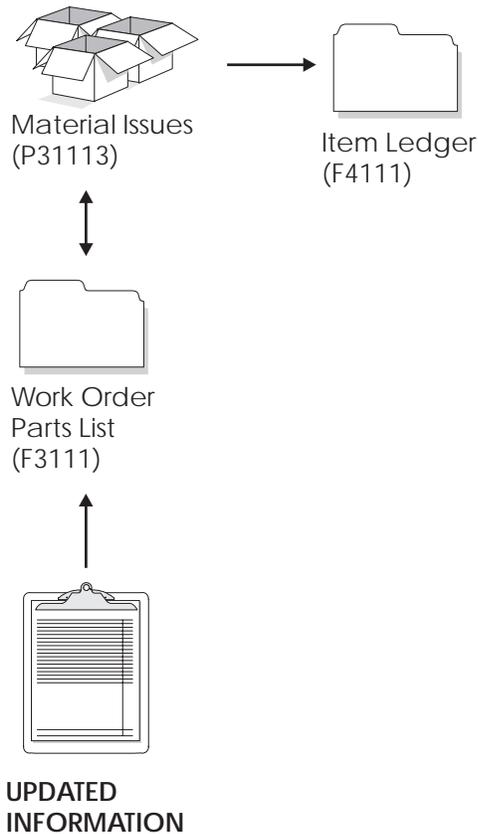
The Routing Instructions table (F3112) stores unaccounted units and dollars. These are updated when reporting labor and machine hours.

The Work Order Master table (F4801) stores unaccounted units that are updated by work order completions.

### What Happens When You Issue Material?

You must send the required materials to the shop floor for production. The quantities issued to the shop floor are deducted from inventory through an issue transaction. This transaction reports the actual quantities of materials that were used in the production process to the Inventory Management and Manufacturing Accounting systems.

Material Issues



Issue transactions do not have to occur at the same time that the physical transfer of inventory takes place. You can choose the point in the production process where you want your inventory records to reflect the issue of the parts to the work order.

The four ways to issue parts are:

- Manual issues**                      Materials are deducted from inventory when you enter the issue transactions on the Issues form.
  
- Preflushing**                        Materials are automatically deducted from inventory when a work order is processed through the Process Work Orders program if the processing option is set to do so.
  
- Backflushing**                        Materials are deducted from inventory when items on the work order are reported complete. This might be when you report partial completions throughout the production process or when you report full completions at the last routing operation.

### **Super Backflushing**

Materials are automatically deducted from inventory at operations defined as pay points throughout the routing. The Super Backflush program allows you to backflush materials and labor hours and report items complete at the same time.

When you issue parts to a work order, unaccounted units are stored in the Parts List table until you run Journal Entries for Work in Process or Completions.

Whatever method you use to issue materials to a work order, when you run Journal Entries for Variances, the program compares the cost of materials issued to the cost of materials specified on the parts list. If there is a discrepancy, the program calculates an actual variance.

## What Happens When You Record Hours and Quantities Used?

As you produce items on a work order, you record the hours spent on production and the number of items completed in that time.

The Manufacturing Accounting system interfaces with Payroll Time Entry so that transaction data is usable in both the Shop Floor Control and Payroll systems. You can record hours and quantities per work request or per employee to accommodate both piece-work and hourly rate employees.

Use the Hours and Quantities Entry program to charge actual hours and quantities to a work order. The header information comes from the Work Order Master table (F4801). The information you enter is stored in the Work Order Transactions table (F31122).

You can enter hours and quantities data on one of two forms:

- Payroll Time Entry
- Hours and Quantities Entry

Inquiries and reports allow you to review and revise the hours and quantities reported by employee and by work request. After you enter the transactions into the system, you must post them to the Manufacturing Accounting system for further tracking and cost accounting.

After you have entered hours and quantities data, you post the transactions to the Work Order Routing table, where they are used to create journal entries. You can perform the post interactively when you record the hours and quantities, or you can run the Hours and Quantities Update program. The update takes the hours and quantities recorded against work order operations from the Work Order Transactions table (F31122) and updates their respective fields in the

Routing Instructions table (F3112). The transaction data is then available for use by Journal Entries for Work in Process or Completions.

When you record labor and machine hours, unaccounted units are stored in the Routing Instructions table.

When you run Journal Entries for Variances, the program compares the cost of materials and labor reported to the cost of materials and labor as specified on the work order parts list and routing instructions. If a discrepancy exists, the program updates the actual variance.

### **What Happens When You Record Component Scrap?**

After you issue parts to a work order, you might need to report some of them as scrapped. Scrap is unusable material that results from the production process. You specify the amount of material to be scrapped and the reason on Component Scrap.

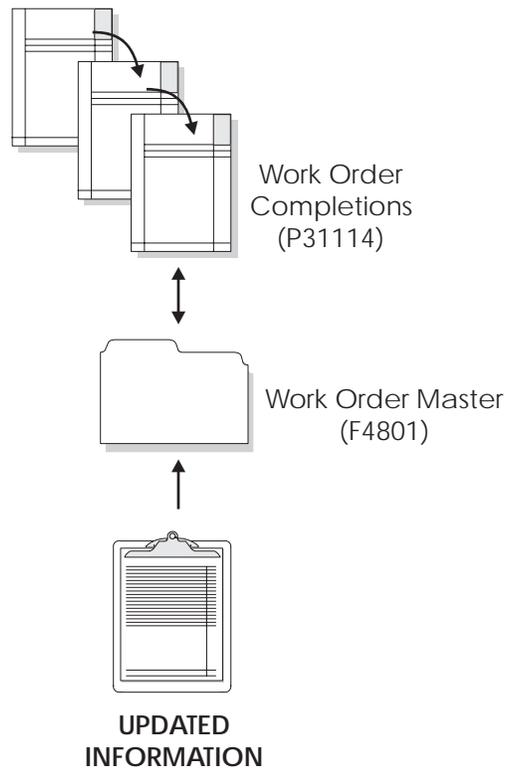
When you report the quantity of component material scrapped, and you run Journal Entries for Work in Process or Completions, the program calculates the new A2 cost value for the parent. If the amount of the scrapped material differs from the estimated scrap amount on the bill of material, this difference updates the amount of the actual variance.

There are no unaccounted units associated with scrapping components.

### **What Happens When You Record Completions?**

When you finish production of a work order on the shop floor, you must record the completions to inventory. These transactions update records in the Inventory Management system.

### Work Order Completions



Completions occur when you report the products that result from a process and enter them into inventory as complete. The Shop Floor Control system provides several ways to complete products into inventory, including:

- Super backflushing
- Partial completion
- Full completion
- Backflushing at completion

Work Order Completions calculates the final value of the cost components for the parent part and updates the amount of the actual variance in the Work Order Variance table. Completions represent amounts added to inventory.

When you record completions, unaccounted units are stored in the Work Order Master table.

# Work with Work Orders

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## Working with Work Orders

Work with work orders to view the effect of each step on manufacturing accounting.

Working with work orders includes:

- Creating work orders
- Attaching parts lists and routing instructions
- Issuing parts to work orders
- Recording hours and quantities used
- Recording component scrap
- Recording completions to work orders

## Creating a Work Order



From Shop Floor Control (G31), choose Daily Order Preparation — Discrete

From Daily Order Preparation (G3111), choose Enter/Change Order

Create a work order as the first step in the process of understanding the cycle of a work order and its effect on manufacturing accounting.

### See Also

- *Creating Work Orders (P48013)* in the *Shop Floor Control Discrete Manufacturing Guide*

### ▶ **To create a work order**

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On Enter/Change Order

Complete the following fields:

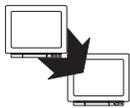
- Item Number
- Requested
- Quantity Ordered
- Branch/Plant
- Charge to Business Unit
- Cost Code

Field	Explanation
Item Number	A number that the system assigns to an item. It can be in short, long, or 3rd item number format.
Requested	The date that an item is to arrive or that an action is to be complete.  ..... <i>Form-specific information</i> .....  For Shop Floor Control  When you change the requested date: <ul style="list-style-type: none"> <li>• The system calculates a new start date based on the new requested date if you delete the date in the Start Date field before you enter the new requested date. If you do not delete the start date, the system does not recalculate or change it.</li> <li>• The system recalculates the operation start and complete dates according to the scheduling rules defined.</li> </ul>

Field	Explanation
Qty Ordered	<p>The quantity of units affected by this transaction.</p> <p>..... <i>Form-specific information</i> .....</p> <p>For Shop Floor Control Discrete Manufacturing:</p> <p>When you change the order quantity, the system recalculates the following:</p> <ul style="list-style-type: none"> <li>• The component-required quantities and commitments</li> <li>• The operation start and complete dates, if the leadtimes are variable</li> </ul> <p>In the process industry:</p> <p>The quantity of co-/by-products produced by the process.</p>
Branch/Plant	<p>A code that represents a high-level business unit. It can be used to reference a branch or plant that might have departments or jobs, which represent lower-level business units (data item MCU), subordinate to it. For example:</p> <ul style="list-style-type: none"> <li>• Branch/Plant (MMCU)</li> <li>• Dept A (MCU)</li> <li>• Dept B (MCU)</li> <li>• Job 123 (MCU)</li> </ul> <p>Business unit security is based on the higher-level business unit.</p> <p>..... <i>Form-specific information</i> .....</p> <p>For Shop Floor Control and Manufacturing Accounting:</p> <p>This field identifies the branch/plant in which the item resides.</p>
Charge to CC	<p>An alphanumeric field that identifies a separate entity within a business for which you want to track costs. For example, a business unit might be a warehouse location, job, project, work center, or branch/plant.</p> <p>You can assign a business unit to a voucher, invoice, fixed asset, and so on, for purposes of responsibility reporting. For example, the system provides reports of open accounts payable and accounts receivable by business units to track equipment by responsible department.</p> <p>Security for this field can prevent you from locating business units for which you have no authority.</p> <p>Note: The system uses this value for Journal Entries if you do not enter a value in the AAI table.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The default business unit for journal entries for the work order. The business unit on the AAI tables must be blank.</p>

Field	Explanation
Cost Code	<p>A subdivision of an object account. Subsidiary accounts include more detailed records of the accounting activity for an object account.</p> <p>..... <i>Form-specific information</i> .....</p> <p>For Shop Floor Control and Manufacturing Accounting:</p> <p>If a value is not entered in the AAI table for subsidiary account, the system uses this value as a default in journal entries.</p>

## Attaching a Parts List and Routing Instructions



From Shop Floor Control (G31), choose Daily Order Preparation — Discrete

From Daily Order Preparation (G3111), choose Order Processing

You can attach the parts list and routing instructions in one of three ways:

- Manually
- Interactively
- Through the Process Work Orders program

For example, to understand its effect on manufacturing accounting, run the Process Work Orders program.

### See Also

- *Attaching the Parts List Interactively (P3111)* in the *Shop Floor Control Discrete Manufacturing Guide*
- *Attaching the Routing Instructions Interactively (P3112)* in the *Shop Floor Control Discrete Manufacturing Guide*
- *Processing Work Orders (P31410)* in the *Shop Floor Control Discrete Manufacturing Guide*

## Processing Options for Process Work Orders

### GENERATION INFORMATION:

1. Enter one of the following:
  - 1 - Parts List only
  - 2 - Routing only
  - 3 - Both Parts List and Routing

If left blank, neither Parts List nor Routing will be generated.
2. Enter a '1' to use the W.O. Date for Effectivity checking. (Default is the W.O. Start Date.)

UPDATE INFORMATION:

- 3. Enter the new Status Code for the Work Order Header. If left blank, status will not be changed.

\_\_\_\_\_

WORK ORDER PRINT INFORMATION:

- 4. Enter a '1' to print Work Orders. If printing Work Orders:

\_\_\_\_\_

PARTS LIST PRINT INFORMATION:

- 5. Enter a '1' to print Parts List
- 6. Enter a '1' to print the 2nd line of information, which is scrap and related work center.
- 7. Enter a '1' to print Parts List on a new page.
- 8. Enter the DREAM Writer Version of the Parts List to print. If left blank, XJDE0001 is used. (See Form ID P31415.)
- 9. Enter a '1' to print a consolidated Parts List.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

ROUTING INSTRUCTIONS PRINT INFO:

- 10. Enter a '1' to print Routing
- 11. Enter a '1' to print Routing on a new page.
- 12. Enter the DREAM Writer Version to be executed for the desired sequencing of the Routing. If left blank, the operation sequence is used. (See Form ID P314151.)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

BACKSCHEDULING INFORMATION:

- 13. Enter the Unit of Measure for backscheduling.

\_\_\_\_\_

SHOP PACKET SUMMARY INFORMATION:

- 14. Enter a '1' to print the Shop Packet Summary.

\_\_\_\_\_

SHORTAGE REPORT INFORMATION:

- 15. Enter the DREAM Writer Version of the Shortage Report to execute. If left blank, no shortage report will be printed. (See Form ID P31418.)

\_\_\_\_\_

BAR CODE INFORMATION:

- 16. Enter the DREAM Writer Version to be executed for the desired print overrides for Bar Coding. (See Form ID P31413.)

\_\_\_\_\_

INVENTORY ISSUE INFORMATION:

- 17. Enter the DREAM Writer Version of Batch Inventory Issues to execute. If left blank, the Inventory Issues program will not be called. (See Form ID P31420)

\_\_\_\_\_

PURCHASE ORDER INFORMATION:

- (Used for Sub-Contract Routings)
- 18. Enter the Document Type
- 19. Enter the Line Type

\_\_\_\_\_

\_\_\_\_\_

20. Enter the Beginning Status \_\_\_\_\_
21. Enter a '1' to default the tax area from the 'Ship-To' address book number. If left blank, the tax area will default from the Supplier address book number. \_\_\_\_\_

### SALES ORDER INFORMATION:

22. Enter the new Line Type for kit and configured components. This is used to avoid issuing inventory from Sales Order processing. The Line Type used should be inventory interface 'N'. If left blank, Line Type will not be changed. \_\_\_\_\_
23. Enter the Next Status for Sales Order kit and configured component lines. (This is used to bypass the normal flow of the order, i.e., Pick Slip.) If left blank, status will not be changed. \_\_\_\_\_
24. Enter a '1' to print Sales Order Text lines. \_\_\_\_\_

### CONFIGURED ITEM COSTS:

25. Enter one of the following options for calculating the standard cost for configured items in the WO Variance file (F3102). \_\_\_\_\_
- 1 - Always calculate the standard cost.
  - 2 - Only calculate the standard cost if it has not already been done (no variance records exist.)
- If left blank, standard cost will not be calculated.

### BOM SUBSTITUTES:

26. Enter '1' to allow the use of Bill of Material substitutes in case of a shortage. \_\_\_\_\_

### PURCHASING JOURNAL ENTRIES:

27. Enter a '1' to load the Work Order Number into the Subledger field of the purchasing J/E's. \_\_\_\_\_

### BLANKET/QUOTE PROCESSING:

28. Enter a '1' for automatic blanket order release processing. \_\_\_\_\_

### BUILD AGAINST PRIOR REVISIONS:

29. Enter a '1' to permit building work orders against prior revision levels. The revision level in the work order header (F4801) will be used to select the parts list to attach to the work order. If left blank, prior revision level bills will not be selected. \_\_\_\_\_

### WAREHOUSE PROCESSING:

30. Enter the request processing mode: \_\_\_\_\_

- 1 - Generate requests only
  - 2 - Generate requests and process using the subsystem.
- If left blank, requests will not be generated.

31. If processing pick requests using the subsystem, enter the DREAM Writer version to use. If left blank, XJDE0002 will be used. (see Form ID P46171) \_\_\_\_\_

32. Enter the default staging location for moving goods out of the warehouse. The parts picked from the warehouse are staged at this location prior to use within manufacturing. (F1=Location Window) \_\_\_\_\_

33. Enter a '1' if the default staging location should be checked for availability. If the part is available at the staging location a request will NOT be generated. This option only applies to parts without work center locations. \_\_\_\_\_

QUALITY MANAGEMENT OPTIONS:

34. Enter a '1' to attach the Work Order/Routing tests. \_\_\_\_\_

GENERIC TEXT PRINT OPTIONS:

35. Enter a '1' to print component generic text on the Parts List. \_\_\_\_\_

36. Enter a '1' to print operation generic text on the Routing. \_\_\_\_\_

37. Enter a '1' to update parts list and routing if order quantity or dates have changed \_\_\_\_\_

38. Enter which symbology to use when using bar codes.  
 '1'= Code 3 of 9 (Code 39)  
 '2'= Code 128  
 ' '= Not print bar codes \_\_\_\_\_

39. Enter a '1' to prevent commitments for rates. \_\_\_\_\_

### Issuing Parts to Work Orders



From Shop Floor Control (G31), choose Daily Order Preparation — Discrete

From Daily Order Preparation (G3111), choose Inventory Issues

Issue the necessary parts to the work order. There are four ways to issue parts:

- Manually
- Preflushing
- Backflushing
- Super backflushing

Whichever method you use, when you issue parts to a work order, you create:

- One source of an actual variance, if the cost of materials issued is different from the cost of materials specified on the parts list
- Unaccounted units in the Parts List table

For example, to understand its effect on manufacturing accounting, issue the parts manually.

#### See Also

- *About Issue Transactions* in the *Shop Floor Control Discrete Manufacturing Guide*

► **To issue parts to work orders**

On Inventory Issues

Branch/Plant M30  
Mode 0 Netted

Order Number 65111 WO  
Item Number 333  
Quantity Ordered 100 EA  
Issue Material for 100 EA  
Order Date 07/09/97

OAK SHELF UNIT  
OAK SHELF UNIT  
Skip to Op Seq .  
Skip to Req'd. .

Op	Item	Op Seq	St	Qty Ordered	Qty Issued	Issues	UM
1	212	10.00		240		240	EA
1	121	25.00		200		200	EA
1	424	30.00		400		400	EA
1	444	30.00		100		100	EA
1	123	40.00		100		100	EA

Opt 1=Process Issue 4=Multi-Location F5=Issues Inquiry F24=More Keys

Complete the following fields:

- Order Number
- Issue Material For

Field	Explanation
Order Number	A number identifying the original document. This can be an invoice number, work order number, sales order number, journal entry number, and so on.
Issue Material for	The number of parent items you want to process. The system calculates lower-level values in quantity per the number of parent items requested. For example, if 3 components are needed for a parent item, and the requested quantity is 10, the system plans for 30 components.

## Recording Hours and Quantities Used



From Shop Floor Control (G31), choose Daily Order Reporting — Discrete

From Daily Order Reporting — Discrete (G3112), choose Hours and Quantities

As you produce items on a work order, you record the hours spent on production and the number of items completed in that time.

When you record hours and quantities used, you create:

- One source of an actual variance, if the cost of materials and labor reported differs from the cost of materials and labor as specified on the work order parts list and routing instructions
- Unaccounted units in the Routing Instructions table

### ▶ To record hours and quantities used

On Hours and Quantities

Order Number	Ty	Op	Seq	TH	Time Card	Begin	Ending	Hours	Quantity	UM	St	Desc	0

Complete the following fields:

- Work Date
- Order Number
- Employee Number
- Operation Number

- Type of Hours
- Hours
- Quantity
- Unit of Measure
- Operation Status

<b>Field</b>	<b>Explanation</b>
Work Date	<p>A date that identifies the financial period to which the transaction is to be posted. The general accounting constants specify the date range for each financial period. You can have up to 14 periods. Generally, period 14 is for audit adjustments.</p> <p>The system edits this field for PBCO (posted before cutoff), PYEB (prior year ending balance), and so on.</p>
Order Number/Rate	<p>A number identifying the original document. This can be an invoice number, work order number, sales order number, journal entry number, and so on.</p> <p>..... <i>Form-specific information</i> .....</p> <p>You can specify the order number or employee number in the processing options for the Hours and Quantities program.</p>
Employee Number	<p>A number that identifies an entry in the Address Book system. Use this number to identify employees, applicants, participants, customers, suppliers, tenants, and any other Address Book members.</p>

Field	Explanation
Op Seq	<p>In routings, this number is used to sequence the fabrication or assembly steps in the manufacture of an item. You can track costs and charge time by operation.</p> <p>In bills of material, this number designates the routing step in the fabrication or assembly process that requires a specified component part. You define the operation sequence after you create the routing for the item. The Shop Floor Control system uses this field in the backflush/preflush by operation process.</p> <p>In engineering change orders, this number is used to sequence the assembly steps for the engineering change.</p> <p>Skip To fields allow you to enter an operation sequence that you want to begin the display of information.</p> <p>You can use decimals to add steps between existing steps. For example, use 12.5 to add a step between steps 12 and 13.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This is the sequence number of the routing step on the work order. You must enter this number.</p>
T H	<p>A code to indicate the type of time entered. Valid codes are:</p> <ul style="list-style-type: none"> <li>1 Run Labor Hours</li> <li>2 Setup Labor Hours</li> <li>3 Machine Hours</li> <li>4 Quantities Completed</li> <li>5 Quantities Scrapped</li> <li>9 Miscellaneous (piece rate bonus and so forth)</li> </ul>
Hours	<p>The number of hours associated with each transaction.</p>
Quantity	<p>The number of units committed for shipment in Sales Order Entry, using either the entered or the primary unit of measure defined for this item.</p> <p>In the Manufacturing system and Work Order Time Entry, this field can indicate completed or scrapped quantities. The quantity type is determined by the type code entered.</p>
St	<p>A user defined code (31/OS) that identifies the current status of a work order or engineering change order as the operation steps in the routing are completed.</p>

## Recording Component Scrap



From Shop Floor Control (G31), choose Daily Order Preparation — Discrete

From Daily Order Preparation (G3111), choose Component Scrap

When you report the quantity of component material scrapped, and you run Journal Entries for Work in Process or Completions, the program calculates the new A2 cost value for the parent. If the amount of the scrapped material differs from the estimated scrap amount on the bill of material, this difference updates the amount of the actual variance.

### See Also

- *Recording Component Scrap (P31116) in the Shop Floor Control Discrete Manufacturing Guide*

### ▶ To record component scrap

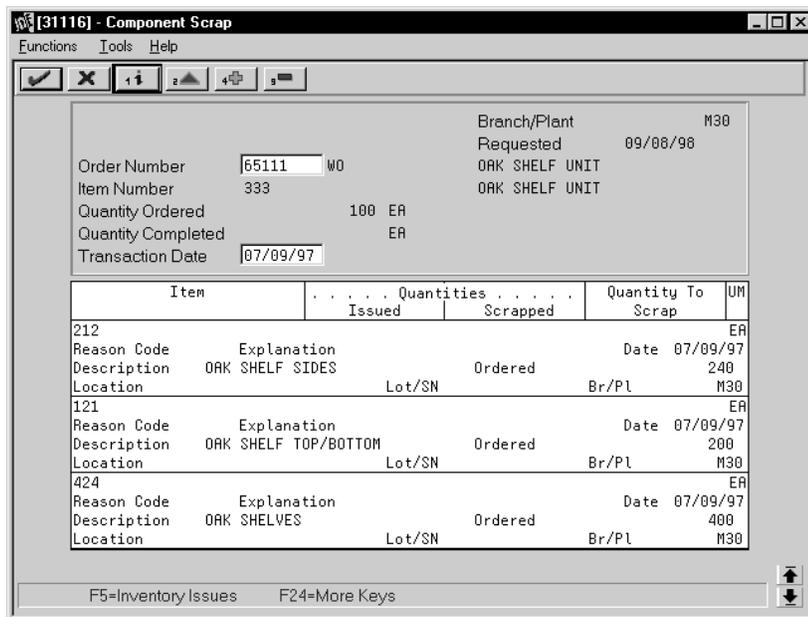
#### On Component Scrap

Item	Quantities		Quantity To	UM
	Issued	Scrapped	Scrap	
212				EA
121				EA
424				EA
444				EA
123				EA

10. Review the following fields:

- Quantity Ordered
- Quantity Completed

- Ingredient
  - Quantities Issued
  - Quantities Scrapped
11. Complete the following field:
    - Quantity to Scrap
  12. Complete the following optional fields:
    - Unit of Measure
    - Transaction Date
  13. Access the detail area.



The detail area is only accessible if you have already issued parts to the work order.

14. Complete the following optional fields:
  - Reason Code
  - Explanation
  - Date

Field	Explanation
Quantity Ordered	The quantity of units affected by this transaction. ..... <i>Form-specific information</i> ..... The work order quantity.

<b>Field</b>	<b>Explanation</b>
Quantity Completed	<p>The number of units committed for shipment in Sales Order Entry, using either the entered or the primary unit of measure defined for this item.</p> <p>In the Manufacturing system and Work Order Time Entry, this field can indicate completed or scrapped quantities. The quantity type is determined by the type code entered.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The quantity completed on this work order to date.</p>
Transaction Date	<p>The date that an order was entered into the system. This date determines which effective level that the system uses for inventory pricing.</p>
Item Number	<p>A number that the system assigns to an item. It can be in short, long, or 3rd item number format.</p> <p>..... <i>Form-specific information</i> .....</p> <p>These are the components used on this work order.</p>
Scrapped	<p>The number of units canceled in Sales Order or Work Order Processing, using either the entered or the primary unit of measure defined for this item.</p> <p>In manufacturing, this can also be the number of units scrapped to date.</p>
Reason Code	<p>A user defined code (system 42/type RC) that explains the purpose for a transaction. For example, you can indicate the reason that you are returning items, such as the goods were damaged in shipment or too many goods were shipped.</p> <p>..... <i>Form-specific information</i> .....</p> <p>A user defined code (system 41, type RC) that indicates the reason for the quantity scrapped at this operation.</p>
Explanation	<p>This text identifies the reason that a transaction occurred.</p>

### What You Should Know About

- Quantities Issued field**      The quantity of a component that has been issued to date.
- Quantity to Scrap field**      The quantity of a component that is being scrapped on this work order.

## Processing Options for Component Scrap

DEFAULT FORMAT:

1. Enter a '1' for Item Number entry. \_\_\_\_\_  
Blanks will default to Work Order  
Number entry.

DEFAULT VALUES:

2. Item Ledger Transaction date. \_\_\_\_\_  
(Blanks will default to the  
current date).

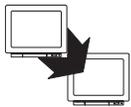
3. Reason Code. \_\_\_\_\_

4. Enter the document type associated  
with the Component Scrap  
Transaction. \_\_\_\_\_

SERIAL NUMBER PROCESSING:

5. Enter the Document type used for  
Serial Number Issues. If left blank  
'IM' will default. \_\_\_\_\_

## Recording Completions to Work Orders



From Shop Floor Control (G31), choose Daily Order Reporting — Discrete

From Daily Order Reporting — Discrete (G3112), choose Full Completion

When you finish production of a work order on the shop floor, you must record the completions to inventory. These transactions update records in the Inventory Management system. You can record completions in the following ways:

- Super backflushing
- Partial completion
- Full completion
- Backflushing at completion

When you record completions to a work order, you create:

- One source of an actual variance, if the cost of materials and labor reported differs from the cost of materials and labor as specified on the work order parts list and routing instructions
- Unaccounted units in the Work Order Master table

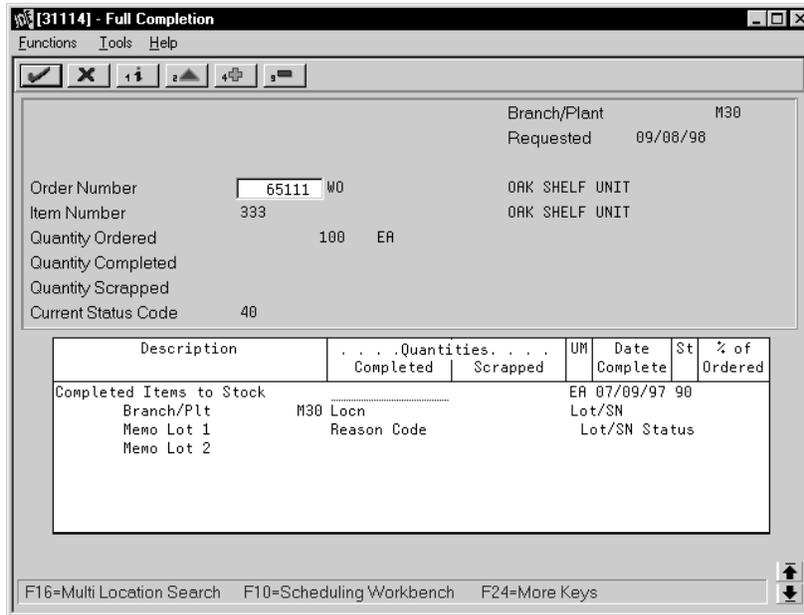
For example, to understand its effect on manufacturing accounting, record a full completion.

See Also

- *Completing Work Orders (P31114) in the Shop Floor Control Discrete Manufacturing Guide*

► **To record completions to work orders**

On Full Completion



Complete the following fields:

- Order Number
- Quantity Completed
- Quantity Scrapped
- Date Complete
- Work Order Status

Field	Explanation
Scrapped	The number of units canceled in Sales Order or Work Order Processing, using either the entered or the primary unit of measure defined for this item.  In manufacturing, this can also be the number of units scrapped to date.

<b>Field</b>	<b>Explanation</b>
Completed Date	The date the work order or engineering change order is completed or canceled.
St	A user defined code (00/SS) that describes the status of a work order or engineering change order. Any status change from 90 thru 99 automatically updates the date completed.



### Exercises

See the exercises for this chapter.

# Create Journal Entries

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## Creating Journal Entries

You create journal entries for work in process (issues, labor entry, and machine run time), completions, and manufacturing variances as the first step towards posting these transactions to the general ledger.

To create journal entries for shop order transactions (from work orders and rate schedules), complete the following tasks:

- Create journal entries for work in process or completions
- Review variances
- Create journal entries for variances
- Create journal entries for bulk manufacturing gains and losses
- Review summarized work orders

If you have extra costs on purchased items, and you want to calculate their costs separately, you need to understand purchase price variance and material burden cost.

### See Also

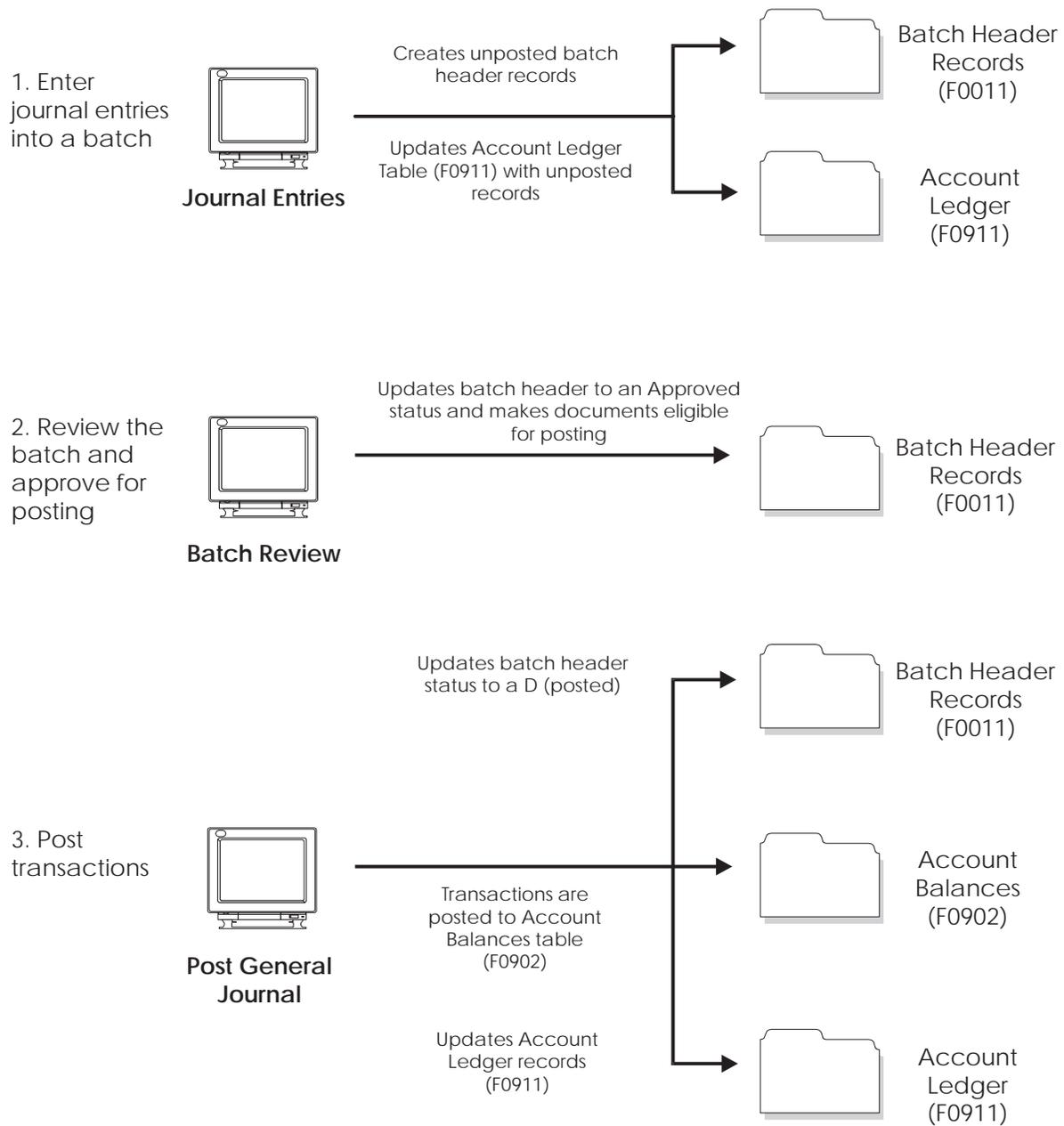
- *Appendix C — Purchase Price Variance*

### Journal Entries and the Three-Tier Process

When you enter daily journal transactions, you are performing the first of three steps in the J.D. Edwards three-tier process. This process is used throughout all J.D. Edwards entry programs and includes the following steps:

1. Entering transactions into a batch
2. Reviewing and approving the batch for posting
3. Posting the batch transactions

The following graphic illustrates the three-tier process.



Journal entries can occur in two ways:

- Manually, when you enter transactions through the General Accounting system, such as:
  - Accruals
  - Adjustments
  - Reclassifications

- Automatically, when the Journal Entries for Work in Process or Completions program generates journal entries based on another system's transactions, such as:
  - Manufacturing Accounting (variances)
  - Shop Floor Control

In the Manufacturing Accounting system, you use programs to create journal entries for various types of shop floor activity, including:

- Material issues
- Labor and machine reporting
- Completions
- Scrap
- Variances
  - Engineering
  - Planned
  - Material usage (actual)
  - Labor efficiency (actual)
  - Other (volume)

### Detail and Summary Journal Entries

You can enter detail or summary entries for both debit and credit journal entry transactions. Use the object portion of the account number to control the level of detail of your journal entries.

#### Detail Journal Entries

To enter detail journal entries for a work order by cost component, enter a different object account number for each cost component.

For example:

Cost Component	Business Unit	Account Number
A1	M30	1341
B1	M30	1342
B2	M30	1343

#### Summary Journal Entries

To summarize the cost components for an item on a work order into a single journal entry, enter the costs with the same object account number.

For example:

Cost Component	Business Unit	Account Number
A1	M30	1340
B1	M30	1340
B2	M30	1340

In addition, you can set processing options to:

- Summarize material issues (document type IM) by account number within a work order. There is one journal entry for each unique combination of account number and work order number.
- Summarize all journal entries by account number across work orders. There is one entry for the batch for each account. The entry is the sum of all work order transactions for each account by document type.
- Print a summarized Accounting Transaction report.

If you use summarized journal entries, the program batches the appropriate work orders and then assigns a new work order number to the batch. This summarized work order number appears on inquiry forms and reports, but does not refer to an actual work order.

## Creating Journal Entries for Work in Process or Completions



From Shop Floor Control (G31), choose Daily Manufacturing Accounting

From Manufacturing Accounting (G3116), choose Work in Process or Completions

Journal Entries for Work in Process or Completions creates journal entries for shop floor activity. You can report transactions for material issues, completions, and labor and machine hours reported against a work order.

This program locates unaccounted units in the Parts List table, Routing Instructions table, and Work Order Master table, and creates journal entries for them. The program then purges the unaccounted units.

This program also updates information in the Work Order Variances table (F3102), which Journal Entries for Variances uses to create journal entries for transactions with variances.

This program uses the following AAI tables to match inventory and cost transactions to general ledger accounts.

<b>3110 Credit inventory, raw materials/subassemblies</b>	Moves inventory cost from inventory during issue reporting. Not used by variance accounting.
<b>3120 Debit/credit work in process</b>	Moves inventory cost to WIP during inventory issue and shop hours report. Also moves inventory from WIP during inventory completion reporting.
<b>3130 Debit inventory, subassemblies/finished goods</b>	Moves inventory cost to inventory during the completion reporting. Not used by variance accounting.
<b>3401 Credit accruals</b>	Moves shop hour cost to accruals during shop hours reporting. Not used by variance accounting.

The system uses the following data to match the transaction to the AAI account:

- Work order type for the AAI.
- Company number associated with the work order or component branch/plant. If the system does not find a match, it uses 00000.
- Document type associated with the transaction.
- G/L category code for the transaction item. If the system does not find a match, it uses \*\*\*\* (four asterisks).
- Cost component.
- Branch/plant.

31802	J.D. Edwards & Company										Page . . . . 1
	Manufacturing WIP Journal Entries										Date . . . . 2/21/98
	for Completed Work Orders										
	Status Equal to 95										
Batch Number	Account Number	G/L Date	AAI Numb	Do Ty	G/L Cat	Cost Type	Document Number	Or Ty	Amount	Error Messages	
122764		02/21/98								No Errors - Batch Ready for G/L Post	

# Product Costing and Manufacturing Accounting

31803 J.D. Edwards & Company Page 1  
 Batch Type - 0 Manufacturing WIP Journal Entries Date 4/03/98  
 Batch Number - 129172 for Work Orders in Process  
 Batch Date - 04/03/98 Status Less Than 95  
 Report Mode - Summarize by Acct. across WO's  
 J/E Mode - Summarize by Acct. across WO's

G/L RECAP (Summarized by Account)

Do Ty	Document Ty	Or Date	G/L Date	Co	Account Description Explanation	G/L Account Subldgr-Ty	Debit	Amounts Credit	LT
IM	135634	WO	06/30/98	00200	Material Material Charged To W.O.'s Summarized W.O.'s	M30.1710.A1	3,416.28		AA
IM	135634	WO	06/30/98	00200	Material Material Charged To W.O.'s Summarized W.O.'s	M30.1510.A1		3,416.28-	AA
IH	135634	WO	06/30/98	00200	Outside Ops Labor Charged To W.O.'s Summarized W.O.'s	M30.1710.D1	67.05		AA
IH	135634	WO	06/30/98	00200	Labor Labor Charged To W.O.'s Summarized W.O.'s	M30.1720.B1	59.86		AA
IH	135634	WO	06/30/98	00200	Variable Labor Labor Charged To W.O.'s Summarized W.O.'s	M30.1730.C3	44.18		AA
IH	135634	WO	06/30/98	00200	Fixed Labor Labor Charged To W.O.'s Summarized W.O.'s	M30.1730.C4	36.82		AA
IH	135634	WO	06/30/98	00200	Other Charges Labor Charged To W.O.'s Summarized W.O.'s	M30.1740.X	254.55		AA
IH	135634	WO	06/30/98	00200	R&D Labor Charged To W.O.'s Summarized W.O.'s	M30.1740.X5	.30		AA
IH	135634	WO	06/30/98	00200	Accrued Payroll Labor Charged To W.O.'s Summarized W.O.'s	200.4205		59.86-	AA
IH	135634	WO	06/30/98	00200	Actual Burden Clearing Accoun Labor Charged To W.O.'s Summarized W.O.'s	200.4333		335.85-	AA
IH	135634	WO	06/30/98	00200	Other Accrued Expenses Labor Charged To W.O.'s Summarized W.O.'s	200.4420		67.05-	AA
IC	135634	WO	06/30/98	00200	Material Completed W.O.'s To Inventory Summarized W.O.'s	M30.1510.A1	3,332.07		AA
IC	135634	WO	06/30/98	00200	Material/Scrap Completed W.O.'s To Inventory Summarized W.O.'s	M30.1510.A2	95.76		AA
IC	135634	WO	06/30/98	00200	Outside Operations Completed W.O.'s To Inventory Summarized W.O.'s	M30.1510.D1	67.05		AA
IC	135634	WO	06/30/98	00200	Direct Labor Completed W.O.'s To Inventory Summarized W.O.'s	M30.1520.B1	55.92		AA
IC	135634	WO	06/30/98	00200	Setup Labor Completed W.O.'s To Inventory Summarized W.O.'s	M30.1520.B2	6.69		AA
IC	135634	WO	06/30/98	00200	Labor Efficiency Completed W.O.'s To Inventory Summarized W.O.'s	M30.1520.B4	12.99		AA

## Configured Items

After the Process Work Orders program establishes frozen standard costs for configured items, journal entries for configured items are created in the same way as for non-configured items.

## See Also

- *Reviewing Manufacturing AAls (P40901)*

## Processing Options for Journal Entries for Work in Process or Completions

1. Enter the G/L Date. If left blank, the current date will be used. \_\_\_\_\_

2. Enter a '1' to create journal entries. If left blank, 'Proof' mode is assumed. \_\_\_\_\_

## JOURNAL ENTRY SUMMARIZATION:

3. Enter a '1' to summarize Material Issues by Account within a document. \_\_\_\_\_

4. Enter a '1' to summarize by Account ACROSS documents. WARNING: This option will reduce the number of journal entries. See Helps. \_\_\_\_\_

## REPORT OPTIONS:

5. Enter a '1' to print an Accounting Journal. \_\_\_\_\_

6. Enter a '1' to print subtotals by Document Type and Document. \_\_\_\_\_

## REPORT SUMMARIZATION:

7. Enter a '1' to summarize Material Issues within a document. \_\_\_\_\_

8. Enter a '1' to summarize by Account ACROSS documents. WARNING: This option will reduce the report output. See Helps. \_\_\_\_\_

9. Enter a '1' to default the document number into the Subledger field. \_\_\_\_\_

10. Enter the new Status Code for the document. If left blank, the status will not be changed. \_\_\_\_\_

11. Enter the Document Type associated with Inventory Scrap. \_\_\_\_\_

12. Enter the Document Type to default for Shop Floor Activity. (NOTE: This will only be used if no Document Type exists in the Routing file, F3112.) \_\_\_\_\_

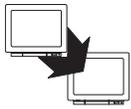
### What You Should Know About Processing Options

**Document types for shop floor activity (12)**

If you use routings, the program automatically assigns a document type of IH to transactions on extra cost components.

If you do not use routings, enter a document type here. This processing option ensures that transactions on extra cost components do not have a blank document type.

### Reviewing Variances



From Shop Floor Control (G31), choose Daily Manufacturing Accounting

From Manufacturing Accounting (G3116), choose Variance Inquiry

Review variances to identify errors before you run Journal Entries for Variances. For example, if you did not issue parts to a work order, a large actual variance appears. You can issue the parts, rerun Journal Entries for Work in Process or Completions, and review the variances again. After you correct any errors, run Journal Entries for Variances.

Variance Inquiry displays the costs and variances associated with a work order. You can view variances by comparing amounts calculated in one mode to amounts calculated in another mode. Modes include:

- Frozen
- Current
- As planned
- Actual
- Completed

Variance Inquiry inserts defaults of 1 and 2 into the column modes when you first access the program. These defaults compare frozen costs with current costs, but you can change the values to compare different modes. The program uses frozen standard costs from the Cost Components table (F30026). Current amounts are based on the current bills of material, routings, and constants. Both frozen and current amounts are extended by the work order quantity.

### What You Should Know About

**Configured Items**

If you manufacture configured items, no engineering variance exists because there is no bill of material.

**Process Industry Accounting**

Small engineering variances can appear on Variance Inquiry because the frozen amounts differ slightly from the current amounts. However, Journal Entries for Variances rounds the amounts, and no variances print on the report.

Amounts are calculated in the process industry as follows:

- Frozen amounts — Frozen amounts are based on the cost of the process, from the Cost Components table (F30026).
- Actual amounts — The actual costs of the ingredients issued are added to calculate the actual A1 cost of the process.
- Completed amounts — For each cost component, the completed costs of the co- and by-products are added to calculate the completed cost of the process for that cost component. For example, the completed B1 cost of all co- and by-products are added. The sum of the B1 costs is the completed B1 cost of the process.

▶ **To review variances**

On Variance Inquiry

The screenshot shows a software window titled '3102 - Variance Inquiry'. At the top, there are menu options: 'Functions', 'Tools', and 'Help'. Below the menu is a toolbar with a checkmark and an 'X' icon. The main area contains a form with the following fields:

- Order Number: 65111
- WO OAK SHELF UNIT
- Quantity Ordered: 100
- EA
- Quantity Completed: EA

Below the form is a 'Data' section with a table. The table has the following columns: Process/Item, Cost, P/C, Frozen Amount, Current Amount, and Variance Amount. The data rows are as follows:

Process/Item	Cost	P/C	Frozen Amount	Current Amount	Variance Amount
333	A1	P	161.7892	161.7892	
333	A2	P	5.2560	5.2560	
333	B1	P	.3728	3.7275	3.3547-
333	B2	P		.0446	.0446-
333	B3	P			
333	B4	P	.0867	.8663	.7796-
333	C1	P			
333	C2	P			
333	C3	P	.2756	2.7830	2.5074-
333	C4	P	.2297	2.3192	2.0895-
333	D1	P	4.7800	4.7800	
333	X2	P	.8526	.8526	
333	X3	P	.0330	.0330	
333	X5	P	.0200	.0200	
Totals			189.7796	198.5554	8.7758-

At the bottom of the window, there is a status bar with the text: 'F11=Inv Issue F13=Production status F15=Order Header F24=More Keys'.

1. Complete the following fields:

- Column 1 Mode
- Column 2 Mode
- Order Number

2. Review the following fields:

- Quantity Ordered
- Quantity Completed
- Item
- Cost
- Parent/Component
- Variance Amount

Depending on the values you entered for Column 1 Mode and Column 2 Mode, two of the following amounts appear:

- Frozen Amount
- Current Amount
- As Planned Amount
- Actual Amount
- Completed Amount

---

<b>Field</b>	<b>Explanation</b>
Column 1 Mode	Determines which amounts the system displays in the first column on the data table for the work order. Valid codes are: 1 Frozen (Standard) Cost 2 Current Cost 3 Planned Cost 4 Actual Cost 5 Completed Cost (includes scrapped)  The difference (variance) between column 1 and column 2 amounts displays in the Variance Amount (3rd) column.

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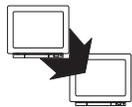
Field	Explanation
Column 2 Mode	<p>Determines which amounts the system displays in the second column on the data table for the work order. Valid codes are:</p> <ul style="list-style-type: none"> <li>1 Frozen (Standard) Cost</li> <li>2 Current Cost</li> <li>3 Planned Cost</li> <li>4 Actual Cost</li> <li>5 Completed Cost (includes scrapped)</li> </ul> <p>The difference (variance) between column 1 and column 2 amounts displays in the Variance Amount (3rd) column.</p>
Quantity Ordered	<p>The quantity of units affected by this transaction.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The original order quantity for the work order.</p>
Quantity Completed	<p>The units completed for the work order.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The sum of units completed and scrapped on the work order.</p>
Process/Item	<p>A number that the system assigns to an item. It can be in short, long, or 3rd item number format.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This column contains either the number assigned to the item on the work order or a brief description of the item.</p>
Cost	<p>This code designates each element of cost for an item. An example of the coding structure is:</p> <ul style="list-style-type: none"> <li>A1 Purchased raw material</li> <li>B1 Direct labor routing sheet rollup</li> <li>B2 Setup labor routing sheet rollup</li> <li>C1 Variable burden routing sheet rollup</li> <li>C2 Fixed burden routing sheet rollup</li> <li>Dx Usually used for outside processing routing sheet rollup</li> <li>Xx Usually used for extra add-ons, such as electricity, water, and so forth</li> </ul> <p>The optional add-on computations usually operate with the type "X" extra add-ons. This cost structure allows you to use an unlimited number of cost components to calculate alternative cost rollups. The system then associates these cost components with one of six user defined summary cost buckets.</p> <p>..... <i>Form-specific information</i> .....</p> <p>This code indicates which cost element, or type of cost, the amounts are for.</p>

Field	Explanation
P/C	A code that indicates if the parent item number has a child item number associated with it. Valid codes are: Blank No relationship has been defined. P Parent number. C Child number. B Co-/By-Product

### See Also

- *Appendix B — Calculations for Variances*

## Creating Journal Entries for Variances



From Shop Floor Control (G31), choose Daily Manufacturing Accounting

From Manufacturing Accounting (G3116), choose Variances

Journal Entries for Variances creates detailed or summary journal entries for work order and rate schedule variances. These include engineering, planned, actual, and other variance transactions for the following items:

- Material issues
- Hours entry
- Material completions

The program generates an exceptions report that lists errors such as invalid account numbers. If no errors exist, the report states that the batch is error-free. However, this error check is not as comprehensive as the error check for the general ledger post process.

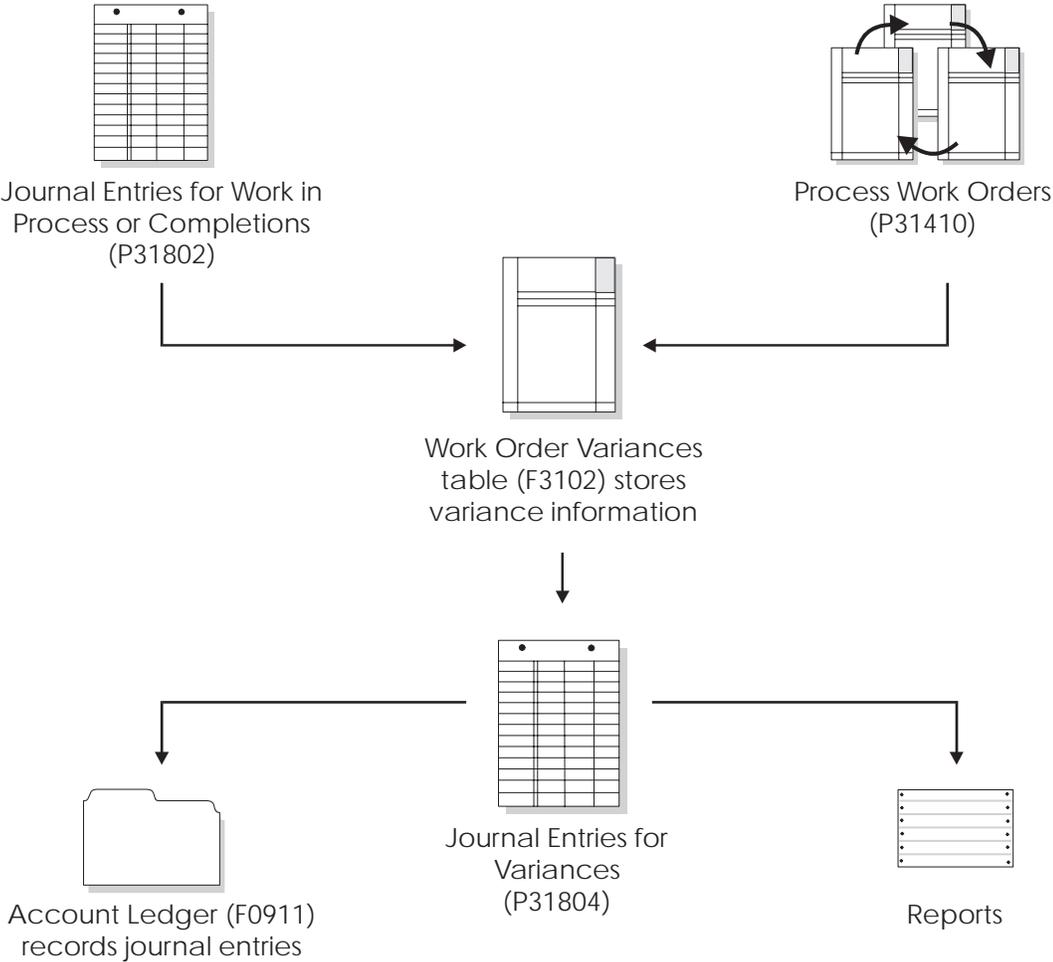
You can set processing options to:

- Indicate to which general ledger date to post entries
- Indicate the document type for the manufacturing variances
- Use the work order number as the subledger number
- Update the status of the work orders processed
- Run the program in proof or final mode
- Summarize journal entries
- Print an accounting journal report that details the journal entries

- Calculate the variances using either the:
  - Completed (plus scrapped) quantity, or
  - Ordered quantity

When you run this program in final mode, the system creates a batch of journal entries for posting to the general ledger.

The following graphic illustrates the flow of information when you run Journal Entries for Variances.



This program creates journal entries for variances using the following calculations.

<b>Engineering</b>	Standard (frozen) cost minus current cost Results from a change to the standard bill of material or standard routing.
<b>Planned</b>	Current cost minus planned cost Results from a change to the parts list or routing instructions, or from a shrink factor.
<b>Material usage (actual) Cost components A1 and A2</b>	Planned cost minus actual cost Results from over- or under-issues.
<b>Labor efficiency (actual) All cost components except A1 and A2</b>	Planned cost minus actual cost Results from having actual hours that differ from the standard hours.
<b>Other (to clear out WIP)</b>	Completed cost minus standard cost Results from doing a cost rollup in the middle of the cycle.

The program uses the following AAI tables to match inventory and cost transactions to general ledger accounts:

3120 Credit, WIP  
 3220 Debit Variances, Labor  
 3240 Debit Variances, Material  
 3260 Debit Variances, Planned  
 3270 Debit Variances, Engineered  
 3280 Debit, Other

The system uses the following data to match the transaction to the AAI account:

- Work order type for the AAI.
- Table number for the AAI. If the system does not find a match, it uses table 3280.

- Company number associated with the work order or component branch/plant. If the system does not find a match, it uses 00000.
- Document type associated with the transaction.
- G/L category code for the transaction item. If the system does not find a match, it uses \*\*\*\* (four asterisks).
- Cost component.

**Before You Begin**

- Run one or more available reports to review your production costs and variances. See *Reviewing World Writer Reports for Manufacturing Accounting*.

31804	J.D. Edwards & Company							Page - . . . . 3		
	Manufacturing Variance Journal Entries							Date - . . . . 4/03/98		
	for Completed Work Orders									
	Order Status EQ 96									
Batch		G/L	AAI Do	G/L	Cost	Document	Or			
Number	Account Number	Date	Numb	Ty	Cat	Type	Number	Ty	Amount	Error Messages
-----										
129173		04/03/98								No Errors - Batch Ready for G/L Post

# Product Costing and Manufacturing Accounting

31805 J.D. Edwards & Company Page 1  
 Batch Type - Manufacturing Variance Journal Entries Date 4/03/98  
 Batch Number - 129173 for Completed Work Orders  
 Batch Date - 04/03/98 Order Status EQ 96  
 Report Mode - Summarize by Acct. across WO's  
 J/E Mode - Summarize by Acct. across WO's

G/L Recap (Summarized by Account)

Do Ty	Document Ty	Or Date	G/L Co	Account Description Explanation	G/L Account Subldgr-Ty	Amounts Debit	Amounts Credit	LT
IV	135642	WO 04/03/98	00200	Direct Labor (Actual) Variance Calculated for W.O.'s Summarized Variances	M30.6076.B1	3.95		AA
IV	135642	WO 04/03/98	00200	Setup Labor (Actual) Variance Calculated for W.O.'s Summarized Variances	M30.6076.B2	8.92-		AA
IV	135642	WO 04/03/98	00200	Labor Eff (Actual) Variance Calculated for W.O.'s Summarized Variances	M30.6076.B4	12.99-		AA
IV	135642	WO 04/03/98	00200	Material (Actual) Variance Calculated for W.O.'s Summarized Variances	M30.6083.A1	84.21		AA
IV	135642	WO 04/03/98	00200	Scrap (Actual) Variance Calculated for W.O.'s Summarized Variances	M30.6083.A2	95.76-		AA
IV	135642	WO 04/03/98	00200	Var Labor (ENG) Variance Calculated for W.O.'s Summarized Variances	M30.6086.C3	1.34		AA
IV	135642	WO 04/03/98	00200	Fixed Labor (ENG) Variance Calculated for W.O.'s Summarized Variances	M30.6086.C4	1.12		AA
IV	135642	WO 04/03/98	00200	Var Labor (Actual) Variance Calculated for W.O.'s Summarized Variances	M30.6088.C3	2.52-		AA
IV	135642	WO 04/03/98	00200	Fixed Labor (Actual) Variance Calculated for W.O.'s Summarized Variances	M30.6088.C4	2.10-		AA
IV	135642	WO 04/03/98	00200	Setup Labor Variance Calculated for W.O.'s Summarized Variances	M30.6091.B2	2.23		AA
IV	135642	WO 04/03/98	00200	Material Variance Calculated for W.O.'s Summarized Variances	M30.1710.A1		84.21-	AA
IV	135642	WO 04/03/98	00200	Scrap Variance Calculated for W.O.'s Summarized Variances	M30.1710.A2		95.76	AA
IV	135642	WO 04/03/98	00200	Labor Variance Calculated for W.O.'s Summarized Variances	M30.1720.B1		3.95-	AA
IV	135642	WO 04/03/98	00200	Setup Variance Calculated for W.O.'s Summarized Variances	M30.1720.B2		6.69	AA
IV	135642	WO 04/03/98	00200	Labor Efficiency Variance Calculated for W.O.'s Summarized Variances	M30.1720.B4		12.99	AA
IV	135642	WO 04/03/98	00200	Variable Labor Variance Calculated for W.O.'s Summarized Variances	M30.1730.C3		1.18	AA
IV	135642	WO 04/03/98	00200	Fixed Labor	M30.1730.C4			

## See Also

- *Reviewing Manufacturing AAls (P40901)*

## Processing Options for Journal Entries for Variances

1. Enter the General Ledger Date. (Blanks defaults to the current date.) \_\_\_\_\_

### JOURNAL ENTRY SELECTIONS:

2. Enter a '1' to create Journal Entries. (Blanks assumes 'Proof Mode' and no journal entries will be created.) \_\_\_\_\_

3. Enter a '1' to summarize by Account ACROSS documents. WARNING: This option will reduce the number of journal entries. See Helps. \_\_\_\_\_

### REPORT SELECTIONS:

4. Enter a '1' to print an Accounting Journal. (Blanks will not print a Journal.) \_\_\_\_\_

5. Enter a '1' to print subtotals by Document. \_\_\_\_\_

6. Enter a '1' to summarize by Account ACROSS documents. WARNING: This option will reduce the report output. See Helps. \_\_\_\_\_

7. Enter a '1' to default the document Number into the Subledger Field. (Blanks will not default.) \_\_\_\_\_

8. Enter the Document Type associated with a Manufacturing Variances. \_\_\_\_\_

9. Enter the new Status Code for the document. (Leave blank if no change) \_\_\_\_\_

10. Over/Under completion :  
Enter a '1' to re-state standard, current and planned production costs based on completed + scrapped qty.  
Note : This will eliminate the variance caused by Over/Under completion. \_\_\_\_\_

11. Enter the Status value beyond which documents should not any additional activity.  
If blank '99' will be used. \_\_\_\_\_

## What You Should Know About Processing Options

**Work order status code (9)** If you run this program in proof mode, leave this processing option blank. If you enter a value, the status code is updated, even though the program is in proof mode.

## Creating Journal Entries for Bulk Manufacturing Gains and Losses



From Bulk Stock Management (G4150), choose Bulk Stock Reconciliations  
 From Bulk Stock Reconciliations (G41502), choose Calculate Gains/Losses

If you use bulk manufacturing and you indicated on the Work Center Master (F30006) that you want to calculate gains and losses, use this program to calculate the gains and losses. The program reads the Work Order Variances table (F3102) to calculate the total quantity issued and completed for a work center within a work order. The difference between the quantity issued and the quantity completed is the gain or loss for that work center. The program then writes a journal entry to the gain and loss account, and the offset to the manufacturing variance account for Other variances.

415141										Page	1	
Bulk Gain/Loss Exceptions										Date	12/31/98	
Batch Number	Account Number	G/L Date	AAI Num	Do Ty	G/L Cat	Cost Type	Document Number	Or Ty	Amount	Error Messages		
12345678	249.7513.A1	07/15/96	3280	IV	IN40	A1	12345678	WO	5.18	Account Number Invalid		

415142										Page	1
Gain/Loss Posting Report										Date	12/31/98
Do Ty	Document Ty	Or Ty	G/L Date	Co	Account Description	G/L Account Subldgr-Ty	Amounts		LT		
							Debit	Credit			
IV	12345678	WO	07/15/96	00249	Bulk Gains/Losses	249.9142	5.13		AA		
					Work Center	12345678 W					
					Process Lube Oil 1 Blending						
					Gain/Loss Quantity:	3 LT					
IV	12345678	WO	07/15/96	00249	Material Variance	249.7513.A1			5.13-	AA	
					Work Center	12345678 W					
					Process Lube Oil 1 Blending						
					Batch Total		5.13		5.13-		
					Report Total		5.13		5.13-		

### Processing Options for Bulk Manufacturing Gains/Losses

MODE OF PROCESSING:

- 1. Enter a '1' to execute the program in final mode. Default of blank will execute in proof mode - a report will be generated but no update will occur.

\_\_\_\_\_

JOURNAL ENTRY CREATION:

- 2. Enter a '1' to summarize the Journal Entries by account number. Default of blank will create detailed JE's.
- 3. Enter the date to be used for the G/L date. If left blank or invalid, today's date will be used.
- 4. Enter '1' to load the Work Order number into the subledger field. Blank will not load the WO number.
- 5. Enter the Document Type for the JE's.
- 6. Enter the Dreamwriter Version ID of the Journal Entry Server to use.

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\_\_\_\_\_

\_\_\_\_\_

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### Reviewing Summarized Work Orders



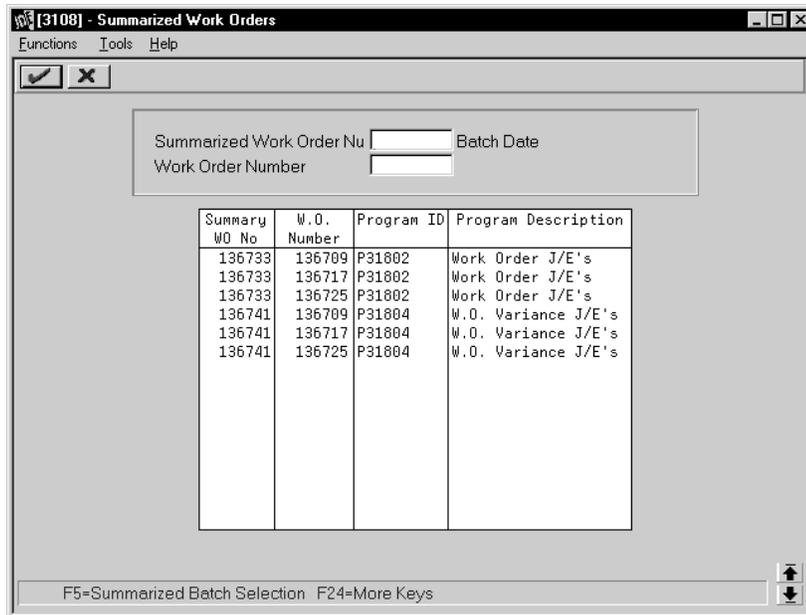
From Shop Floor Control (G31), choose Daily Manufacturing Accounting

From Manufacturing Accounting (G3116), choose Summarized Work Orders

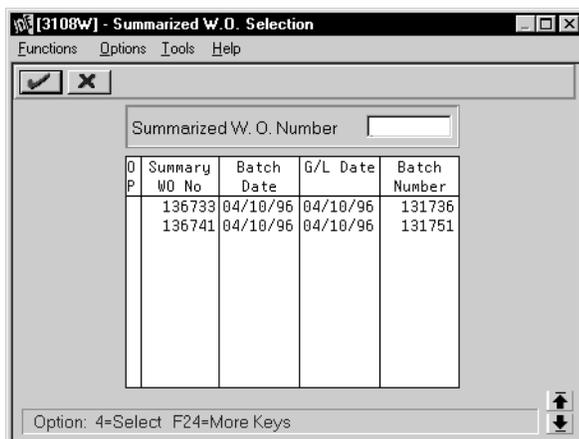
You can view which work orders were summarized into a particular batch.

► To review summarized work orders

On Summarized Work Orders



1. Complete one of the following fields:
  - Summary Work Order Number
  - Work Order Number
2. To locate the summarized work order number, access Summarized Batch Selection.



3. Summarized Work Order Selection displays summarized work orders, their batch dates, and their general ledger dates, in descending date order.

Choose a summarized work order and return to Summarized Work Orders.

4. On Summarized Work Orders, review the following fields:

- Summary Work Order Number
- Work Order Number
- Program ID
- Program Description

<b>Field</b>	<b>Explanation</b>
Summarized Work Order Number	The document number assigned as a batch work order number when you summarize manufacturing work order journal entries. The number indicates the work order into which the journal entries were summarized. The system writes this number to the DOCO field in the General Ledger (F0911).



### Exercises

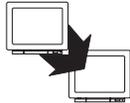
See the exercises for this chapter.



# Review General Ledger Batches

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## Reviewing General Ledger Batches



From Shop Floor Control (G31), choose Daily Manufacturing Accounting

From Manufacturing Accounting (G3116), choose G/L Review

After you generate journal entries, you review and approve them before posting them to the general ledger. This review is the second step in the J.D. Edwards three-tier process.

When you review G/L batches, you can:

- Review all or specific batches
- Review G/L batch detail
- Review the original journal entry document

Each batch of journal entries has one of the following status codes:

- Pending
- Approved
- Error

The status that the system assigns depends on how you set the management approval in the general accounting constants. If a batch has an error status, the system prevents it from posting.

The system updates information in the Batch Control (F0011) and the Account Ledger (F0911) tables.



If you change, void, or add transactions to a posted batch, the system automatically changes the batch status from posted to the default entry status of pending or approved. You must then repost the batch. The post only processes changed transactions.

### Before You Begin

- Verify that you have set up your general accounting system properly.
- Set the management approval in the general accounting constants for approving journal entries for posting. This depends on the workflow and responsibility controls you establish for your organization.

### See Also

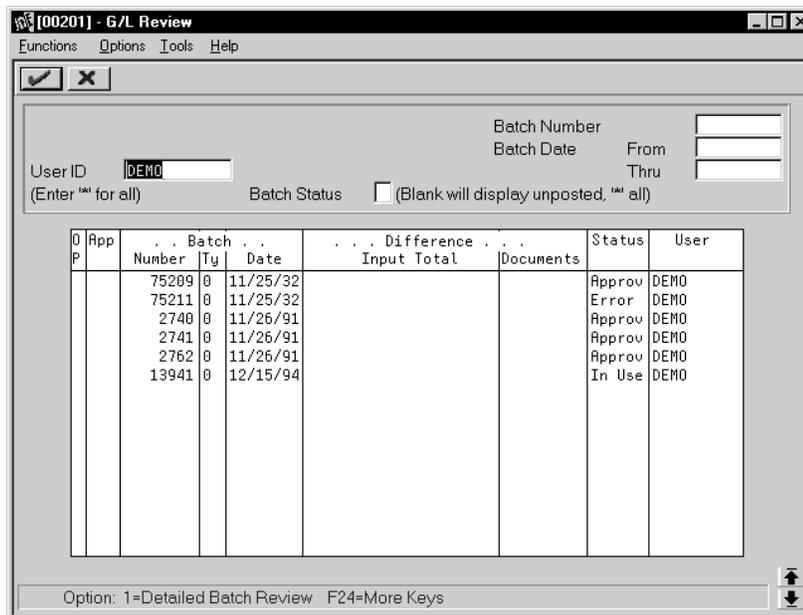
- *Creating Journal Entries (P31802)*
- *Reviewing Journal Entries (P00201)* in the *General Accounting I Guide*

**▶ To review all or specific G/L batches**

When you review all or specific journal entry batches, you can also:

- Approve a batch for posting (if allowed)
- Change the status of a batch
- Select a particular batch of journal entries to review the batch detail

On G/L Review



Review the following fields:

- Batch Number
- Batch Date From
- Batch Date Through
- User ID
- Batch Approved for Posting
- Batch Number
- Batch Type
- Batch Date
- Status
- User

Field	Explanation
Batch Number	A number that identifies a group of transactions that the system processes and balances as a unit. When you enter a batch, you can either assign a batch number or let the system assign it through Next Numbers. When you change, locate, or delete a batch, you must specify the batch number.
From:	The date of the batch. If you leave this field blank, the system date is used.
Thru:	The ending date of the range for the batches you want to display. If you specify a From date and leave the Thru date blank, the system displays all batches with that batch date and future batch dates.
User ID	For World, The IBM-defined user profile. For OneWorld, the creator of the version.
App	A code that indicates whether a batch is ready for posting. Valid codes are: <ul style="list-style-type: none"> <li>A     Approved, ready for posting.</li> <li>P     Pending approval. The batch will not post.</li> </ul> If the system constants do not specify manager approval, the system automatically approves batches that are not in error.
Ty	A code that indicates the system and type of entries for a batch. This is a user defined code (system 98, type IT).
Batch Date	The date for the batch. If this is an entry field and you leave it blank, the system supplies the current date.

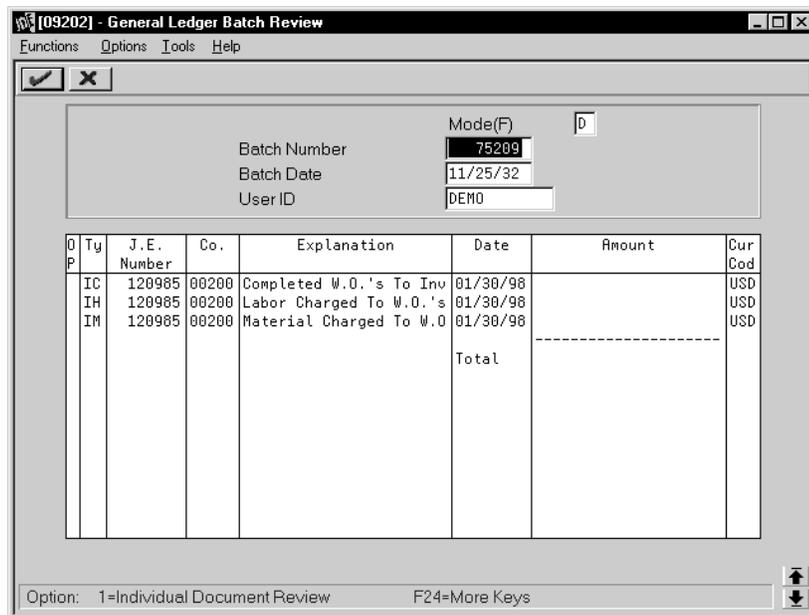
Field	Explanation
Batch Status	A user defined code (98/IC) that indicates the posting status of a batch. Valid codes are: blank Unposted batches that are pending approval or have a status of approved. A Approved for posting. The batch has no errors, is in balance, but has not yet been posted. D Posted. The batch posted successfully. E Error. The batch is in error. You must correct the batch before it can post. P Posting. The system is posting the batch to the general ledger. The batch is unavailable until the posting process is complete. If errors occur during the post, the batch status is changed to E (error). U In use. The batch is temporarily unavailable because someone is working with it.

► **To review G/L batch detail**

You can review detailed batch header information and general journal entry information (one line per document) for a batch. You can also select a specific journal entry from the batch to review or revise.

On G/L Review

1. Access General Ledger Batch Review.



2. On General Ledger Batch Review, review the following fields:

- Mode
- Type
- Journal Entry Number
- Company
- Explanation
- G/L Date
- Amount
- Currency Code

Field	Explanation
Mode(F)	<p>This code indicates whether amounts are in the domestic currency of the company that the accounts are associated with, or in the foreign currency of the transaction. If Detailed Currency Restatement is being used, amounts restated from the domestic currency of the company that the accounts are associated with are shown. Codes are:</p> <p style="margin-left: 40px;">D     Domestic F     Foreign</p>
Ty	<p>A user defined code (system 00/type DT) that identifies the origin and purpose of the transaction.</p> <p>J.D. Edwards reserves several prefixes for document types, such as vouchers, invoices, receipts, and timesheets.</p> <p>The reserved document type prefixes for codes are:</p> <p style="margin-left: 40px;">P     Accounts payable documents R     Accounts receivable documents T     Payroll documents I     Inventory documents O     Order processing documents J     General ledger/joint interest billing documents</p> <p>The system creates offsetting entries as appropriate for these document types when you post batches.</p>
Co	<p>A number that, along with document number, document type and G/L date, uniquely identifies an original document, such as invoice, voucher, or journal entry.</p> <p>For World, if you are using the Next Numbers by Company/Fiscal Year feature, the Automatic Next Numbers program (X0010) uses the document company to retrieve the correct next number for that company.</p> <p>If two or more original documents have the same document number and document type, you can use the document company to locate the desired document.</p>

<b>Field</b>	<b>Explanation</b>
Explanation	A description, remark, explanation, name, or address.
G/L Date	A date that identifies the financial period to which the transaction will be posted. The company constants table for general accounting specifies the date range for each financial period. You can have up to 14 periods. Generally, period 14 is for audit adjustments.
Amount	The gross amount of an invoice or voucher pay item, including tax but not including discounts. The total amount for a voucher or invoice is the accumulation of the open pay items. The accounting distributions must balance to the net amount of a voucher or invoice, not to the gross amount.
Cur Cod	A code that indicates the currency of a customer's or a supplier's transactions.  ..... <i>Form-specific information</i> .....  This is the currency code of the transaction if the form is displaying foreign amounts (F in the Mode field). It is the currency code of the company if the form is displaying domestic amounts (D in the Mode field).

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**► To review the original journal entry document**

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You can review the original journal entry document. You can also make changes to the accounting distributions, as well as add a new transaction to an existing batch.

On G/L Review

1. Access General Ledger Batch Review.
2. On General Ledger Batch Review, access Journal Entries.

**[09101] - Journal Entries**

Functions Tools Help

Mode (F)  Model (Y)   
 Reverse or Void (R/V)   
 Base Co. Currency USD

Document Type   
 Document Number/Co   Explanation   
 G/L Date  Batch Number   
 Remaining  Currency Code  Ref. 1   
 Exchange Rate   
 Skip to Line

Account No.	Amount	Explanation 2	P
M10.1510.A1	16,278,075.20	F0006-GN1	
M10.1520.B1	1,939.90	F0006-GN1	
M10.1520.B3	1,358.50	F0006-GN1	
M10.1520.B4	96.90	F0006-GN1	
M10.1535.C2	2,717.00	F0006-GN1	
M10.1533.C4	4,075.50	F0006-GN1	
M10.1710.A1	16,278,075.20	F0006-GN1	
M10.1720.B1	1,939.90	F0006-GN1	
M10.1720.B3	1,358.50	F0006-GN1	
M10.1720.B4	96.90	F0006-GN1	

F5=Make New Model F6=% JE F15=Model JE's F13=Acct Master F24=More Keys

3. On Journal Entries, review the following fields:

- Account Number
- Amount
- Explanation 2

4. Access the detail area.

**[09101] - Journal Entries**

Functions Tools Help

Mode (F)  Model (Y)   
 Reverse or Void (R/V)   
 Base Co. Currency USD

Document Type   
 Document Number/Co   Explanation   
 G/L Date  Batch Number   
 Remaining  Currency Code  Ref. 1   
 Exchange Rate   
 Skip to Line

Account No.	Amount	Explanation 2	P
M10.1510.A1	16,278,075.20	F0006-GN1	
Units 19,000.00 UM Subledger 00120985 Type W G/L Date 01/30/98 Reference 2 Asset ID P.O. Srvc 03/16/95 LT RR Desc Material Ln 1.0 Batch 75209 MA Code 1 MA Type 1 MA Code 2 MA Type 2			
M10.1520.B1	1,939.90	F0006-GN1	
Units 19,000.00 UM Subledger 00120985 Type W G/L Date 01/30/98 Reference 2 Asset ID P.O. Srvc 03/16/95 LT RR Desc Direct Labor Ln 2.0 Batch 75209 MA Code 1 MA Type 1 MA Code 2 MA Type 2			

F5=Make New Model F6=% JE F15=Model JE's F13=Acct Master F24=More Keys

5. Review the following fields:

- Units
- Subledger
- Type
- G/L Date
- Ledger Type

Field	Explanation
Account No	<p>A field that identifies an account in the general ledger. You can use one of the following formats for account numbers:</p> <ul style="list-style-type: none"> <li>• Standard account number (business unit.object.subsidiary or flexible format)</li> <li>• Third G/L number (maximum of 25 digits)</li> <li>• 8-digit short account ID number</li> <li>• Speed code (not currently available in OneWorld)</li> </ul> <p>The first character of the account indicates the format of the account number. You define the account format in the General Accounting Constants program.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Depending on your general accounting constants, you might be able to accept an invalid account number. Insert an &amp; (ampersand) as the first character in front of the invalid account number. For example, &amp;90.1107</p>
Amount	<p>A number that identifies the actual amount. Type debits with no sign or a plus sign (+). Type credits with a minus sign (-) either before or after the amount. You can use decimals, dollar signs, and commas. The system ignores non-significant symbols.</p> <p>..... <i>Form-specific information</i> .....</p> <p>For a percent journal entry or a model for percent journal entries, enter the percent to be distributed to the account without a % (percent) sign. For example, enter 25.75 for 25.75%. The system will calculate the amount as a percentage of the amount to distribute.</p> <p>When you use the Journal Entry format with separate debit and credit columns, omit signs. Instead, enter the amount in the appropriate column (debit or credit).</p>

Field	Explanation
Explanation 2	<p>A name or remark that describes an element in the J.D. Edwards systems.</p> <p>..... <i>Form-specific information</i> .....</p> <p>An optional description of the transaction or a remark. Press the key that is set up to act as a duplication key to copy the description from the preceding line.</p>
Units	<p>The quantity of something that is identified by a unit of measure. For example, it can be the number of barrels, boxes, cubic yards, gallons, hours, and so on.</p>
Subledger	<p>A code that identifies a detailed auxiliary account within a general ledger account. A subledger can be an equipment item number, an address book number, and so forth. If you enter a subledger, you must also specify the subledger type.</p>
Type	<p>A user defined code (00/ST) that is used with the Subledger field to identify the subledger type and subledger editing. On the User Defined Codes form, the second line of the description controls how the system performs editing. This is either hard-coded or user defined. For example:</p> <ul style="list-style-type: none"> <li>A    Alphanumeric field, do not edit</li> <li>N    Numeric field, right justify and zero fill</li> <li>C    Alphanumeric field, right justify and blank fill</li> </ul>
G/L Date	<p>A date that identifies the financial period to which the transaction is to post. The company constants table for general accounting specifies the date range for each financial period. You can have up to 14 periods. Generally, period 14 is for audit adjustments.</p>
Ledger Type	<p>A user defined code (system 09/type LT) that specifies the type of ledger, such as AA (Actual Amount), BA (Budget Amount), or AU (Actual Units). You can set up multiple, concurrent accounting ledgers within the general ledger to establish an audit trail for all transactions.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The default ledger type is AA.</p>



# Post to the General Ledger

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## Posting to the General Ledger

Update your account balances with amounts from journal entries by posting the journal entries to the general ledger. After posting, the system provides several reports that you can use to view the journal entries that have been posted.

Complete the following tasks:

- Post manufacturing journal entries
- Review the Posting Edit report
- Review the Posting Journal report
- Review the Item Ledger/Account Integrity report
- Review World Writer reports

## Posting Manufacturing Journal Entries



From Manufacturing Systems (G3), choose Manufacturing Accounting  
From Manufacturing Accounting (G3116), choose Post General Journal

After you enter, review, and approve journal entries, use Post General Journal to post the journal entries to the general ledger.

You can only run one post at a time. You must ensure that all post menu selections are routed to the same job queue and that the job queue only allows one job to process at a time.



J.D. Edwards strongly recommends that you do not customize the post program.

The post is the third step of the J.D. Edwards three-tier process. The post itself consists of two phases, the pre-post process and the post process.

### Pre-Post Process

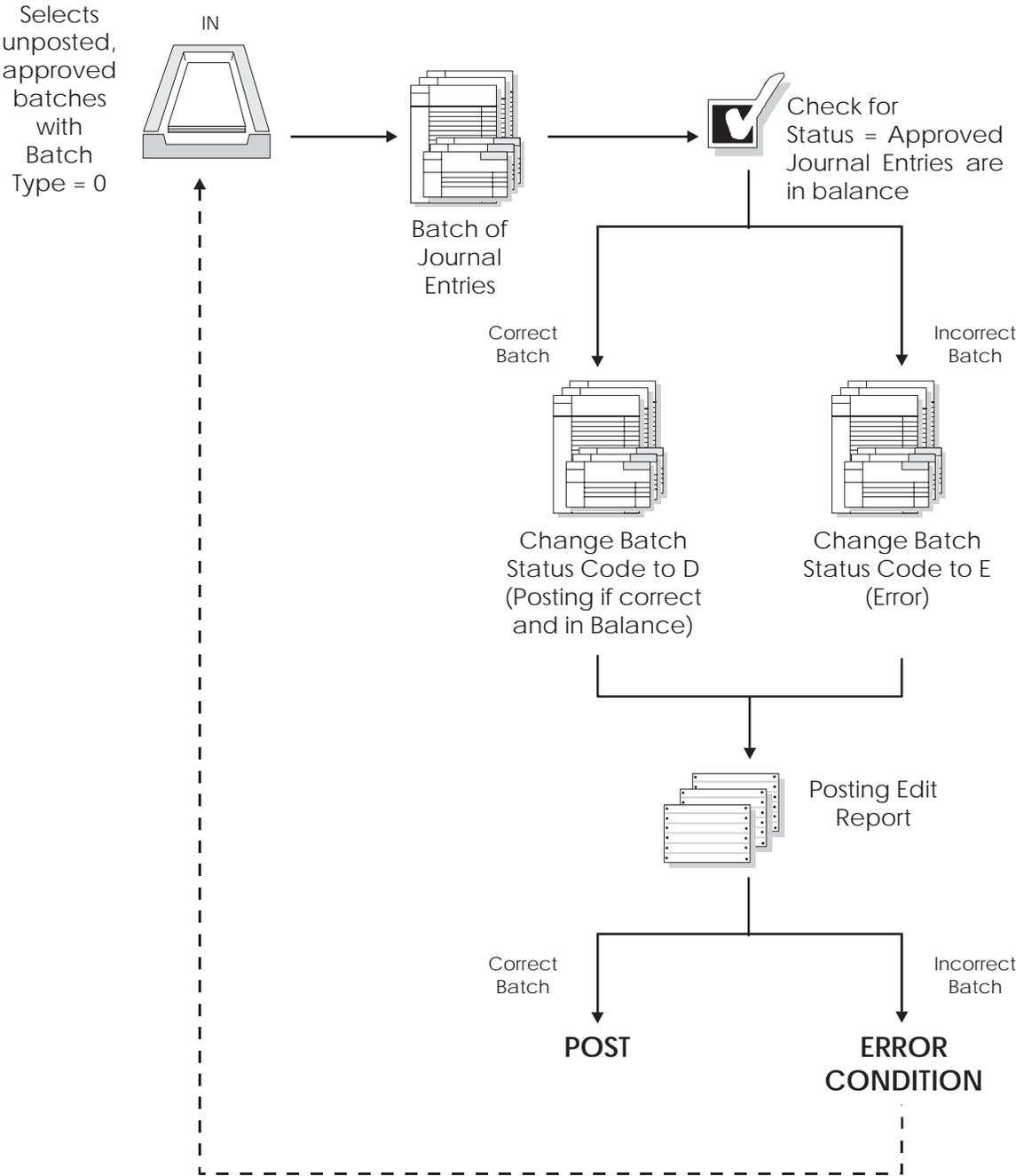
The pre-post process consists of several elements:

<b>Selection</b>	The Post General Journal program selects unposted, approved transactions with a batch type 0 and other criteria specified in the processing options. These transactions come from the Account Ledger table (F0911).
<b>Detail edit</b>	The program edits each transaction to determine whether: <ul style="list-style-type: none"><li>• The account exists in the Account Master and is a posting account.</li><li>• The business unit is valid in the Business Unit Master table (F0006).</li><li>• The G/L date is valid.</li><li>• Intercompany transactions exist.</li><li>• Detail currency restatement should be done.</li></ul>
<b>Batch edit</b>	The program edits each batch to ensure that it is approved and in balance. If the program finds any errors, it does not post the batch.
<b>Posting Edit report</b>	This report lists all batch errors that have occurred. It prints in batch sequence.
<b>Error conditions</b>	If any transaction in the batch is in error, the program places the entire batch in error, which prevents it from posting.



You should not make changes to the accounts, automatic accounting instructions (AAIs), intercompany settlements, general accounting constants, or processing options when you run the post.

The following graphic illustrates the pre-post process.

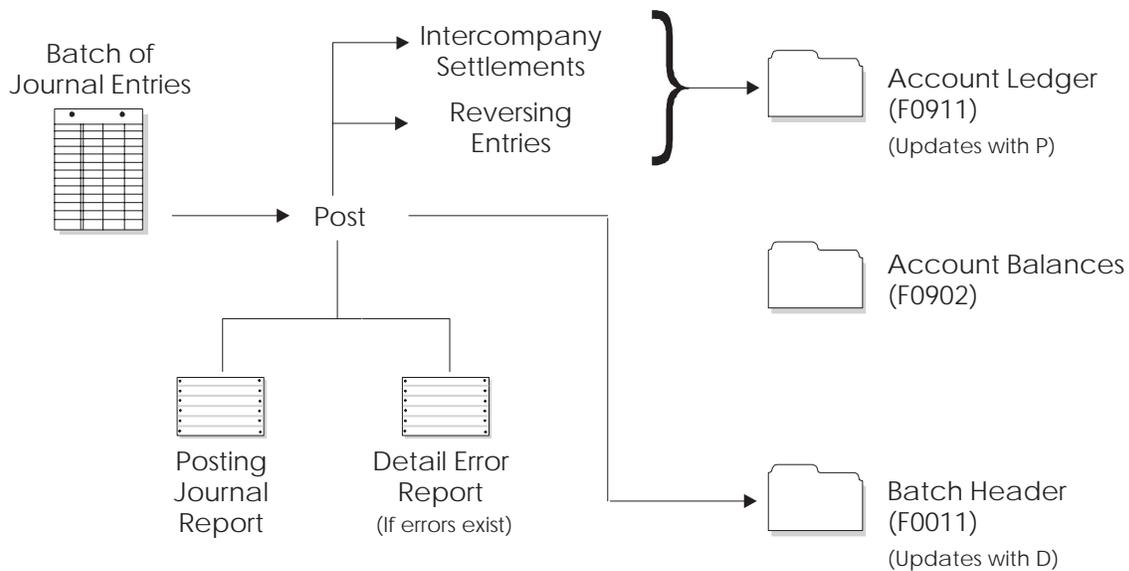


## Post Process

The Post General Journal program only posts batches when no errors are found in the pre-post process. In general, the program:

- Posts transactions to the Account Balances table (F0902) and marks each transaction and the batch header as posted in the Account Ledger table and the Batch Control table (F0011)
- Changes the batch status for the Batch Control table to D
- Marks each transaction with a status of P (posted)
- Performs intercompany settlements for ledger types AA (actual amounts), XA, YA, CA, AZ, and ZA (detailed currency restatement amounts), if requested
- Creates reversing entries, if requested
- Generates two reports:
  - Posting Journal report, which lists the transactions posted to the Account Balances and the Account Ledger tables
  - Detailed Post Error report, which lists the detail transactions in a batch if there is a balancing error.

The following graphic illustrates the post process.



## Before You Begin

- Verify that the batch has an approved status. See *Reviewing General Ledger Batches*.
- Verify that the post is submitted to a single-threaded job queue.

See Also

- *Creating Journal Entries (P31802)*
- *Posting Journal Entries (P09800) in the General Accounting I Guide*

Processing Options for Post General Ledger

BATCH SELECTION:

1. Enter Batch Number \_\_\_\_\_  
     or Batch Date \_\_\_\_\_  
     or Batch User ID \_\_\_\_\_

PRINT SELECTION:

2. Identify how to print amount fields on Post Journal:  
     '1' = to Millions (w/ commas) \_\_\_\_\_  
     '2' = to Billions (w/o commas)  
     Blank (Default) = No Journal Printed.
  
3. Identify which account number to print on report:  
     '1' = Account Number \_\_\_\_\_  
     '2' = Short Account ID  
     '3' = Unstructured Account  
     '4' = (Default) Number Entered During Input

FIXED ASSETS:

4. Enter a '1' to post F/A entries to Fixed Assets. \_\_\_\_\_  
     NOTE: DREAM Writer version ZJDE0001 of Post G/L Entries to Assets(P12800) is executed when this option is selected. All transactions selected from that DREAM Writer will be posted rather than just the current entries being posted to G/L.
5. Enter a 'Y' if you wish to explode parent item time down to the assembly component level. Component billing rates will be used. (This applies to batch type 'T' only.) \_\_\_\_\_

CASH BASIS ACCOUNTING:

6. Enter a '1' to create and post Cash Basis accounting entries. (Applies to batch type G, K, M, W, & R only.) \_\_\_\_\_
7. Enter units ledger type for Cash Basis Accounting entries. (Default of blank will use "ZU" ledger type.) \_\_\_\_\_

ACCOUNTING FOR 52 PERIODS:

8. Enter a '1' for 52 Period Post. \_\_\_\_\_  
     NOTE: DREAM Writer data selection is used for 52 period posting ONLY. It is NOT used for the standard post to the F0902. Additionally, 52 period date patterns must be set up.

TAX FILE UPDATE:

9. Identify when to update the Tax Work file (F0018):  
'1' = V.A.T. or Use Tax only  
'2' = for All Tax Amounts  
'3' = for All Tax Explanation Codes  
Blank (Default) = No Update to File.  
Note: When using Vertex Taxes the Vertex Tax Register file will be updated instead of the Tax Work file for methods '1', '2', and '3'.
10. Adjust VAT Account for Cash Receipt Adjustments and Write Offs. Tax explanation must be a 'V'.  
'1' = update VAT amount only  
'2' = update VAT amount, extended price and taxable amount
11. Adjust VAT Account for Discount Taken. The Tax Rules file must be set to Calculate Tax on Gross Amount, including Discount and Calculate Discount on Gross Amount, including Tax. Tax explanation must be a 'V'.  
'1' = update VAT amount only  
'2' = update VAT amount, extended price and taxable amount

### PROPERTY MANAGEMENT:

12. Enter DREAM Writer version of Property Management G/L Transaction Creation to be executed. Default is version ZJDE0001. (This applies to batch types '2' and '//'.)

### UPDATE OPTION:

13. Enter '1' to update short ID number, company, fiscal year/period number, century, and fiscal quarter in unposted transaction records selected for posting. (May be required for custom input programs.)

### REPORT FORMAT:

14. Enter a '1' to print the Posting Journal in a 198 character format. The default of blank will print the format with 132 characters.

### DETAILED CURRENCY RESTATEMENT:

15. Enter a '1' to create currency restatement entries. This creates records in the XA, YA, and/or ZA ledgers depending on the version you are running.
16. Enter the version of the Detailed Currency Restatement (P11411) to execute. Default of blank will execute ZJDE0001.

### RECONCILIATION FILE PROCESSING

17. Enter a '1' to update the Cross-Environment Reconciliation

file. Blank will not update the reconciliation file.

Note: The Cross-Environment Reconciliation file can also be updated through the stand-alone Cross-Environment File Creation program.

BATCH TYPE SELECTION:

NOTE: This option should NOT be changed by User.

## Reviewing the Posting Edit Report for Manufacturing

Each time you run Post General Journal, the program generates the Posting Edit Report. This report lists errors detected during the post. If the program finds errors, it does not post the batch. You must correct all errors in order for the batch to be posted.

09800	J.D. Edwards & Company General Ledger Post - General Accounting Posting Edit Report						Page 4 Date 4/24/98
Create Intercompany Settlements: Y							
Batch Number	Batch Date	Account Number - Input Account ID	G/L Date	Do	Document Subldgr Ty	JE Line Number	Error Messages
83257	04/24/98						***NO ERRORS*** Batch will post. *

## Common Posting Errors

**Batch not approved for posting**

This error message is caused by a batch with a pending or error status.

**Account not set up in  
Account Master table  
(F0901)**

Two situations can cause this error message:

- An undefined account number (designated as # during journal entry) was entered. To correct this, locate the document number and line number on the Journal Entries form. Change the # on the detail line to the valid account number.
- An undefined account number was not set up prior to posting, or it does not meet the model account criteria to be automatically created by the system. Add the G/L account number on Accounts by Object.

**Batch journal entries  
out-of-balance**

This error message occurs when debits do not equal credits. If the out-of-balance journal entry was entered in error, correct the error and post the batch again.

Other situations can cause a journal entry to be out-of-balance. For example:

- A power failure might have occurred during entry or posting.
- A valid, one-sided journal entry might have been entered to correct a conversion error made during setup.

For information about how to enter an out-of-balance transaction, see *Correcting Out-of-Balance Batches* in the *General Accounting II Guide*.

## Reviewing the Posting Journal Report

Each time you run Post General Journal, the program generates the Posting Journal report during the post process. This report lists the transactions posted to the Account Balances and Account Ledger tables.

09801		J.D. Edwards & Company				Page	1		
Batch Type	- G	General Ledger Post - General Accounting				Date	4/24/98		
Batch Number	- 83257								
Batch Date	- 04/24/98								
Posting Journal									
Post Out of Balance :									
Create Intercompany Settlements: Y									
Do Ty	Document	G/L Date	Co	Account Description Explanation	G/L Account Subldgr-Ty/Asset Number	Amounts Debit      Credit		LT	Units
JE	1522	03/31/98	00100	Miscellaneous Expense Bank Service Charge	USD 90.9250	1.000.00		AA	
JE	1522	03/31/98	00100	Bear Creek National B Bank Service Charge	USD 100.1110.BEAR		1.000.00-	AA	
JE	1522	03/31/98	00100	Miscellaneous Expense Bank Service Charge	USD 90.9250		1.000.00-	AA	
VOID JOURNAL ENTRY									
JE	1522	03/31/98	00100	Bear Creek National B Bank Service Charge	USD 100.1110.BEAR	1.000.00		AA	
VOID JOURNAL ENTRY									
JE	10418	03/31/98	00001	Other Expense Bank Service Charge	USD 9.9200	1.000.00		AA	
JE	10418	03/31/98	00001	Bear Creek National B Bank Service Charge	USD 1.1110.BEAR		1.000.00-	AA	
JE	10418	03/31/98	00100	Miscellaneous Expense Bank Service Charge	USD 90.9250	1.000.00		AA	
JE	10418	03/31/98	00100	Bear Creek National B Bank Service Charge	USD 100.1110.BEAR		1.000.00-	AA	
Batch Total						4.000.00	4.000.00-	AA	

## Reviewing the Item Ledger/Account Integrity Report



From Inventory Master/Transactions (G4111), choose Inventory Reports  
From Inventory Reports (G41111), choose Item Ledger/Account Integrity

The Item Ledger/Account Integrity report lists discrepancies between the Item Ledger and Account Ledger tables. If the data in the two files is in agreement, no lines print.

The lines that print are summary lines, that is, the amounts on a line represent the total for a specific document type, document number, and key company. No other total lines print. You can run this report as many times as needed because no tables are updated.

If you use summarized journal entries for work orders, the program ignores material issue transactions (IM), completions (IC), and scrap transactions (IS) against those summarized work orders because they are not actual work orders. In a future release of the software, the program will summarize these transactions for the report.

### Before You Begin

- Verify that you have set up exception rules (41/IN).

# Product Costing and Manufacturing Accounting

41543

J.D. Edwards & Company  
Item Ledger/Account Integrity

Page - . . . 2  
Date - . . . 12/12/98

From - 01/01/98 To - 12/10/98

Document Type/Number	Key Co	. . . . . Amount . . . . .		Variance	G/L Date	Error Number	Error Message
		Item Ledger	Account Ledger				
IA	8	100	60,000.00		01/01/96	3036	No existing General Ledger records
IA	9	100	180,000.00		01/01/96	3036	No existing General Ledger records
IA	10	100	33,600.00		01/01/96	3036	No existing General Ledger records
IA	11	100	273,600.00		01/01/96	3036	No existing General Ledger records
IA	12	100	30,000.00		01/01/96	3036	No existing General Ledger records
IA	653	200	2,048,212.61	2,048,212.61	01/30/97	3036	No existing General Ledger records
IA	4144	200	104,938.00-	104,938.00-	06/30/98	3038	Item Ledger and G/L do not balance
IB	1918	50	4,184.83-	4,184.83-	10/13/93	3036	No existing General Ledger records
IB	2240	200	24,394.53	24,394.54	0.01- 11/22/94	3038	Item Ledger and G/L do not balance
IB	2242	200	8,347.96	8,347.97	0.01- 11/22/94	3038	Item Ledger and G/L do not balance
IB	2243	200	22,467.04	22,467.05	0.01- 11/22/94	3038	Item Ledger and G/L do not balance
IB	2247	200	18,592.68	18,592.69	0.01- 11/22/94	3038	Item Ledger and G/L do not balance
IC	109954	200	281,405.45	562,810.90	281,405.45- 12/01/94	3038	Item Ledger and G/L do not balance
IC	109971	200	255,261.97	485,215.94	229,953.97- 12/01/94	3038	Item Ledger and G/L do not balance
IC	109989	200	319,531.34	639,062.68	319,531.34- 12/01/94	3038	Item Ledger and G/L do not balance
IC	109997	200	245,458.17	490,916.34	245,458.17- 12/01/94	3038	Item Ledger and G/L do not balance
IC	110023	200	314,810.99	629,621.98	314,810.99- 12/01/94	3038	Item Ledger and G/L do not balance
IC	110040	200	261,071.63	464,623.26	203,551.63- 12/01/94	3038	Item Ledger and G/L do not balance
IC	110058	200	269,423.02	512,134.04	242,711.02- 12/01/94	3038	Item Ledger and G/L do not balance
IC	110066	200	327,882.73	655,765.46	327,882.73- 12/01/94	3038	Item Ledger and G/L do not balance
IC	110074	200	288,304.42	548,024.84	259,720.42- 12/01/94	3038	Item Ledger and G/L do not balance
IC	110082	200	344,222.40	688,444.80	344,222.40- 12/01/94	3038	Item Ledger and G/L do not balance
IC	110091	200	276,321.99	519,159.98	242,837.99- 12/01/94	3038	Item Ledger and G/L do not balance

## See Also

- *Printing the Item Ledger/Account Integrity Report (P41543)* in the *Inventory Management Guide*
- *Creating Journal Entries (P31802)* for more information on summarized journal entries

## Processing Options for Item Ledger/Account Integrity

### REPORT DISPLAY:

1. Enter the beginning Item Ledger date. \_\_\_\_\_
2. Enter the ending Item Ledger date. \_\_\_\_\_

### SUMMARIZED MANUFACTURING J/E's:

3. Enter a '1' to indicate that Manufacturing J/E's are summarized by account. \_\_\_\_\_

### Enter Document Types associated with:

4. Inventory Issues \_\_\_\_\_
5. Inventory Completions \_\_\_\_\_
6. Parent Scrap \_\_\_\_\_

## Reviewing World Writer Reports for Manufacturing Accounting



From Master Directory (G), choose World Writer Reporting

From World Writer (G82), choose Manufacturing

When you access the Manufacturing World Writer menu, locate the World Writer reports for Group Q31.

These reports help you review your production costs and variances. You might want to run them before you run Journal Entries for Variances, or you can run them after Journal Entries for Variances to verify the accuracy of the journal entries.

Complete the following tasks:

- Review Work Order Activity (Amounts)
- Review Work Order Activity (Units)
- Review Engineering Variance
- Review Planned Variance (to Current)
- Review Planned Variance (to Standard)
- Review Material Usage Variances
- Review Efficiency Variances
- Review Total/WIP and Other Variances
- Review Open Work Order Valuation
- Review Completed Work Order Valuation
- Review Work Order Amount Variances
- Review Manufacturing Accounting Tables

### Reviewing Work Order Activity (Amounts)

This report lists standard, current, planned, actual, and completed amounts of work orders.

Work Order Activity							Page	-	2
Amounts							Date	-	02/21/98
Order Number	2nd Item Number	Cost Type	P	Standard Amount	Current Amount	Planned Amount	Actual Amount	Completed Amount	
422 333		A1	P	16,178.9200	18,806.9400	19,206.9400	20,826.5230	16,178.9200	
422 333		A2	P	525.6000	1,051.2080	1,051.2080		525.6000	
422 333		B1	P	37.2800	37.2750	37.2750	55.1200	37.2800	
422 333		B2	P		3.1875	3.1875	3.1800		
422 333		B3	P		8.1250	11.3750	11.3700		
422 333		B4	P	8.6700	8.6625	8.6625	12.8625	8.6700	
422 333		C1	P		10.1563	14.2188	14.2125		
422 333		C2	P		8.5313	11.9438	11.9385		
422 333		C3	P	27.5600	29.4750	29.4750	42.6975	27.5600	
422 333		C4	P	22.9700	24.5626	24.5626	35.5813	22.9700	
422 333		D1	P	478.0000	478.0000	478.0000	478.0000	478.0000	
422 333		X2	P	85.2600	85.2600	85.2600	85.2600	85.2600	
422 333		X3	P	3.3000	3.3000	3.3000	3.3000	3.3000	
422 333		X5	P	2.0000	2.0000	2.0000	2.0000	2.0000	
422 333		X6	P	1,608.4000	1,608.4000	1,608.4000	1,608.4000	1,608.4000	
Parent Child Relationship. . .									
Total				18,977.9600	22,165.0832	22,575.8082	23,190.4453	18,977.9600	
490 1007					84.4000				
Parent Child Relationship. . .									
Total					84.4000				

### Reviewing Work Order Activity (Units)

This report lists standard, current, planned, actual, and completed units of work orders.

Work Order Activity Units							Page	- 2
							Date	- 02/21/98
Order Number	2nd Item Number	Cost P Type C	Standard Units	Current Units	Planned Units	Actual Units	Completed Units	
422 333		A1 P	100.0000	100.0000	100.0000	100.0000	100.0000	
422 333		A2 P	100.0000	100.0000	100.0000		100.0000	
422 333		B1 P	100.0000	7.1000	7.1000	10.5000	100.0000	
422 333		B2 P	100.0000	.7500	.7500	.7500		
422 333		B3 P	100.0000	2.5000	3.5000	3.5000		
422 333		B4 P	100.0000	7.1000	7.1000	10.5000	100.0000	
422 333		C1 P	100.0000	2.5000	3.5000	3.5000		
422 333		C2 P	100.0000	2.5000	3.5000	3.5000		
422 333		C3 P	100.0000	9.5000	9.5000	13.7000	100.0000	
422 333		C4 P	100.0000	9.5000	9.5000	13.7000	100.0000	
422 333		D1 P	100.0000	100.0000	100.0000	100.0000	100.0000	
422 333		X2 P	100.0000	100.0000	100.0000	100.0000	100.0000	
422 333		X3 P	100.0000	100.0000	100.0000	100.0000	100.0000	
422 333		X5 P	100.0000	100.0000	100.0000	100.0000	100.0000	
422 333		X6 P	100.0000	100.0000	100.0000	100.0000	100.0000	
Parent Child Relationship. . .								
Total			1,500.0000	741.4500	744.4500	659.6500	1,100.0000	
490 1007		C		2,000.0000				
Parent Child Relationship. . .								
Total				2,000.0000				
490 1001		A1 P	2,000.0000					
490 1001		B1 P	2,000.0000	37.1000				
490 1001		B2 P	2,000.0000	4.0000				
490 1001		B3 P	2,000.0000	16.0000				
490 1001		B4 P	2,000.0000	37.1000				
490 1001		C1 P	2,000.0000	16.0000				
490 1001		C2 P	2,000.0000	16.0000				
490 1001		C3 P	2,000.0000	48.1200				
490 1001		C4 P	2,000.0000	48.1200				
490 3991		A1 P	2,000.0000	2,000.0000				
490 3991		A2 P		2,000.0000				
490 3991		B1 P	2,000.0000	80.0000				
490 3991		B3 P	2,000.0000	32.0000				
490 3991		C1 P	2,000.0000	32.0000				
490 3991		C2 P	2,000.0000	32.0000				
Parent Child Relationship. . .								
Total			28,000.0000	4,398.4400				

## Reviewing Engineering Variance

This report lists work orders, their standard and current amounts, and their engineering variances.

						Page - 1
						Date - 02/21/98
Engineering Variance Amounts						
Order Number	2nd Item Number	Cost P Type C	Standard Amount	Current Amount	Engineering Variance	
406	5120	B1 P	5,701.8000	5,701.5000	.3000-	
406	5120	B2 P	2,337.6000	11.6875	2,325.9125-	
406	5120	B4 P	1,108.8000	1,108.8000		
406	5120	C3 P	5,488.8000	4,093.1925	1,395.6075-	
406	5120	C4 P	4,573.8000	3,410.9938	1,162.8062-	
Parent Child Relationship. . .						
Total			19,210.8000	14,326.1738	4,884.6262-	
414	333	A1 P	16,178.9200	16,178.9200		
414	333	A2 P	525.6000	525.6040	.0040	
414	333	B1 P	37.2800	37.2750	.0050-	
414	333	B4 P	8.6700	8.6625	.0075-	
414	333	C3 P	27.5600	27.5625	.0025	
414	333	C4 P	22.9700	22.9688	.0012-	
414	333	D1 P	478.0000	478.0000		
414	333	X2 P	85.2600	85.2600		
414	333	X3 P	3.3000	3.3000		
414	333	X5 P	2.0000	2.0000		
414	333	X6 P	1,608.4000	1,608.4000		
Parent Child Relationship. . .						
Total			18,977.9600	18,977.9528	.0072-	
422	333	A1 P	16,178.9200	18,806.9400	2,628.0200	
422	333	A2 P	525.6000	1,051.2080	525.6080	
422	333	B1 P	37.2800	37.2750	.0050-	
422	333	B2 P		3.1875	3.1875	
422	333	B3 P		8.1250	8.1250	
422	333	B4 P	8.6700	8.6625	.0075-	
422	333	C1 P		10.1563	10.1563	
422	333	C2 P		8.5313	8.5313	
422	333	C3 P	27.5600	29.4750	1.9150	
422	333	C4 P	22.9700	24.5626	1.5926	
422	333	D1 P	478.0000	478.0000		
422	333	X2 P	85.2600	85.2600		
422	333	X3 P	3.3000	3.3000		
422	333	X5 P	2.0000	2.0000		
422	333	X6 P	1,608.4000	1,608.4000		
Parent Child Relationship. . .						
Total			18,977.9600	22,165.0832	3,187.1232	

### Reviewing Planned Variance (to Current)

This report lists all work orders and their planned variances (current amounts compared to planned amounts). Journal entries for planned variances are calculated in the same way.

				Planned Variance Amounts		Page - 1
						Date - 02/21/98
Order Number	2nd Item Number	Cost Type	P C	Current Amount	Planned Amount	Planned Variance
422 212		C		5,256.0400	5,256.0400	
422 121		C		2,609.5000	2,609.5000	
422 424		C		5,256.6000	5,256.6000	
422 444		C		5,200.8000	5,200.8000	
422 123		C		400.0000	800.0000	400.0000
422 122		C		84.0000	84.0000	
Parent Child Relationship. . .						
Total				18,806.9400	19,206.9400	400.0000
422 333		A1	P	18,806.9400	19,206.9400	400.0000
422 333		A2	P	1,051.2080	1,051.2080	
422 333		B1	P	37.2750	37.2750	
422 333		B2	P	3.1875	3.1875	
422 333		B3	P	8.1250	11.3750	3.2500
422 333		B4	P	8.6625	8.6625	
422 333		C1	P	10.1563	14.2188	4.0625
422 333		C2	P	8.5313	11.9438	3.4125
422 333		C3	P	29.4750	29.4750	
422 333		C4	P	24.5626	24.5626	
422 333		D1	P	478.0000	478.0000	
422 333		X2	P	85.2600	85.2600	
422 333		X3	P	3.3000	3.3000	
422 333		X5	P	2.0000	2.0000	
422 333		X6	P	1,608.4000	1,608.4000	
Parent Child Relationship. . .						
Total				22,165.0832	22,575.8082	410.7250
490 1007		C		84.4000		84.4000-
Parent Child Relationship. . .						
Total				84.4000		84.4000-
490 1001		B1	P	195.7750		195.7750-
490 1001		B2	P	24.8000		24.8000-
490 1001		B3	P	67.6800		67.6800-
490 1001		B4	P	36.6550		36.6550-
490 1001		C1	P	54.1440		54.1440-
490 1001		C2	P	58.8816		58.8816-
490 1001		C3	P	164.7680		164.7680-
490 1001		C4	P	143.5150		143.5150-
490 3991		A1	P	84.4000		84.4000-
490 3991		B1	P	4.2000		4.2000-
490 3991		B3	P	1.0400		1.0400-
490 3991		C1	P	1.3000		1.3000-
490 3991		C2	P	1.0920		1.0920-
Parent Child Relationship. . .						
Total				838.2506		838.2506-

### Reviewing Planned Variance (to Standard)

This report lists work orders and their planned variances (standard amounts compared to planned amounts). These variances are informational only. Journal entries are not created from these amounts. Journal entries for planned variances come from comparing current amounts to planned amounts.

				Planned Variance Amounts		Page	-	1
						Date	-	02/21/98
Order Number	2nd Item Number	Cost Type	P C	Standard Amount	Planned Amount	Planned Variance		
110040	1122	A1	P	2,323.1163	2,323.1163			
110040	1122	A2	P	2,323.1163		2,323.1163-		
110040	1122	B1	P					
110040	1122	B2	P					
110040	1122	B3	P					
110040	1122	B4	P					
110040	1122	C1	P					
110040	1122	C2	P					
110040	1122	C3	P					
110040	1122	C4	P					
Parent Child Relationship. . .								
Total				4,646.2326	2,323.1163	2,323.1163-		
110058	1122	A1	P	2,560.6702	2,560.6702			
110058	1122	A2	P	2,560.6702		2,560.6702-		
110058	1122	B1	P					
110058	1122	B2	P					
110058	1122	B3	P					
110058	1122	B4	P					
110058	1122	C1	P					
110058	1122	C2	P					
110058	1122	C3	P					
110058	1122	C4	P					
Parent Child Relationship. . .								
Total				5,121.3404	2,560.6702	2,560.6702-		
110066	1122	A1	P	3,278.8273	3,278.8273			
110066	1122	A2	P	3,278.8273		3,278.8273-		
110066	1122	B1	P					
110066	1122	B2	P					
110066	1122	B3	P					
110066	1122	B4	P					
110066	1122	C1	P					
110066	1122	C2	P					
110066	1122	C3	P					
110066	1122	C4	P					
Parent Child Relationship. . .								
Total				6,557.6546	3,278.8273	3,278.8273-		

### Reviewing Material Usage Variances

This reports lists the planned and actual material (A1) quantities, extended by standard cost, and a total dollar variance for items on your work orders.

Material Usage Variances						Page	-	1
Amounts						Date	-	02/21/98
Order Number	2nd Item Number	Cost Type	P C	Planned Amount	Actual Amount	Material Usage Variance		
3390		A1	P					
Parent Child Relationship. . .								
Total								
347	INSPECT FAN BLADES	A1	P					
347	INSPECT FAN BLADES	A2	P					
Parent Child Relationship. . .								
Total								
406	5120	A1	P					
Parent Child Relationship. . .								
Total								
414	333	A1	P					
414	333	A2	P					
Parent Child Relationship. . .								
Total								
422	333	A1	P	19,206.9400	20,826.5230	1,619.5830		
422	333	A2	P	1,051.2080		1,051.2080-		
Parent Child Relationship. . .								
Total								
				20,258.1480	20,826.5230	568.3750		

### Reviewing Efficiency Variances

This report shows planned and actual labor hours (all cost components except A1), extended by standard rates, and the dollar amount of variance by work order and item number.

			Efficiency Variances Amounts			Page - 1
						Date - 02/21/98
Order Number	2nd Item Number	Cost P Type C	Planned Amount	Actual Amount	Efficiency Variance	
422 212		C	5,256.0400	6,307.2480	1,051.2080	
422 121		C	2,609.5000	3,261.8750	652.3750	
422 424		C	5,256.6000	5,256.6000		
422 444		C	5,200.8000	5,200.8000		
422 123		C	800.0000	800.0000		
422 122		C	84.0000		84.0000-	
Parent Child Relationship. . .						
Total			19,206.9400	20,826.5230	1,619.5830	
422 333		B1 P	37.2750	55.1200	17.8450	
422 333		B2 P	3.1875	3.1800	.0075-	
422 333		B3 P	11.3750	11.3700	.0050-	
422 333		B4 P	8.6625	12.8625	4.2000	
422 333		C1 P	14.2188	14.2125	.0063-	
422 333		C2 P	11.9438	11.9385	.0053-	
422 333		C3 P	29.4750	42.6975	13.2225	
422 333		C4 P	24.5626	35.5813	11.0187	
422 333		D1 P	478.0000	478.0000		
422 333		X2 P	85.2600	85.2600		
422 333		X3 P	3.3000	3.3000		
422 333		X5 P	2.0000	2.0000		
422 333		X6 P	1,608.4000	1,608.4000		
Parent Child Relationship. . .						
Total			2,317.6602	2,363.9223	46.2621	

### Reviewing Total/WIP and Other Variances

This report shows the standard, actual, and completed amounts, and total and other variances by cost component and item for your work orders.

Total/WIP and Other Variances Amounts							Page	-	1
							Date	-	02/21/98
Order Number	2nd Item Number	Cost Type	P C	Standard Amount	Actual Amount	Completed Amount	Total/WIP Variance	Other Variance	
414 333		A1	P	16,178.9200				16,178.9200	
414 333		A2	P	525.6000				525.6000	
414 333		B1	P	37.2800				37.2800	
414 333		B2	P						
414 333		B3	P						
414 333		B4	P	8.6700				8.6700	
414 333		C1	P						
414 333		C2	P						
414 333		C3	P	27.5600				27.5600	
414 333		C4	P	22.9700				22.9700	
414 333		D1	P	478.0000				478.0000	
414 333		X2	P	85.2600				85.2600	
414 333		X3	P	3.3000				3.3000	
414 333		X5	P	2.0000				2.0000	
414 333		X6	P	1,608.4000				1,608.4000	
Parent Child Relationship. . .									
Total				18,977.9600				18,977.9600	
422 333		A1	P	16,178.9200	20,826.5230	16,178.9200	4,647.6030		
422 333		A2	P	525.6000		525.6000	525.6000-		
422 333		B1	P	37.2800	55.1200	37.2800	17.8400		
422 333		B2	P		3.1800		3.1800		
422 333		B3	P		11.3700		11.3700		
422 333		B4	P	8.6700	12.8625	8.6700	4.1925		
422 333		C1	P		14.2125		14.2125		
422 333		C2	P		11.9385		11.9385		
422 333		C3	P	27.5600	42.6975	27.5600	15.1375		
422 333		C4	P	22.9700	35.5813	22.9700	12.6113		
422 333		D1	P	478.0000	478.0000	478.0000			
422 333		X2	P	85.2600	85.2600	85.2600			
422 333		X3	P	3.3000	3.3000	3.3000			
422 333		X5	P	2.0000	2.0000	2.0000			
422 333		X6	P	1,608.4000	1,608.4000	1,608.4000			
Parent Child Relationship. . .									
Total				18,977.9600	23,190.4453	18,977.9600	4,212.4853		

### Reviewing Open Work Order Valuation

This report shows the standard, actual, completed, and outstanding balance of amounts by cost component and item for your open work orders. The program calculates the total for each type of cost by work order and a grand total of each cost for all of the work orders listed.

Open Work Order Valuation							Page	-	1
for Status Less Than 97							Date	-	02/21/98
Order Number	Item Number	Cost Type	P C	Standard Amount	Actual Amount	Completed Amount	Balance (Actual-Complete)		
347	INSPECT FAN BLADES	A1	P	.00	.00	.00	.00		
		A2	P	.00	.00	.00	.00		
Order Number . . . . .									
Total				.00	.00	.00	.00		
698	SHAFT MAINT PM KIT	A1	P	.00	.00	.00	.00		
		A2	P	.00	.00	.00	.00		
Order Number . . . . .									
Total				.00	.00	.00	.00		
844	200-001	A1	P	19750.49	19750.49	.00	19750.49		
		B1	P	3254.50	.00	.00	.00		
		B3	P	86.60	16.92	.00	16.92		
		C1	P	129.90	13.54	.00	13.54		
		C2	P	69.28	14.72	.00	14.72		
		C3	P	3599.75	.00	.00	.00		
C4	P	3519.45	.00	.00	.00				
Order Number . . . . .									
Total				30409.97	19795.67	.00	19795.67		

### Reviewing Completed Work Order Valuation

This report shows the standard, actual, completed, and outstanding balance amounts by cost component and item for your completed work orders. The Journal Entries for Work in Process or Completions and Journal Entries for Variances programs have already been run for these work orders. The program calculates the total for each type of cost by work order and a grand total of each cost for all of the work orders listed.

Completed Work Order Valuation for Status Greater Than or Equal To 97							Page	3
							Date	- 02/21/98
Order Number	Item Number	Cost Type	P C	Standard Amount	Actual Amount	Completed Amount	Balance (Actual-Complete)	
112328	12706	A1	P	2.33	2.33	2.33	.00	
		A2	P	.00	.00	.00	.00	
		B1	P	.39	.39	.39	.00	
		B2	P	.19	.00	.19	.19-	
		B3	P	1.41	1.41	1.41	.00	
		B4	P	.08	.08	.08	.00	
		C1	P	1.77	1.77	1.77	.00	
		C2	P	1.48	1.48	1.48	.00	
		C3	P	.40	.28	.40	.12-	
		C4	P	.33	.24	.33	.09-	
Order Number . . . . .				8.38	7.99	8.38	.39-	
Total								
112344		A1	P	2.33	2.33	2.33	.00	
		A2	P	.00	.00	.00	.00	
		B1	P	.39	.39	.39	.00	
		B2	P	.19	.00	.19	.19-	
		B3	P	1.41	1.41	1.41	.00	
		B4	P	.08	.08	.08	.00	
		C1	P	1.77	1.77	1.77	.00	
		C2	P	1.48	1.48	1.48	.00	
		C3	P	.40	.28	.40	.12-	
		C4	P	.33	.24	.33	.09-	
Order Number . . . . .				8.38	7.99	8.38	.39-	
Total								
112352		A1	P	2.33	2.33	2.33	.00	
		A2	P	.00	.00	.00	.00	
		B1	P	.39	.39	.39	.00	
		B2	P	.19	.00	.19	.19-	
		B3	P	1.41	1.41	1.41	.00	
		B4	P	.08	.08	.08	.00	
		C1	P	1.77	1.77	1.77	.00	
		C2	P	1.48	1.48	1.48	.00	
		C3	P	.40	.28	.40	.12-	
		C4	P	.33	.24	.33	.09-	
Order Number . . . . .				8.38	7.99	8.38	.39-	
Total								

### Reviewing Work Order Amount Variances

This report shows detailed production costs and variance amounts for your work orders.

Work Order Variances										Page	-	1
Amounts										Date	-	02/21/98
Cost Type	Standard Amount	Current Amount	Engineering Variance	Planned Amount	Planned Variance	Actual Amount	Actual Variance	Other Variances	Total Variance			
A1	16178.92	18806.94	2628.02	19206.94	400.00	20826.52	1619.58	.00	4647.60			
A2	525.60	1051.21	525.61	1051.21	.00	.00	1051.21-	.00	525.60-			
B1	37.28	37.28	.01-	37.28	.00	55.12	17.85	.00	17.84			
B2	.00	3.19	3.19	3.19	.00	3.18	.01-	.00	3.18			
B3	.00	8.13	8.13	11.38	3.25	11.37	.01-	.00	11.37			
B4	8.67	8.66	.01-	8.66	.00	12.86	4.20	.00	4.19			
C1	.00	10.16	10.16	14.22	4.06	14.21	.01-	.00	14.21			
C2	.00	8.53	8.53	11.94	3.41	11.94	.01-	.00	11.94			
C3	27.56	29.48	1.92	29.48	.00	42.70	13.22	.00	15.14			
C4	22.97	24.56	1.59	24.56	.00	35.58	11.02	.00	12.61			
D1	478.00	478.00	.00	478.00	.00	478.00	.00	.00	.00			
X2	85.26	85.26	.00	85.26	.00	85.26	.00	.00	.00			
X3	3.30	3.30	.00	3.30	.00	3.30	.00	.00	.00			
X5	2.00	2.00	.00	2.00	.00	2.00	.00	.00	.00			
X6	1608.40	1608.40	.00	1608.40	.00	1608.40	.00	.00	.00			
Order Totals . . . . .												
Total	18977.96	22165.08	3187.12	22575.81	410.73	23190.45	614.64	.00	4212.49			
A1	19750.49	975049.00	955298.51	19750.49	955298.51-	19750.49	.00	19750.49	19750.49			
B1	3254.50	3254.50	.00	3254.50	.00	.00	3254.50-	3254.50	.00			
B3	86.60	86.60	.00	42.30	44.30-	16.92	25.38-	86.60	16.92			
C1	129.90	129.90	.00	33.84	96.06-	13.54	20.30-	129.90	13.54			
C2	69.28	69.28	.00	36.80	32.48-	14.72	22.08-	69.28	14.72			
C3	3599.75	3599.75	.00	3608.00	8.25	.00	3608.00-	3599.75	.00			
C4	3519.45	3519.45	.00	3526.38	6.93	.00	3526.38-	3519.45	.00			
Order Totals . . . . .												
Total	30409.97	1985708.48	1955298.51	30252.31	1955456.17-	19795.67	10456.64-	30409.97	19795.67			

## Reviewing Manufacturing Accounting Tables

This report lists the manufacturing AAIs used by your companies.

Manufacturing Accounting Tables						Page	-	4
							Date	- 02/21/98
M Co	G/L	Do	Description	V Cost	Description	Cost	Obj	Sub
C	Cat	Ty		T Type		Center	Acct	
3 0	IN20	IC	Completed W.O.'s To Inventory	A1	Material	48	1510	A1
	IN20	IC		A2	Scrap	48	1510	A2
	IN20	IC		B1	Direct Labor	48	1520	B1
	IN20	IC		B2	Setup Labor	48	1520	B2
	IN20	IC		B3	Machine Run	48	1520	B3
	IN20	IC		B4	Labor Efficiency	48	1520	B4
	IN20	IC		C1	Machine Variable Overhead	48	1535	C1
	IN20	IC		C2	Machine Fixed Overhead	48	1535	C2
	IN20	IC		C3	Labor Variable Overhead	48	1533	C3
	IN20	IC		C4	Labor Fixed Overhead	48	1533	C4
	IN20	IC		D1	Outside Operation	48	1510	D1
	IN20	IC		X1	Taxes and Duty	48	1540	X
	IN20	IC		X2	Electricity	48	1540	X
	IN20	IC		X3	Freight Out	48	1540	X
	IN20	IC		X4	Royalties	48	1540	X
	IN20	IC		X5	R&D	48	1540	X5
	IN20	IC		X6	Warehouse Charge	48	1540	X
	IN20	IC		X7	Cooling Unit	48	1540	X
	IN20	IS	Scrapped W.O.'s To Inventory	A1	Material	48	1511	A1



# Manufacturing Accounting in ERPx Environments





# Manufacturing Accounting in ERPx Environments

## Objectives

- To understand what happens when completions are reported against co- and by-products

## About Manufacturing Accounting in ERPx Environments

If you use the Manufacturing Accounting system in any special environment (using rate schedules or processes), there are differences in how the system calculates variances and creates journal entries.

Understanding manufacturing accounting in ERPx environments requires the following:

- Understanding process industry accounting





# Understand Process Industry Accounting

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## About Process Industry Accounting

The main difference between discrete manufacturing accounting and process manufacturing accounting is that with a process, completions are reported against the co- and by-products themselves and not against the parent process. You can set a processing option to allow completions of unplanned co- and by-products. Variances are still reported against the process.

## About Unaccounted Units in Process Industry Accounting

Unaccounted units represent the quantities and dollar amounts of transactions that occur against a work order when you issue parts, or record labor or completions. You cannot view unaccounted units. They are stored by the system until you run the Journal Entries for Work in Process or Completions program. This program creates journal entries for the unaccounted units and then purges the unaccounted units.

In the process industry, unaccounted units are stored in the same tables as in the discrete industry. Unaccounted units are stored in the following tables:

<b>Work Order Master (F4801)</b>	When you complete a work order or record scrap against a work order, unaccounted units are stored in the Work Order Master table.
<b>Parts List (F3111)</b>	When you issue material to a work order, unaccounted units are stored in the Parts List table.
<b>Routing Instructions (F3112)</b>	When you record hours against a work order, unaccounted units are stored in the Routing Instructions table.

### About Calculated Amounts in Process Industry Accounting

Variance Inquiry can display small engineering variances because the frozen amounts differ slightly from the current amounts. However, Journal Entries for Variances rounds the amounts, and no variances print on the report.

Amounts are calculated in the process industry as follows:

<b>Frozen amounts</b>	Frozen amounts are based on the cost of the process, from the Cost Components table (F30026).
<b>Actual amounts</b>	The actual costs of the ingredients issued are added to calculate the actual A1 cost of the process.
<b>Completed amounts</b>	For each cost component, the completed costs of the co- and by-products are added to calculate the completed cost of the process for that cost component. For example, the completed B1 cost of all co- and by-products are added. Their sum is the completed B1 cost of the process.

# Appendices



# Appendix A — Calculations in Cost Rollup

---

The following provides information about how hard-coded cost components are generated in the cost rollup process. These calculations can vary according to your manufacturing constants and your processing option choices.

The program adjusts direct labor hours and direct machine hours by time basis, crew size, and cumulative yield, as appropriate. The program adjusts component material quantities by operation scrap. Hours and quantities are also converted to the primary unit of measure.

## See Also

- *Assigning Values to User Defined Cost Components (P30026)*

## Material Cost Components

### A1 (Purchased Material Cost)

- If you enter a cost method in the Purchased Item processing option on the Simulate Cost Rollup program, the program uses that cost method to retrieve the cost from the Cost Ledger table.
- If you leave the processing option blank, the program uses the values entered manually on Enter/Change Cost Components.

### A2 (Material Scrap)

- Used for items that have a percent of scrap defined in their bill of material.
- Net added cost comes from scrap incurred when the components are assembled.
- Component material scrap cost = % of scrap from bill of material x quantity per parent item x the total cost of the component.

## Routing Cost Components

Routing cost components (cost components B and C) can be controlled manually or through the Simulate Cost Rollup program.

### B1 (Direct Labor)

- Parent direct labor costs = sum of direct labor calculations for all operations on the item's routing.
- Operation direct labor cost =  $\left( \left( \left( \text{operation direct labor hours} / \text{operation time basis} \right) \times \text{operation crew size} \right) / \left( \text{operation cumulative yield \%} / 100 \right) \right) \times \text{work center direct labor rate}$ .

### B2 (Setup Labor)

- Parent setup labor cost = sum of all setup labor calculations for all operations on the item's routing.
- Operation setup labor cost =  $\left( \text{operation setup labor hours} \times \text{work center setup labor rate} \right) / \text{accounting cost quantity}$  (if the accounting cost quantity is not zero).

### B3 (Machine Run)

- Parent machine run cost = sum of machine run calculations for all operations on the item's routing.
- Operation machine run cost =  $\left( \left( \text{operation machine run hours} / \text{operation time basis} \right) \times \left( \text{operation cumulative yield} / 100 \right) \right) \times \text{work center machine run rate}$ .

### B4 (Labor Efficiency)

- Increases or decreases the cost of the labor required to produce an item. If you have set the manufacturing constants to modify costs by work center efficiency, the program creates a cost component (B4) for labor efficiency when you run Simulate Cost Rollup. In addition, if the efficiency for a work center is equal to zero, then no calculation is performed for that work center. Labor efficiency is only calculated for direct labor hours.
- Parent labor efficiency cost = sum of all efficiency calculations for all operations on the item's routing.
- Operation labor efficiency cost =  $\text{operation direct labor hours} - \left( \text{operation direct labor hours} \times \left( \text{work center efficiency} / 100 \right) \right) \times \text{work center direct labor rate}$ .

**C1, C2 (Variable/Fixed Machine Overhead)**

- Calculated only if you have set the Manufacturing Constants table (F3009) to include variable and fixed machine overhead in the cost. In this table, you must also determine whether machines' overhead costs are calculated from manually entered rates in the Work Center Master table (F30006) or as a percent of machine run costs.
- Parent variable/fixed machine overhead cost = sum of all variable/fixed machine overhead calculations for the item's routing.
- Operation variable/fixed machine overhead cost by percent = machine run hours x (work center variable/fixed machine overhead percent / 100) x work center machine run rate.
- Operation variable/fixed machine overhead cost by rate = machine run hours x work center variable/fixed machine overhead rate.

**C3, C4 (Variable/Fixed Labor Overhead)**

The following calculations are displayed as rates. If you indicate on Work Center Master that variable/fixed labor overhead costs should be calculated as a percent of labor costs, multiply the work center labor rate by the percent / 100 to obtain the labor overhead rate. For example:

Operation variable labor overhead rate = (work center variable labor overhead percent / 100) x work center direct labor rate

- Calculated only if you have set the Manufacturing Constants table (F3009) to include variable and fixed labor overhead in the cost. In this table, you must also determine whether labor overhead costs are calculated from manually entered rates in the Work Center Master table (F30006) or as a percent of labor costs. In addition, you can set the manufacturing constants to factor labor overhead by work center efficiency.
- Parent variable/fixed labor overhead cost = sum of all variable/fixed labor overhead calculations for all operations on the item's routing.
- Variable/fixed labor overhead cost = direct labor overhead cost + setup labor overhead cost:
  - Direct labor overhead cost by rate:
    - Without labor efficiency: direct labor hours x work center variable/fixed labor overhead rate
    - With labor efficiency: (direct labor hours + work center efficiency) x work center variable/fixed labor overhead rate

Work center efficiency = labor hours - ((work center efficiency percent / 100) x labor hours)

- Setup labor overhead cost by rate = (operation setup labor hours / accounting cost quantity) x work center variable/fixed labor overhead rate. Accounting cost quantity is factored if it is not equal to zero.

### Outside Operation Cost Components (Usually Dx)

- Can be entered manually on Enter/Change Cost Components or retrieved from the Cost Ledger table (F4105) when you run Simulate Cost Rollup.
- The Simulate Cost Rollup program creates item numbers for outside operations as follows:
  - Parent\*OPxx. Parent = the parent item number and xx = the whole-number portion of the outside operation's operation sequence number.

For example, for item 333, an outside operation at operation sequence number 30 receives an item number of 333\*OP30.

- If you enter a cost method in the Outside Operations processing option on the Simulate Cost Rollup program, the program uses that cost method to retrieve the cost from the Cost Ledger table. If the value is zero and a value previously existed in the Cost Components table, the original value remains.
- If you leave the processing option blank, the program uses the values entered manually on Enter/Change Cost Components.

## Appendix B — Calculations for Variances

---

Variance Inquiry displays costs from the Work Order Variance table (F3102). How the system calculates each cost component is explained here.

### Standard Costs

**A1** Sum of rolled costs minus sum of net added costs = component material cost. Component material cost multiplied by work order quantity.

**All other cost components** Net added cost x work order quantity

These costs are created under the following conditions:

- When you run Process Work Orders
- When the Parts List Revisions program copies the bill of material
- When the Work Order Routing program copies the routings
- When you generate journal entries for work order activity

### Current Costs

**A1** The sum of total rolled costs for each item in the current bill of material. The cost of components is based on the quantity before scrap is added.

This value is created under the following conditions:

- When you generate a parts list with Process Work Orders
- When you generate journal entries for work order activity

**A2** The sum of the total rolled costs for each item that is scrapped.

This value is created under the following conditions:

- When you generate a parts list with Process Work Orders
- When Parts List Revisions copies the bill of material

**B1-C4** Calculated in the same manner as the Simulate Cost Rollup using the hours from the current routing.

This value is created under the following conditions:

- When you generate a parts list with Process Work Orders
- When Work Order Routing copies the routing

**All other cost components** Net added cost x work order quantity

These costs are created under the following conditions:

- When you generate work order routing with Process Work Orders
- When Work Order Routing copies the routing



You must run the Journal Entry program in update mode to create standard and current variance values. Running the program in proof mode does not generate these values.

### Planned Costs

**A1** The sum of total rolled costs for each item in the current parts list.

This value is created when you generate journal entries for work order activity.

**A2** The sum of the total rolled costs for each item that is scrapped.

This value is created when you generate journal entries for work order activity.

**B1-C4** Calculated in the same manner as the Simulate Cost Rollup using the hours from the work order routing.

This value is created when you generate journal entries for work order activity.

**All other cost components** The net added cost x work order quantity.

This value is created when you generate journal entries for work order activity.

## Actual Costs

<b>A1</b>	Generated based on actual work order issues.  This value is created when you generate journal entries for work order activity.
<b>A2</b>	The cost of the components actually scrapped using the Component Scrap form.  <i>See Recording Component Scrap.</i>
<b>B1-C4</b>	Calculated in the same manner as Simulate Cost Rollup using the hours from the work order routing.  This value is created when you generate journal entries for work order activity.
<b>All other cost components</b>	The net added cost x work order quantity  This value is created when you generate journal entries for work order activity.

## Completed/Scrapped Costs

<b>A1</b>	Sum of rolled costs – sum of net added costs = component material cost.  This amount includes completed and scrapped quantities.
<b>All other cost components</b>	Net added cost x work order quantity.  This value is created when you generate journal entries for work order activity.



## Appendix C — Purchase Price Variance

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For purchased items, if the standard cost differs from the actual purchase price, you have a purchase price variance (PPV). If you use extra costs on purchased items, the total standard cost might differ from the A1 (material) cost. This difference is the material burden cost.

When you receive a purchase order, the system updates the accounts payable account using the price on the purchase order. The system updates the inventory account with the standard item cost from the Cost Ledger table (F4105). Any difference between the two costs is made up of PPV and material burden. PPV is the difference between the frozen A1 cost and the purchase order cost. Material burden cost is the difference between the total standard cost from the Cost Ledger table and the A1 cost, as follows:

$$\text{PPV} = \text{A1 cost} - \text{purchase order unit cost}$$

$$\text{Material burden cost} = \text{total standard cost} - \text{A1 cost}$$

### Example: Purchase Price Variance and Material Burden

#### Cost Ledger Table (F4105)

Average cost = \$14

Standard cost = \$16

#### Cost Components Table (F30026)

A1 cost = \$13

X1 cost = \$3

Material Inventory	Material Received (AP)	Material Burden	PPV
\$16	\$12	\$3	\$1
total standard cost	Purchase Order cost		

Material issued to the work order relieves the inventory account and posts to the WIP account with the fully loaded standard cost for the item.

Material Inventory	WIP
\$16	\$16

At period end, a manual journal entry closes the PPV to the Cost of Goods Sold account.

PPV	COGS
\$1	\$1

There is an additional AAI table (4337) to handle posting of the material overhead.

If you have multiple cost extras and you want to post to different accounts for each of them, you must use landed cost.

### See Also

- *Setting Up Landed Costs (P41291)* in the *Procurement Guide*

## Appendix D — Functional Servers

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Several J.D. Edwards programs access functional servers. The purpose of functional servers is to provide a central location for standard business rules about entering documents, such as vouchers, invoices, and journal entries. These business rules establish the following:

- Data dictionary default values
- Field edits and valid values
- Error processing
- Relationships between fields or applications

The advantages of a functional server are:

- It reduces maintenance of entry programs because edit rules reside in one central location.
- You can standardize documents across all applications because you create them using the same business rules.
- Generally, the user interface (appearance and interaction) of a form is now separate from how a program works.

The steps for setting up business rules for an entry program are:

1. Create a DREAM Writer version for a specific functional server program (for example, XT0411Z1 for voucher entry).
2. Set the processing options within the version according to your company requirements.
3. Specify the version you want the entry program to use in the processing options for that entry program.

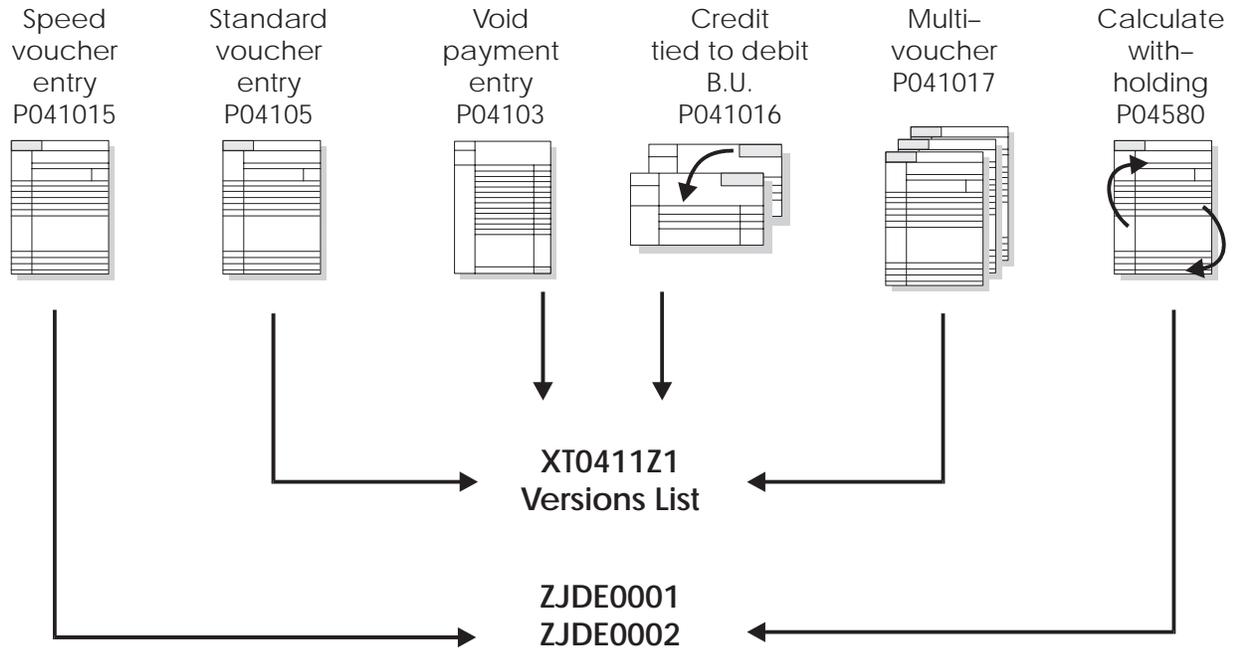
You can have all your entry programs use the same DREAM Writer version (and thus, use the same rules) or you can set up different DREAM Writer versions. J.D. Edwards provides DREAM Writer version ZJDE0001 as the default functional server version for your entry programs.



Only the person responsible for system-wide setup should make changes to the functional server version. For more information about how to set up DREAM Writer versions, see the *Technical Foundation Guide*.

## Example: Voucher Processing Functional Server

The following graphic shows the programs that use the voucher processing functional server. J.D. Edwards provides two demo versions of the functional server, ZJDE0001 and ZJDE0002.



# Glossary



# Glossary

This glossary defines terms in the context of your use of J.D. Edwards systems and the accompanying documentation.

**AAI.** See *automatic accounting instruction*.

**access.** To locate the information or functions provided by the system through menus, forms, and reports.

**aggregate leadtime.** See *cumulative leadtime*.

**alphabetic character.** Represents data by using letters and other symbols from the keyboard (such as \*, &, and #). Contrast with *alphanumeric character* and *numeric character*.

**alphanumeric character.** Represents data in a combination of letters, numbers, and other symbols (such as \*, &, and #). Contrast with *alphabetic character*.

**alternate operation.** Replacement for a normal operation in the manufacturing process or routing for an item.

**alternate routing.** A routing, usually less preferred than the primary routing, but resulting in an identical item.

**assemble-to-order.** A product for which key components (bulk, semi-finished, intermediate, subassembly, fabricated, purchased, packaging, and so on) used in the assembly or finishing process are planned and stocked in anticipation of a customer order. Receipt of an order initiates assembly of the finished product. This is useful when a large number of finished products can be assembled from common components. Contrast with *make-to-order*.

**assembly.** A group of items or subassemblies that are put together and constitute an end item.

**associated service type.** See *linked service type*.

**audit trail.** The detailed, verifiable history of a processed transaction. The history typically shows all additions, changes, and deletions of records.

**automatic accounting instruction (AAI).** A code that refers to an account in the chart of accounts. AAIs define rules for programs that automatically generate journal entries. This includes interfaces between Accounts Payable, Accounts Receivable, Financial Reporting, and the General Accounting system. Each system that interfaces with the General Accounting system has AAIs. For example, AAIs can direct the Post General Journal program to post a debit to a specific expense account and an automatic credit to a specific accounts payable account.

**backflush.** The deduction from inventory records of the components or ingredients as a result of the production process. See also *super backflush*.

**back scheduling.** A technique for calculating operation start dates and due dates. The schedule is computed starting with the due date for the order and working backward to determine the required start date and due dates for each operation.

**batch.** A group of like records or transactions that the computer treats as a single unit during processing. For identification purposes, the system usually assigns each batch a unique identifier, known as a "batch number."

**batch bill of material.** A recipe or formula in which the statement of quantity per is based on the standard batch quantity of the parent.

**batch header.** Information the system uses as identification and control for a group of transactions or records in a batch.

**batch job.** A task or group of tasks you submit for processing that the system treats as a single unit during processing, for example, printing reports and purging files. The system performs these tasks with little or no user interaction.

**batch processing.** A method by which the system selects jobs from the job queue, processes them, and sends output to the outqueue.

**batch type.** A code that designates to which J.D. Edwards system the associated transactions pertain, thus controlling which records are selected for processing. For example, the Post General Journal program selects for posting only unposted transaction batches with a batch type of 0.

**bill of material (BOM).** A listing of all the subassemblies and raw materials that go into a parent assembly showing the quantity of each required to make the assembly. The BOM is used with the master production schedule to determine the items for which purchase requisitions and production orders must be released. There are a variety of display formats for bills of material, including: single level, multi-level, indented, planning, and costed.

**Boolean logic operand.** In J.D. Edwards' reporting program, the parameter of the Relationship field. The Boolean logic operand tells the system to perform a comparison between certain records or parameters. Available operands are:

- EQ = Equal To
- LT = Less Than
- LE = Less Than or Equal To
- GT = Greater Than
- GE = Greater Than or Equal To
- NE = Not Equal To
- NL = Not Less Than
- NG = Not Greater Than

**bucketed system.** An MRP, DRP, or other time-phased system in which all time-phased data is accumulated into time

periods or "buckets." If the period of accumulation is one week, then the system is said to have weekly buckets.

**bucketless system.** An MRP, DRP, or other time-phased system in which all time-phased data is processed, stored, and usually displayed using dated records rather than defined time periods or "buckets."

**bulk issue.** Items issued from stores to work-in-process inventory, but not based on a job order, such as miscellaneous fasteners. They are issued in quantities estimated to cover requirements of individual work centers and production lines. The issue may be used to cover a period of time or to fill a fixed-size container.

**business unit.** See *facility*.

**by-product.** A material of positive or negative value produced as a residual or incidental to the production process. The ratio of by-product to primary product is usually predictable. By-products may be discarded, sold as is, or used for other purposes.

**capacity requirements planning (CRP).** The function of establishing, measuring, and adjusting limits or levels of capacity. It is the process of determining in detail how much labor and machine resources are required to accomplish the tasks of production. Open shop orders and planned orders in the MRP system are input to CRP, which "translates" these orders into hours of work by work center and by time period.

**category code.** In user defined codes, a temporary title for an undefined category. For example, if you are adding a code that designates different sales regions, you could change category code 4 to *Sales Region*, and define E (East), W (West), N (North), and S (South) as the valid codes. Syn: *reporting code*.

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**character.** Any letter, number, or other symbol that a computer can read, write, and store. See also *alphabetic character*; *alphanumeric character*; *numeric character*.

**closed-loop MRP.** A system built around material planning that includes the additional planning functions of sales and operations (production planning, master production scheduling, and capacity requirements planning). After this planning phase is complete and the plans have been accepted as realistic and attainable, the execution functions come into play. These include the manufacturing control functions of input-output (capacity) measurement, detailed scheduling and dispatching, as well as anticipated delay reports from both the plant and supplier. The term “closed-loop” implies that not only are each of these elements included in the overall system, but also that feedback is provided by the execution functions so that the planning can be kept valid at all times.

**committed material.** Material on hand or on order that is assigned to specific future production or customer orders. Syn: *reserved material*.

**co-product.** An end item produced as the result of a process. There are usually two or more co-products. See also *end item*.

**component.** Raw material, ingredient or subassembly that goes into a higher level assembly, process, or other item. This term may also include packaging materials for finished items.

**component availability.** The availability of component inventory for the manufacture of a specific parent order or group of orders or schedules.

**component changeout.** See *component swap*.

**component swap.** In Equipment/Plant Management, the substitution of an operable component for one that requires maintenance. Typically, you swap

components to minimize equipment downtime while servicing one of the components. When you perform a component swap, you can update the parent and component relationship for each component, as well as the status of each component.

**composite leadtime.** See *cumulative leadtime*.

**configuration management.** A rules-based method of ordering assemble-to-order or make-to-order products. Characteristics of the product are defined as part of the Sales Order Entry process. Characteristics are edited using Boolean logic and then translated into the required components and routing steps. The resulting configuration is also priced and costed based on characteristics defined.

**constants.** Parameters or codes that rarely change. The system uses constants to standardize information processing by an associated system. Some examples of constants are: validating bills of material online and including fixed labor overhead in costing.

**corrective maintenance.** Any maintenance work that falls outside the scope of preventive or predictive maintenance. Corrective maintenance can be planned, unplanned, or emergency. Examples of corrective maintenance include emergency repairs and maintenance performed to respond to equipment failure. Contrast with *preventive maintenance* and *predictive maintenance*.

**corrective work order.** In Equipment/Plant Management, a work order that is used to formally request and schedule corrective maintenance and other unscheduled maintenance, such as emergency repairs. Corrective work orders are not generated by the preventive maintenance system. You use corrective work orders to record and communicate all details pertaining to the corrective maintenance task.

**cost component.** An element of an item's cost, for example, material, labor, or overhead.

**costed bill of material.** A type of bill of material that extends the quantity per of every component in the bill by the cost of the components. See also *bill of material*.

**cost rollup.** A simulated scenario in which work center rates, material and labor costs are used to determine the total cost of an item.

**crew size.** The number of people required to perform an operation. The associated standard time should represent the total time for all crew members to perform the operation.

**critical path leadtime.** See *cumulative leadtime*.

**CRP.** See *capacity requirements planning*.

**cumulative leadtime.** The longest planned length of time involved to accomplish the activity in question. For any item planned through MRP, cumulative leadtime is found by reviewing the leadtime for each bill of material path below the item. Whichever path adds up to the greatest number defines cumulative leadtime. Syn: *aggregate leadtime, composite leadtime, and critical path leadtime*.

**current cost.** The cost associated with an item at the time a parts list and routing are attached to a work order or rate. Cost is based on the latest bill of material and routing for the item.

**data dictionary.** A database table consisting of the definitions, structures, and guidelines for the use of fields, messages, and help text. The data dictionary table does not contain the actual data itself.

**date pattern.** A period of time set for each period in standard and 52-period accounting.

**demand.** A need for a particular product or component. The demand could come from any number of sources, such as customer

order, forecast, an interplant requirement, or a request from a branch warehouse for a service item.

**dependent demand.** Demand that is directly related to or derived from the bill of material structure for other items or end products. Such demands are calculated and should not be forecast. A given inventory item may have both dependent and independent demand at any given time. For example, an item may simultaneously be the component of an assembly and also sold as a service item.

**direct labor.** Labor that is specifically applied to the product being manufactured.

**direct material.** Material that becomes a part of the final product in measurable quantities.

**discrete manufacturing.** Production of distinct items such as cars, appliances, or computers.

**dispatch list.** A list of sequenced manufacturing orders or rates. The dispatch list contains detailed information on location, quantity, and capacity requirements. Dispatch lists are usually generated daily and are oriented by work center or line.

**DREAM Writer.** Data Record Extraction And Management Writer. A flexible data manipulator and cataloging tool. You use this tool to select and sequence the data that is to appear on a programmed report.

**effective date.** See *effectivity date*.

**effectivity date.** The date on which a component or an operation is to be added or removed from a bill of material or an assembly process. Effectivity dates are used in the explosion process to create demands for the correct items. Normally, bills of material and routings provide for an effectivity "start date" (from) and "stop date" (through), signifying the beginning and end of a particular relationship. Syn: *effective date*.

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**efficiency.** A measure (as a percentage) of the actual output to the standard output expected. Efficiency measures how well something is performing relative to expectations; it does not measure output relative to any input. For example, if there is a standard of 100 pieces per hour and 780 units are produced in one eight-hour shift, the efficiency is 780 divided by 800, then multiplied by 100% or 97.5%.

**electronic commerce.** See *electronic data interchange (EDI)*.

**electronic data interchange (EDI).** The paperless (electronic) exchange of trading documents, such as purchase orders, shipment authorizations, advanced shipment notices, and invoices, using standardized document formats. Syn: *electronic commerce*.

**end item.** A product sold as a completed item or repair item. Any item subject to a customer order or sales forecast. Syn: *parent item, finished good, and co-product*.

**engineering change order (ECO).** A work order used to implement and track a change in a manufactured product. This can be a change in design, quantity of items required, assembly or production process, and so forth.

**engineer-to-order.** Products whose customer specifications require unique engineering design or significant customization. Each customer order results in a unique set of item numbers, bills of material, and routings.

**expedite.** To rush production or purchase orders that are needed in less than the normal leadtime. To take extraordinary action because of an increase in relative priority.

**explosion.** The process of calculating the demand for the components of a parent item by multiplying the parent item requirements by the quantity per specified in the bill of material. Syn: *requirements explosion*. Contrast with *implosion*.

**explosion level.** See *low-level code*.

**exponential smoothing.** A type of weighted moving average forecasting technique in which past observations are geometrically discounted according to their age. The heaviest weight is assigned to the most recent data. The smoothing is termed “exponential” because data points are weighted in accordance with an exponential function of their age.

**facility.** Identifies a separate entity within a business for which you want to track costs. For example, a facility might be a warehouse location, job, project, work center, or branch/plant. Syn: *business unit*.

**family.** See *master planning family*.

**feature.** A characteristic of a product or service, such as an option, accessory, or attachment.

**FIFO.** See *first in, first out*.

**finished good.** See *end item*.

**firm planned order (FPO).** A planned order that can be frozen in quantity and time. The system is not allowed to automatically change it; this is the responsibility of the planner in charge of the item that is being planned. This technique can help planners respond to material and capacity problems by firming up selected planned orders. Additionally, firm planned orders are the normal method of stating the master production schedule.

**first in, first out (FIFO).** A method of inventory valuation for accounting purposes, based on the assumption that oldest inventory (first in) is the first to be used (first out). There is no relationship with the actual physical movement of specific items.

**fixed cost.** An expense that does not vary with the production volume, for example, setup cost.

**fixed order quantity.** A lot-sizing technique in MRP or inventory management that always causes planned or actual orders

to be generated for a predetermined fixed quantity, or multiples thereof, if net requirements for the period exceed the fixed order quantity.

**fixed quantity.** Indicates that the amount of a component or ingredient used in the manufacturing process of an end item remains the same, regardless of the quantity of the end item produced. Contrast with *variable quantity*.

**fixed overhead.** Manufacturing costs other than direct labor and direct materials, that continue even if products are not produced. Although fixed overhead is necessary to produce the product, it cannot be directly traced to the final product.

**forecast.** An estimate of future demand. A forecast can be determined by 1) mathematical means using historical data, 2) subjective estimates from informal sources, or 3) a combination of both techniques.

**forecast consumption.** In Manufacturing and Distribution Planning, forecast consumption occurs when forecast demand is reduced by actual sales orders received or shipped, up to the forecast quantity.

**FPO.** See *firm planned order*.

**frozen cost.** After a frozen update, the cost of an item, operation, or process, as used by the Manufacturing Accounting system.

**frozen update.** A program that freezes the current simulated costs, thereby finalizing them for use by the Manufacturing Accounting system.

**Gantt chart.** A control chart designed to show graphically the relationship between planned performance and actual performance.

**header.** Information at the beginning of a table. This information is used to identify or provide control information for the group of records that follows.

**hidden selections.** Menu selections you cannot see until you enter HS in a menu's Selection field. They include items such as

Display Submitted Jobs (33), Display User Job Queue (42), and Display User Print Queue (43). The Hidden Selections window displays three categories of selections: user tools, operator tools, and programmer tools.

**implosion.** The process of determining the where-used relationship for a given component. Implosion can be single level (showing only the parents on the next higher level) or multi-level (showing the ultimate top-level parent). Syn: *where-used*. Contrast with *explosion*.

**indented bill of material.** A form of multi-level bill of material that lists the highest level parent items at the left margin and all the components going into these parents indented to the right of the margin. All subsequent levels of components are indented farther to the right. If a component is used in more than one parent within a given product structure, it will appear under every subassembly in which it is used.

**indented where-used.** A type of bill of material listing for one component every parent item and subassembly, and the respective quantities required. Each of these parent items calls for the given component item in a bill of material table. The component item is shown closest to the left margin of the listing in the bill, with each parent indented to the right, and each of their respective parents indented even further to the right.

**indirect costs.** Costs that are not directly incurred by a particular job or operation. Certain utility costs, such as plant heating, are often indirect. An indirect cost is typically distributed to the product through the overhead rates.

**indirect labor.** Work required to support production in general without being related to a specific product, for example, administrative work.

**indirect materials.** Items that become part of the final product, or substances that are consumed in the manufacture of a product that have a negligible value relative to the

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value of the final product or the use of which cannot effectively be determined. Examples of indirect materials include masking tape, rags, and oils. These components might or might not be included in the bill of material.

**ingredient.** In process manufacturing industries, the raw material or component of a recipe or formula.

**in-process inventory.** See *work-in-process (WIP)*.

**intermediate.** Material processed beyond raw material and used in higher level items. Intermediates are not stocked in inventory, sold to customers, or planned by MRP.

**issue.** The physical movement of items from a stocking location and, often, the transaction reporting of this activity.

**item.** Any unique manufactured or purchased part, material, intermediate, subassembly, or product, based on form, fit, or function.

**item master.** A record for an item. This record contains descriptive data and control values (leadtimes, lot sizes, and so on), and might contain data on inventory status, requirements, planned orders, and costs. Item records are linked together by product structure records that define the bill of material for an item.

**Just-in-Time (JIT).** A type of manufacturing based on planned elimination of all waste and continuous improvement of productivity. The primary elements of Just-in-Time manufacturing are to have only the required inventory when needed; to improve quality to zero defects; to reduce leadtimes by reducing setup times, queue lengths, and lot sizes; to revise incrementally the operations themselves; and to keep costs to a minimum.

**kanban.** Information cards attached to a group or bin of items that travel in and out of a work center. Kanbans indicate to producing work centers what has been

consumed and what needs to be produced next. Some companies use various shapes, sizes, and colors of cards for each recognition and to indicate an item's priority.

**kit.** The components of a parent item that have been pulled from stock and readied for movement to a production area.

**labor cost.** The dollar amount of added value due to labor performed during manufacturing.

**last in, first out (LIFO).** Method of inventory valuation for accounting purposes, based on the assumption that the most recently received (last in) is the first to be used or sold (first out). There is no relationship with the actual physical movement of specific items.

**leadtime.** 1) A span of time required to perform a process (or series of operations). 2) In a distribution context, the time between recognition of the need for an order and the receipt of goods. Individual components of leadtime can include order preparation time, queue time, move or transportation time, and receiving and inspection time.

**leadtime offset.** A technique used in MRP where a planned order receipt in one time period requires the release of that order in an earlier time period based on the leadtime for the item.

**ledger type.** A ledger used by the system for a particular purpose. For example, all transactions are recorded in the AA (actual amounts) ledger type in their domestic currency. The same transactions may also be stored in the CA (foreign currency) ledger type.

**level.** Every item or assembly in a product structure is assigned a code signifying the relative level in which that item or assembly is used within the product structure. Normally the end items are assigned to level 0 with the components and

subassemblies of the item assigned to level 1 and so forth. The MRP explosion process starts from level 0 and proceeds downward one level at a time.

**LIFO.** See *last in, first out*.

**linked service type.** A service type that is associated with a primary service type. Linked service types are cancelled and the maintenance tasks are performed when the primary service type to which they are linked comes due. You can specify whether the system generates work orders for linked service types, as well as the status the system assigns to work orders that have already been generated. Syn: *associated service type*. See also *primary service type, service type*.

**load.** The amount of planned work scheduled and actual work released for a work center, or operation for a specific span of time. It is usually expressed in terms of standard hours of work or, when items consume similar resources at the same rate, units of production.

**load center.** See *work center*.

**lot.** A control quantity produced together that shares the same production components. Lots are uniquely identified to allow for traceability.

**lot number control.** Assignment of unique numbers to each instance of receipt. This number carries forth into subsequent manufacturing processes. Thus, in review of an end item lot, each lot consumed can be identified as having been used for the manufacture of this specific end item lot.

**low-level code.** A number that identifies the lowest level in any bill of material at which a particular component appears. Net requirements for a given component are not calculated until all the gross requirements have been calculated down to that level. Low-level codes are calculated and maintained automatically. Syn: *explosion level*.

**machine hours.** The amount of time, in hours, that a machine is required to produce a product. Machine hours, rather than labor hours, may be used for planning capacity and scheduling, and for allocating costs.

**maintenance loop.** See *maintenance route*.

**maintenance route.** A method of performing PMs for multiple pieces of equipment from a single preventive maintenance work order. A maintenance route includes pieces of equipment that share one or more identical maintenance tasks that can be performed at the same time for each piece of equipment. Maintenance routes eliminate the need to create separate maintenance work orders for each piece of equipment, yet still accommodate all of the features of the preventive maintenance cycle. Syn: *maintenance loop*.

**maintenance work order.** A term used to distinguish work orders created for the performance of equipment and plant maintenance from other work orders within J.D. Edwards systems, such as manufacturing work orders, utility work orders, engineering change orders, and so on.

**make-to-order.** A product that is produced after receipt of a customer's order. The final product is usually a combination of standard purchased items and items custom-designed to meet the special needs of the customer. Frequently, long leadtime components are planned prior to the order arriving to reduce the delivery time to the customer. Contrast with *assemble-to-order*.

**make-to-stock product.** A product that is shipped from finished goods "off-the-shelf," and is finished prior to a customer order arriving. Master scheduling and final assembly scheduling are conducted at the finished goods level.

**manufacturing calendar.** See *work day calendar*.

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**manufacturing leadtime.** The total time required to manufacture an item, exclusive of lower level purchasing leadtime. It includes the time for queue, setup, run, and move.

**master planning.** A classification scheme that includes the following activities: forecasting and order servicing (which together constitute demand management); production and resource planning; and master scheduling (which includes the final assembly schedule, the master schedule, and the rough cut capacity plan).

**master planning family.** A group of products used in material planning that have similar characteristics.

**master production schedule (MPS).** A detailed statement of how many items are planned to be produced and when. The MPS focuses on products to be made and, through the detailed planning system, identifies the resources (materials, work force, plant equipment, and capital) needed and the timing of the need. See also *material requirements planning*.

**material requirements planning (MRP).** A set of techniques that uses bill of material, inventory data, and the master production schedule to calculate the time-phased net material requirements for every component item and subassembly. MRP suggests a replenishment plan to support the production of the quantities that are specified in the Master Production Schedule. See also *master production schedule*.

**model work order.** In Equipment and Plant Maintenance, a work order that functions as a template for the creation of other work orders. You can assign model work orders to service types. When the service type comes due, the system automatically generates a work order based on information from the model work order.

**MPS.** See *master production schedule*.

**MRP.** See *material requirements planning*.

**net added cost.** The net added cost represents the cost to manufacture an item at the current level in the bill of material. Thus for manufactured parts, the net added cost includes labor, outside operations, and cost extras applicable to this level in the bill of material, but not materials (lower-level items). For purchased parts, the net added cost also includes the cost of materials.

**next number facility.** A facility used to control the automatic numbering of such items as new purchase orders, sales orders, and work orders. The next number facility provides a method to increment numbers to reduce transposition and typing errors.

**nonsignificant item numbers.** Item numbers that are assigned to each item but do not convey any information about the item. They are identifiers, not descriptors. Contrast with *significant item numbers*.

**numeric character.** Represents data using the numbers 0 through 9. Contrast with *alphabetic character* and *alphanumeric character*.

**operand.** See *Boolean logic operand*.

**operation sequence.** The sequential steps for an item to follow in its flow through the plant. For instance, operation 10: cut bar stock; operation 20: grind bar stock; operation 30: shape; operation 40: polish; operation 50: inspect and send to stock. This information is maintained in the routing table.

**overhead.** Costs incurred in the operation of a business that cannot be directly related to the individual products or services produced. These costs, such as light, heat, supervision, and maintenance, are grouped into department overhead, factory overhead, and general overhead. They are distributed to units of product or service by some standard allocation method.

**overlap.** The percentage by which an operation overlaps the previous operation in the sequence. For example, a 20% overlap means that a step can begin when the previous step is 80% complete.

**parent/child relationship.** See *parent/component relationship*.

**parent/component relationship.** 1) In Equipment/Plant Management, a hierarchical relationship of the components of a piece of equipment to the parent equipment. For example, a manufacturing line could be a parent and the machinery on the line could be components of the line. In addition, each piece of machinery could be a parent of still more components. 2) In Product Data Management, a hierarchical relationship of the components and subassemblies of a parent item to that parent item. For example, an automobile is a parent item and its components and subassemblies include: engine, frame, seats, and windows. Syn: *parent/child relationship*.

**parent item.** See *end item*.

**pegging.** In MRP, the ability to identify for a given item the sources of its gross requirements, allocations, or both. Pegging can be thought of as “live where-used” information.

**phantom bill of material.** A bill of material used primarily for nonstocked items. A phantom bill of material represents an item that is physically built, but rarely stocked. It is instead used in the next step or level of manufacturing. MRP uses the bill to drive the requirements through the phantom item to its components.

**picking.** The process of withdrawing from stock the components to make the products or the finished goods to be shipped to a customer.

**pick list.** A document that lists the material to be picked for manufacturing or shipping orders.

**planning calendar.** See *work day calendar*.

**planned order.** A suggested order quantity, release date, and due date created by MRP processing when it encounters net requirements. Planned orders at one level are exploded into gross requirements for components at the next lower level. Planned orders, along with released orders, serve as input to capacity requirements planning to show the total capacity requirements by work center in future time periods. See also *firm planned order*.

**planning bill of material.** An artificial grouping of items or events in bill of material format, used to facilitate master scheduling or material planning, and forecasting. Syn: *pseudo bill of material*.

**planning family.** A means of grouping end items whose similarity of design and manufacture facilitates being planned in aggregate.

**planning horizon.** The amount of time the master schedule extends into the future. This is normally set to cover a minimum of cumulative leadtime, plus time for lot sizing low-level components, and for capacity changes of primary work centers.

**PM.** Refers to one or more service types that are due to be performed for a piece of equipment, based on the service intervals for each service type. When you complete a PM, a new PM cycle begins for the service types included in the PM.

**predictive maintenance.** A maintenance strategy that uses computerized data collection and analysis of equipment operating parameters to predict the point at which equipment is expected to fail and then schedules the appropriate procedures just before the expected equipment failure. Predictive maintenance can significantly reduce costs and equipment downtime by eliminating unnecessary preventive maintenance procedures. In addition, by predicting and averting catastrophic equipment failure, predictive maintenance

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reduces overall maintenance costs and allows for equipment to be operated for its full service life. Contrast with *corrective maintenance* and *preventive maintenance*.

**preflush.** An automatic deduction by the system of materials from inventory when the parts list and routing are attached.

**preventive maintenance.** Maintenance tasks and procedures that are routine and repetitive, such as periodic lubrications and filter replacements. Preventive maintenance procedures are designed to eliminate breakdowns and the need for corrective maintenance. Contrast with *corrective maintenance* and *predictive maintenance*.

**preventive maintenance cycle.** Refers to the sequence of events that make up a preventive maintenance task, from its definition to its completion. Because most preventive maintenance tasks are commonly performed at scheduled intervals, parts of the preventive maintenance cycle repeat, based on those intervals.

**preventive maintenance schedule.** Defines the service types that apply to a specific piece of equipment, as well as the intervals at which each service type is scheduled to be performed.

**primary location.** The designation of a certain storage location as the standard, preferred location for an item.

**primary service type.** A service type to which you can link related service types. For example, for a particular piece of equipment, you might set up a primary service type for a 1000-hour inspection and a linked service type for a 500-hour inspection. The 1000-hour inspection includes all tasks performed at 500 hours. When a primary service type is scheduled to be performed, the system schedules the linked service type. See also *linked service type*.

**priority.** 1) The relative importance of jobs in a queue. 2) The sequence in which jobs should be completed.

**process manufacturing.** Production that adds value by mixing, separating, forming, or performing chemical reactions. It may be done in either batch or continuous mode.

**product data management (PDM).** The Product Data Management (PDM) system enables a business to organize and maintain information about each item it manufactures. Features of this system, such as bills of material, work centers, and routings, define the relationships between components and how they can be combined to manufacture an item. PDM also provides data for other manufacturing systems including Manufacturing Accounting, Shop Floor Control, and Manufacturing and Distribution Planning.

**product family.** See master planning family.

**pseudo bill of material.** See *planning bill of material*.

**purchased part.** An item bought from a supplier.

**quality management.**

**quality control.** The process of measuring quality conformance by comparing the actual with a standard for the characteristic and acting on the difference.

**quantity per.** The quantity of a component to be used in the production of its parent. This value is stored in the bill of material and is used to calculate the gross requirements for components during the explosion process of MRP, and to calculate the quantity on the parts list for a work order.

**queue.** The jobs waiting to be processed at a given work center. As queues increase, so do average queue time and work-in-process inventory.

**rated capacity.** The demonstrated capability of a system. Capacity is calculated from such data as planned hours, efficiency, and utilization. The rated capacity = available hours x efficiency x utilization.

**raw material.** Purchased items or extracted materials that are converted through the manufacturing process into components or products.

**receipt.** 1) The physical acceptance of an item into a stocking location. 2) The transaction reporting of this activity.

**record.** A collection of related, consecutive fields of data the system treats as a single unit of information. For example, a supplier record consists of information such as the supplier's name, address, and telephone number.

**release.** Authorization to produce or ship material that has already been ordered.

**repetitive manufacturing.** Producing items in high-volume concentration, often with entire production lines dedicated to a family of products.

**replacement parts.** Parts that can be used as substitutes. They differ from completely interchangeable service parts in that they require some physical modification, such as cutting, drilling, and so forth, before they can replace the original part.

**reporting code.** See *category code*.

**requirements explosion.** See *explosion*.

**reserved material.** See *committed material*.

**resource requirements planning (RRP).** The process of converting the production plan into capacity needs for key resources: workforce, machinery, warehouse space, suppliers' capabilities, and in some cases, money. Comparison of capacity required of items in the MPS to available capacity is usually done for each key resource.

**revision level.** A number or letter representing the number of times a document or item has been changed.

**rework order.** A manufacturing order to rework and salvage defective parts or products.

**rollup.** See *cost rollup*.

**rough cut capacity planning (RCCP).** The process of converting the master production schedule into capacity needs for key resources: workforce, machinery, warehouse space, suppliers' capabilities, and in some cases, money. Comparison of capacity required of items in the MPS to available capacity is usually done for each key resource.

**routing.** Information detailing the method of manufacture or maintenance of a particular item. It includes the operations to be performed, their sequence, the various work centers involved, and the standards for setup and run. In some companies, the routing also includes information on tooling, operator skill levels, inspection operations, testing requirements, and so on.

**run size.** See *standard batch quantity*.

**safety stock.** 1) In general, a quantity of stock planned to be in inventory to protect against fluctuations in demand or supply. 2) In the context of master production scheduling, the additional inventory or capacity planned as protection against forecast errors or short-term changes in the backlog. Overplanning can be used to create safety stock.

**scrap.** Unusable material that results from the production process. It is material outside of specifications and of such characteristics that rework is impractical.

**scrap factor.** A percentage factor in the product structure used to increase gross requirements to account for anticipated loss within the manufacture of a particular product. Syn: *scrap rate*.

**scrap rate.** See *scrap factor*.

**selection.** Found on J.D. Edwards menus, selections represent functions that you can access from a given menu. To make a selection, you type its associated number in the Selection field and press Enter.

**sequencing.** Determining the order in which a facility processes different jobs.

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**service interval.** Refers to the frequency at which a service type is to be performed. Service intervals can be based on dates, periods, or statistical units that are user defined. Examples of statistical units are hours, miles, and fuel consumption.

**service type.** An individual preventive maintenance task or procedure, such as an inspection, lubrication, or overhaul. Service types can apply to a specific piece of equipment or to a class of equipment. You can specify that service types come due based on a predetermined service interval, or whenever the task represented by the service type becomes necessary.

**setup.** 1) The work required to change a specific machine, resource, work center, or line from making the last good piece of unit A to the first good piece of unit B. 2) Teardown of the just completed production and preparation of the equipment for production of the next scheduled item.

**setup cost.** The labor costs associated with setting up an operation for the next product.

**shelf life.** The amount of time an item may be held in inventory before it becomes unusable.

**shop calendar.** See *work day calendar*.

**shop floor calendar.** See *work day calendar*.

**shop floor control.** A system that uses data from Product Data Management, Master Production Schedule, and Material Requirements Planning to create, maintain, and communicate status on shop orders (work orders.). The major subfunctions of shop floor control are: 1) assigning priority of each shop order, 2) maintaining work-in-process quantity information, 3) conveying shop order status information to the office, 4) providing actual output data for capacity control purposes, 5) providing quantity by location by shop order for work-in-process inventory and accounting

purposes, and 6) providing measurement of efficiency, utilization, and productivity of machines and labor resources.

**shrinkage.** Reductions of actual quantities of items in stock, in process, or in transit. The loss might be caused by scrap, theft, deterioration, evaporation, and so forth.

**shrink factor.** A percentage factor in the item master record that compensates for expected loss during the manufacturing cycle either by increasing the gross requirements or by reducing the expected completion quantity of planned and open orders. The shrink factor differs from the scrap factor in that the former affects all uses of the part and its components and the scrap factor relates to a single component. Syn: *shrinkage rate*.

**shrinkage rate.** See *shrink factor*.

**significant item numbers.** Item numbers that are intended to convey certain information, such as the source of the part, the material in the part, the shape of the part, and so forth. Contrast with *nonsignificant item numbers*.

**simulated cost.** After a cost rollup, the cost of an item, operation, or process according to the current cost scenario. This cost can be finalized, by performing a frozen update. You can create simulated costs for a number of cost methods, for example, standard, future, and simulated current costs. See also *cost rollup*.

**simulation.** 1) The technique of using representative or artificial data to reproduce a model of various conditions that are likely to occur in the actual performance of a system. It is frequently used to test the behavior of a system under different operating policies. 2) Within MRP, using the operational data to perform “what if” evaluations of alternative plans to determine the feasibility of the model.

**single level bill of material.** A display of those components that are directly used in a parent item. It shows only the relationships one level down.

**single level where-used.** A type of bill of material listing each parent in which a specific component is directly used and in what quantity.

**specification.** A statement of the technical requirements of an application or item and the process involved to ensure the requirements are met.

**standard batch quantity.** The quantity of a parent that is used as the basis for specifying the material requirements for production. The “quantity per” is expressed as the quantity needed to make the standard batch quantity, not to make only one of the parent. It is often used by manufacturers that use some components in very small quantities or by process-related manufacturers. Syn: *run size*.

**standard cost.** The expected, or target cost of an item, operation, or process. Standard costs represent only one cost method in the Product Costing system. You can also calculate, for example, future costs or current costs. However, the Manufacturing Accounting system uses only standard frozen costs.

**standard costing.** A cost system that uses cost units determined before production. For management control purposes, the system compares standards to actual costs and computes variances.

**standard hours.** The length of time that should be required to 1) set up a given machine or operation and 2) run one part, assembly, batch, or end product through that operation. This time is used in determining machine and labor requirements. It is also frequently used as a basis for incentive pay systems and as a basis for allocating overhead in cost accounting systems.

**subassembly.** An assembly that is used at a higher level to make up another assembly.

**substitution.** Using alternate components in production when the primary item is not available.

**super backflush.** Creates backflush transactions against a work order at pay points defined in the routing. This allows you to relieve inventory at strategic points throughout the manufacturing process. See also *backflush*.

**supplier scheduling.** Provides suppliers with consistent shipping information and advanced demand profiles to support just-in-time production and delivery. The supplier scheduling system includes a business agreement and delivery schedule for each supplier. Supplier scheduling includes a formal priority planning system and EDI functionality to provide the supplier with valid due dates.

**supply chain.** The link from the initial raw materials to the consumption of the finished product.

**threshold percentage.** In Equipment/Plant Management, the percentage of a service interval that you define as the trigger for maintenance to be scheduled. For example, you might set up a service type to be scheduled every 100 hours with a threshold percentage of 90 percent. When the equipment accumulates 90 hours, the system schedules the maintenance.

**throughput.** The total volume of production through a facility (machine, work center, department, plant, or network of plants).

**time series.** A set of data that is distributed over time, such as demand data, in monthly time periods.

**traceability.** The ability to trace the production history of a product for quality or warranty purposes. This is usually done through the use of lot or serial numbers to link raw materials from the supplier to the

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end product. Lot/SN traceability can be a government requirement in certain regulated industries, such as the pharmaceutical or automotive industries. See also *lot*.

**unit cost.** Total labor, material, and overhead cost for one unit of production.

**unit of measure.** The unit by which the quantity of an item is managed, such as by weight, each, box, package, case, and so forth.

**variable overhead.** All manufacturing costs that vary directly with production volume, other than direct labor and direct materials. Variable overhead is necessary to produce the product, but cannot be directly assigned to a specific product.

**variable quantity.** In manufacturing, a variable quantity of a component or ingredient indicates that the amount required varies based on the quantity of the end product produced. Contrast with *fixed quantity*.

**variance.** 1) In Product Costing and Manufacturing Accounting, the difference between two methods of costing the same item. For example, the difference between the frozen standard cost and the current cost is an engineering variance. Frozen standard costs come from the Cost Components table, and the current costs are calculated using the current bill of material, routing, and overhead rates. 2) In Equipment/Plant Management, the difference between revenue generated by a piece of equipment and costs incurred by the equipment.

**where-used.** A listing of every parent item that calls for a given component, and the respective quantity required, from a bill of material file. Syn: *implosion*.

**work center.** A specific production facility with identical capabilities, consisting of one or more people, machines, or both. A work

center can be considered as one unit for purposes of capacity requirements planning and detailed scheduling. Syn: *load center*.

**work day calendar.** A calendar used in planning functions that consecutively lists only the working days so that component and work order scheduling can be done based on the actual number of work days available. Syn: *planning calendar*, *manufacturing calendar*, and *shop floor calendar*.

**work-in-process (WIP).** A product or products in various stages of completion throughout the plant, including all material from raw material that has been released for initial processing up to completely processed material awaiting final inspection and acceptance as finished product. Syn: *in-process inventory*.

**work order life cycle.** In Equipment/Plant Management, refers to the sequence of events through which a work order must pass to accurately communicate the progress of the maintenance tasks it represents.



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