

PeopleSoft®

EnterpriseOne JDE5
Product Costing and Manufacturing
Accounting PeopleBook

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Product Costing and Manufacturing Accounting PeopleBook
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Overviews

Overviews

Product costing is an important part of a profitable manufacturing environment. After you have determined whether your company will use standard or actual costing methods, you can set up and implement your manufacturing accounting system.

Industry Overview

This chapter introduces you to the industry concepts associated with product costing and manufacturing accounting. In addition, this chapter outlines several issues inherent in product costing and manufacturing accounting, as well as J.D. Edwards solutions through Idea to Action.

Industry Environment and Concepts

Virtually every organization must address fundamental questions such as: Are we operating at a profit or a loss? Are we as profitable as we could be? To answer those questions, an organization must have a method for establishing the cost of doing business. Companies should also have a method for tracking those costs to their associated functions. This provides a means for gauging whether costs are appropriate and a method for correcting costs that might be out of sync with the organization's plans.

Traditionally, organizations have been set up in separate and distinct functional groups. Information is obtained from one area in the organization and forwarded along a predetermined path without much coordination across other functional areas. These areas could benefit from shared information to operate more efficiently. Sharing information among departments such as design engineering, manufacturing engineering, industrial engineering, production planning, production control, and quality management provides valuable cross-functional integration that might result in smoother processes and reduced product costs.

Modern organizations are redefining and refining how information is processed within the enterprise's structure. They are paying closer attention to making information available across functional boundaries and coordinating information to operate at an optimal level. Market competition has driven most businesses to analyze how they manage operations and seek more efficient ways of setting up, tracking, and changing processes. All of these activities ultimately affect the bottom line. An organization cannot reduce the costs of doing business if it does not know where and how the costs are generated.

Organizations are realizing that global competition and dynamic market changes have changed the focus of many business practices. Most business activities must be flexible. To ensure a potentially larger market share, organizations must become aware of strategic areas so that they can focus on the "significant few" tasks and shift focus away from the remaining "trivial many" areas. Total Quality Management tools, which can pinpoint areas of concern and potential causes, are becoming more common throughout many industries. Statistical process controls, tracking methods, and causal analysis assist organizations in focusing on areas that can make a difference in improving operations. These processes can positively affect the organization's customer service capability and the organization's financial bottom line.

From a financial standpoint, an organization seeking to improve its bottom line must have access to detailed information for individual product costs. The information must be broken down to various cost component levels to understand how each activity affects costs and how to manage each activity appropriately.

Each contributing area within an organization must be responsible for the total costs of the activities that the area generates. For example, the initial cost of an item might be a combination of the following costs, in addition to the actual item cost:

- Supplier costs
- Production costs
- Warehouse costs
- Transportation costs
- Carrying costs

As you perform various operations within a manufacturing company, other costs are associated with that item. Each operation that you perform has associated costs that you need to record and account for in the overall or updated cost of the item.

Once costs are defined, you might use various tools to monitor how the costs are distributed among the operating areas. Manufacturing accounting specifically monitors costs generated during various manufacturing activities and provides management with a tool to compare actual results to expected results.

One method used to create baseline costs for comparison purposes is the standard product costing method. By specifying a standard cost for a product, which can comprise various cost components, you determine a base cost. You can compare this base cost to the actual cost of the product after you have finished manufacturing it. The result of the comparison allows management to gauge whether the tasks accomplished during production are within the scope of what the product's cost should have been. You can then begin to improve how specific costs are derived. An organization is unable to resolve discrepancies if it does not know what costs are involved and where they originated.

Every area within the organization that affects the cost of the product must be involved in determining and evaluating those costs. You must then determine which costs add value to the item and which do not. You should then eliminate those costs that do not add value to an item. Each area should be responsible for the costs that are derived from that area's activity. Reducing the cost of doing business reflects directly on the bottom line of the organization. Enterprise-wide techniques for waste reduction, such as just-in-time methodologies, can also pertain to wastes that affect the cost of the product to the customer. The organization's goal is to reduce wastes within processes by reducing non-value-added tasks. This typically results in reduced overall costs and can ultimately reduce the product's cost to the customer.

With the increased need to monitor costs, organizations need a mechanism for tracking the expected costs of items as well as the actual costs that are incurred at each activity. When expected and actual costs are known, you can compare them to identify areas for improvement. You can then put processes into place to ensure the lowest cost to the consumer, increase profitability, and maintain or enhance the organization's position in the marketplace.

Standard Costing Systems

Organizations that use standard costing systems can track specific cost flows from purchasing or production to inventory. Typically, the expected costs of labor, material, and overhead are based on history. This technique is different from the techniques of activity-

based costing, which use current costs as the activity is accomplished, rather than predetermined standard costs. With standard costing you can establish a systematic strategy to identify all cost components, the individual costs that make up an item's cost. Typically, the system calculates material, labor, and overhead costs. Generally, an organization finds it necessary to recognize extra costs that must also be calculated and controlled, such as electricity or royalty costs. The total of all of these costs is the costing baseline. These cost components are helpful in planning future strategic goals across the entire enterprise.

After you complete production activities, you identify variances between the predetermined standard costs and the values established throughout the production process. Several phases of variance can be identified. For example, a variance could represent discrepancies between the original frozen (expected) standard values and the bill of material costs that might exist sometime after the frozen record was established. This is known as an engineering variance. You can also compare the bill of material to the parts list that is generated for a work order. A cost variance between these two is known as a planned variance. Another variance might be between the work order's original parts list and the final list of products issued to the work order. This is known as the actual variance. These variance comparisons allow management to understand where discrepancies occur in production, and identify areas that might require further controls. Standard costing is ideal for repetitive or rate-based manufacturing industries, as well as for discrete and process manufacturing. Once established, the costs can be tracked throughout the life cycle of the product or product family.

Actual Costing Systems

Organizations that choose to manage costing by tracking actual costs for reporting purposes emphasize the need to monitor costs as they are incurred. Actual costing uses predetermined cost components, but the costs are accumulated at the time that they occur throughout the production process. Variances between the estimated costs and the actual costs do not exist because the actual cost is continually updated to become the most current or last manufactured cost. Costing analysis can include material and labor costs as they accumulate. For manufacturing environments such as make-to-order, or assemble-to-order, this visibility is important because of the possibility that no two deliverable items are identical. Because each product might vary from products manufactured in the past, a standard cost based on production history might be impossible to determine. Other factors that influence whether an organization decides to use actual costing instead of standard costing include the use of commodity items, whose costs might vary constantly, or dynamic economic fluctuations.

An additional benefit to using actual costing is the ability to revalue inventory based on actual costs, which are the most accurate. Changes to costs from labor or additional cost components are reflected almost immediately. Inventory activity is costed at the updated value for any additional inventory transactions that you process.

Technology or electronics industries benefit most from this type of costing because component variations affect total actual costs. Industries that deal with commodities, for example, dairy products or precious metals, and are characterized by widely fluctuating costs, might use an actual costing system to provide the most current cost values. For these industries, the return on investment is having immediate access to the costs as they are incurred.

External Need to Track Costs

External entities often require industries to monitor specific areas of operations. These entities include regulatory agencies (such as agencies that influence pharmaceutical industries) or customers who require more self-regulation and monitoring of processes. Many

organizations demonstrate their compliance by participating in registration processes such as ISO registration. The premise of ISO registration states that organizations have established business processes to which they conform and have documentation to support those processes. Merely participating in a registration program is not enough, however. An organization must determine if its purpose for participating is generating additional paperwork, or if process improvement is the goal. Defining product costs and establishing methods for accounting for enterprise-wide activities are valid justifications for implementing monitoring processes. Many organizations implement self-improvement programs to uncover problem areas and to eliminate sources of waste internal to the organization, even if no outside agency or requirement exists. The ultimate goal is the need to stay informed and maintain a sound, well-run organization that will continue to be a viable contender as the future of that market evolves on a global scale.

Conclusion

Organizations that are interested in ensuring the health of their entire organization have many specialized methods available. Methods include establishing the criteria for organizational health, establishing and implementing processes and procedures to create a healthy operating system, and establishing criteria for evaluating progress. These methods assist the organization in attaining the ultimate goal of maintaining or increasing share of its target market.

If the organization's goals include operating at optimal cost levels, management should ensure that costing analysis not only includes the cost of products consumed during processing, but that costs reflect all of the various factors that comprise the total cost profile. Analysis should include any activity that positively or negatively affects costs that might eventually be passed along to the end user or customer. The ability to break costs down and define extra costs enables an enterprise to identify and evaluate activities that are valuable to the process and to identify areas where improvements might result in the ability to stay in business in the global community and to become a stronger market player.

Idea to Action: The Competitive Advantage

The following are typical issues in manufacturing accounting, the business activator that solves each problem, and the return on investment.

Issue	Solution
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How do I know if my company is operating at a profit or a loss?	<p>Product costing and various accounting functions throughout OneWorld give complete costing and accounting visibility at each level of the organization.</p> <p>Costs are compiled in a single ledger record regardless of where the cost record was generated.</p> <p>OneWorld provides the ability to sort and report cost information by summary or detail.</p> <p>Return on investment: OneWorld provides continuous visibility of product costs and accounting records generated from associated functions throughout the enterprise. This allows management to make better-informed decisions.</p>
Where are my costs derived?	<p>Product costing by item: the item's cost can be broken down to each specific element influencing cost.</p> <p>Costs are compiled in a single ledger record regardless of where the cost record was generated.</p> <p>OneWorld provides the ability to sort and report information by summary or detail information.</p> <p>Return on investment: OneWorld provides improved accuracy in cost visibility for better-informed management decisions, which contributes to increased accuracy in determining costs to customers.</p>
Because of the number of accounts and the complexity of our accounting structure, we need to automate account processing for manufacturing. How can we do so?	<p>Once you have structured your accounts, nonaccounting personnel can access accounts throughout the system by using Automatic Accounting Instructions (AAIs) and G/L class codes.</p> <p>Accurate accounting records of activity are available automatically without requiring nonaccounting personnel to generate new accounts.</p> <p>Fewer opportunities exist for inaccurate accounting records to be generated.</p> <p>Return on investment: OneWorld provides improved accuracy in cost visibility for better-informed management decisions, which contributes to increased accuracy in determining costs to customers.</p>
Must I maintain accounting records to various accounts based on customer?	<p>You can design and maintain product costing and accounting structures within a single database to provide accurate records throughout the life cycle of any item.</p> <p>Return on investment: OneWorld provides the ability to view and adjust cost and accounting records to maintain an accurate and complete cost history throughout a single database. This ability contributes to decreased processing leadtimes and decreased costs.</p>
Our product pricing structure for configured items is very complex. How can we give our customers real-time pricing when they place an order?	<p>Use the Advanced Pricing system in conjunction with the Sales Configurator system to create accurate and timely pricing at sales order entry. Because configurations are determined at the time of order, electronics industry companies are using</p>

pricing when they place an order?	advanced pricing to provide customers with automatic price quotes at order time.
This issue is of particular interest to the high-tech and electronics industries.	Return on investment: OneWorld provides improved accuracy in cost visibility for better-informed management decisions and decreased order-processing leadtime.
How can our company record current labor performance against standard performance?	The Manufacturing Accounting system provides records of standard labor costs that can be compared to current performance during or after a production process.
This issue is of particular interest to commodity shops.	Return on investment: OneWorld provides accurate and timely comparison records of standard versus current performance, which contributes to more accurate customer-related costs.

Product Costing and Manufacturing Accounting Overview

Maintaining accurate and complete records of 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 on 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 information 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.

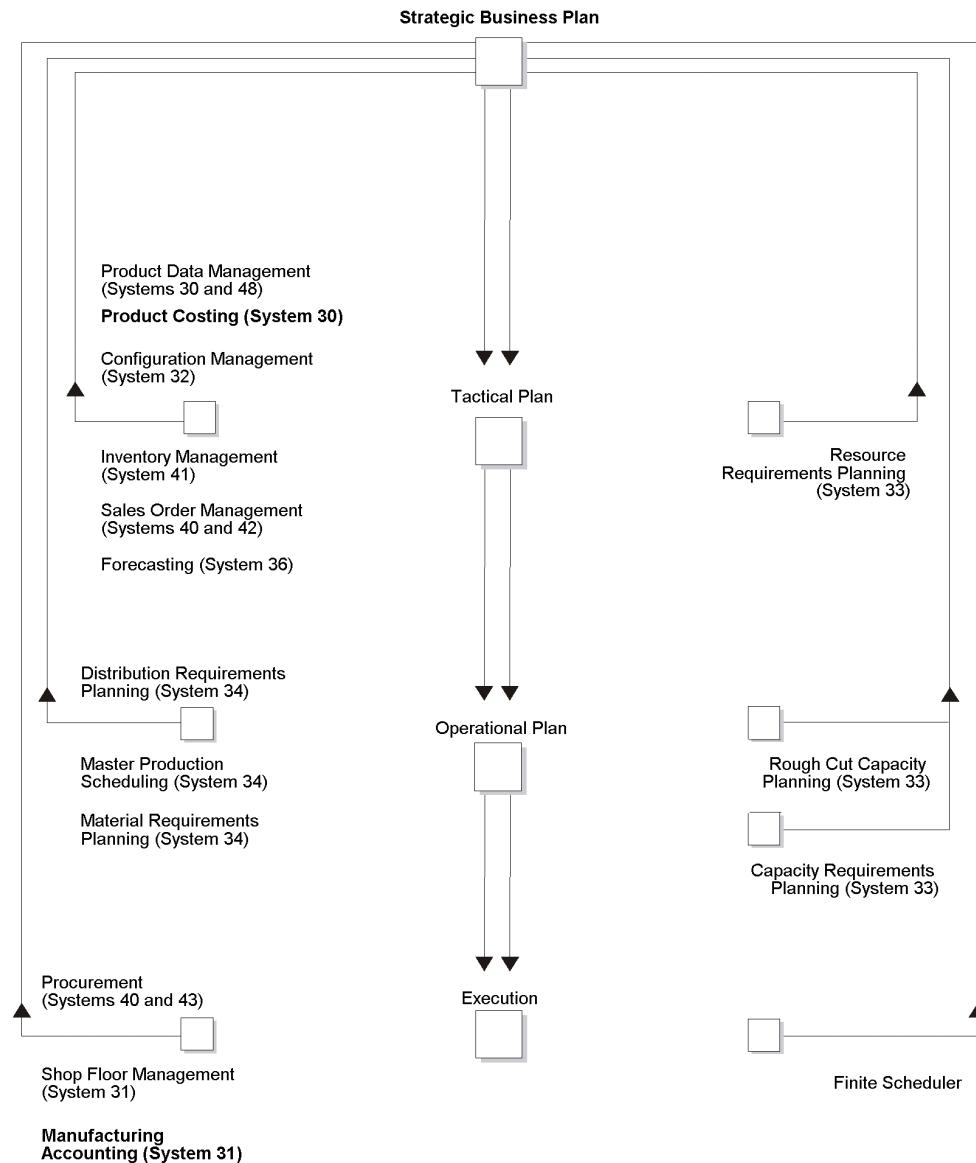
System Integration

Product Costing and Manufacturing Accounting are two of the systems that are included in the Enterprise Requirements Planning and Execution (ERPx) system.

ERPx is a closed-loop manufacturing system that formalizes company and operations planning, and the implementation of those plans. Use the ERPx 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.

ERPx
Enterprise Requirements Planning and Execution



Certain functions within the Product Costing and Manufacturing Accounting systems overlap with other J.D. Edwards systems, such as:

- Product Data Management
- Shop Floor Management
- Equipment/Plant Maintenance
- Payroll
- General Accounting

You should have a basic understanding of these systems and their tables and how they interact with Product Costing and Manufacturing Accounting.

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:

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

Product Costing and Standard Accounting Integration

Product costing plays a significant role in the manufacturing environment. For standard costing, before you can implement your Manufacturing Accounting system, you must set up costs for the products that you produce. To calculate these costs, you must consider the following aspects in the manufacturing environment:

- Cost reporting (what does the item really cost to produce?)
- Variance reporting (actual versus standard costs)
- Product and job costing (detailed information) for material labor, and overhead

If you use standard cost (07) cost method 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.

Standard costing is most applicable for a company with stable costs and little cost variance from one manufacturing run to another. Companies with minimal accounting staff often use standard cost accounting.

Actual Accounting Integration

J.D. Edwards provides two methods to use to evaluate actual costs. These methods are:

- Weight Average cost method (02)
- Actual, or Manufacturing Last, cost method (09)

You can implement actual costing with the Manufacturing Accounting system without using the Product Costing system.

Many companies who use the J.D. Edwards Shop Floor Management system want to capture and record actual or average manufacturing costs. If you use actual costing, the system calculates the cost of the product built on a work order or rate schedule based on the actual hours used and the actual quantity of issued parts. The system updates the cost based on the most current information.

Actual costing is a function of the Manufacturing Accounting system and not the Product Costing system. If you use actual costing, you do not need to set up product costs for each item that you manufacture because product costs will be calculated when the work or rate order completions are run. A company can choose to use a combination of actual costed items and standard costed items. A company using one of the actual costing methods will want to set up its extra, or overhead, costs as it would for standard accounting.

When you complete work orders for items that use the average (02) or actual, manufacturing last, (09) cost methods, the system:

- Calculates a new cost unit for the item based on shop floor activities
- Revalues on hand inventory for items using cost method 09
- Calculates and updates the weighted average cost
- Updates the Cost Ledger table with the new unit cost

Average costing is often useful for companies whose costs change often but not significantly. Actual costing is useful for companies that:

- Engineer or manufacture to order
- Create quotations
- Have costs that change often and significantly

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 a typical company and the aspects of the Product Costing and Manufacturing Accounting systems that are affected by that department.

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

The following issues should be considered as you define and manage your manufacturing costs:

- When (and how often) you change costs
- How you limit access
- When the cost of a new item is reflected
- How you account for labor rates and work center overhead

You might also encounter the following circumstances as you define costs:

- Not all costs are available before your initial cost rollup.

- You have used incorrect units of measure.
- Your company reports labor hours and costs inaccurately.
- 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.

Considerations between Standard and Actual Costing

A company should decide to use either standard or actual costing depending on its needs and requirements. You must weigh many considerations when making the decision to use standard or actual costing and accounting. To assist in the decision making, the following list identifies considerations relevant to the J.D. Edwards Product Costing and Manufacturing Accounting in OneWorld Xe:

Integration with other systems	The OneWorld Xe version of the Sales Order Management and Configurator applications are not fully adapted to actual costing methods (02 or 09). The manufacturing variance program (P31804) can only accommodate one sales order document type.
Manufacturing considerations	For actual costing methods (02 or 09), J.D. Edwards recommends: <ul style="list-style-type: none"> • Using only single level bills of material, if you use bills of material • Using discrete manufacturing • Using engineer to order or make to order practices and oversee the entry of all information on the work orders • Completing a work order to only one lot and location
Inventory transfer considerations	When using actual costing methods (02 or 09) you should: <ul style="list-style-type: none"> • Be aware that transferring inventory for any purposes other than the cost of goods sold (COGS) might result in unreliable information in the variance accounting. • Manually set the actual cost for the primary location to equal the standard cost to allow for transient stock., • Understand that processing for physical inventory might be more time consuming than with other cost methods.
Costing considerations	You should maintain inventory cost level at the item, branch, and location levels (Inventory Cost Level 3) for best results if using actual cost method (02 or 09).

Tables

The following is a list of the tables that are used throughout Product Costing and Manufacturing Accounting.

Account Balances (F0902)	Contains net postings for each period and prior year balances (net and cumulative). This table contains one record per account, ledger type, subledger, fiscal year, and transaction currency table.
Account Ledger (F0911)	Contains detailed transactions in the general ledger.
Account Master (F0901)	Contains account definitions, including numbers and descriptions.
Address Book Master (F0101)	Contains information about customers, suppliers, employees, and prospects.
Distribution / Manufacturing - AAI Values (F4095)	Contains account numbers that are used to create journal entries and charge amounts to those accounts.
Batch Control Records (F0011)	Contains system-generated batch header information, including the batch number, batch status, and batch entry date.
Bill of Material Master File (F3002)	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.
Item Branch File (F4102)	Defines and maintains warehouse or plant-level information, such as branch-level category codes.
Business Unit Master (F0006)	Identifies information about business units, such as company names and category codes assigned to the business unit.
Item Cost Component Add-Ons (F30026)	Contains standard costs and extra costs.
Item Cost File (F4105)	Contains the summarized item costs and inventory valuation method.
Equipment Rates (F1301)	Contains the information based on the equipment billing selection chosen in the Manufacturing Constants setup.
Generic Message/Rates (F00191)	Contains rate and factor tables, as follows: <ul style="list-style-type: none"> • 30/CF Costing Factors • 30/CR Costing Rates • 31/ER Employee Rates
Item Ledger File (F4111)	Contains transactions that indicate changes in inventory value.
Item Location File (F41021)	Determines the G/L class code used in manufacturing accounting transactions.
Item Master F4101)	Stores basic information about each defined inventory item, such as item numbers, descriptions, category codes, and units of measure.
Job Shop Manufacturing Constants (F3009)	Stores variables that indicate, for example, whether to include efficiency in the cost rollup, which overhead values to use, and what source to use for labor rates.

Manufacturing Data (F4101M)	Stores the accounting cost quantity, which the system uses to determine the allocation of fixed setup costs for an item.
Work Order Parts List (F3111)	Contains the parts list that is attached to a work order or rate schedule. It contains one record for each part. The system creates this table interactively or when you run the Process Work Orders program.
Shop Floor Control Parts List Tag Table (F3111T)	Stores the accumulated costs, accumulated scrap amount, and unaccounted scrap quantity for components.
Production Cost (F3102)	Contains all costs associated with a particular work order.
Purchase Order Detail File (F4311)	Contains transactions related to a purchase order.
Routing Master File (F3003)	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.
Sales Flex Accounting (F4096)	Determines the information to use for cost objects.
User Defined Codes (F0005)	Contains user defined codes and their descriptions.
Work Center Master (F30006)	Contains detailed data about all defined work centers, including efficiency.
Work Center Rates File (F30008)	Contains simulated and frozen rates for each work center, such as rates for overhead and labor.
Work Order Master File (F4801)	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.
Work Order Master Tag File (F4801T)	Stores the cost method for the work order. Additionally, it includes the unaccounted amount and quantity for scrap units and the unaccounted work order completions.
Work Order Routing (F3112)	Contains the routing steps that are attached to a work order or rate schedule. 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.
Shop Floor Control Routing Instructions (F3112T)	Stores the unaccounted quantity and amounts for outside operations.
Work Order Time Transactions (F31122)	Contains labor and machine time transactions by work order.

Menu Overview

OneWorld provides access through a menu hierarchy. The hierarchy is organized by system and frequency of use.

Product Costing

Access Product Costing functions from the Product Data Management menus.

Product Data Management (G30)



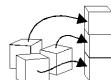
Daily Processing (G3010)

S Product Costing (G3014)



Periodic Processing (G3020)

S Product Costing Reports (G3023)



Product Data Management Setup (G3041)

S Product Costing Setup (G3042)

Fast Path Commands

The following table provides the fast path commands that you can use to move among the Product Costing menus:

Command	Menu	Title
COST	G3014	Product Costing
DPC	G3014	Product Costing
PPC	G3023	Product Costing Reports
COSTS	G3042	Product Costing Setup
SPC	G3042	Product Costing Setup

Manufacturing Accounting

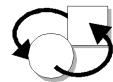
Access Manufacturing Accounting functions from the Shop Floor Management menus.

Shop Floor Management (G31)



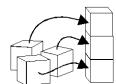
Daily Processing (G3110)

S Manufacturing Accounting (G3116)



Periodic Processing (G3120)

S Manufacturing Accounting Reports (G3123)



Shop Floor Management Setup (G3141)

Fast Path Commands

The following table provides the fast path commands that you can use to move among the Manufacturing Accounting menus:

Command	Menu	Title
DMA	G3116	Manufacturing Accounting
MA	G3116	Manufacturing Accounting
PMA	G3123	Manufacturing Accounting Reports
SSFC	G3141	Shop Floor Management Setup

Setup

System Setup for Product Costing and Manufacturing Accounting

Before you can use your Product Costing and Manufacturing Accounting systems, you need to define certain information that the system uses during processing. The settings might vary depending on whether you are using standard or actual accounting for an item.

Understanding User Defined Codes

Many fields throughout the Product Costing and Manufacturing Accounting systems require user defined codes. You can customize fields in your system by setting up user defined codes to meet the needs of your organization. User defined codes allow you to establish and maintain a table that defines valid codes for various types of information. Codes are categorized by system and code type.

The Product Costing and Manufacturing Accounting systems uses the following user defined codes:

Cost Component Add-Ons (30/CA) 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. J.D. Edwards recommends that you use cost component D for outside operations.

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. J.D. Edwards recommends that you define extra costs with an "X" for easy identification. You can assign separate cost components by categories that are applicable to your business. The user defined codes for extra cost components can begin with any letter except A, B, or C. Although it might appear that you can set up extra cost components that begin with these letters, the Simulate Cost Rollup program actually deletes these cost components.

When you set up cost components, complete a separate line for all of the possible cost components that can be used in the cost rollup for an item. Complete the fields with the following information:

- Codes - The code for the cost component.
- Description 1 - What the component represents.
- Description 2 - Additional text that further clarifies Description 1 or the cost component.
- Special Handling - For outside operations, type 1 as the first character.

Cost Buckets (30/CB) Use cost buckets to group similar cost components for inquiry and reporting purposes.

When you set up cost buckets, complete the fields with the following information:

- Codes - Identify the cost components to be grouped
- Description 1 - 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 operation bucket.
- Description 2 - Specify in which column (bucket) each cost component is grouped.

See Example: Setting Up Cost Bucket Codes for Costed Bills of Material.

Costed Operation Buckets (30/CO) 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.

When you set up operation bucket codes, complete the fields with the following information:

- Codes - Identify the cost components to be grouped.
- Description 1 - 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 - Specify in which column (bucket) each cost component is grouped. You should reserve buckets 1 and 2 for extra costs (Usually cost components UDC 30/CA) because the system does not calculate cost buckets 1 and 2 based on the routine, and extra costs are not related to a particular operation on the

routing. Buckets 1 and 2 appear in the header area of Costed Routing Inquiry and a processing option controls whether they are included in the calculation of total costs.

Costing Exception Error Messages (30/EM)	Contains the error messages that appear on the Costing Exceptions report when any item contains any of the errors included in this table. You can change the severity level of an error to one that is appropriate for your company. The severity level is defined in Description 2.
The error messages are hard-coded. You cannot add or delete messages. If you change the name of an existing message, you should not change its meaning but merely adapt the definition to one that is more understood by your company.	
Average Cost Calculation (40/AV)	If you want your Weighted Average cost method (02) to be updated automatically by the system, you must set up each of the program numbers that you want updated in this UDC list.
Cost Methods (40/CM)	Contains the cost methods used to calculate costs for all items. Codes 01 through 09 and IC are hard-coded and cannot be altered. Codes 10 through 19 are reserved for use by J. D. Edwards. Codes 02, 07, and 09 are the only cost methods supported by manufacturing.

Example: Setting Up Cost Bucket Codes for Costed Bills of Material

You can group similar cost components for inquiry and reporting purposes. For example, you can define A1 and A2 cost components as Purchasing. You do this by assigning them the same sequence number in the Description 2 field. The sequence number also determines in which order the groups are displayed on costed bill inquiries and reports. You can then use the costed bill inquiries and reports to review the total costs for the group Purchase.

Each cost bucket can contain several defined cost components. For example, you might define the buckets and user defined codes as follows:

Bucket 1 Purchase

Includes cost components A1 (material), A2 (scrap), and D1 (outside operations)

Bucket 2 Labor

Includes cost components B1 (direct labor), B2 (setup), and B4 (labor efficiency)

Bucket 3 Machine

Includes cost component B3 (machine run)

Bucket 4 Overhead

Includes cost components C1 (machine variable) and C2 (machine fixed)

Bucket 5 Extras

Includes cost components X1 (taxes) and X2 (electricity)

See Also

- Customizing User Defined Codes* in the OneWorld Foundation documentation for information about how to set up user defined code lists
- Setting Up Standard Rate and Factor Codes* for information about setting up and maintaining rates and factors for extra costs
- Assigning Values to User Defined Cost Components* for information about setting up and maintaining rates and factors for extra costs

Setting Up Costing Information

You can customize the Product Costing and Manufacturing Accounting systems to meet your specific manufacturing environment needs. The system uses the values that you define to determine the costs of the items you manufacture.

Note

If you use either of the actual cost methods, you do not complete the task for setting up accounting cost quantities.

Setting Up Accounting Cost Quantities for Standard Costs

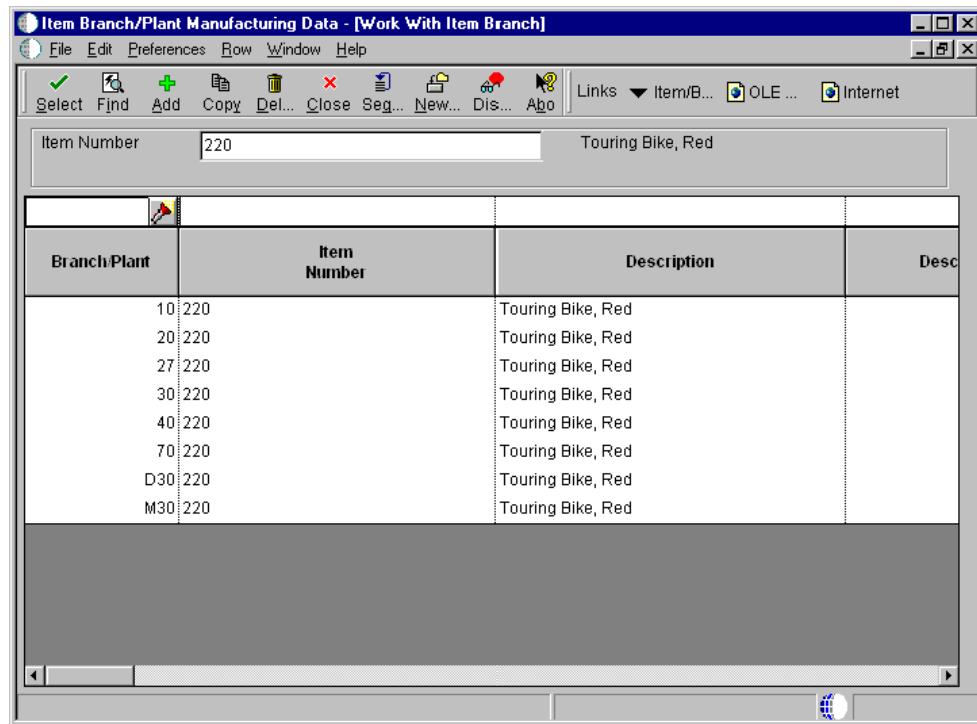
The system uses accounting cost quantities to determine the allocation of fixed costs for an item. Accounting cost quantities represent the average quantity of a work order or rate schedule for this item. During cost rollup, the system divides the fixed costs by the accounting cost quantity that you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

Note

If you use either of the actual cost methods (02 or 09) for an item, you do not need to complete this task.

► To set up accounting cost quantities for standard costs

From the Item Revisions menu (G4112), choose Item Branch/Plant Manufacturing Data.



1. On Work With Item Branch, complete the following field and click Find:
 - Item Number
2. Choose a record and then choose Addl System Info from the Row menu.

3. On Additional System Info, review the following field:

- Accounting Cost Qty

Setting Up Item Cost Levels

The cost level that 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).

The following applies to using cost level 3:

- Configured items must be cost level 3.
- If you use actual costing, J.D. Edwards recommends that you use cost level 3.
- In the standard costing system, costs at cost level 3 are informational only.

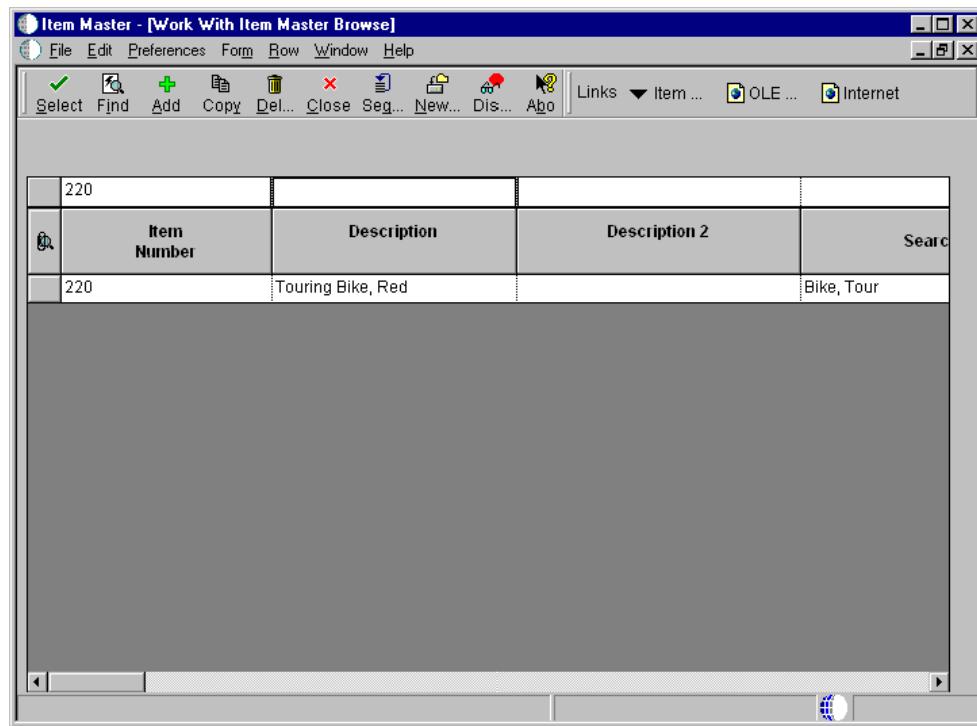
After you have entered cost information, do not change an item's cost level on this form. To change an item's cost level, use the Item Cost Level Conversion program.

See Also

- ❑ *Changing Item Cost Levels* for information about how to change the cost level once it has been assigned

► To set up an item cost level

From the Inventory Master/Transactions menu (G4111), choose Item Master.



1. On Work With Item Master Browse, complete the following field in the Query by Example row and click Find:
 - Item Number
2. Choose the record and click Select.

The screenshot shows the PeopleSoft Item Master Revisions screen. At the top, there's a toolbar with icons for Home, View, Intranet, and Training. Below that is a menu bar with 'Select Workspace' set to 'Active Foundation'. The main title is 'Item Master Revisions'. A sub-header 'Basic Item Data' is visible. The catalog number is listed as 220. The description is 'Touring Bike, Red'. Other fields include Stocking Type (M), G/L Class (IN30), Unit of Measure (EA), Line Type (S), and Planner Number (7500). The 'Inventory Cost Level' field is set to 2. The 'Sales Price Level' field is set to 3. The 'Purchase Price Level' field is set to 3. The 'KitConfigurator Pricing Method' field is set to 1. The 'Configurator Costing Method' field is empty. The 'Commitment Method' field is set to 1. The 'Print Message' field is empty. The 'Item Flash Message' field is empty. The 'Std UOM Conversion' field is empty. There are also checkboxes for 'Backorders Allowed' and 'Check Availability'.

3. On Item Master Revisions, complete or review the following field:
 - Inventory Cost Level

4. If you use actual costing and you entered 3 as the Inventory Cost level, complete the following field:
 - Lot Process Type

Setting Up Methods and Costs for Items

You must provide cost information for each of your items so that the system can track inventory costs. You specify the cost method that the system uses to determine an item's cost for both sales and inventory transactions and purchase orders.

For example, you can specify that 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.

You can set up your manufacturing accounting to do one of the following:

Standard costing Use cost method 07 (Standard).
This method is useful for items that are manufactured in volume with low variety and have stable costs. When using cost method 07 for the parent item, the system uses only method 07 for all components of the parent, outside operations, and so forth.

Actual costing Use either cost method 02 (Weighted Average) or cost method 09 (Actual, Manufacturing Last).
When you assign either cost method 02 or 09 to the parent item, when the system generates work orders it uses this to update the Ledger (WALEDG) field . Therefore, the components on the parts list for the parent item can have any valid cost method (40/CM). The actual costing methods apply to discrete items only.

Cost Method 02 (Weighted Average) is useful for costs that change often. Use this method if you don't want to revalue on-hand inventory when the work orders are completed but at a time of your own determination.

Cost Method 09 (Actual, Manufacturing Last) is useful for items that are engineered or manufactured to order and have costs that change often and significantly. Use this method if you want to revalue your inventory each time that you run the work order completion programs.

For each cost method that you assign to an item, you must also specify a cost or let the system calculate it. For example, to use the actual, or manufacturing last cost method for an item, you could enter an initial cost or let the system update it with the last manufactured cost. If you use actual costing, the system retrieves the last purchase order receipt cost from the last receipt.

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 09 are hard-coded and cannot be altered. Codes 10 through 19 are reserved for J.D. Edwards use and cannot be assigned.

Note

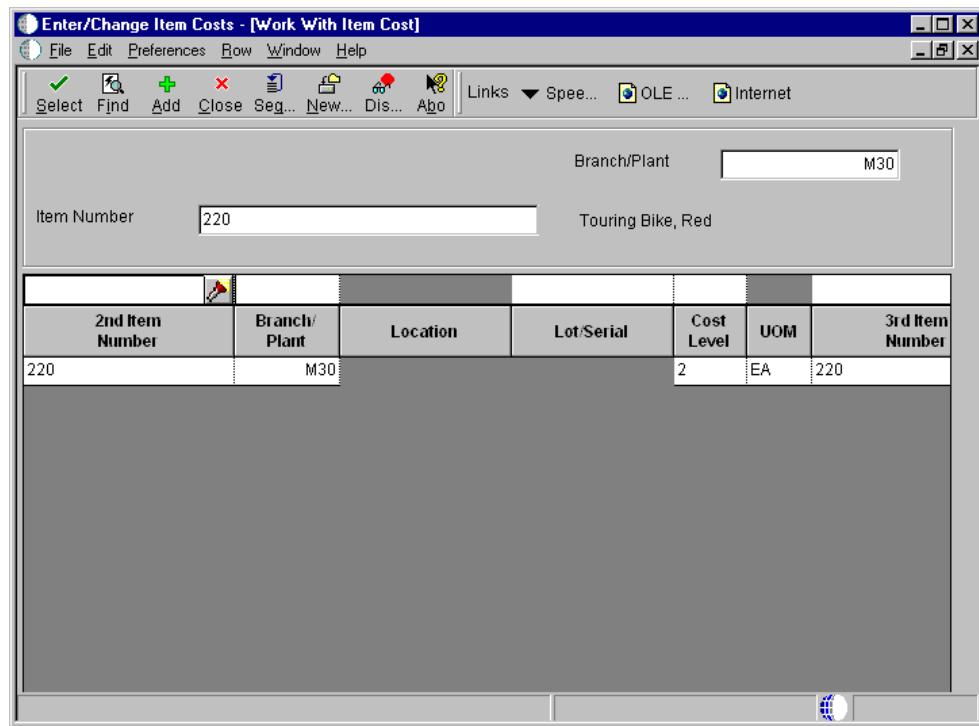
You can remove a cost method for an item if it is no longer applicable. If you try to remove your sales and inventory or purchasing cost method, the system displays a warning message. The system does not delete the cost method, but updates it to a cost of zero.

See Also

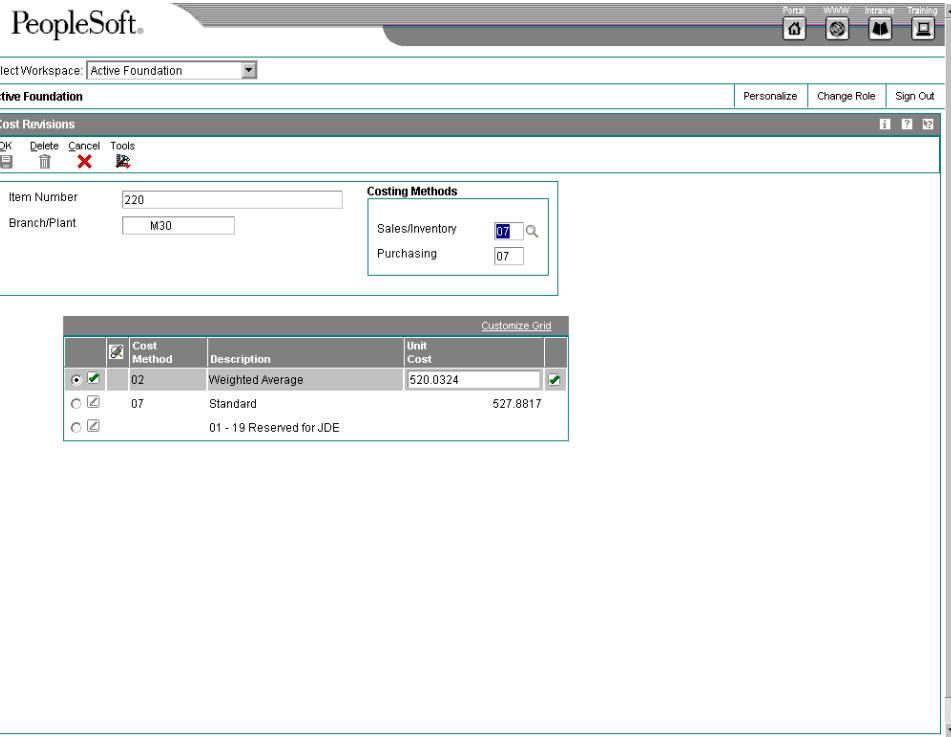
- ❑ *Customizing User Defined Codes* in the *OneWorld Foundation* documentation for information about setting up additional cost methods
- ❑ *Updating Product Costs* for information about updating product or standard costs

► To set up methods and costs for items

From the Product Costing menu (G3014), choose Enter/Change Item Costs.



1. On Work With Item Cost, complete the following fields and click Find:
 - Branch/Plant
 - Item Number
2. Choose a record and click Add.



3. On Cost Revisions, enter the appropriate cost methods in the following fields:
 - Sales/Inventory
 - Purchasing
4. Complete the following fields for each of the applicable cost methods:
 - Cost Method
 - Unit Cost

If you enter a cost method for Sales/Inventory or Purchasing and do not set up a cost amount for that method, a warning message appears. If you do not enter a cost amount for the cost method, the system assigns a cost of zero.
5. Click OK.

Processing Options for Cost Revisions (P4105)

Process

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

Interop

1. Enter the transaction type for the interoperability transaction. If left blank, outbound interoperability processing will not be performed.
-

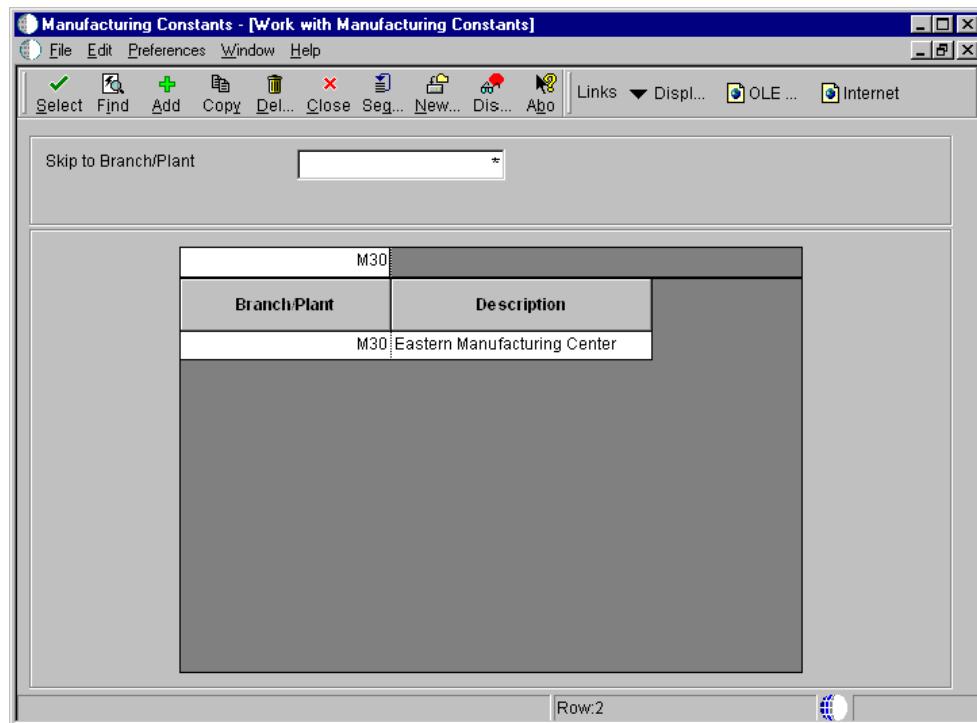
Setting Up Manufacturing Constants

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

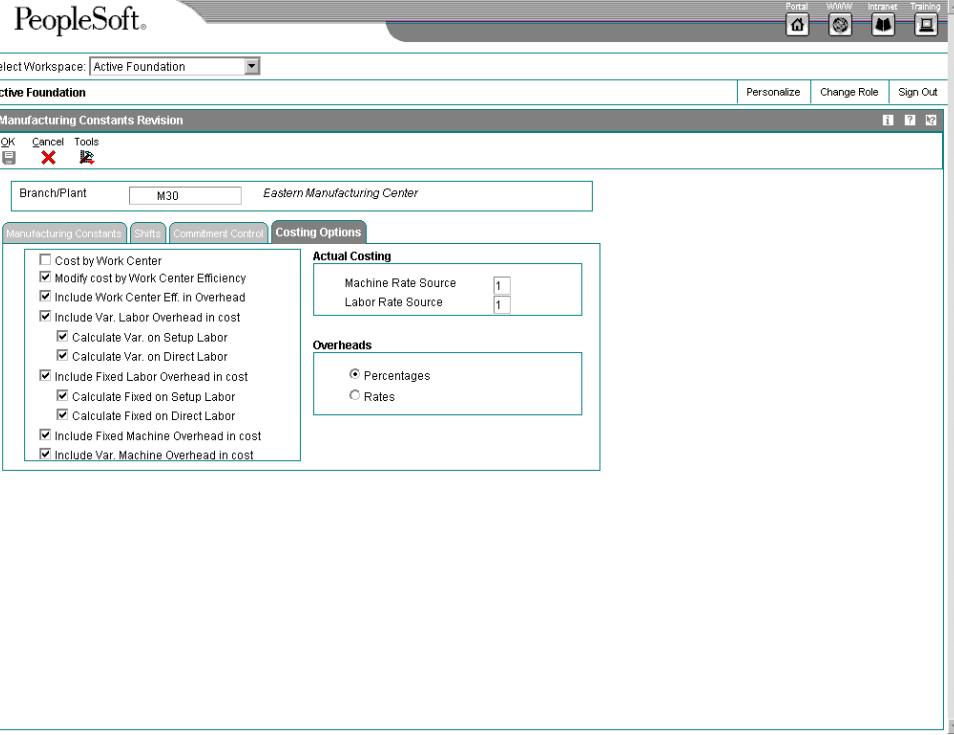
- How to calculate overhead costs
- Whether to consider work center efficiency when calculating direct labor and overhead
- Whether overheads are entered as percents or rates
- How to calculate labor and machine rates for actual costing

► To set up manufacturing constants for Product Costing

From the Product Costing Setup menu (G3042), choose Manufacturing Constants.



1. On Work with Manufacturing Constants, choose a branch/plant and click Select.



2. On Manufacturing Constants Revision, click the Costing Options tab.
3. Click the appropriate costing options:
 - Modify cost by Work Center Efficiency
 - Include Var. Labor Overhead in cost
 - Calculate Fixed on Setup Labor
 - Calculate Var. on Direct Labor
 - Include Fixed Labor Overhead in cost
 - Calculate Fixed on Setup Labor
 - Calculate Fixed on Direct Labor
 - Calculate Var. on Direct Labor
 - Include Var. Machine Overhead in cost
 - Include Fixed Machine Overhead in cost
4. For actual costing, complete the following fields:
 - Machine Rate Source
 - Labor Rate Source

5. Click one of the following options under the Overheads heading:
 - Percentages
 - Rates
6. Click OK when you have chosen all the appropriate costing options.

See Also

- Setting Up Manufacturing Constants* in the *Product Data Management* documentation for further information on setting up all the manufacturing constants.

Setting up Standard Rate and Factor Codes

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 the costs of an item. These types of costs include utilities, insurance, research and development costs, rent or lease costs, or other overhead or general operating costs.

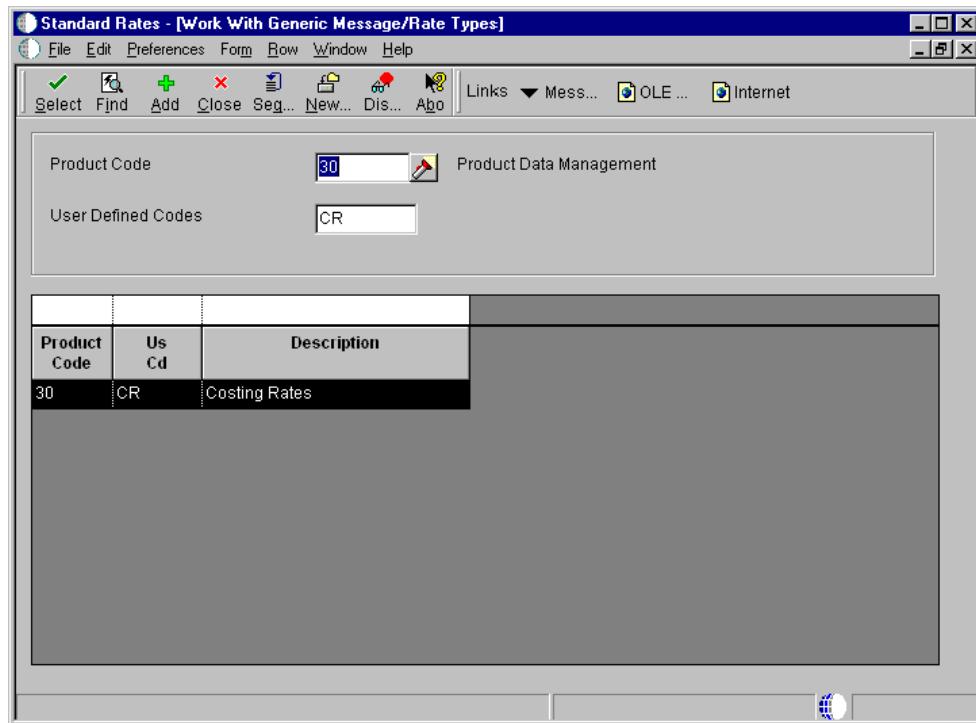
The Simulate Rollup program (R30812) uses the rates and factors that you define to calculate some of the costs that appear in the Cost Components program (P30026).

See Also

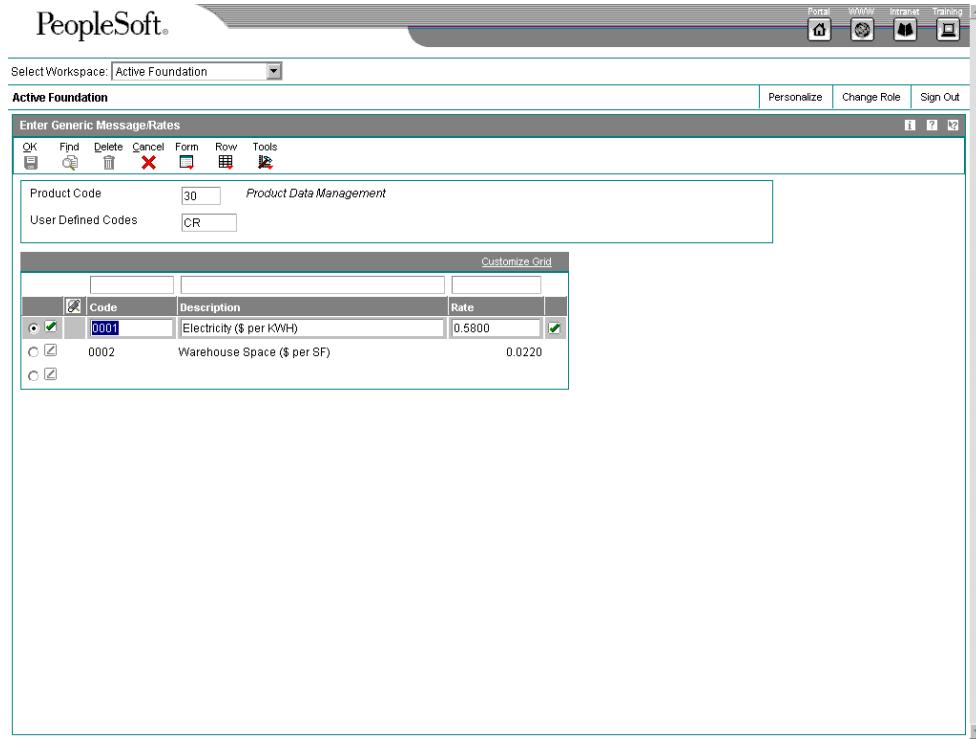
- Assigning Values to User Defined Cost Components* to complete the setup for these codes.

► To set up standard rate codes

From the Product Costing Setup menu (G3042), choose Standard Rates.



1. Choose Costing Rates and click Select.



2. On Enter Generic Message/Rates, complete the following fields and click OK:

- Code

In the Cost Components program (P30026) this value is used in conjunction with the Factor Code and Factor Rate to calculate extra costs.

- Description

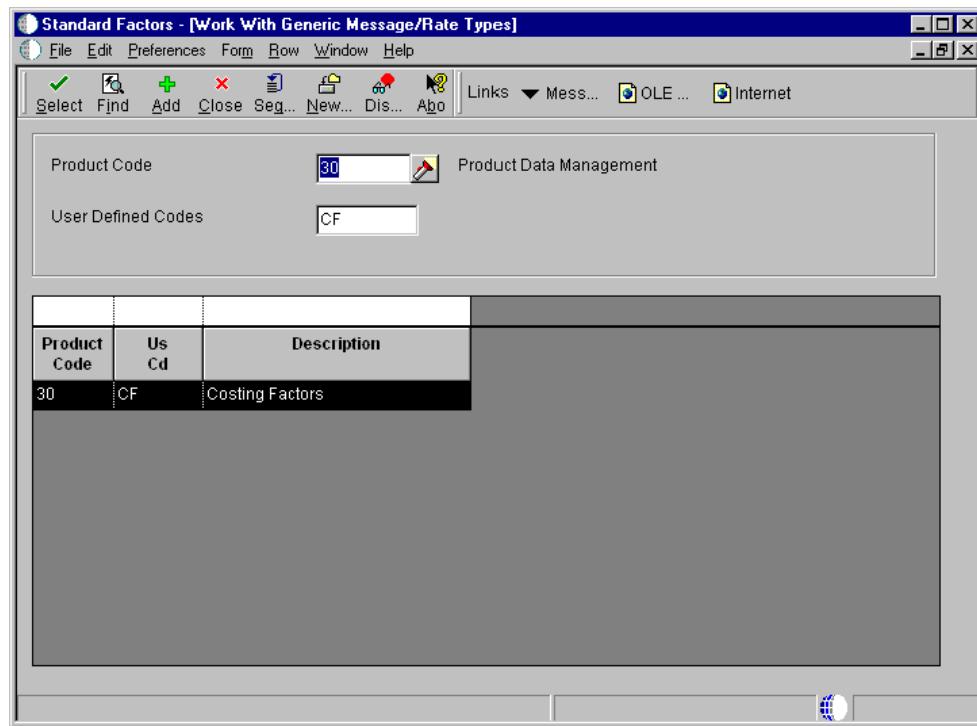
A description of the code.

- Rate

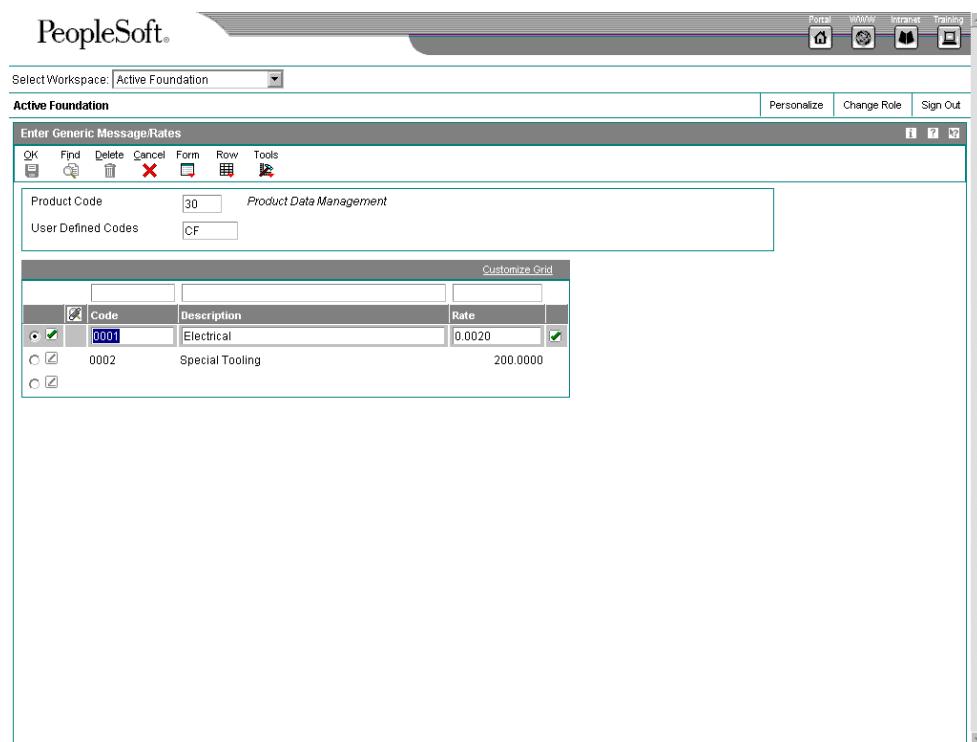
The rate with up to four decimal places used to calculate the extra costs for this code.

► To set up standard factor codes

From the Product Costing Setup menu (G3042), choose Standard Factors.



1. Choose Costing Factors and click Select.



2. On Enter Generic Message/Rates, complete the following fields and click OK:

- Code

On Enter/Change Cost Components, the system uses this value in conjunction with the Rate Code and Rate to calculate extra costs.

- Description

A description of the code.

- Rate

The rate with up to four decimal places used to calculate the extra costs for this code.

Assigning Values to User Defined Cost Components

Once you have set up cost components and standard rate and factor codes, you must assign a monetary value to each. These values are added to the net amount of each item that you set up.

Before You Begin

- ❑ Set up the cost components in UDC list 30/CA. See *Understanding User Defined Codes*.
- ❑ Set up the standard rate and factor codes. See *Setting Up Standard Rate and Factor Codes*.

► To assign a net added value manually

From the Product Costing menu (G3014), choose Enter/Change Cost Components.

1. On Work With Cost Components, complete the following fields and click Find:

- Branch/Plant
- Item Number

2. Choose a record and click Select.

3. On Enter Cost Components, complete the following fields and click OK:

- Cost Type
- Simulated Net Added

Note

The program records manually entered costs in the Simulated Total field when you run the Simulate Cost Rollup program.

► To assign a predefined value

From the Product Costing menu (G3014), choose Enter/Change Cost Components. Use user defined rate codes and factor codes to identify net added costs.

1. On Work With Cost Components, complete the following fields and click Find:

- Branch/Plant
- Item Number

2. Choose a record and click Select.

3. On Enter Cost Components, complete the following field:

- Cost Type

4. Complete one of the following fields and click OK:

- Sim Fac Code

The system retrieves the value that you defined for the factor code (30/CF) in the Generic Rate table (F00191). The system enters this value in the Simulated Factor field. The system enters a default value of 1 in the Simulated Rate field and multiplies the values in the Simulated Factor and the Simulated Rate fields.

To view the valid factor codes, use the visual assist or choose Factors from the Form menu.

- Simulated Rate Code

The system retrieves the value that you defined for the rate code (30/CR) in the Generic Rate table (F00191). The system enters this value in the Simulated Rate field. The system enters a default value of 1 in the Simulated Factor field and multiplies the values in the Simulated Rate and the Simulated Factor fields.

To view the valid rate codes, use the visual assist or choose Rates from the Form menu.

Note

If you complete both fields, the system multiplies the returned values for the factor and the rate.

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

From the Product Costing menu (G3014), choose Enter/Change Cost Components.

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.

1. On Work With Cost Components, complete the following fields and click Find:

- Branch/Plant
 - Item Number
2. Choose a record and click Select.
 3. On Enter Cost Components, complete the following field:
 - Cost Type
 4. Type & followed by the cost component code in the following field:
 - Sim Fac Code

Because of the way that the system rolls up the costs, the cost component that you reference must come before the cost component that you are defining. For example, to define cost component X2, you can reference cost component X1 by entering &X1 in this field, but you cannot define cost component X1 by referencing cost component X2.

5. Complete one of the following fields and click OK:
 - Simulated Rate Code
 - Simulated Rate

The system retrieves the total value for the cost component and multiplies it by the rate value that you indicated.

► To assign a calculated value based on another cost component's net-added value

From the Product Costing menu (G3014), choose Enter/Change Cost Components.

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.

1. On Work With Cost Components, complete the following fields and click Find:
 - Branch/Plant
 - Item Number
2. Choose a record and click Select.
3. On Enter Cost Components, complete the following field:
 - Cost Type
4. Type * followed by the cost component code in the following field:
 - Sim Fac Code

Because of the way system rolls up costs, the cost component that you reference must come before the cost component that you are defining. For example, to define cost component X2, you can reference cost component X1 by entering *X1 in this field, but you cannot define cost component X1 by referencing cost component X2.

5. Complete one of the following fields and click OK:

- Simulated Rate Code
- Simulated Rate

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

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

From the Product Costing menu (G3014), choose Enter/Change Cost Components.

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

1. On Work With Cost Components, complete the following fields and click Find:

- Branch/Plant
- Item Number

2. Choose a record and click Select.

3. On Enter Cost Components, complete the following field:

- Cost Type

4. Complete one or both of the following fields:

- Simulated Rate Code
- Simulated Rate

Alternatively, you can complete the fields Simulated Factor Code or Simulated Rate Code or both. The system retrieves the values for the codes and multiplies them.

Setting Up Simulated Rates for Work Centers

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 those used in costed routings, labor rate variance reports, and direct labor efficiency reports.

If you use standard costing, you must set up the simulated rates for work centers.

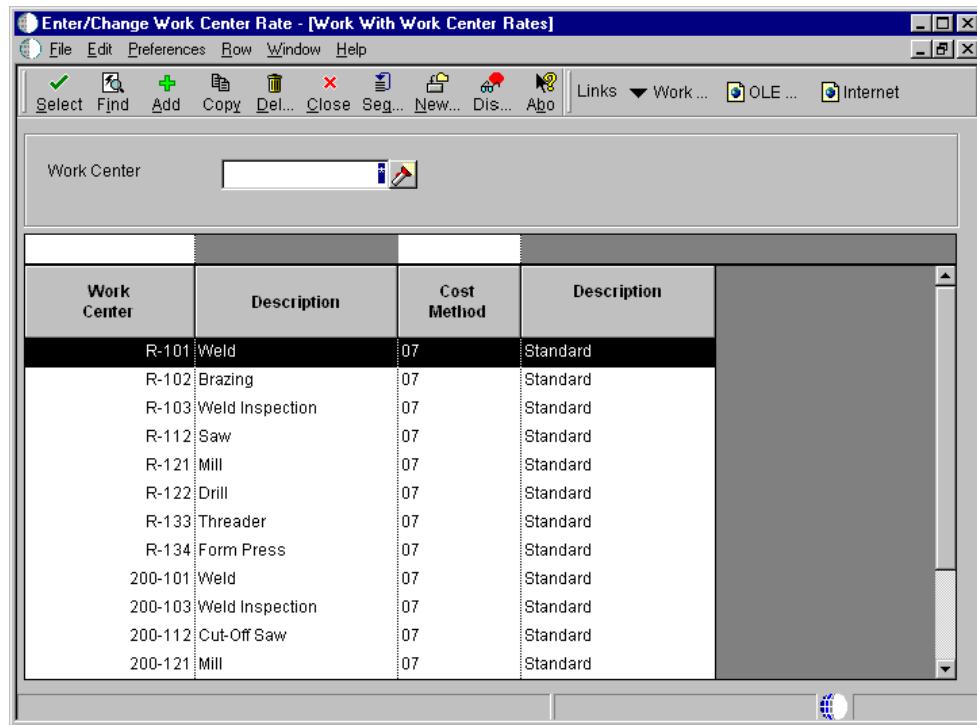
If you use actual costing and don't want to use labor or machine rates, you can use work center rates. You would have made this decision when you set up the manufacturing constants. You can also set up the work center rates even if you have chosen labor or machine rates. The system uses the work center rate as the default rate if the other rates are missing, and therefore, eliminate empty costs.

Before You Begin

- ❑ Set up your work centers. See *Working with Work Centers* in the *Product Data Management* documentation for complete information about setting up work centers.

► To set up simulated rates for work centers

From the Product Costing menu (G3014), choose Enter/Change Work Center Rate.



1. On Work With Work Center Rates, complete the following field and click Find:
 - Work Center
2. Choose a record and click Select.

	Simulated	Frozen
Direct Labor	12.00	12.00
Setup Labor	12.00	12.00
Labor Variable O/H	25.00	25.00
Labor Fixed O/H	25.00	25.00
Machine Run	10.00	10.00
Machine Variable O/H	10.00	10.00
Machine Fixed O/H	10.00	10.00

* O/H values are shown in percents

3. On Work Center Rate Revisions, complete the following fields and click OK:
 - Direct Labor
 - Setup Labor
 - Labor Variable O/H
 - Labor Fixed O/H
 - Machine Run
 - Machine Variable O/H
 - Machine Fixed O/H

See Also

- Entering Costing and Accounting Information in the Product Data Management documentation*

Setting Up General Ledger (G/L) Class Codes

General ledger (G/L) class codes are used by the automatic accounting instructions (AAIs) to determine to which accounts the system posts transactions.

You set up the G/L class code on Item Branch/Plant Info. However, the system then copies that value to Item Location form, and the AAIs use the G/L class code from the Item Location table (F41021).

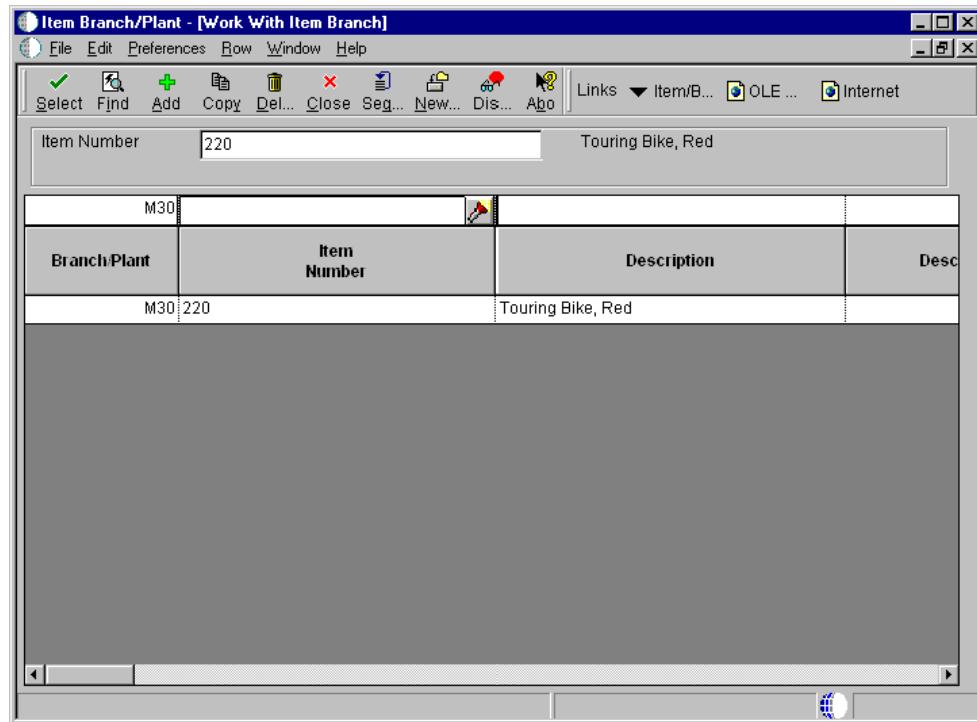
Because the system generates journal entries based on G/L class codes and AAIs, you should set up the class codes carefully. Generally, the AAIs are either already set up or are set up in collaboration with other accounting departments.

See Also

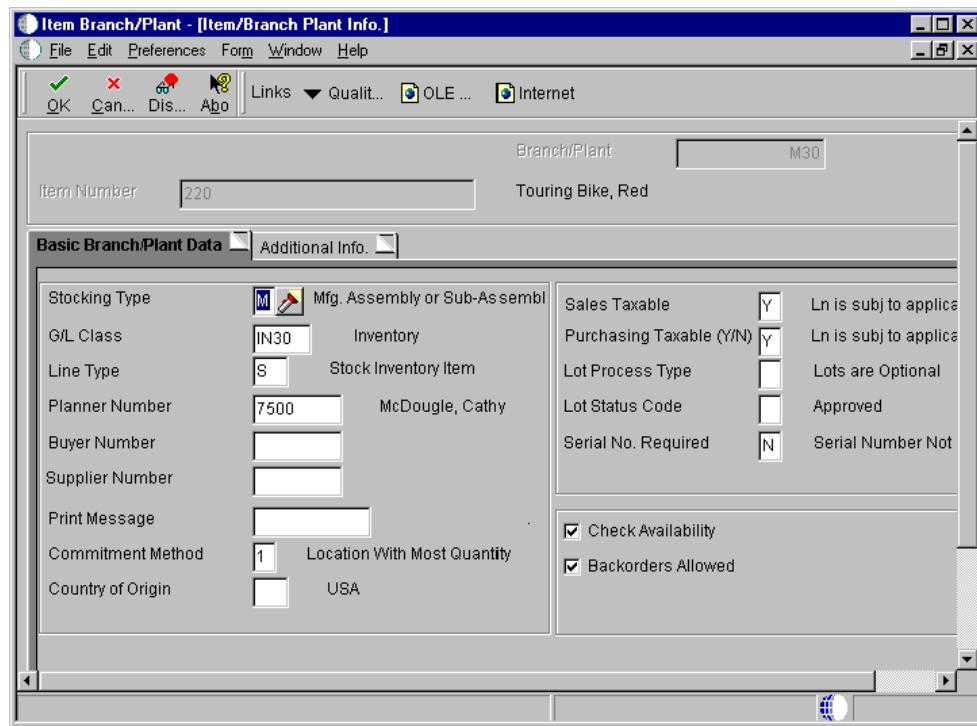
- *Reviewing Manufacturing Automatic Accounting Instructions (AAIs)* for additional information that is important to setting up for manufacturing accounting.

► To set up G/L class codes

From the Inventory Master/Transactions menu (G4111), choose Item Branch/Plant.



1. On Work With Item Branch, complete the following field and click Find:
 - Item Number
2. Choose a branch/plant and click Select.



3. On Item/Branch Plant Info, complete the following field and click OK:

- G/L Class

Reviewing Manufacturing AAIs

Each transaction for which the system 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, G/L class, and cost component.

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

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, it then searches for the company, and uses **** (four asterisks) for the G/L class code.

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:

3110 Inventory/Raw Materials	Specifies which balance sheet G/L accounts are used when issuing raw materials or parts from inventory to work in process (document type IM). This AAI is also used to issue completed subassemblies from inventory back into work in process.
3120 Work in Process	<p>For debit transactions, increases the material value of work in process by issuing raw materials and parts to work orders or rate schedules (document type IM). This AAI also records increases in direct labor, setup labor, machine time, and overhead by applying them to issued materials.</p> <p>For credit transactions, during completion (document type IC) this AAI records the transfer of material costs for a work order or a rate schedule from work in process inventory to subassemblies/finished goods inventory. This AAI also records the transfer of direct labor, setup labor, and overhead from work in process when work orders or rate schedules are complete.</p>
3130 Sub-Assmby/Finished Goods	Specifies which balance sheet G/L accounts are used when receiving subassemblies or finished goods from work in process into inventory (document type IC) or scrap (document type IS).
3210 Clear Work in Process	For actual costing, posts any additional cost of goods sold that were not included when completions were entered.
3220 Labor	<p>Posts debits when the planned hours are different from the actual hours associated with shop floor activities on document type IV. This is applicable to all cost components except A1 and A2.</p> <p>Variances are posted as positive or negative depending on whether they are favorable or unfavorable.</p>
3240 Material	<p>Posts when the planned costs are different from the actual for cost components A1 and A2. The variance results from either over-issues or under-issues.</p> <p>Variances are posted as debits or credits depending on whether they are favorable or unfavorable.</p>
3260 Planned	<p>Posts when the planned costs are different from the current costs associated with shop floor activities on document type IV. This variance results from either:</p> <ul style="list-style-type: none"> • A change to the parts list or the routing • A shrink factor <p>Variances are posted as positive or negative depending on whether they are favorable or unfavorable.</p>
3270 Engineered	<p>Posts when the standard (frozen) costs are different from the current costs associated with shop floor activities on document type IV. This variance results from a change to the standard bill of material or the standard routing.</p> <p>Variances are posted as positive or negative depending on whether they are favorable or unfavorable.</p>
3280 Other	Posts when the completed cost is different from the standard cost associated with shop floor activities on document type IV. This variance results if a cost rollup is performed in the middle of the cycle, or is generated when the quantity completed plus the quantity scrapped does not equal the work or rate schedule quantity. It could be due to a rounding problem.

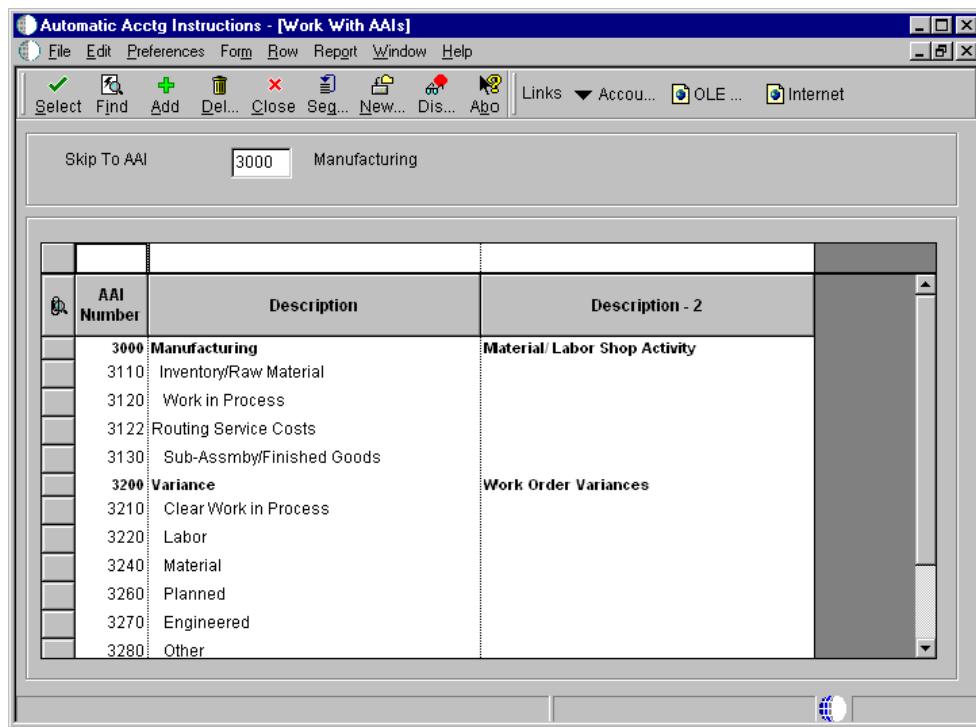
Variance are posted as positive or negative depending on whether they are favorable or unfavorable.

- 3401 Accruals** Specifies the profit and loss accounts that offset work in process labor transactions to work orders or rate schedules (document type IH).

► **To review AAIs**

From the Shop Floor Management Setup menu (G3141), choose Automatic Accounting Instructions.

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



1. On Work With AAIs, choose a record, and choose Details from the Row menu.

PeopleSoft®

Select Workspace: Active Foundation

Active Foundation

Account Revisions

AAI Table Number 3110 Inventory/Raw Material

Co	Do Ty	Description	G/L Cat	Description G/L	Or Ty	Cost Type	Branch Plant	Obj Acct	Sub
<input checked="" type="checkbox"/>	DO	Material Charged To\IN30	IN30	Inventory	WO	Real (firm) Work Orde A1		1411	<input checked="" type="checkbox"/>
<input type="checkbox"/>	00200	IM Material Charged To\IN99		Inventory	WO	Real (firm) Work Orde A1	M10 1510	A1	
<input type="checkbox"/>	00200	IM Material Charged To\JC30		EPM with Job Cost	WO	Real (firm) Work Orde A1		1472	
<input type="checkbox"/>	00200	IM Material Charged To\JC30		EPM with Job Cost	WO	Real (firm) Work Orde A2		1474	
<input type="checkbox"/>	00200	IM Material Charged To\JC30		EPM with Job Cost	WO	Real (firm) Work Orde B1		1476	
<input type="checkbox"/>	00200	IM Material Charged To\JC30		EPM with Job Cost	WO	Real (firm) Work Orde B2		1478	
<input type="checkbox"/>	00200	IM Material Charged To\JC30		EPM with Job Cost	WO	Real (firm) Work Orde B3		1480	
<input type="checkbox"/>	00200	IM Material Charged To\JC30		EPM with Job Cost	WO	Real (firm) Work Orde B4		1482	
<input type="checkbox"/>	00200	IM Material Charged To\JC30		EPM with Job Cost	WO	Real (firm) Work Orde C1		1484	
<input type="checkbox"/>	00200	IM Material Charged To\JC30		EPM with Job Cost	WO	Real (firm) Work Orde C2		1486	

2. On Account Revisions, review the following fields:

- Co
- Do Ty
- G/L Cat
- Or Ty
- Cost Type
- Branch Plant
- Obj Acct
- Sub

3. To view an attachment, choose Attachments from the Form menu.

4. On Media Objects, review memo text for the AAI.

Processing Options for Manufacturing AAIs (P40950)

Defaults

AAI Table Number

Enter a '1' if the cost type field should be available to Distribution AAI tables listed below: 4122, 4124, 4134, 4136, 4220, 4240 and 4310.

Product Costing

To remain competitive in a changing business environment and to reduce costs passed along to the consumer, companies must be aware of all aspects of their business and be on the lookout for ways to refine operations to reduce leadtimes, expedite speed to market, and reduce the cost of operations. All of these processes help the company to be more flexible to changes in customer demands and to maintain or improve market share.

To reduce costs incurred as a part of conducting business, you must understand where costs are generated. For production industries, you must break down product costs into each contributing factor that influences the ultimate cost of the manufactured product. You should track not only the cost of the individual item, but also each additive feature or activity that adds cost to the end product or increases the value of the product.

Numerous activities or processes might add costs to the product. You should have processes and tools in place to identify each component of cost. You must also understand how those incurred costs might be passed along to customers.

As your company refines its production processes and automates costing activities, you should create detailed definitions of the costing processes. You should ensure that cost techniques support any manufacturing method that you use. Often, a company wants to decrease the leadtime required to maintain and monitor product costing information throughout the entire manufacturing process. More accurate costing information enables you to identify wasteful costs, and to lower costs that must be passed to the consumer or that are absorbed. The goal is to increase the company's bottom line and improve profit margins.

What is Standard Costing?

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.

Standard Cost

Net Added Cost

Includes:

- Labor
- Overhead
- Outside operations
- Extra costs
- Materials (for purchased parts only)

Total Cost

Includes:

- This item's net-added cost
- Total cost of lower-level components

The net-added cost represents the cost to manufacture an item at a specified 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 item's net-added cost and the total cost of all components.

By defining and monitoring standard product costs, you can measure your company's current manufacturing performance against your standard (target) costs. Product costing provides

information about the monetary 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.

What is Actual Costing?

Actual costing captures and records actual manufacturing costs associated with shop floor transactions such as work orders. Actual costing calculates costs by cost component based on the parts list, routing, and extra costs.

If you are implementing actual costing, you need to have a thorough understanding of how standard costing flows through the J.D. Edwards systems. Actual costing with J.D. Edwards provides the following features:

Material costs	The system calculates material costs based on the costing method and cost level that you choose when you set up the item.
Labor rates	Labor rates can be calculated in one of the following ways: <ul style="list-style-type: none"> • You can use the rates set up for the work center. • The system can calculate labor rates using the Employee Rates table (31/ER). • If you use J.D. Edwards Workforce Management, the system can calculate labor rates using the Employee Master Table (F060116). You must use JDE Speed Time Entry to allow employee pay rates to be pulled from the Employee Master Table. • You can manually enter the costs when you enter the time and quantity completed.
Machine rates	Machine rates can be calculated in one of the following ways: <ul style="list-style-type: none"> • You can use the work center rates for the cost method that you specify. • The system can calculate work center rates using equipment billing rates. • You can manually enter the costs when you enter the time and quantity completed.
Overhead costs	The system calculates overhead costs using rates or percentages from the Work Center Rates File table (F30008).
Other costs	The system calculates costs for outside operations from the cost method specified for the item that is processed by an outside company (*OP item). The system calculates extra costs from the Item Cost Components Add-Ons table (F30026).

What Are Cost Components?

Cost components are UDCs (30/CA) that represent the individual costs that make up an item, for example, costs for 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 costs related to the manufacturing of a product, such as costs for electricity, insurance, water, or warehouse space.
- Review specific calculations used to determine cost amounts for any item.
- Maintain costs by branch for multifacility processing. Multifacility 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

- Understanding User Defined Codes* for information about setting up UDC table 30/CA

Reviewing Bills of Material and Routings for Product Costing

Reviewing Costing in Bills of Material

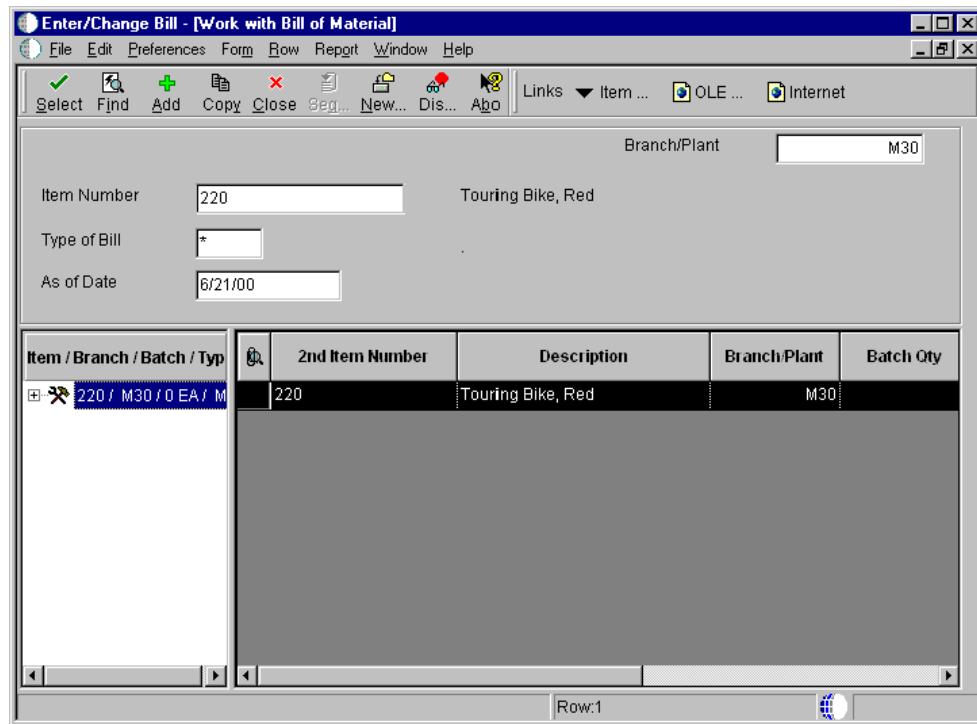
Review your bills of material to understand the bills' input to your material costs. Only items with a bill type of M are costed.

See Also

- ❑ *Entering Bills of Material* in the *Product Data Management* documentation for complete instructions on how to enter bills of material

► To review costing in bills of material

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



1. On Work with Bill of Material, complete the following fields and click Find:

- Branch/Plant
- Item Number
- As of Date

2. Choose a record and click Select.

PeopleSoft®

Select Workspace: Active Foundation

Active Foundation

Enter Bill of Material Information

Records 1 - 10												Customize Grid	
	Item Number	Description	Quantity	UM	Active Ingr. Flag	F V	Is Cd	Sing Typ	Ln Ty	Line No.	Open Seq#	Eff. From	
<input checked="" type="checkbox"/>	2001	Cro-Moly Frame, Red	1	EA		V	U	M	S	10.00	10.00	04/0	
<input type="checkbox"/>	2006	Touring Fork	1	EA		V	U	P	S	20.00	20.00		
<input type="checkbox"/>	2007	Bottom Bracket	1	EA		V	U	P	S	30.00	30.00		
<input type="checkbox"/>	2008	Head Set	1	EA		V	U	P	S	40.00	40.00		
<input type="checkbox"/>	2009	Crank	2	EA		V	U	P	S	50.00	50.00		
<input type="checkbox"/>	2010	Chain Rings	1	EA		V	U	P	S	60.00	60.00		
<input type="checkbox"/>	2011	Chain, Std	1	EA		V	U	P	S	70.00	60.00		
<input type="checkbox"/>	2013	Shift Kit	1	EA		V	U	P	S	80.00	30.00		
<input type="checkbox"/>	2014	Brake Kit	1	EA		V	U	P	S	90.00	40.00		
<input type="checkbox"/>	2015	Wheel Set, Front	1	EA		V	U	P	S	100.00	60.00		

3. On Enter Bill of Material Information, review the following fields:

- Item Number
- Quantity
- UM
- F V
- Feat Cost %
- Percent Scrap
- Operation Scrap Percent

Reviewing Routing Information

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

► To review routing information

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

Enter/Change Routing - [Work with Routing Operations]

File Edit Preferences Form Row View Window Help

Select Find Add Copy Close Seg... New... Dis... Abo Links Revisi... OLE... Internet

Branch/Plant	M30				
Item Number	220	Touring Bike, Red			
Batch Quantity		EA			
As of Date	6/21/00	Line/Cell			
Item Rev	*	Drawing No	200T	Routing Type	M
Skip to Op No. *					

	Work Center	Oper Seq#	Description	Run Labor	Run Machine	Setup Labor	Effective From
	200-901	10.00	Assembly	.50			4/4/9
	200-901	20.00	Assembly	.25			4/4/9
	200-901	30.00	Assembly	1.00			4/4/9
	200-901	40.00	Assembly	1.00			4/4/9
	200-911	50.00	Test / Inspect	.25			4/4/9
	200-920	60.00	Package	.25			4/4/9

1. On Work with Routing Operations, find the routing that you want to review.
2. Choose Revision from the Form menu.

PeopleSoft.

Select Workspace: Active Foundation

Active Foundation

Personalize Change Role Sign Out

Enter Routing Information

OK Delete Cancel Form Row View Tools

Branch/Plant	M30				
Item Number	220	Touring Bike, Red			
Batch Quantity		EA			
As of Date	08/27/03	Line/Cell			
Item Rev.		Drawing No	200T	Routing Type	M
Skip to Oper. *					

	Work Center	Oper Seq#	Description	Run Labor	Run Machine	Setup Labor	Cons Prod	Queue Hours	Move Hours	Line/Cell	Effective From
<input checked="" type="checkbox"/>	200-901	10.00	Assembly	0.50	0.00	0.00	Cons	0.00	0.00		04/04/97
<input type="checkbox"/>	200-901	20.00	Assembly	0.25	0.00	0.00	Cons	0.00	0.00		04/04/97
<input type="checkbox"/>	200-901	30.00	Assembly	1.00	0.00	0.00	Cons	0.00	0.00		04/04/97
<input type="checkbox"/>	200-901	40.00	Assembly	1.00	0.00	0.00	Cons	0.00	0.00		04/04/97
<input type="checkbox"/>	200-911	50.00	Test / Inspect	0.25	0.00	0.00	Cons	0.00	0.00		04/04/97
<input type="checkbox"/>	200-920	60.00	Package	0.25	0.00	0.00	Cons	0.00	0.00		04/04/97

3. On Enter Routing Information, review the following fields:

- Work Center
- Run Labor
- Run Machine
- Setup Labor
- Time Basis
- Crew Size
- Cost Type
- Type Oper
- Yield %

See Also

- Working with Routings* in the *Product Data Management* documentation for information about entering routings.

Creating Simulated Costs

You can use the Product Costing system to calculate costs based on hypothetical situations. You can view the effect of any changes that 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

You can set the processing options in any of the cost simulation programs to specify the cost method that you want to use.

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

Job Shop Manufacturing Constants (F3009)	Values from Manufacturing Constants indicate whether overhead should be included in cost component calculations.
Work Center Rates File (F30008)	The rollup program uses monetary amounts and percentages for the calculation of labor, machine, and overhead costs.
Routing Master File (F3003)	Hours required for each operation, crew size, outside operation costs, and cumulative yield values are from the Routing Master table.
Bill of Material Master File(F3002)	The Bill of Material table provides information on the material required at each level of the bill.
Item Cost File (F4105)	The Cost Ledger table provides costs for purchased items and outside operations.
Item Cross Reference File(F4104)	The Item Cross Reference table identifies the master routing.
Work Center Master (F30006)	The Work Center Master table provides the work center efficiency factor.
Item Master (F4101)	The Item Master table stores the lowlevel code. Costs are rolled up from the lowest level to the highest level.
Item Branch File (F4102)	The Item Branch table provides the accounting cost quantity.
Generic Message/Rates (F00191)	The Generic Message/Rates table provides rates and factors for extra costs.
Item Cost Components Ad-ons (F30026)	The Cost Components table provides the calculations for extra costs.

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 the Product Costing Reports menu (G3023), choose Costing Exceptions.

Before you roll up simulated costs, run the Costing Exceptions program R30801). The program generates a report with error messages identifying any problems associated with an item. An example of a problem is an item without a routing.

The error messages are hard-coded in UDC table 30/EM. You cannot add or change these error messages. You can define the severity level for each error message to one that is appropriate for your company. For example, if labor costs of 0 (zero) is an important exception in your company, you could assign that error message a high severity level. You can indicate in the processing options the minimum level of error messages that you want included in the report.

The following list identifies the changeable, default severity setting for each of the hard-coded error messages:

Severity level 10 No accounting lot size for setup

Setup hours are zero

Machine hours are zero

Severity level 20 Purchase part with bill of material

Bill of material components with no quantity

Severity level 30 No cost component - material cost

No work center - labor rate

No work center - setup labor rate

No work center - labor variable overhead rate

No work center - labor fixed overhead rate

No work center - machine run rate

No work center - machine variable overhead rate

No work center - machine fixed overhead rate

Purchased item without purchased cost

Severity level 40 No rates for work center

Severity level 50 Manufactured item with no bill of material

Manufactured item with no routing

You should correct the problems and run the Costing Exceptions program again before creating a simulated rollup.

Before You Begin

- Set the severity levels for the error messages in UDC table 30/EM

See Also

- R30801, Costing Exceptions* in the *Reports* documentation for a report sample
- Customizing User Defined Codes* in the *OneWorld Foundation* documentation and *Understanding User Defined Codes* for information about changing the severity level for UDC 30/EM

Processing Options for Costing Exceptions (R30801)

Error Message

Enter the minimum message level to appear on the report.

Error Message

Cost Method:

Enter the cost method to base costing errors on (i.e: 01, 02,...). If left blank, cost method 07 (standard) will be used.

Cost Method

Enter the Purchasing Cost Method to base costing errors on (ie: 07, 02, ...). If left blank, cost method 07 (standard) will be used.

Cost Method

Creating a Simulated Rollup

From the Product Costing menu (G3014), choose Simulate Standard Rollup.

Use the Cost Simulation Build-Temp program to calculate costs based on hypothetical situations. Then, you can view the results on Enter Cost Components.

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.

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 File table (F30006) 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 the current date.

Before You Begin

- Create the Costing Exceptions report. See *Creating the Costing Exceptions Report*.

Cumulative Yield

Cumulative yield, which is defined on the routing, affects labor and machine hours in the rollup calculations. Enough hours must be expended to obtain 100 percent 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
Without Yield	5	5	5
With Yield	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. Enough material must be at each operation in order to obtain 100 percent 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 = $3 \times 1.08 \times 5 = 16.20$

Master Routings

The program uses the master routing for the item from the Routing Master File 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.)
- An item routing has been defined for the cross-reference item.

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 = $[(3 / .5) \times 50] = 300.00$

See Also

- Updating Frozen Costs* for instructions to update your frozen costs with the simulated values
- Appendix A: Calculations in Cost Rollup* to review examples
- About Calculations in Cost Rollup*

Processing Options: Cost Simulation - Build Temp (R30812)

Default Tab

These processing options define the default values for date and cost method.

1. As Of Date

blank = system date

This date is used to determine which routing and bill of material for each item are used in the rollup, based on their effectivity dates. If you leave this field blank, the program uses the current date.

2. Cost Method

blank = 07

This is the cost method that will contain your new simulated costs in the Cost Components table. If you leave this field blank, the program calculates costs for cost method 07 (standard costs).

Processing Tab

These processing options define processing criteria.

1. Single Level

blank = complete rollup

1 = single level

Use this processing option to specify whether you want 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 item that needs to be costed, but you do not want to recost all components. If you enter 1, the program uses the costs of the lower-level components to roll up the cost for the new item, but does not recost the lower-level components themselves.

If you leave this field blank, the program does a complete rollup of all the components. Enter only the parent item numbers in the data selection.

If you are costing items in process manufacturing, leave the option blank and do a complete rollup to cost the ingredients.

Valid values are:

blank Perform a complete rollup.

1 Perform a single-level rollup.

2. Clear and Recalculate

1 = manufactured items

2 = all items

3 = clear all items and calculate manufactured items

Use this processing option to control how the program calculates routing related costs.

Valid values are:

blank You manually enter B1-C4 costs. Otherwise, the program overwrites costs that are manually entered.

1 The program clears and recalculates labor and overhead for manufactured items. This is the most common option for this program.

2 The program clears and recalculates labor and overhead for all

-
- items. Use this option if you have purchased parts with routings and you need to recalculate labor costs, for example, inspection steps.
- 3 The program clears labor and overhead for all items, but recalculates labor and overhead for manufactured items only. Use this option if a part changes from manufactured to purchased. This ensures that labor and overhead are cleared for the changed items.

3. Cost Method

a. Purchased Items

blank = do not move costs

Use this processing option to specify the cost method to use as the input for the costs of purchased items. If you leave this field blank, the program does not retrieve costs from the Cost Ledger table (F4105).

b. Outside Operation

blank = do not move costs

Use this processing option to specify the cost method to use as the input for the purchased costs of outside operations. If you leave this field blank, the program does not retrieve costs from the Cost Ledger table (F4105).

You should verify the following about your outside operations before you run this program:

- o You have set up an item branch/plant record for the *OP item, either manually or through the Process Work Orders program
- o There is a valid cost in the Cost Ledger table (F4105) for the method specified here

Print Tab

This processing option specifies which items appear on the Cost Simulation report.

1. Print Items

blank = print nothing

1 = all items

2 = changed items

Use this processing option to specify which items appear on the Cost Simulation report.

Valid values are:

blank Do not print

1 Print all items

2 Print changed items

Process Mfg Tab

If you use process manufacturing, this processing option calculates costs for co-/by-products.

1. Calculate Co/By-Products

blank= do not calculate

1 = calculate

If you use process manufacturing, enter 1 to calculate costs for co-/by products. If you leave this field blank, the program calculates costs only for the parent process.

Valid values are:

blank Do not calculate

1 Calculate

2. Calculate and Clear Costs of Ingredients used as CoBy in another Process.

Use this processing option to specify whether the system clears and recalculates co-/by-product costs.

If an ingredient of a process that you include in data selection is also a co-/by-product of another process that is not included in data selection, enter 1 in this processing option. If you leave this option blank, include both processes in the data selection. Otherwise, the system clears the cost of the co-/by-product and does not include the cost of the co-/by-product in the total cost of the process.

Valid values are :

Blank The system clears co-/by-product costs

1 The system does not clear co-/by-product costs

Blank = Clear and Calculate.

1 = DO NOT Clear and DO NOT Calculate.

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.

Reviewing and Revising Simulated Cost Components

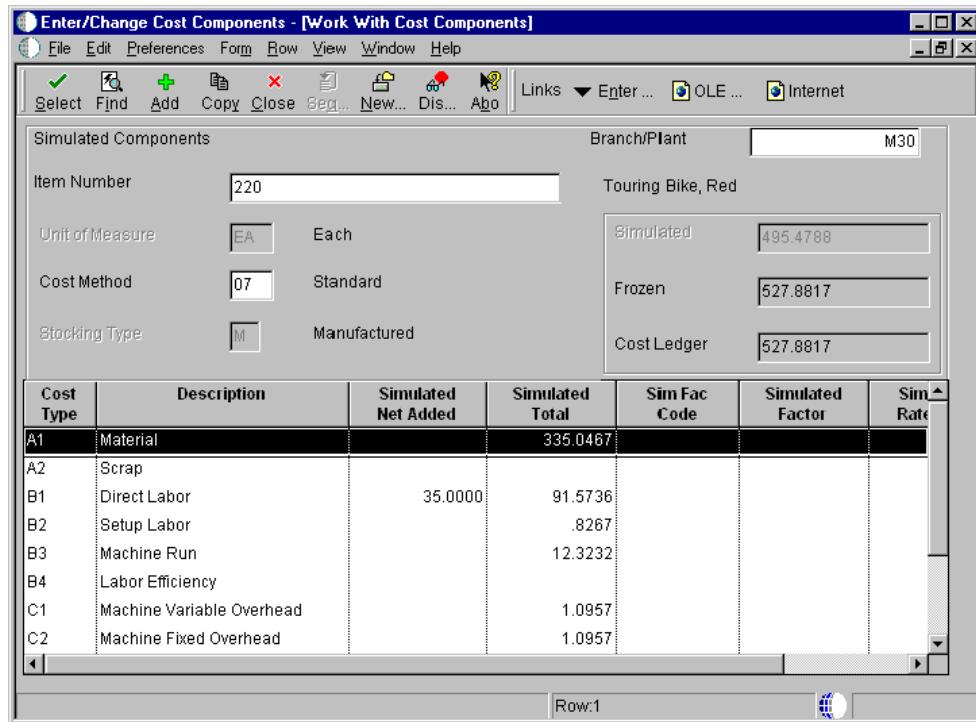
You review costing information and set up simulated cost scenarios to help plan for future cost changes.

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.

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 Cost Simulation – Build Temp program (R30812). 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 Cost Components.

► To review and revise simulated cost components

From the Product Costing menu (G3014), choose Enter/Change Cost Components.



1. On Work With Cost Components, complete the following fields and click Find:

- Branch/Plant
- Item Number

2. Choose a record and click Select.

Cost Type	Description	Simulated Net Added	Simulated Total	Sim Fac Code	Simulated Factor	Simulated Rate Code	Simulated Rate
<input checked="" type="checkbox"/> A1	Material		335.0467				
<input type="checkbox"/> A2	Scrap						
<input type="checkbox"/> B1	Direct Labor	35.0000	91.5736				
<input type="checkbox"/> B2	Setup Labor		0.8267				
<input type="checkbox"/> B3	Machine Run		12.3232				
<input type="checkbox"/> B4	Labor Efficiency						
<input type="checkbox"/> C1	Machine Variable Overhead		1.0957				
<input type="checkbox"/> C2	Machine Fixed Overhead		1.0957				
<input type="checkbox"/> C3	Labor Variable Overhead	8.7500	21.7586				
<input type="checkbox"/> C4	Labor Fixed Overhead	8.7500	21.7586				

3. On Enter Cost Components, review the following fields in the header area:

- Simulated Net Added
- Cost Ledger
- Cost Method

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 Component Add-Ons table (F30026).

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

See *Reviewing the Cost Component/Ledger Integrity Report* for more information about comparing frozen and cost ledger values.

4. Review or revise the following fields in the detail area:

- Cost Type

- Simulated Net Added
- Simulated Total

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.

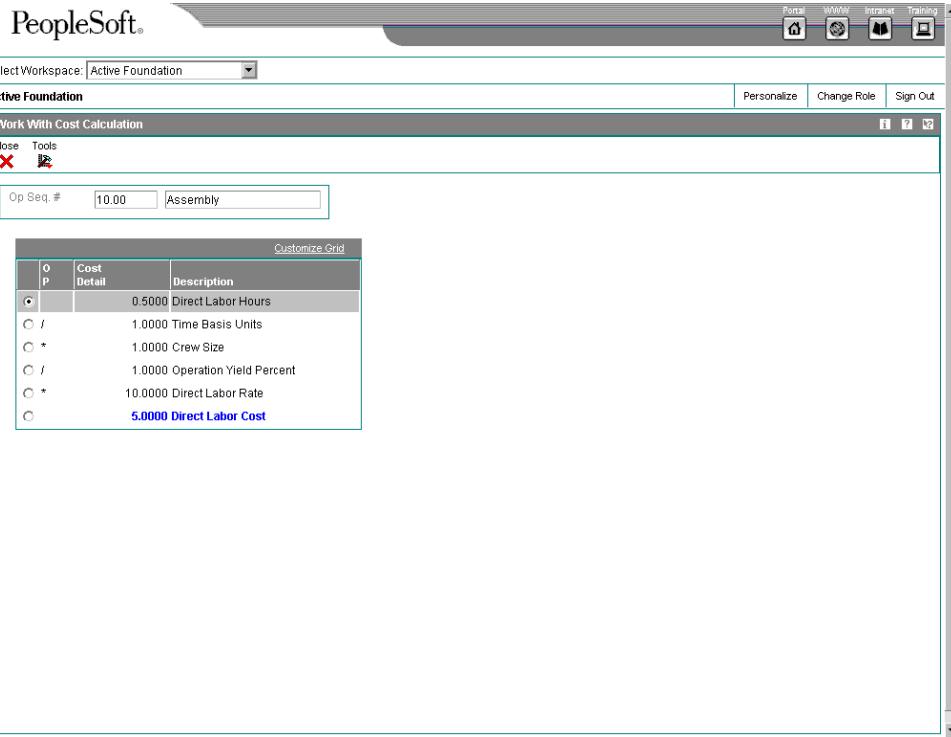
5. To access the detail calculations for the net-added value of a routing cost component (B or C), choose the row, and then choose Cost Calc from the Row menu.

The screenshot shows a PeopleSoft application window titled "Work With Work Center Cost". The top navigation bar includes links for Portal, WWW, Intranet, Training, and a sign-out button. The main content area displays a grid of simulated work center costs. The grid has columns for Branch Plant, Op Seq#, and Unit Cost. The data is as follows:

Branch Plant	Op Seq#	Unit Cost
<input checked="" type="radio"/> 200-901	10.00	5.0000
<input type="radio"/> 200-901	20.00	2.5000
<input type="radio"/> 200-901	30.00	10.0000
<input type="radio"/> 200-901	40.00	10.0000
<input type="radio"/> 200-911	50.00	2.5000
<input type="radio"/> 200-920	60.00	5.0000

A total value of 35.0000 is displayed at the bottom of the grid. The "Cost Type" field is set to B1. The toolbar above the grid includes buttons for Select, Close, Cost Calc, View, Row, and Tools.

6. On Work With Work Center Cost, choose an operation and click Select.



Work With Cost Calculation shows real-time costs. These costs might be different from those shown on Enter Cost Components, if you have changed the item's routing, work center rates, or manufacturing constants since you last ran the Cost Simulation - Build Temp program (R30812).

See Also

- ❑ *Creating Simulated Costs* for instructions about how to create the costs you are reviewing
- ❑ *Appendix A: Calculations in Cost Rollup* to view examples
- ❑ *About Calculations in Cost Rollup* to view examples

Processing Options for Cost Components

Process

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

Routing Cost Entry

Enter a '1' to allow input into the Total Simulated Cost
Total Cost Entry

What You Should Know About Processing Options

- Process (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. Instead, the Simulate Cost Rollup program calculates the fields.
- If you do maintain these components manually, the Simulate Cost Rollup program overwrites the values unless you have set the processing options for that program not to calculate labor and overhead.
- See also *Creating a Simulated Rollup*.

Reviewing the 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.

See Also

- Creating a Simulated Rollup* for instructions about creating the information in the report
- Item Cost Component - Frozen Update (R30835)* in the *Reports* documentation for a report sample

Reviewing Costed Bills of Material

Effective cost and profit projection depends on accurate and comprehensive item cost information. Use Costed Bill of Material to view costs for both parent items and components to assist you in budgeting your 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 as follows:

- 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 the five user defined categories for precise costing calculations:

- Purchase
- Labor
- Machine
- Overhead
- Extras

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

See also *About Calculations in Cost Rollup*.

The form displays the following:

- Net-added cost for the parent from the Item Cost Component Add-Ons (F30026) table at the top of the form
- Cost breakdown for all next-level components.
- Total costs of the parent item from the Cost Components table at the bottom of the form.
- Total of all costs for the parent item on the last line of the form at the far right

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.

Note

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

The totals are either totals from the Cost Components table (F30026) or columnar totals calculated in real-time, depending on how you set the processing option for calculating totals.

See Also

- *Example: Setting Up Cost Bucket Codes for Costed Bills of Material* to view the set up
 - *Appendix A: Calculations in Cost Rollup* to view examples
- **To review a costed bill of material**
-

From the Product Costing menu (G3014), choose Costed Bill Inquiry.

Costed Bill Inquiry - [Work With Costed Bill]

File Edit Preferences Form Row View Window Help

Select Find Close Beg... New... Dis... Abo Links Colu... OLE... Internet

Simulated Component Costs		Branch/Plant	M30			
Parent Item	220	Touring Bike, Red				
Req. Quantity	1 EA	As of Date	6/21/00			
Stocking Type	M Mfg. Assembly or Sub-Assembly <th>Cost Method</th> <td>07 Standard</td>	Cost Method	07 Standard			
Batch Quantity	0 EA	Skip to Seq #				
2nd Item Number	Purchase	Labor	Machine	Overhead	Extras A-D	
220		35.0000		17.5000	5.0000	
2001	56.1867	57.4003	12.3232	28.2086		
2006	26.2500					
2007	22.1000					
2008	15.9000					
2009	18.4000					
2010	24.6000					
2011	5.5000					
2013	41.0300					

1. On Work With Costed Bill, complete the following fields and click Find:

- Branch/Plant
- Parent Item

2. Review the following fields:

- As of Date
- Cost Method
- Req. Quantity
- Skip to Seq #
- 2nd Item Number
- Purchase
- Labor
- Machine
- Overhead
- Extras

- Total

3. Choose a record and choose Details from the Row menu.

Simulated Component Costs		Branch/Plant	M30
Item Number	220	Touring Bike, Red	
Stocking Type	M		
Purchase		Quantity Per	0
Labor	35.0000	Effective From	
Machine		Effective Thru	
Overhead	17.5000	Operation Scrap %	0.00
Extras	5.0000	Percent of Scrap	
Total	57.5000	Feature Cost %	

4. On Costed Bill Detail, review the following fields:

- Quantity Per
- Effective From
- Effective Thru
- Operation Scrap %
- Percent of Scrap
- Feature Cost %

5. Click Cancel.

6. On Work With Costed Bill, choose a component and choose Next from the Row menu to access the costed bill information for the components.

PeopleSoft®

Select Workspace: Active Foundation

Active Foundation

Work With Costed Bill

2nd Item Number	Purchase	Labor	Machine	Overhead	Extras 1-9	Total	Branch	3rd Item Number
<input type="checkbox"/> 2001	5.0000	24.1000	6.0000	10.7700		45.8700	M30 2001	
<input type="checkbox"/> 2004	15.7429	9.1851	1.4473	4.9302		31.3055	M30 2004	
<input type="checkbox"/> 9011	11.2500					11.2500	M30 9011	
<input type="checkbox"/> 9031	4.5000					4.5000	M30 9031	
<input type="checkbox"/> 9026	7.3500					7.3500	M30 9026	
<input type="checkbox"/> 2005	32.9910	14.4008	3.5000	7.7360		58.6278	M30 2005	
<input type="checkbox"/> TOTALS:	70.2180	47.6837	10.9473	23.4362		152.2861	M30 2001	

7. To toggle between frozen and simulated costs, choose Frozen or Simulated from the View menu.
8. To review an item's cost buckets, choose Columns from the Form menu.

Select Workspace: Active Foundation

Active Foundation

Work With Cost Buckets

Close Tools  

Records 1 - 10 <input checked="" type="checkbox"/>					Customize Grid
Purchase	Labor	Machine	Overhead	Extras	
<input checked="" type="radio"/> A1	B1	B3	C1	X1	
<input type="radio"/> A2	B2		C2	X2	
<input type="radio"/> D1	B4		C3	X3	
<input type="radio"/> D2			C4	X4	
<input type="radio"/>				X5	
<input type="radio"/>				X6	
<input type="radio"/>				X7	
<input type="radio"/>				X8	
<input type="radio"/>				X9	
<input type="radio"/>				XA	

Processing Options for Costed Bill of Material (P30206)

Display Tab

1. Decimal Places (0-4) (Future)

Blank = 4

Use this processing option to indicate the number of decimal places that the system displays. Valid values are 0 to 4. If you leave this option blank, the system displays four decimals.

2. Totals

Blank = Standard Totals

1 = Calculated Totals

Use this processing option to specify whether the system displays the calculated totals or the standard totals. The calculated totals are the columnar totals. The standard totals are the unit costs from the Cost Components table (F30026) multiplied by the requested quantity. Valid values are:

- 1 Display calculated totals.
- blank Display standard totals (default).

3. Fixed Costs Based On

Blank = ACQ

1 = Requested Quantity

Use this processing option to specify whether the system bases fixed costs on the accounting cost quantity or on the requested quantity. Valid values are:

- blank Base fixed costs on the accounting cost quantity (default).
- 1 Base fixed costs on the requested quantity.

Reviewing a Costed Routing

Use Costed Routing Inquiry to review the summarized costs of an item for each operation in the routing. This information can help you to 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

This program calculates the cost associated with each cost component in the same way as the Cost Simulation – Build Temp program.

See also *About Calculations in Cost Rollup*.

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.

Note

The costs on Work with Costed Routing Process are real-time costs, so they can change if you update the bill of material or routing for an item. The Enter Cost Components form displays the costs computed when you run Cost Simulation – Build Temp. As a result, the values might differ from those on Work with Costed Routing Process if you have changed the bill of material, routing, work center rates, or manufacturing constants since you last ran the rollup program.

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

- The Master Routings field on the Manufacturing Constants Revisions form is turned on 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.)
- An item routing has been defined for the cross-reference item.

► To review a costed routing

On the Product Costing menu (G3014), choose Costed Routing/Process Inquiry.

Costed Routing/Process Inquiry - [Work With Costed Routing/Process]

Simulated Costs Discrete **Branch/Plant** M30

Item Number 220 **Touring Bike, Red**

Requested Quantity 1 **EA** **Each**

As of Date 6/21/00 **Skip to Op. Seq.** **i**

Cost Method 07 **Standard** **Stocking Type** M **Manufactured**

Routing Batch Qty **EA** **Extras 1-3**

BOM Batch Qty **EA** **Extras A-D** 5.0000

Work Center	Oper Seq#	Ty Cd	Labor	Machine	Overhead	Components
200-901	10.00		5.0000	0.0000	2.5000	165.
200-901	20.00		2.5000	0.0000	1.2500	26.
200-901	30.00		10.0000	0.0000	5.0000	63.
200-901	40.00		10.0000	0.0000	5.0000	40.
200-911	50.00		2.5000	0.0000	1.2500	18.

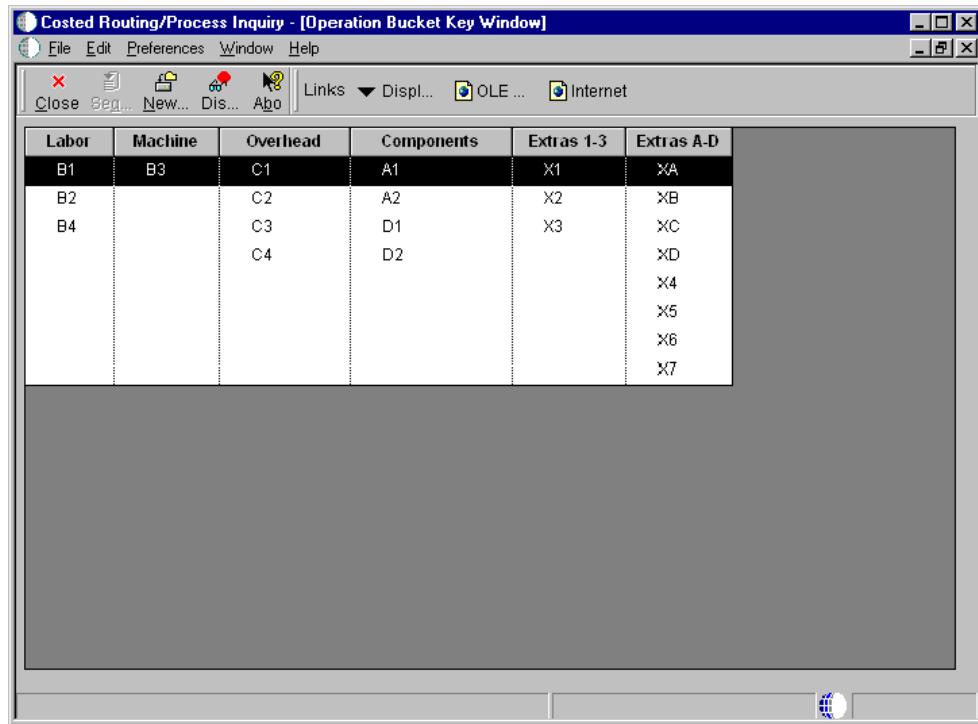
1. On Work With Costed Routing/Process, complete the following fields and click Find:
 - Branch/Plant
 - Item Number
2. Review the following fields:
 - Requested Quantity
 - As of Date
 - Cost Method
 - Skip to Op. Seq.
 - Extras
 - Work Center
 - Oper Seq#
 - Labor
 - Machine
 - Overhead

- Components
 - Total
3. To toggle between frozen and simulated costs, on Work with Costed Routing/Process, choose Frozen or Simulated from the View menu.
 4. To see detailed calculations, choose an operation, and then choose Details from the Row menu.

The screenshot shows a software application window titled "Costed Routing/Process Inquiry - [Costed Routing Details]". The window has a menu bar with File, Edit, Preferences, Window, and Help. Below the menu is a toolbar with Close, Save, New, Dis..., Abo, Links, Disp..., OLE..., and Internet buttons. The main area contains a table with the following data:

Category	Cost Type	Description	Cost
Labor	B1	Direct Labor	5.0000
Overhead	C3	Labor Variable Overhead	1.2500
	C4	Labor Fixed Overhead	1.2500
Components	A1	Material	165.1188
Totals:			172.6188

5. On Costed Routing Details, review the following fields:
 - Category
 - Cost Type
 - Description
 - Cost
6. Click Close.
7. On Work With Costed Routing/Process, choose OP Bucket Window from the Form menu to review an item's operation buckets.



The Operation Bucket Key Window appears. This form displays the cost components and the buckets into which they are grouped.

See Also

- Understanding User Defined Codes* for information about setting up operation bucket codes (30/CO)
- Appendix A: Calculations in Cost Rollup* to view examples

Processing Options for Costed Routing Inquiry (P30208)

Defaults

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

Outside Operations Cost Method

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

Tax Authority 2

Purchased Cost Method

Display

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

Skip to flag

Process

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

Include 1 and 2 in total

Updating Frozen Costs

From the Product Costing menu (G3014), choose Frozen Update.

After you perform simulated rollups to determine the effect of any 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.

Note

This program uses the costs generated by the most recent version of the Cost Simulation – Build Temp 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 Item Cost File table (F4105) for the cost method selected
- Update frozen costs in the Item Cost Component Add-Ons table (F30026) for the cost method selected
- Update labor and overhead rates in the Work Center Rates File table (F30008)
- 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 File 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 sales and 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.

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 File table ((F4111) and the Account Ledger table (F0411). Use the Item Ledger/Account Integrity report to verify this integrity.

The process flow for updating frozen costs 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:

- 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

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

The following list identifies information relevant to detail and summary journal entries:

Detail journal entries	The program can generate several journal entries by cost component for the same item and branch, depending on how you set up the AAIs. 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 and could cause disk space problems.
Summary journal entries	If you choose summary format, the program creates debit and credit records by subtotals of company, general ledger class code, and transaction type. Use the summary format to reduce the amount of detail in the general ledger. You can still run a report to provide a detailed audit trail.

The program produces the following output:

Error messages	The program produces error messages if it finds any general ledger errors while formatting the journal entries. One error message indicates the same combination of AAI number, account number, and G/L class code. Correct any errors and run the Item Cost Component Frozen Update program (F30835) again. You can view messages in the Submitted Jobs Queue in the Work Center.
Item Cost Ledger 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: <ul style="list-style-type: none"> • 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 • G/L exception errors • Whether G/L transactions have been written • Either G/L subtotals by company and G/L class code or G/L class code only

Before You Begin

- Ensure that you have set up item cost levels on the initial Item Master Revisions form. See *Setting Up Item Cost Levels*.
- Set the processing option to specify the costing method that you want to use.

See Also

- Creating Journal Entries* for more information about detail and summary journal entries
- Reviewing Manufacturing AAIs* for information on the AAIs that are used
- Setting Up AAIs in Distribution Systems* in the *Inventory Management* documentation
- Working with Detail Costing in Distribution* in the *Inventory Management* documentation
- R30834, Item Cost Ledger Update* in the *Reports* documentation for a report sample

Processing Options for Item Cost Component Frozen Update (R30835)

Default Tab

These processing options specify the default values for cost method and "as of" date.

1. Cost Method

blank = 07

This processing option specifies the cost method to be updated in the Cost Components and Cost Ledger tables. If you leave this field blank, the program calculates costs for cost method 07 (standard costs).

2. As Of Date

blank = system date

The date that determines which routing and bill of material for each item the system uses in the rollup, based on their effectiveness dates. If you leave this field blank, the system uses the current date.

Processing Tab

These processing options define processing criteria.

1. Update Costs

blank = proof mode

1 = final mode

Type 1 to update costs. If you leave this field blank, the program creates exception reports and error messages, but does not update costs.

Valid values are:

blank Do not update

1 Update

2. Single Level

blank= complete update

1 = single level update

This processing option allows you to update costs for a selected item or items, without updating everything else in the bill of material. For example, you might have a new item that needs to be costed, but you do not want to recost everything else. After you create simulated costs for the new item, you can update its frozen costs without updating the costs of the lower-level components.

Valid values are:

blank Complete rollup

1 Single level rollup

3. Update Work Center Rates

blank = do not update

1 = update

If you run the program in final mode (specified in the Update Costs processing option), type 1 here to also update all rates in all work centers in all branch/plants.

4. Use Flex Accounting

blank = do not use flex accounting

1 = use flex accounting

If you use flex accounting, type 1. The program looks for your flex accounting rules to determine how to populate the cost object fields.

Process Mfg Tab

If you use process manufacturing, this processing option updates costs for co-/by-products.

1. Update Co/By Products

blank = do not update

1 = update

If you use process manufacturing, enter 1 to update costs for co-/by-products.

If you leave this field blank, the program updates costs only for the parent process.

Valid values are:

blank Do not update

1 Update

G/L Tab

These processing options define your G/L criteria.

1. G/L Date

blank= system date

Use this processing option to specify the date that appears on Item Ledger transactions and journal entries. If you leave this field blank, the program uses the system date.

2. G/L Transactions

blank= none

1 = detailed

2 = summarized

Type 1 to create detailed G/L entries for Item Balance (IB) transactions (one entry for each item). Type 2 to create summarized G/L entries (one entry for each account). If you leave this field blank, no G/L entries are created.

Print Tab

This processing option specifies whether all items or only changed items appear on the Item Cost Ledger Update report.

1. Print Items

blank = all items

1 = all items

2 = changed items

Type 2 to include only changed items. Type 1 to include all items. If you leave this field blank, all items are included.

Reviewing Costing Information

After you run the Item Cost Component - Frozen Update program (R30835) to revalue your inventory, you should review the updated costing information. These costs stay in effect until you run the update again.

Reviewing Frozen Cost Components

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

► To review frozen cost components

From the Product Costing menu (G3014), choose Enter/Change Cost Components.

Enter/Change Cost Components - [Work With Cost Components]

File Edit Preferences Form Row View Window Help

Select Find Add Copy Close Beg... New... Dis... Abo Links Enter... OLE... Internet

Simulated Components		Branch/Plant	M30
Item Number	220	Touring Bike, Red	
Unit of Measure	EA	Each	Simulated 495.4788
Cost Method	07	Standard	Frozen 527.8817
Stocking Type	M	Manufactured	Cost Ledger 527.8817

Cost Type	Description	Simulated Net Added	Simulated Total	Sim Fac Code	Simulated Factor	Sim Rate
A1	Material		335.0467			
A2	Scrap					
B1	Direct Labor	35.0000	91.5736			
B2	Setup Labor		.8267			
B3	Machine Run		12.3232			
B4	Labor Efficiency					
C1	Machine Variable Overhead		1.0957			
C2	Machine Fixed Overhead		1.0957			

- On Work With Cost Components, complete the following fields and click Find:
 - Item Number
 - Branch/Plant
 - Cost Method
- Review the following field:
 - Frozen Total
- To toggle between frozen and simulated costs, choose Frozen or Simulated from the View menu.
- Click Close.

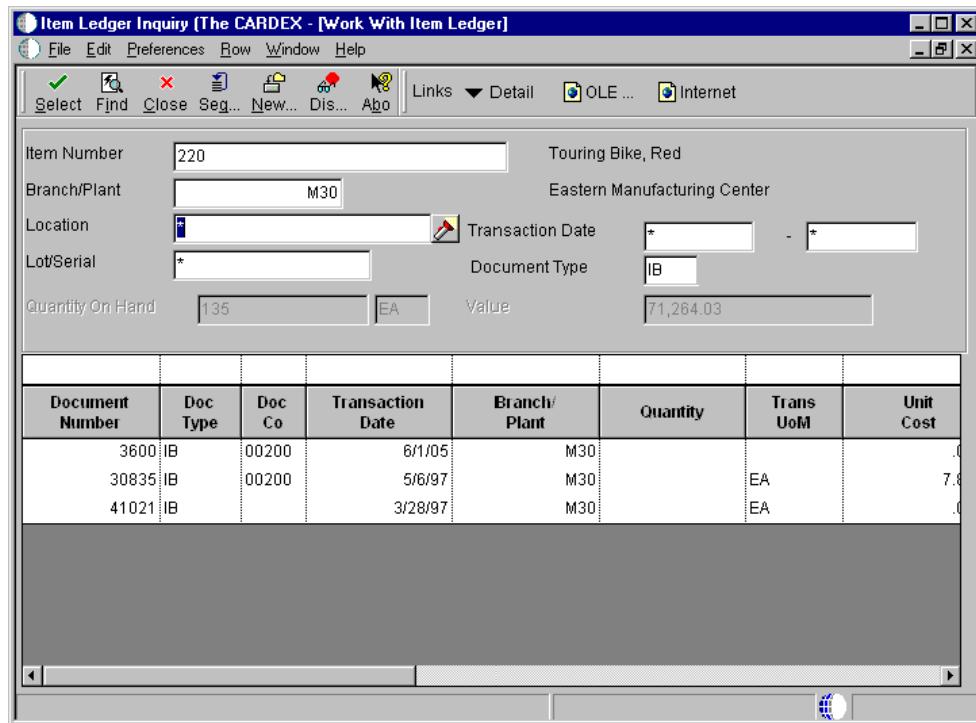
Reviewing the Item Ledger

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.

► To review the item ledger

From the Product Costing menu (G3014), choose Item Ledger Inquiry.



1. On Work With Item Ledger, complete the following field:
 - Item Number
2. Type IB in the following field and click Find:
 - Document Type
3. Review the following fields:
 - Transaction Date
 - Quantity
4. Click Close.

Processing Options for Item Ledger (The CARDEX)

Default

Enter a Document Type. If left blank, '*' will be the default value and all document types will be shown.

1. Document Type

Versions

Enter the version to be used for each program. If left blank, ZJDE0001 will be used.

1. Load and Delivery Ledger Inquiry (FUTURE)

Display

-
1. Enter a '1' to display Quantity in Primary Units of Measure along with Quantity in Transaction Units of Measure.
-

Reviewing the Single Level Costed Bill of Material Report

From the Product Costing Reports menu (G3023), choose Costed Bill.

Use the Costed Bill of Material Report program R30440 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 in the processing options from which the information is retrieved if you do not want to use the current date
- 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.

See Also

- *Example: Setting Up Cost Bucket Codes for Costed Bills of Material*
- *R30440, Costed Bill of Material* in the *Reports* documentation for a report sample

Processing Options for Costed Bill of Material Report (R30440)

Defaults

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

As of Date

Display

1. Enter the Cost Method to be used (ie., 01, 02, 03). Blanks will default to 07 cost method (standard).

Tax Authority

Cost Method

2. Enter the Costs to be printed. '1' for Simulated or '2' for Frozen.

Simulated/Frozen

3. Enter the number of units to Cost. (ie., 10,000).

Quantity - Requested Quantity

Reviewing the Multi-Level Costed Bill of Material Report

From the Product Costing Reports menu (G3023), choose Multi-Level Costed Bill.

Use the Multi-Level Costed Bill Report (R30445A) to review lists of 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.

See Also

- ❑ *Example: Setting Up Cost Bucket Codes for Costed Bills of Material*
- ❑ *R30445, Multi-Level Costed Bill* in the *Reports* documentation for a report sample

Processing Options for Multi-Level Costed Bill Report (R30445A)

Defaults

1. Enter the 'As of Date' for the Bill of Material. If left blank the current date will be used.

As of Date

Display

1. Enter the cost method to be used. Blanks will default to '07' (standard).

Cost Method

- | | |
|--|---------------|
| 2. Enter the costs to be printed
2 = Frozen | 1 = Simulated |
|--|---------------|

Simulated / Frozen

3. Enter the units to Cost. (ie. 10000)

Quantity - Requested Quantity

Print

Indented Report Switch

2. 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.

Unit Cost Detail

Reviewing the Cost Components Report

From the Product Costing Reports menu (G3023), choose Cost Components.

Use the Cost Components report (R30026P) to review the component costs and total cost for each item. This information comes from the Enter 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 that you define for an item in the cost bucket that you specify.

See Also

- Example: Setting Up Cost Bucket Codes for Costed Bills of Material*
- R30026P, Cost Components* in the *Reports* documentation for a report sample

Processing Options for Cost Components Report (R30026P)

Defaults

1. Enter "1" to print Simulated costs, "2" to print Frozen Costs. If left blank, simulated costs will print.

Simulated/Frozen Cost Selection

Reviewing the Cost Component/Ledger Integrity Report

From the Product Costing Reports menu (G3023), choose Cost Integrity.

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

Note

If you use actual costing, do not run this report as it does not produce accurate and relevant information about your company's costs.

See Also

- R30543, Cost Integrity* in the *Reports* documentation for a report sample

Processing Options for Cost Component/Ledger Integrity (R30543A)

Report Option

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

Selection value

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.

Copying Costs

From the Product Costing Reports menu (G3023), choose Copy Cost Values.

Use Copy Cost Values (R30890) to copy the simulated or frozen costs and work center rates from one cost method to 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 from the Item Cost Component Add-Ons table (F30026) and the Work Center Rates File table (F30008) to update costs and work center rates for the cost method that you specify. You can only replace simulated costs, not frozen costs, in the *copy to* branch. Run the Item Cost Component - Frozen Update program to update frozen costs.

Caution

To ensure acceptable results, J.D. Edwards recommends that you carefully plan which costs and rates you want to copy to which cost methods. Write down your choices and processing option setting before you complete the copy. This program does not generate a report of the updated costs.

Processing Options for Copy Cost Values (R30890)

Process

COPY FROM INFORMATION:

1. Enter a '1' to copy simulated costs or a '2' to copy frozen costs.

Simulated or Frozen

2. Enter the Branch/Plant and Cost Method to copy.

Branch/Plant to copy:

Cost Method to copy:

COPY TO INFORMATION:

3. Enter the Branch/Plant and Cost Method to update.

Branch/Plant to update

Cost Method to update:

Copying Frozen Costs to Simulated Costs

From the Product Costing Reports menu (G3023), choose Reset Simulated Costs.

For the cost method and branches that you choose, use Cost Simulation Refresh (R30850) to reset simulated costs to their frozen values. Resetting costs allows you to begin a simulation again.

Processing Options for Cost Simulation Refresh (R30850)

Process

1. Enter the Branch for Cost Reset processing ('*' for all branches).

Branch

2. Enter a '1' to reset rates in the Work Center Rates Table for the selected Cost Centers and Cost Methods.

Reset Rates

Updating Sales Order Price and Cost

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

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

Caution

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* in the *Sales Order Management* documentation for information about updating prices for a specific customer instead for all sales.

Processing Options for Update Sales Order Price/Cost

Cost Options

Enter a '1' to update sales order with most current unit cost. (Any other value will leave cost unchanged.)

Enter a '1' to update the currency exchange rate (only domestic amounts will be recalculated). Enter a blank to leave unchanged.

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.

Price Options

Enter a '1' to update the unit price of the sales order. Any other entry will leave unit price unchanged.

' ' - Transaction Date; '1' - Requested Ship Date; '2' - Promised Ship Date; '3' - Original Promise Date; '4' - Actual Ship Date; '5' - System Date; '6' - Invoice Date; 'P' - Preference Value

Specify the date on which to base all price recalculations.

Enter '1' to recalculate the Transfer Price for inter-branch sales. The pricing method specified when the order was entered will be used.

Adv. Pricing O

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.

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.

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.

Versions

Sales Order Entry (P4210)

Updating Product Costs

Use the Speed Cost Maintenance program (P41051) to update costs for purchased items in the branch/plants, locations, and lots that you choose. You can increase or decrease costs by a percentage or monetary amount, or you can specify a new monetary amount. You also specify the cost method for which you want to update costs.

This program updates costs for purchased items in the Item Cost File table (F4105). Run the Item Cost Component - Frozen Update program (R30835) to update costs in the Cost Components table for purchased and manufactured items.

Note

The information that appears on Work with Location Costs 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

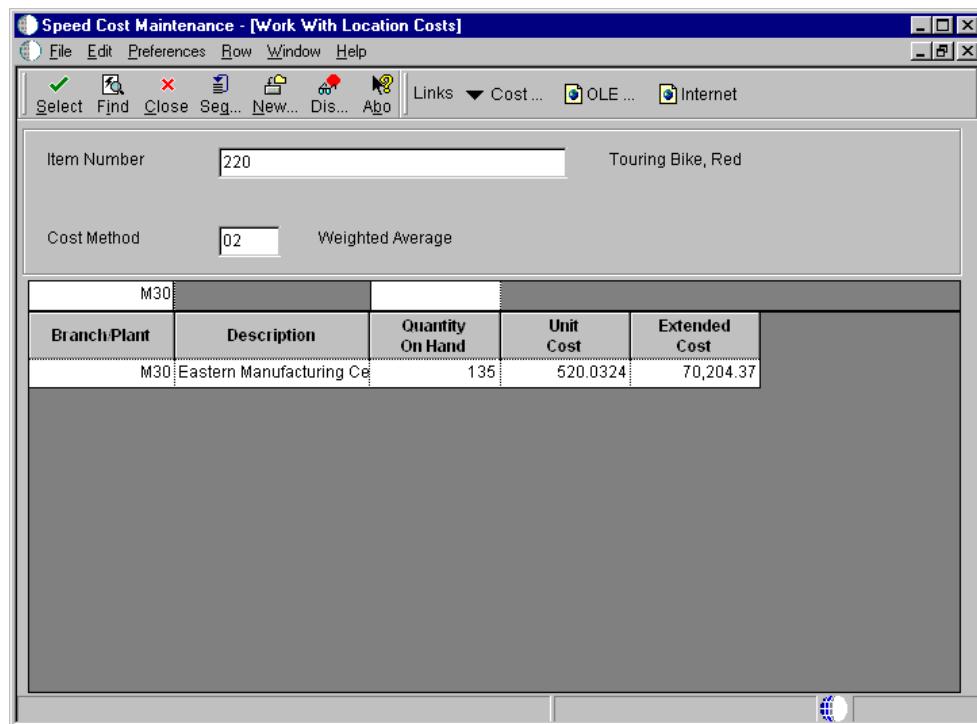
branch/plants. If an item has a cost level of 3, the system displays costs for all locations at the branch/plant that you specify.

See Also

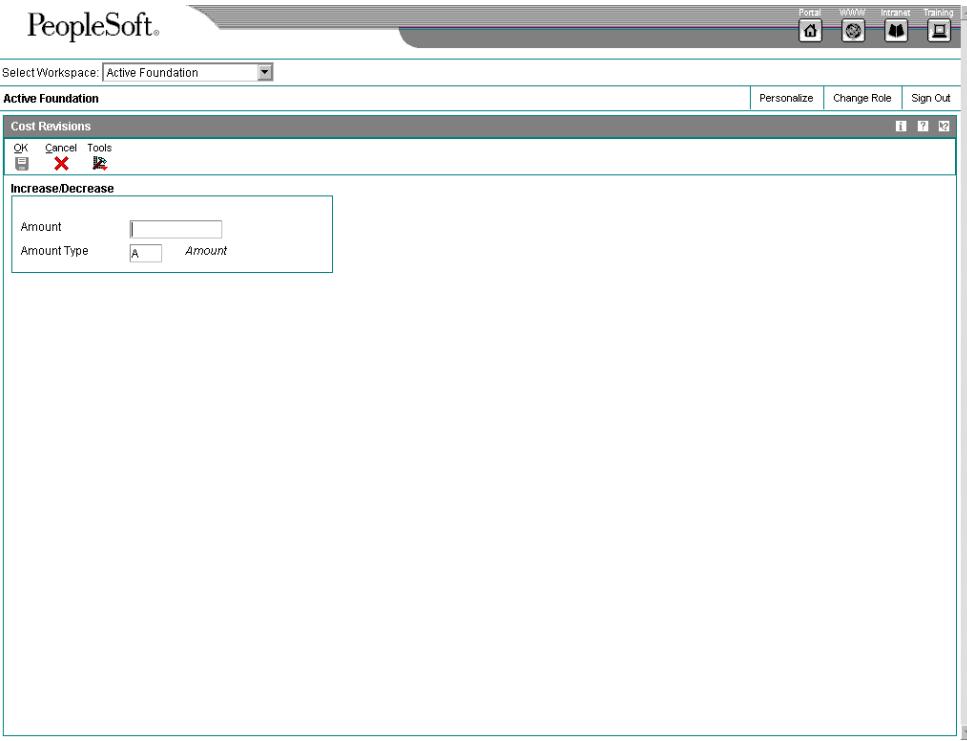
- ❑ *Setting Up Item Cost Levels* for instructions about how to set the cost level
- ❑ *Updating Item Costs* in the *Inventory Management* documentation for additional topics about updating costs

► To update product costs

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



1. On Work With Location Costs, complete the following fields and click Find:
 - Item Number
 - Cost Method
2. Choose a branch/plant and click Select.



3. On Cost Revisions, complete the following fields:

- Amount
- Amount Type

Processing Options for Speed Cost Maintenance

Defaults

1. Enter the default cost method to display.

Process

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

Changing Item Cost Levels

From the Inventory Advanced & Technical Operations menu (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 (R41815) to change an item's cost level after cost information has been entered.

When you run this program, it deletes all existing cost records for the item in the Item Cost File table (F4105) and creates new cost records that correspond to the level. For the item to create the new cost records, the system uses the cost method you identified for sales/inventory on the Cost Revisions form.

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)
- Item Cost File (F4105)

Caution

When you change your item cost levels, the changes affect 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 access the Item Master (F4101) or Item Cost File table (F4105) when this program is running in final mode.

See Also

- *Setting Up Item Cost Levels* if you need to set up the cost level for the first time
- *R41815, Item Cost Level Conversion* in the *Reports* documentation for a report sample

Processing Options for Item Cost Level Conversion (R41815)

Process

1. Enter the Cost Level to update to.

Level - Inventory Cost

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.

Branch/Plant

3. Enter a '1' to run in final mode and update files. If blank, no file updates will occur.

Update Mode

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

Print Mode

Applying Extra Costs for Manufacturing Actual Costing

When a company decides to use actual costing for one or all items they might want to apply extra costs to the cost of the parent item. To apply the extra costs for actual costing, you follow most of the setup tasks and some of the steps that you do for standard product

costing. The system calculates cost extras based on a template stored in the Item Cost Component Add-Ons table (F30026).

Before You Begin

- Set up the cost levels for your items. See *Setting Up Item Cost Levels*.
- Set up the rate and factor codes for your extra costs. See *Setting Up Standard Rate and Factor Codes*.

► To apply extra costs for Manufacturing Actual Costing

1. Set up cost components in UDC 30/CA for each extra cost.
See *Understanding User Defined Codes* for information about UDC 30/CA.
2. Set up the cost method for each item as either 02 (Weighted Average) or 09 (Actual or Manufacturing Last).
See *Setting Up Methods and Costs for Items*.
3. Set up the simulated rates for any cost method that you want to use for the extra costs.
See *Setting Up Simulated Rates for Work Centers*.
4. Create the simulated rollup.
You must enter cost method 02 or 09 in the processing option under the Defaults tab. Enter the same cost method that you set up in step 2.
See *Creating a Simulated Rollup*.
5. Update the frozen extra costs.
You must enter cost method 02 or 09 in the processing option under the Defaults tab. Enter the same cost method that you set up in step 2.
See *Updating Frozen Costs*.
6. Review the frozen costs to validate that they are set up correctly and that they match those in the report produced when you updated the frozen costs in step 5.
See *Reviewing Frozen Cost Components*.

Working with Product Costing in ERPx Environments

Few manufacturing companies use only one type of operating environment. Often, process manufacturing companies find it useful to employ discrete methodologies when performing packing and shipping activities. Companies that use discrete or job shop manufacturing methods, often adopt more efficient operations using repetitive, rate based, or batch processing methods. Any combination of operating methods are possible, depending on the industry and the product mix.

Companies that are able to use a combination of manufacturing methods must also consider how to account for costs incurred from those various methods. Each method has specific strategies for establishing and collecting cost information. In combination, certain adjustments or restrictions might be necessary so that costing information flows from the most basic of cost components through the rolled up or completely costed end products.

As your company refines its production processes and automates costing activities, you should create detailed definitions of the costing processes. Care should be used in assuring that cost techniques support any manufacturing method that you use. The ultimate goal is to decrease the leadtime required to maintain and monitor product costing information throughout the entire manufacturing process.

If you use the Product Costing system in any special environment such as using batches, kits, processes, or configured items, or in distribution, the system calculates product costs differently.

Note

If you use 02 (Weighted Average) or 09 (Actual, Manufacturing Last) cost method, processes and configured items are not supported and the content in these topics does not apply.

Understanding 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 matches the routing batch size
- Material costs are rolled up only if the accounting cost quantity matches the bill of material batch size

The following table illustrates these possibilities:

Accounting Cost Quantity	Bill Batch Size	Routing Batch Size	Rollup
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 Cost Simulation – Build Temp (R30812) program does not find a bill of material whose batch quantity matches the accounting cost quantity, it uses the zero batch bill.

Note

Most quantities displayed on Work with Costed Bill and Enter Cost Components are expressed per each unit of measure, not per batch quantity. Setup quantities are expressed per the batch quantity.

See Also

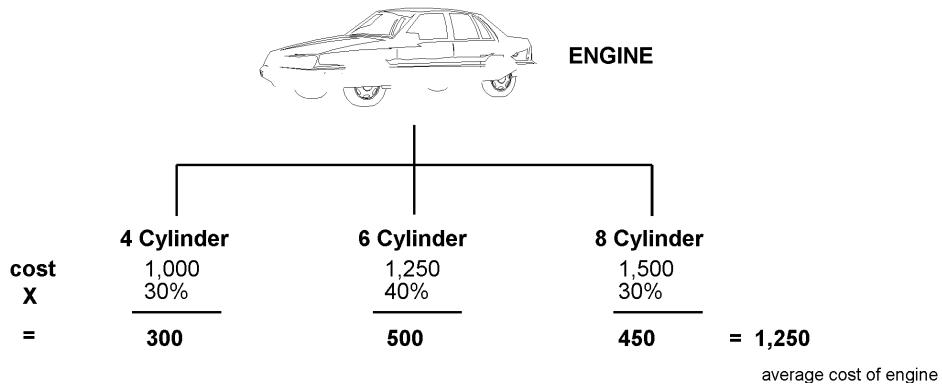
- Entering Bills of Material* in the *Product Data Management* documentation for instructions about entering bills of material

Understanding Costing for Kit Items

When you use kit items with options, the Cost Simulation – Build Temp 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 Cost Simulation - BuildTemp program multiplies the feature costing percentage by the cost of the option (from the Item Cost File table [F4105]) to determine the option's share of the parent phantom's average cost.
- The program then adds monetary amounts for each option to determine the average cost for the parent phantom.

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



Standard 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 no standard configuration exists, costing cannot be established before you enter the sales order. In other words, no standard costs are available for configured items.

The Order Processing program (R31410) 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. The costs are stored in the Production Cost table (F3102), not the Cost Components table (F30026).

For a configured item, the A1 material cost is calculated from the total cost of its direct components. B1 direct labor cost is calculated from the item's routing.

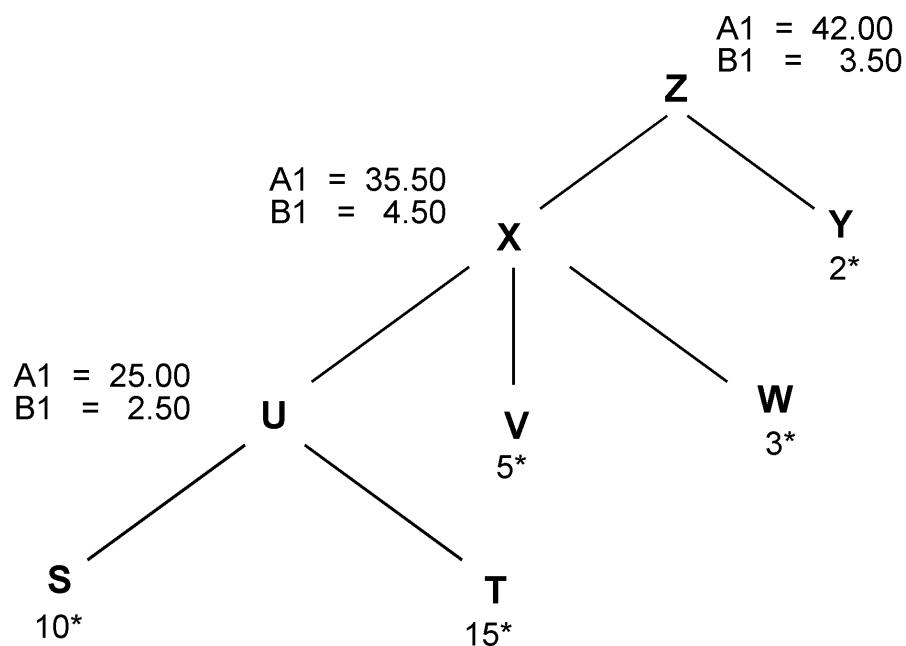
When these costs have been established, the system updates the unit cost and extended cost on the sales order for the top-level configured item only.

Note

If you use cost method 02 (Weighted Average) or cost method 09 (Actual, Manufacturing), processes and configured items are not supported. The content in this topic does not apply.

Example: Costing a Configured Item

The following example illustrates how the frozen standard costs are calculated for a configured item. The example assumes that you have done a cost rollup for the non-configured items and that frozen standard costs exist in the Cost Components table for items S through Z.



* 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

For the rollup to occur correctly, the data sequence for the Order Processing program (R31410) must be set as follows:

- The sales order number appears first, and is in ascending order.
- The sales order line number appears second, and is in descending order.

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, the Order Processing program 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.

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 Sales Configurator* in the *Sales Configurator* documentation
- Sales Configurator Overview* in the *Sales Configurator* documentation for information about configured items on sales orders

Working with Standard Costing in Process Manufacturing

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 of industries that often use process manufacturing.

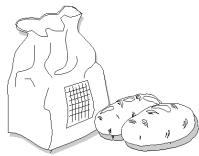
A process includes ingredients (equivalent to parts on a work order) and a process routing or recipe. The output from a process includes the following:

Intermediate The output from an operation that is used as the input to the next operation. No cost is associated with an intermediate.

By-product The material produced incidental to (or as a residual) of the process.

Co-product An end item produced as a result of the process. Usually, two or more co-products result from a process.

The following illustration is an example of a process for potato chips:



Process - Potato Chips

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

You define a process item with ingredient relationships. These relationships also determine intermediates, by-products, co-products, and substitutions. You also define the steps that are required to produce a manufactured item with process routings. These routings determine work centers and labor standards.

When you run the Cost Simulation – Build Temp program (R30812), you must set the processing option to include the cost for the co- and by-products. To determine the cost for the co- and by-products as produced in the process, the system performs the following calculation:

Divides the costs for the process into the co-and by-products according to how the feature cost percentage is set up

The system then uses the information from the Co-/By-Product Planning Table (P3404) to allocate the cost from each process and to determine the standard cost for the co- and by-products.

See Also

- Process Manufacturing* in the *Shop Floor Management* documentation

Reviewing Product Costing for Processes

Use this form to review the costs for each step in the process.

► To review product costing for a process

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

1. On Work with Routing Operations, complete the following fields and click Find:

- Branch/Plant
- Item Number
- Batch Quantity

2. Review the following fields:

- Run Labor
- Run Machine
- Setup Labor

3. Choose Revision from the Form menu.

Work Center	Oper Seq#	Description	Run Labor	Run Machine	Setup Labor	Cons Prod	Queue Hours	Move Hours	Line Cell	Effective From
200-201	10.00	Filter bulk oil	0.00	1.00	0.25	Both	0.00			04/15/97
200-202	20.00	Blend additives	0.00	0.25	0.00	Cons	0.00			04/15/97
200-203	30.00	Refine	0.00	2.00	0.00	Prod	0.00			04/15/97
200-202	40.00	Blend graphite	0.00	0.25	0.00	Both	0.00			04/15/97

4. On Enter Process Information, review the following fields:

- Time Basis
- Setup Crew
- Ty Cd
- Planned Yield

Reviewing Product Costing for Ingredients

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.

If an ingredient in a process has extra costs built into its cost, the system allocates the extra costs to the co-and by-products in the same way that the ingredients are allocated. That is, the extra costs are allocated in the same sequence that the ingredients are consumed and at the feature cost of the co-by-product.

See Also

- [Reviewing Product Costing for Co-/By-Products](#)

► To review product costing for ingredients

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

1. On Work with Routing Operations, complete the following fields and click Find:
 - Branch/Plant
 - Item Number
2. Choose Revision from the Form menu.
3. On Enter Process Information, choose Ingredients from the Form menu.

The screenshot shows the PeopleSoft Enter Ingredients screen. At the top, there are fields for Process (5000), Branch/Plant (M30), and Lubricant Process. Below these are fields for Batch Quantity (EA), As of Date, Type of Bill (M), Oper Seq#, Drawing #, Item Rev. Level, and Skip to Line No. A grid below lists ingredients with columns for Item Number, Description, Quantity, UM, Active Ingr. Flag, F, V, Is Cd, Stkg Typ, Ln Ty, Line No., Oper Seq#, and Effec From. The grid contains the following data:

Item Number	Description	Quantity	UM	Active Ingr. Flag	F	V	Is Cd	Stkg Typ	Ln Ty	Line No.	Oper Seq#	Effec From
5001	Oil	50	GA		V	I	P	S	S	10.00	10.00	04/
5002	Rust Inhibitor	1	GA		V	B	P	S		20.00	20.00	
5003	Graphite	38 OZ			V	B	P	S		30.00	40.00	
5004	Thinner	1	GA		V	B	P	S		40.00	20.00	

4. On Enter Ingredients, review the following fields:

- Parent Item
- Quantity
- UM
- F V
- Feat Cost %
- Percent Scrap
- Operation Scrap Percent

Reviewing Product Costing for Co-/By-Products

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

A by-product is a material of value that is 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. Extra costs for co-/by-products do not use feature cost percents.

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 percent.
- The total of all percentages at the last operation must equal 100 percent.

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 3	60	100.00	100.00 + 195.00 = 295.00	177.00
	Co 4	30			88.50
	Co 5	10			29.50

The following list identifies calculations for feature cost percent and co-/by-product costing:

- Co-/by-product cost at an operation = cumulative cost at an operation multiplied by the feature cost percent.
- 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%.

Example: Extra Costs for Co-/By-Products

Extra costs are not associated with a particular step of the process. Therefore, feature cost percentages are not used for distributing the extra costs. Instead, the system:

1. Determines the total of the net-added B1 through C4 costs for all of the co-/by-products
2. Calculates the percent of this total that each co-/by-product represents
3. Uses this percentage to allocate the extra costs

In the following simulated rollup of cost components for a process, the cost of extra cost X3 (Outbound Freight) is included for the amount of the process:

Cost Type	Net Added Total	
A1 Material		40.00
B1 Direct Labor	20.00	20.00
B2 Setup Labor	40.00	40.00
B3 Machine Run	20.00	20.00
C1 Machine Variable	20.00	20.00
C2 Machine Fixed Overhead	20.00	20.00
C3 Labor Variable	60.00	60.00
C4 Labor Fixed Overhead	60.00	60.00
X# Freight Out		40.00

Simulated, Frozen, and Cost Ledger each is 280.00

When you run the cost rollup to include the X3 cost type, the program determines the percentage each co-/by-product contributes to the total B1 through C4 costs as shown in the following grid:

Cost Type	BY 1	BY 2	CO 1	CO2	Total
B1	10.00	10.00	5.00	5.00	20.00
B2	10.00	10.00	10.00	10.00	40.00
B3	10.00		5.00	5.00	20.00

C1	10.00	5.00	5.00	20.00	
C2	10.00	5.00	5.00	20.00	
C3	10.00	20.00	15.00	15.00	60.00
C4	10.00	20.00	15.00	15.00	60.00
Totals	60.00	60.00	60.00	60.00	240.00
% of Total	25%	25%	25%	25%	100%

Because all four co-/by-products have the same total costs, each is allocated 25 percent of the extra cost X3 (Freight Out) in the rollup. When you inquire on the cost for this item after the rollup, the simulated cost appears as follows:

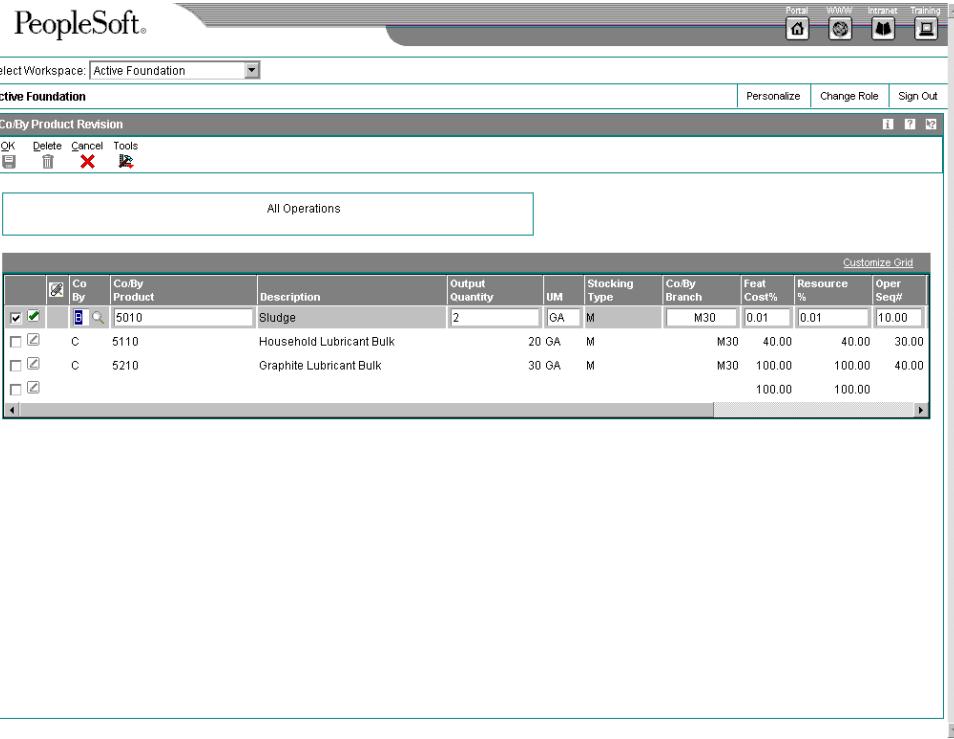
Cost Type	Net Added Total	
A1 Material		10.00
B1 Direct Labor	5.00	5.00
B2 Setup Labor	10.00	10.00
B3 Machine Run	5.00	5.00
C1 Machine Variable	5.00	5.00
C2 Machine Fixed Overhead	5.00	5.00
C3 Labor Variable	15.00	15.00
C4 Labor Fixed Overhead	15.00	15.00
X# Freight Out	10.00	10.00

Simulated Cost = 80; Frozen and Cost Ledger each = 70.00

► To review inputs to co-/by-product costing

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

1. On Work with Routing Operations, complete the following fields and click Find:
 - Branch/Plant
 - Item Number
2. Choose Revision from the Form menu.
3. On Enter Process Information, choose Co/By Revision from the Form menu.



4. On Co/By Product Revision, review the following fields:

- Output Quantity
- UM
- Feat Cost%
- Resource %

► To review co-/by-product costs

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

Enter/Change Cost Components - [Work With Cost Components]

File Edit Preferences Form Row View Window Help

Select Find Add Copy Close Beg... New... Dis... Abo Links Co/By... OLE... Internet

Simulated Components		Branch/Plant	M30			
Item Number	5000	Lubricant Process				
Unit of Measure	EA	Each	Simulated 529.5342			
Cost Method	07	Standard	Frozen 529.5342			
Stocking Type	R	Manufactured	Cost Ledger 529.5342			
Cost Type	Description	Simulated Net Added	Simulated Total	Sim Fac Code	Simulated Factor	Simula Rate C
A1	Material		526.7180			
B2	Setup Labor	2.0000	2.0000			
B3	Machine Run	.0140	.0140			
C1	Machine Variable Overhead	.0011	.0011			
C2	Machine Fixed Overhead	.0011	.0011			
C3	Labor Variable Overhead	.4000	.4000			
C4	Labor Fixed Overhead	.4000	.4000			

1. On Work With Cost Components, complete the following fields and click Find:
 - Branch/Plant
 - Item Number
2. From the Form menu, choose Co/By Product.



3. On Co/By Product Selection, choose a co-/by-product and click Select. The system returns to Work With Cost Components and displays the costs for the co-/by-product.

Reviewing a Costed Process

Use the Costed Routing Inquiry program (P30208) 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, machine, and overhead values by cost method.
- 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.

This program calculates the cost associated with each cost component in the same way as the Cost Simulation Build Temp program (R30812).

► To review a costed process

From the Daily Product Costing menu (G3014), choose Costed Routing/Process Inquiry.

Costed Routing/Process Inquiry - [Work With Costed Routing/Process]

File Edit Preferences Form Row View Window Help

Select Find Close Beg... New... Dis... Abo Links Op Bu... OLE... Internet

Simulated Costs	Process	Branch/Plant	M30
Item Number	5000	Lubricant Process	
Requested Quantity	1	EA	Each
As of Date	6/21/00	Skip to Op. Seq.	i
Cost Method	07	Standard	Stocking Type R Manufactured
Routing Batch Qty		EA	Extras 1-3
BOM Batch Qty		EA	Extras A-D

Work Center	Oper Seq#	Ty Cd	Labor	Machine	Overhead	Components
200-201	10.00		2.0000	.1920	.8307	320.00
200-202	20.00		0.0000	.0010	.0002	142.08
200-203	30.00		0.0000	.0080	.0013	0.00
200-202	40.00		0.0000	.0010	.0002	64.63
TOTAL			2.0000	.2020	.8324	526.71

1. On Work With Costed Routing/Process, complete the following fields and click Find:
 - Branch/Plant
 - Item Number
2. Review the following fields:
 - Requested Quantity
 - As of Date
 - Cost Method
 - Routing Batch Qty
 - BOM Batch Qty
 - Extras
 - Extras A-D
 - Work Center
 - Oper Seq#
 - Labor

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

- Machine
- Overhead
- Components
- Total

3. To toggle between frozen and simulated costs, choose Frozen or Simulated from the View menu.
4. To review the item's operation buckets, from the Form menu choose Op Bucket Window.

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

5. On Operation Bucket Key Window, review the information and then click Close.
6. On Work With Costed Routing/Process, choose Costed Bill from the Form menu.

Costed Routing/Process Inquiry - [Work With Costed Bill]

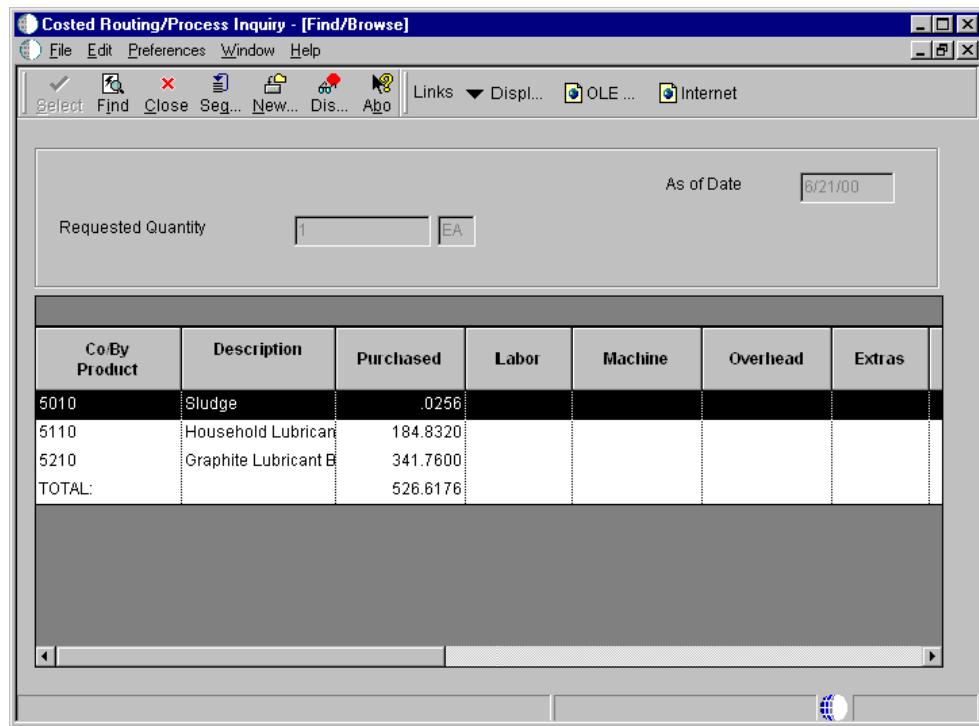
File Edit Preferences Form Row View Window Help

Select Find Close Beg... New... Dis... Abo | Links Colu... OLE... Internet

Simulated Component Costs		Branch/Plant	M30			
Parent Item	5000	Lubricant Process				
Req. Quantity	1 EA	As of Date	6/21/00 EZ			
Stocking Type	R Process	Cost Method	07 Standard			
Batch Quantity	0 EA	Skip to Seq #				
2nd Item Number	Purchase	Labor	Machine	Overhead	Extras A-D	Tot
5000		2.0000	.0140	.8022		
5001	320.0000					320.0000
5002	42.2400					42.2400
5003	64.6380					64.6380
5004	99.8400					99.8400
TOTALS:	526.7180	2.0000	.0140	.8022		526.7180

The Work With Costed Bill form appears, from which 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 program (P30026) and reflect the last simulated rollup. Thus, the costs might differ from those on Work With Costed Routing/Process if you have changed the process since the last rollup.

7. Click Close.
8. On Work With Costed Routing/Process, choose Costed Co-/By from the Form menu.



The Find/Browse form appears on which all co-/by-products across all operations are displayed. If a co-/by-product is made from more than one process, the costs shown are for all processes. These costs are from the Cost Components program (P30026) and reflect the last simulated rollup. Thus, the costs might differ from those on Work With Costed Routing/Process if you have changed the process since the last rollup.

9. Click Close to return to Work With Costed Routing/Process
10. You can view co-by-product costs for a single operation by choosing Costed/ CoBy from the Row menu on Costed Routing/Process.
11. Click Close.
12. On Work With Costed Routing/Process to view all costs associated with an operation, choose Details from the Row menu.

The screenshot shows a Windows application window titled "Costed Routing/Process Inquiry - [Costed Routing Details]". The menu bar includes File, Edit, Preferences, Window, and Help. The toolbar contains icons for Close, Save, New, Delete, and Abort, along with Links, Display, OLE, and Internet buttons. A search bar at the top right says "Filter bulk oil". Below the toolbar is a table with the following data:

Category	Cost Type	Description	Cost
Labor	B2	Setup Labor	2.0000
Machine	B3	Machine Run	.1920
Overhead	C1	Machine Variable Overhead	.0154
	C2	Machine Fixed Overhead	.0154
	C3	Labor Variable Overhead	.4000
	C4	Labor Fixed Overhead	.4000
Components	A1	Material	320.0000
Totals:			323.0228

On Costed Routing Details, labor costs that appear are real-time. The cost components are grouped according to cost buckets.

13. Click Close.

See Also

- Calculations in Cost Rollup*
- Understanding User Defined Codes* for information on how to define Costed Operation Buckets (UDC 30/CO)
- Example: Setting Up Cost Bucket Codes for Costed Bills of Material*

Processing Options for Costed Routing/Process Inquiry

Defaults

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

Outside Operations Cost Method

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

Tax Authority 2

Purchased Cost Method

Display

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

Skip to flag

Process

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

Include 1 and 2 in total

Setting Up the 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 of the manufacture for the item is satisfied from other sources such as purchase orders or work orders for the co-products themselves

You set up the planning table to identify the process that the system uses to calculate the costs of co/by-products, as well as which processes the system uses for demand planning. Because a co-/by-product can be produced by more than one process, depending on how often a process is used, you can assign a weight to the costs for each process on the planning table.

Normally, all demand for co/by-products is satisfied from process work orders. However, you can specify a percentage from the item process and from a bill of material and routing for a discrete co-product. To do so, enter less than 100 percent in the table, for example, 50 percent for the item process. The remainder is satisfied by discrete work orders for co-product .

You can also have a co-product that is produced entirely by more than one process. For example, two processes can have a 75 percent to 25 percent relationship between them. Both processes appear on the Co-/By-Products Planning Table form when you locate the co-product. In these situations, you must set up the co-/by-products planning table with a cost percent equal to 100. This ensures that the rollup calculates the costs of co- and by-products correctly.

When a co-/by-product is created by more than one process, use the planning table to allocate the cost of the co-/by-product among the processes. You can assign a weight to the costs from each process.

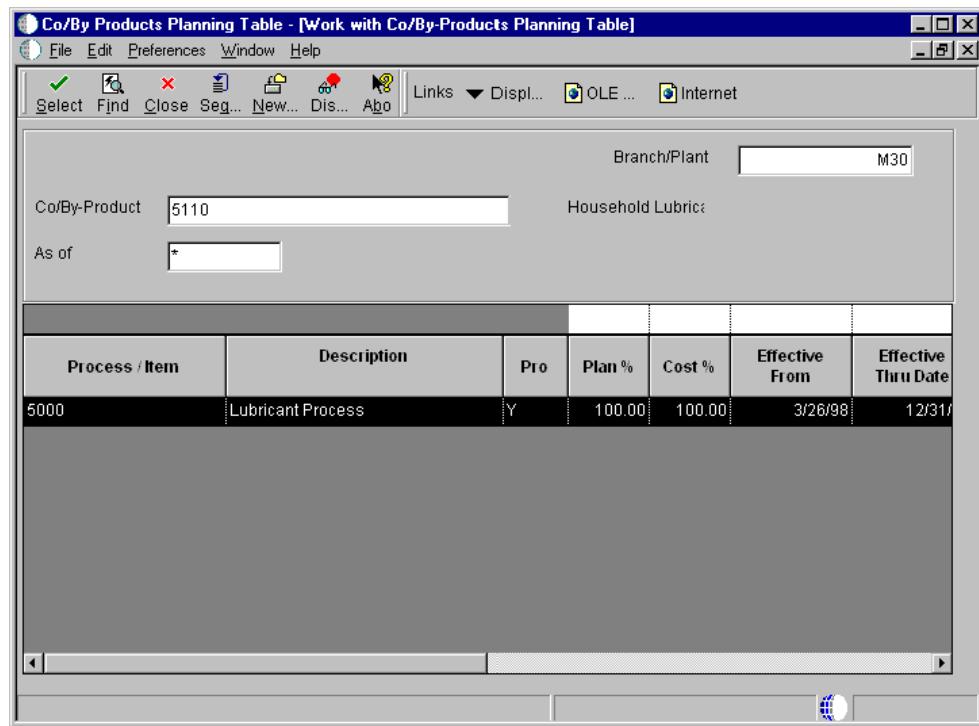
For example, you might have a co-product that is produced by two processes such as the following:

- The normal manufacturing process which is used 90 percent of the time.
- A second process, used for rush orders 10 percent of the time with costs that are much higher than the normal.

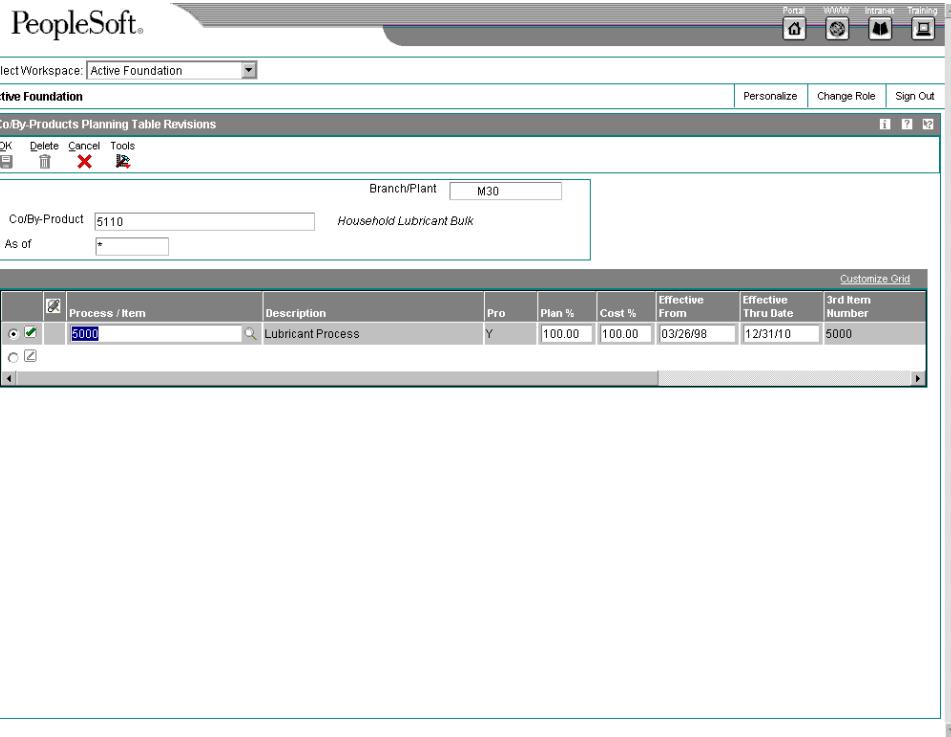
You can set up the planning table with these two processes and percentages that allows the co-product's standard cost to reflect the extra costs that are incurred 10% of the time.

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

From the Product Costing Setup menu (G3042), choose Co/By Products Planning Table.



1. On Work with Co/By-Products Planning Table, complete the following fields and click Find:
 - Branch/Plant
 - Co/By-Product
2. Choose a process and click Select.



3. On Co/By-Products Planning Table Revisions, complete the following fields for each process:
 - Process / Item
 - Plan %
 - Cost %
 - Effective From
 - Effective Thru Date
4. When the information is accurate for all listed processes, click OK.

See Also

- ❑ *Defining Co- and By-Products* in the Manufacturing and Distribution Planning documentation for additional information about setting up the planning table

Reviewing Product Costing for Percent Bills of Material

In either process or discrete manufacturing environments, you use a percent bill of material to express the ingredients as a percentage of the parent quantity.

If you use percent bills of material, the system calculates costs based on the quantities specified in the percent bill. Quantities are expressed in percentages (for example 75 for 75%) and the total of the component quantities must equal 100. Components must have a unit of measure that can convert to the parent unit of measure without causing rounding.

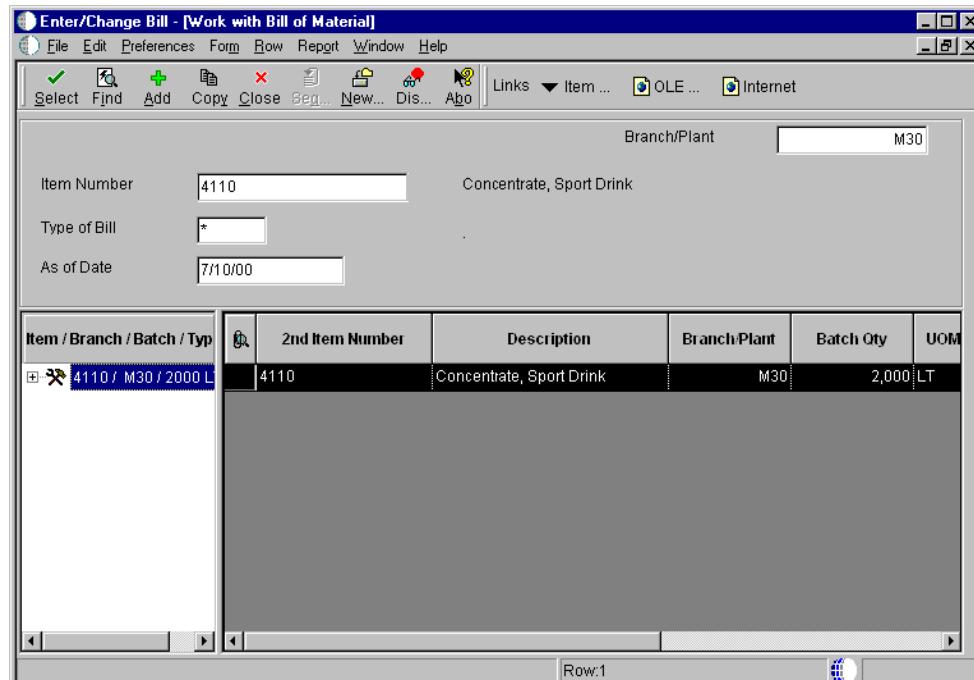
errors. For bills of materials with a "blank" batch quantity, the cost rollup calculates the cost for 1 primary unit of measure for the parent product.

See Also

- ❑ *Understanding Bills of Material* in the *Product Data Management* documentation
- ❑ *Setting Up Standard Units of Measure* in the *Inventory Management* documentation for information on how to set up the unit of measure for each parent and component.

► To review product costing for a percent bill of material

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



1. On Work with Bill of Material, complete the following fields and click Find:
 - Branch/Plant
 - Item Number
2. Choose a record and click Select.

PeopleSoft®

	Item Number	Description	Quantity	UM	Active Ingr. Flag	F V	Is Cd	Stng Typ	Line No.	Open Seq#	Effr
<input checked="" type="checkbox"/>	4101	Water, Purified	50	ML	%	B	P	S	10.00	10.00	09/03
<input type="checkbox"/>	4102	Electrolyte	38	ML	1	%	B	P	S	20.00	10.00
<input type="checkbox"/>	4103	Flavoring, Lime	10	ML		%	B	P	S	30.00	10.00
<input type="checkbox"/>	4104	Coloring, Green #8	2	ML		%	B	P	S	40.00	10.00

3. On Enter Bill of Material Information, review the following fields:

- Quantity
- F V

Daily

Manufacturing Accounting

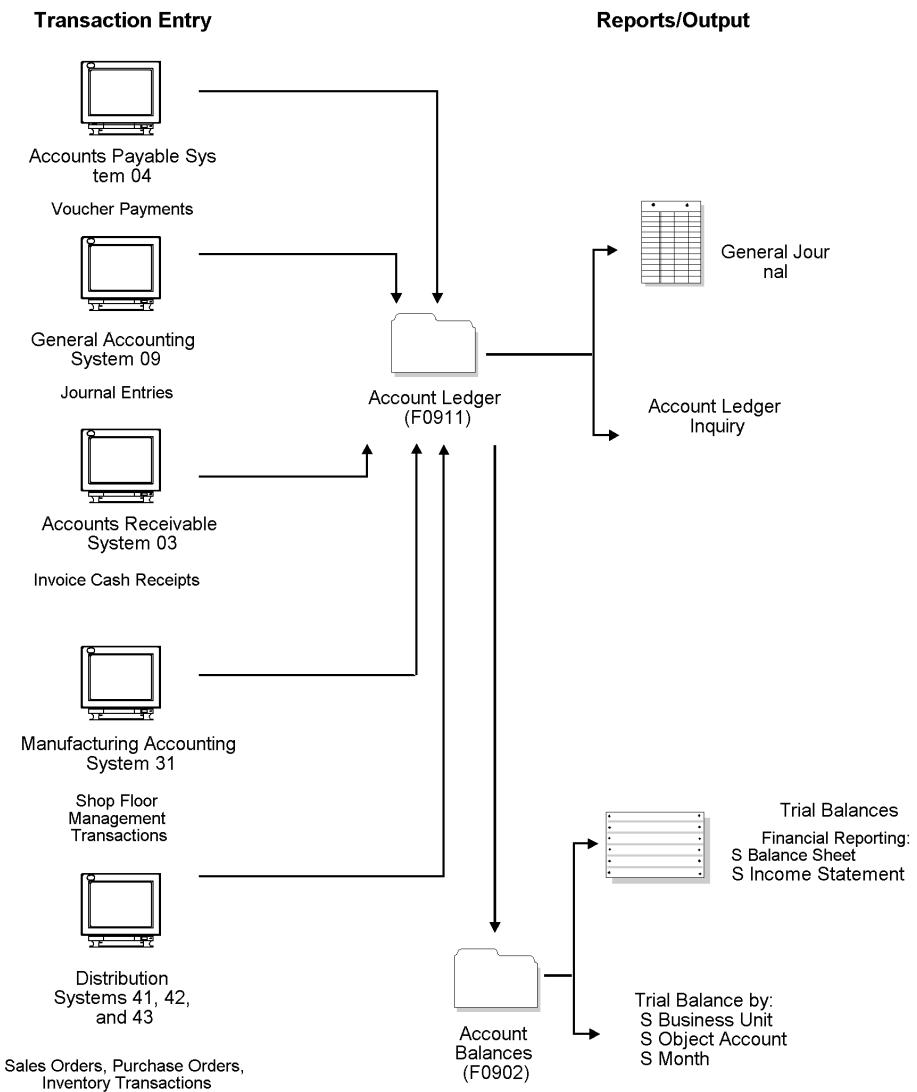
To remain competitive in a changing business environment, companies must integrate all aspects of their operation. This includes identifying operations that reduce leadtimes, expedite speed to market, and reduce operating costs. The objective is to reduce costs passed along to customers and to remain a competitive market player.

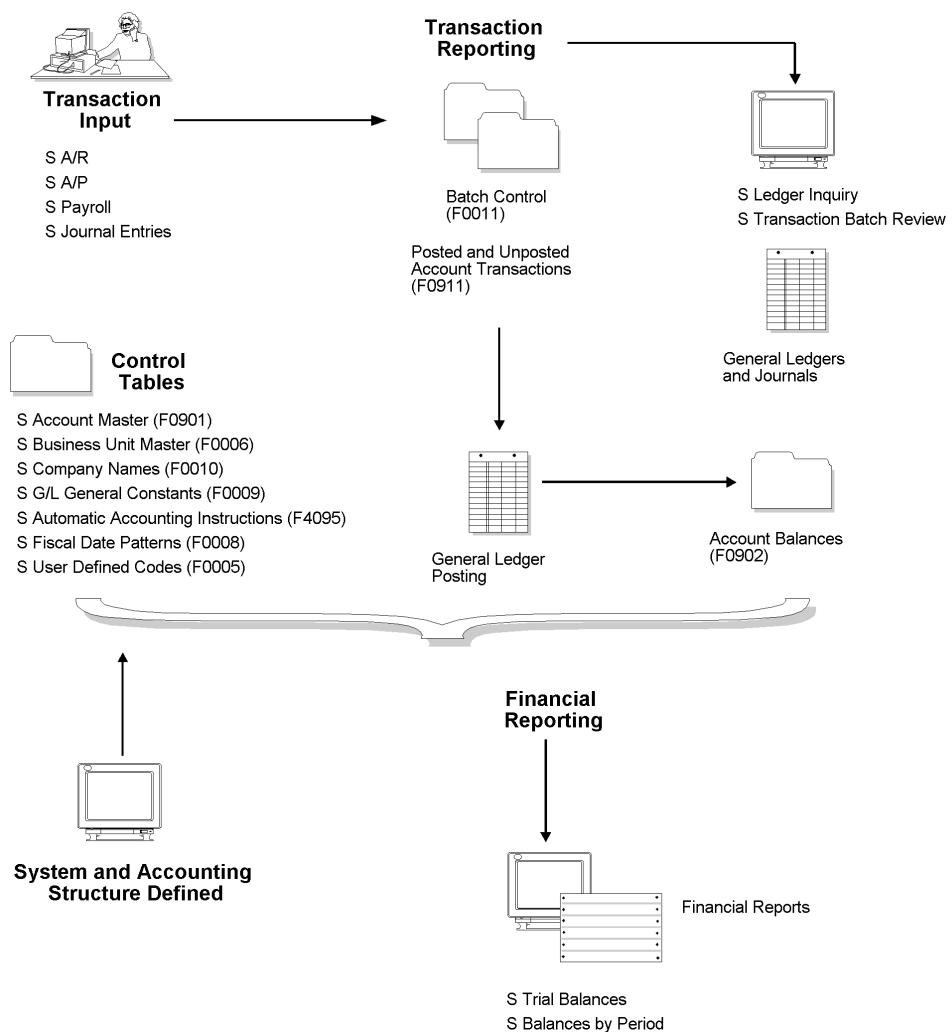
After a company defines item costs and where each cost is derived, it might choose to transfer these cost records into the accounting records. When a manufacturing accounting system is used, it enables the company to track costs associated with each activity within the manufacturing process. As material is received into inventory, issued to a manufacturing order, and used at various stages within the manufacturing cycle, the company has detailed accounting records that reflect debits and credits to predetermined financial accounts. These records can be transferred to the general ledger to balance financial records throughout the manufacturing cycle.

The ability to perform standard costing (comparisons based on frozen costs), or actual costing (comparison of expected cost versus actual cost) enables companies to accurately account for the cost of manufacturing. Comparisons can identify areas that deviate from original cost expectations. Better-informed management decisions can then be made and a course of action implemented to reflect current costs in the ultimate cost of the products. Inventory cost can be revalued to reflect these updated costs.

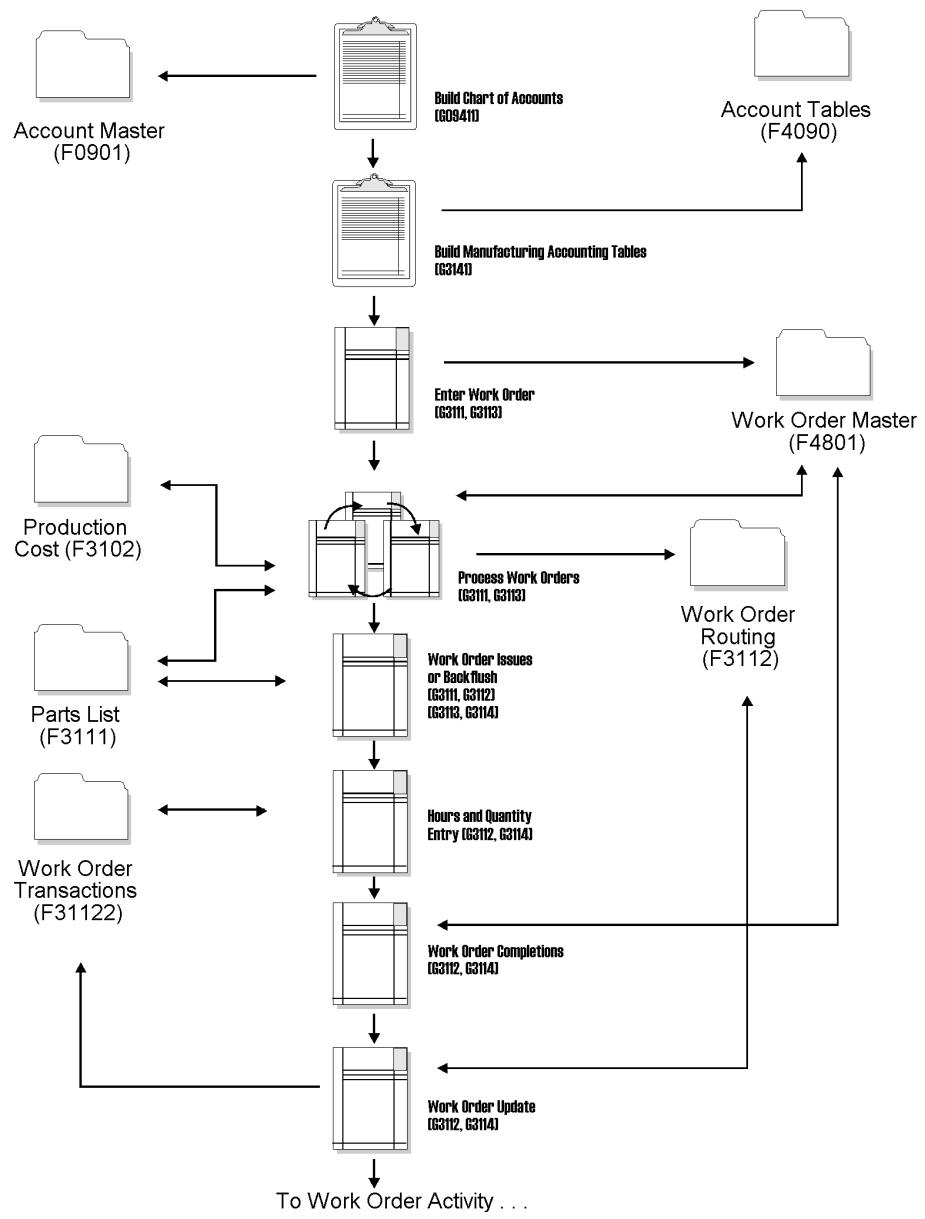
In volatile and dynamic industries, such as electronics and other technologies, constant changes in technology and customer demand, product configuration, and production processes need to be constantly monitored. Changes need to be integrated and reflected throughout product life cycles as quickly as possible. Industries remain competitive in the global marketplace only if they minimize time to market for new products and reduce costs.

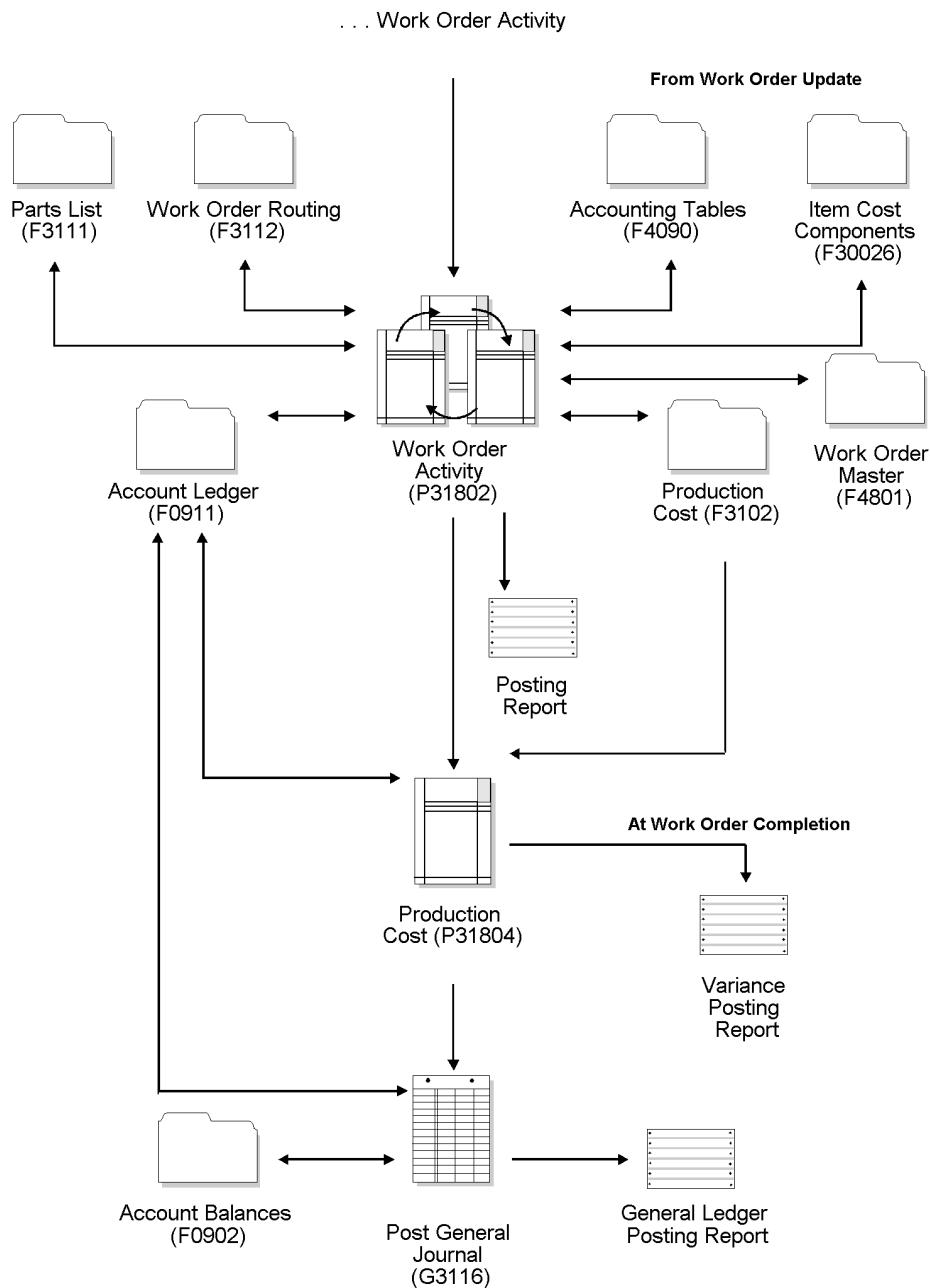
The following two graphics illustrate the interaction between the Manufacturing Accounting system and the General Accounting system.





The following two-part graphic illustrates the flow of the Manufacturing Accounting system.





Accounting Fundamentals

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

- Create journal entries for work order or rate schedules
- Create variance journal entries

The Accounting Equation

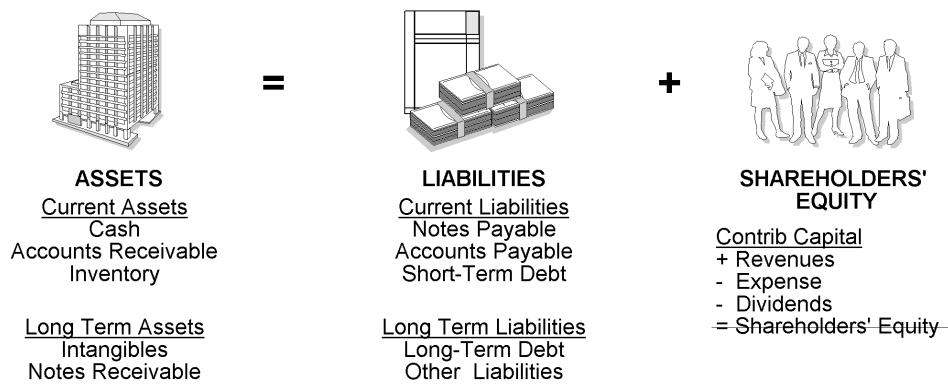
To determine a company's net worth, you must review the results at the end of the previous fiscal period and then take into consideration changes that have occurred during the year.

You calculate these changes with this basic accounting equation:



$$\text{Assets} = \text{Liabilities} + \text{Equity}$$

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:



What Is the Chart of Accounts?

The chart of accounts is a record of the valid accounts that 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 by using automatic accounting instructions (AAIs). AAIs 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:

Assets (Balance Sheet)

Liabilities (Balance Sheet)

Owners' Equity (Balance Sheet)

Revenues (Income Statement)

Expenses (Income Statement)

The chart of accounts displays the following elements:

- The account number and description
- The posting edit codes
- The level of detail assigned to the account (LOD)
- Which accounts are assigned to which business units

The graphic following illustrates an excerpt of the balance sheet chart of accounts for company 200:

Acct	Description	Post Edit	LOD	B/S BU200
1000	Assets	N	3	X
1001	Current Assets	N	4	X
1100	Cash	N	5	X
1110	Cash in Bank	N	6	X
1130	Short-Term Investments	N	6	X
1200	Accounts Receivable	M	5	X
1210	Trade Accounts Receivable	N	6	X
1215	Allow for Doubtful Accounts	N	6	X
1400	Inventory		5	X
1800	Prepaid Expenses		5	X
1810	Prepaid insurance		6	X
1890	Other Prepaid Expenses		6	
2000	Fixed Assets	N	4	X
2001	Property and Equipment	N	5	X
2020	Buildings	N	6	X
2060	Furniture & Office Equipment	N	6	X
2100	Accumulated Depreciation		5	X
2120	Accum Depr - Buildings		6	X
2160	Accum Depr -		6	X
2170	Furniture & Equipment		6	X
3900	Accum Depr - Computer		5	X
	Other Assets			

See Also

- *Reviewing Manufacturing AAs* for additional information about the chart of accounts

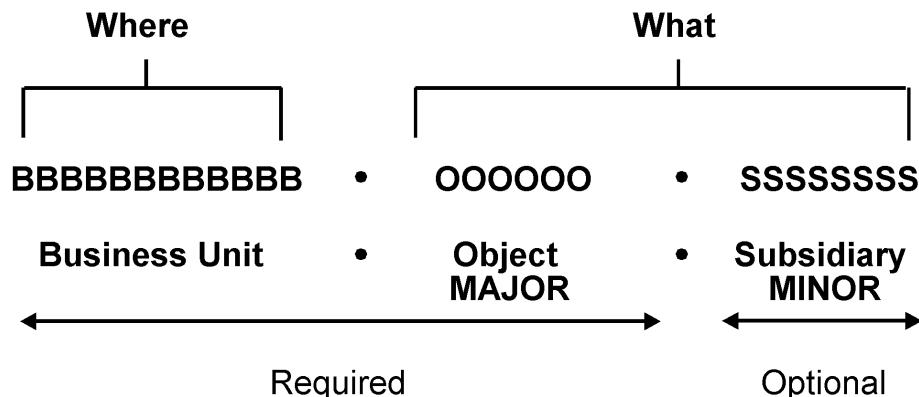
Accounts and Account Numbers

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 which the system uses to roll up balances into a structured hierarchy of accounts

An account number includes both the business unit and object and subsidiary codes. You set up the General Accounting Constants to use periods, commas, or other user defined symbols to separate the components of the account number.

The following graphic illustrates the structure of an account number:



The following list defines the structure of an account number:

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.

A company can have several revenue and expense business units such as:

- Department A
- Department B
- Machine shop

Object and Subsidiary Accounts

Most business units that you define consist of object accounts. Optionally, object accounts can also have a subsidiary account, which further defines the transaction activity. The object and subsidiary accounts define the kind of transaction with which you are working (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 can use up to six alphanumeric characters in this field. To make data entry more efficient, you should consider using only numbers in the object account.

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

1110.BEAR for Bear Creek National Bank

1110.FIB for First Interstate Bank

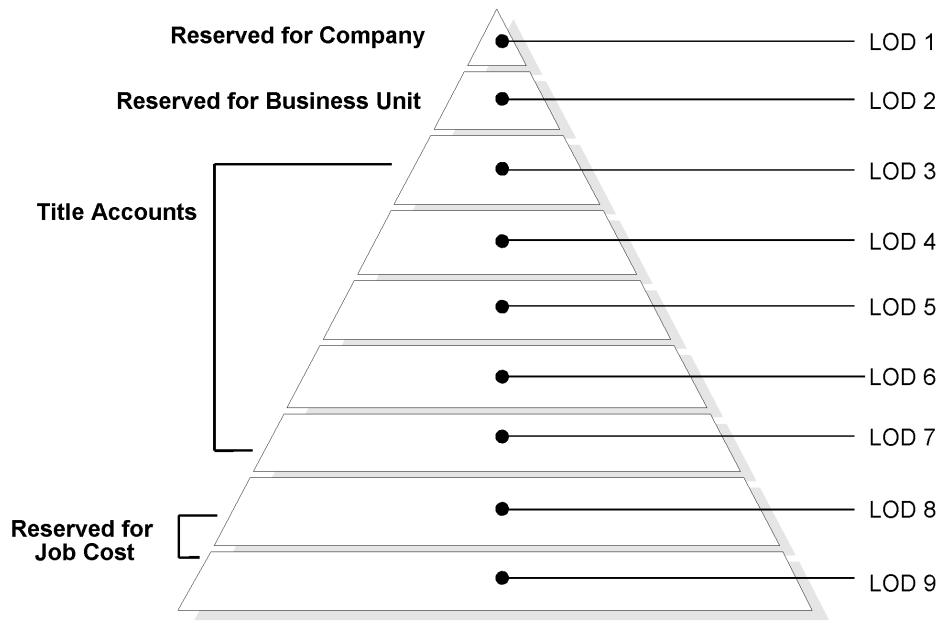
1110.FRANCE for First Bank of France

Level of Detail

You assign a level of detail (LOD) to each account to control which accounts are subtotalized during the rollup process. The system also displays the level of detail 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 graphic illustrates the LOD hierarchy.



Apply the following guidelines when you assign levels of detail to accounts:

- Assign LODs sequentially and do not skip a level of detail. Nonsequential 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 such as:
 - 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 in the Account Master table (F0901). The subledger numbers allow an audit trail for the posted subledger transactions.

You can use subledger types to group and report transactions posted to a general ledger account. Subledger types allow you to view account totals in more detail. You can also report on subledgers across accounts. For example, you can report 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 by using the posting edit code on the Account Master table.

Subledger Types

There are eight predefined 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 number. This number is edited against the Asset Master File table (F1201).
	L - Lease item number. This number is edited against the Tenant/Lease Master table (F1501).
	I - Item number (short). This number is edited against the Item Master table (F4101).
	O - Order number. This number is edited against the Sales Order Detail File table (F4211).
	S - Structure subledger. This item is edited against the Chart of Accounts Reference File table (F0909).
	W - Work order number. This number is edited against the Work Order Master File table (F4801).

In addition, you can define three subledger types (X, Y, and Z) with user defined codes (00/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.

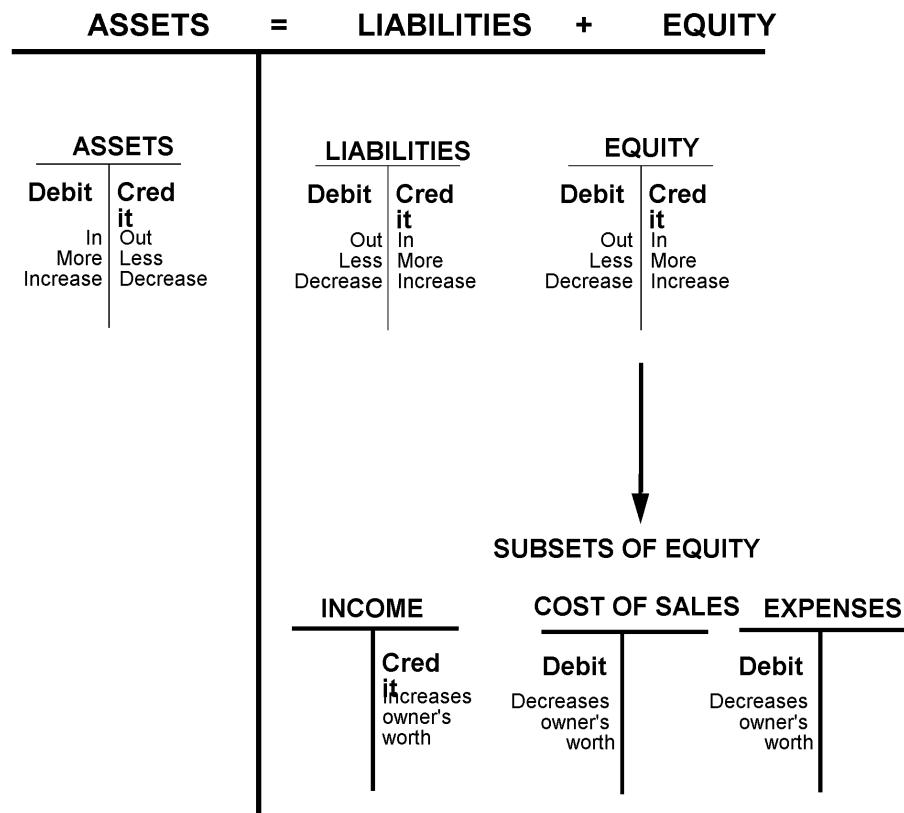
Set the PEC on the Account Master table (F0901) for all accounts that use subledger accounting. For subledger accounting, use one of the following PECs:

- S** Summary - The system posts subledgers in summary format on every transaction that references the account. You see only subledger detail in the Account Ledger table (F0911).
This code requires subledger entry.
 - L** Long - The system posts subledgers in detailed format. The system stores the subledger in detail in both the Account Ledger (F0911)and Account Balances tables (F0902).
This code requires subledger entry.
 - X** The system does not allow subledger entry for the account.
 - Blank** The system allows all posting. The system posts the subledger in detailed format. A blank code does not require subledger entry.

T-Accounts

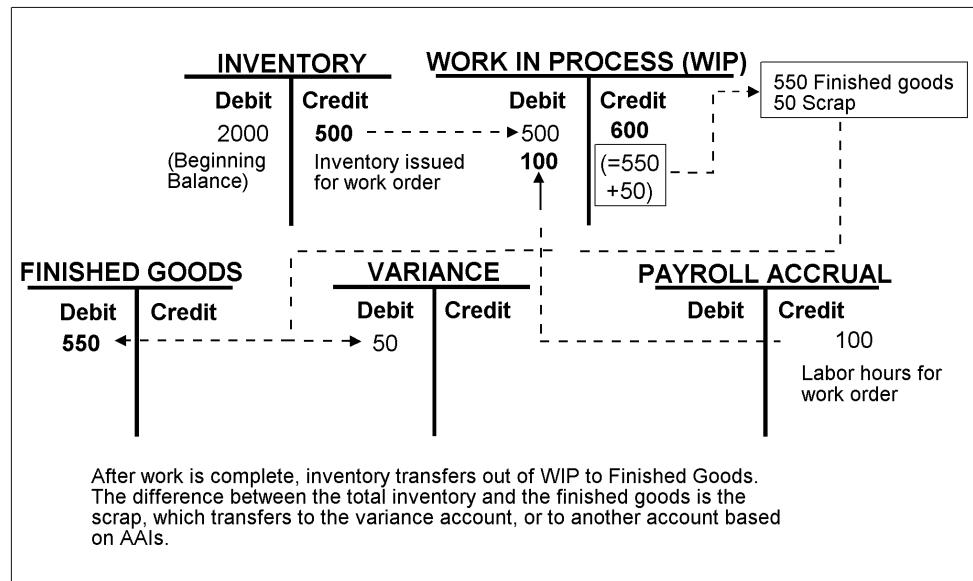
Most accounting systems are based on double entries (equal debits and credits per transaction). T-accounts are commonly used to show debit and credit entries.

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.



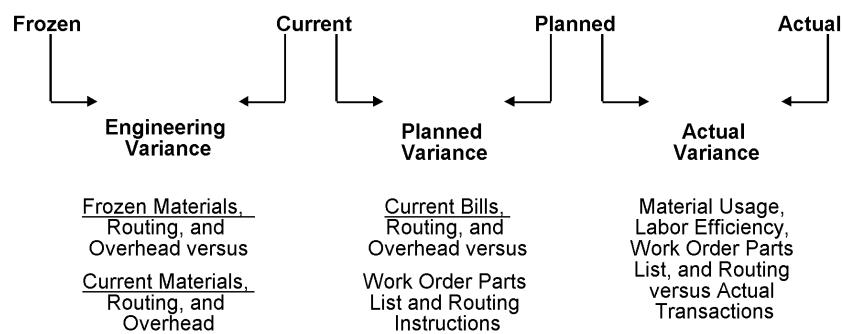
General Ledger Transactions

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



What Are Manufacturing Variances?

Variances occur when the actual cost differs from the predefined or expected cost. These variances can be due to differences in labor or overhead, or changes to the bill of material or routing.



The following table describes each variance type:

Engineering	The difference between the frozen standard costs (material, labor, and overhead) and the current costs that are derived from the bills of material, routings, and overhead rates.
Planned	The difference between the current costs that are derived from the bills of material, routings, and overhead rates at the time the parts list and routing were attached and the costs that are based on the work order or rate schedule parts list and routing instructions. Planned variances can occur when you revise a work order or rate schedule.
Actual	The difference between the cost values derived from the work order or rate schedule parts list and routing, and the material and labor that were actually reported against that work order or rate schedule. Actual variances can occur when you: <ul style="list-style-type: none"> • Issue material • Record hours and quantities • Record completions
Labor Efficiency	
	The difference between the planned and actual labor costs, based on the work order or rate schedule routing.
Material Usage	
	The difference between the planned and actual material costs, based on the work order or rate schedule parts list.
Other	The difference between the frozen standard costs and the completed (plus scrap) costs. This variance represents the over-completion or under-completion costs of the work order or rate schedule. Other variances can also be the result of a cost rollup that was done in the middle of a work order or routing.

Transaction Flow for Manufacturing Accounting

The following list identifies which tables are updated by the manufacturing programs. Unless specified separately, the update applies to both standard and actual costing.

Work Order Generation (R31410)	This program updates:
	<ul style="list-style-type: none"> • Work order status and quantity on order in the Work Order Master (F4801) • Cost method in the Work Order Master tag file (F4801T) • Required quantity in the Parts List (F3111) • Accumulated costs in the Parts List tag file (F3111T) • Required hours in Work Order Routing (F3112) • Outside operations in the Work Order Routing tag file (F3112T) • For standard costing, standard units, standard amounts, current units, and current amounts in Production Cost (F3102) • For actual costing, current units and amounts in Production Cost (F3102)
Inventory Issues (P3113)	This program:
	<ul style="list-style-type: none"> • Updates quantity issued in Parts List (F3111) • Updates unaccounted units and amounts in the Parts List tag file (F3111T) • Creates IM transactions (no batch number) in the Item Ledger (F4111)
Component Scrap (P31116)	This program updates unaccounted units and amounts in the Parts List Tag file (F3111T)
Employee Time Entry (P311221) or Payroll Time Entry (P051121)	This program updates the hours reported in Routing Hours (F31122)
Hours and Quantities Update (R31422)	This program:
	<ul style="list-style-type: none"> • Activates the processed flag in Routing Hours (F31122) • Updates unaccounted units and amounts in Work Order Routing (F3112)
Routing Quantities and Status (P3101)	This program updates units and amounts for outside operations in the Work Order Routing tag file (F3112T)
Inventory Completion (P31114)	This program:
	<ul style="list-style-type: none"> • Updates work order status in Work Order Master (F4801) • Updates unaccounted units and amounts for completions and scrap in the Work Order Master • For actual costing, updates the unaccounted units and amount for completions and scrap in Production Cost (F3102) • Creates IC and IS transactions (no batch number) in the Item Ledger (F4111)
Manufacturing Journal Entries (R31802)	This program:
	<ul style="list-style-type: none"> • Updates work order status in Work Order Master (F4801) • Resets unaccounted units to zero in Work Order Master (F4801) • Resets unaccounted units to zero in the Parts List (F3111) • Resets unaccounted units to zero in the Work Order Routing

(F3112)

- Updates planned, actual, completions and scrap units and amounts in Production Cost (F3102)
- For actual costing, resets unaccounted units and amounts for completions and scrap to zero
- Updates batch number and G/L date for IM and IC transactions in the Item Ledger (F4111)
- Creates IM, IH, IS, and IC transactions in the Account Ledger (F0911)
- Updates the Cross Reference table (F3106) with the work order number, document number, document type, G/L Date, and batch number, type, and date

**Variance Journal Entries
(R31804)**

This program:

- Updates work order status and the production price variance flag in Work Order Master (F4801)
- Records variances and optionally updates standard, current, and planned amounts and units in Production Cost (F3102)
- For Cost Method 09 only, creates IB transactions in the Item Ledger (F4111)
- Creates IV transactions in the Account Ledger (F0911)
- For companies using actual costing, creates IC, IS, and SO transactions in the Account Ledger (F0911)

General Ledger (R09801)

This program updates all account balances in the Account Balances table (F0902)

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 principle 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 Variance Journal Entries (R31804).

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

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. 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

Parts List and Routing

After you have created a work order header, you must attach a Work Order Parts List (P3111) and Work Order Routing (P3112) 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 Manufacturing Work Order Process (P48013). 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 Order Processing program (R31410). 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. You also use this method to generate a purchase order for outside operations.

Standard Costing

When the parts list and routing are attached interactively or in batch with the Order Processing program, the system compares the frozen standard costs and the current costs and updates the Production Cost table (F3102). The frozen standard costs come from the Item Cost Component Add-Ons table (F30026), based on the original bill of material and routing. The current costs are calculated from the values in the Item Cost Component Add-Ons table, based on the current bill of material 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.

Actual Costing

For actual costing, the system calculates current costs and updates the Production Cost table (F3102). The system retrieves costs from the Item Cost File table (F4105), using the component's inventory cost method.

For current routing costs, the system retrieves labor and machine rates based on the manufacturing constants. The system retrieves rates from the Work Center Rates File table (F30008) or from employee rates, as defined in the Employee Rates table (31/ER).

See Also

- ❑ *Reviewing Production Costs* for information on how to display the costs and variances associated with a work order or rate schedule
- ❑ *Setting Up Manufacturing Constants* for information on how to set the constants for costing calculations

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 Manufacturing Journal Entries (R31802), the system calculates the planned costs from the values in the parts list and routing instructions and updates the Production Cost table (F3102). The system compares the current costs to these revised planned costs. If a discrepancy exists between the current costs and the planned costs, the amount of the discrepancy becomes the planned variance.

If you make no revisions to a work order, a planned variance is not created.

See Also

- Creating Journal Entries for Variances* for information about journal entries for variances

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 can view unaccounted units through the Universal Table Browser. They are stored by the system until you run Manufacturing Journal Entries (R31802) for work in process or completions. That program creates journal entries for the unaccounted units and then purges the unaccounted units.

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

The Work Order Routing table (F3112) stores unaccounted labor units and amounts. These are updated when reporting labor and machine hours.

For standard costing, the Work Order Master File table (F4801) stores unaccounted units that are updated by work order completions. For actual costing, the Production Cost table (F3102) stores unaccounted units and amounts that are updated by work order completions.

See Also

- Viewing the Data in Tables* in the *Development Tools* documentation for information on how to locate information with the Universal Table Browser

What Happens When You Issue Material?

You must send the required materials (parts) to the shop floor for production. The quantities issued to the shop floor are deducted from inventory through a Work Order Inventory Issue (P31113) transaction. This transaction reports the actual quantities and cost of materials that were used in the production process to the Inventory Management and Manufacturing Accounting systems.

Inventory 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 following list identifies the four ways to issue material:

Manual issues Materials are deducted from inventory when you enter the issue transactions on the Issues form.

Preflushing If the processing option is set to do so, materials are automatically deducted from inventory when a work order is processed through the Order Processing program (R31410).

Backflushing Materials are deducted from inventory when items on the work order are reported as 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, when the pay points are reported as complete or partially complete. The Super Backflush program (P3115) allows you to backflush materials and labor hours and report items complete at an operation at the same time.

If you use super backflushing to complete work orders that use actual costing, you must consume all raw materials up to the last pay point and update the hours online before proceeding to the Work Order Completions program (P31114). If you set the processing options to run the program in blind mode, the cost does not include the B1 through C4 costs for the transactions that you processed in this mode.

When you issue parts to a work order, the parts are relieved from inventory immediately with a material issue (IM) transaction written to the Item Ledger table (F4111). The unaccounted units and amounts are updated in the Parts List table (F31171) until you run Manufacturing Journal Entries (R31802) for work in process or completions.

Regardless of the method that you use to issue materials to a work order, when you run Variance Journal Entries (R31804), the program compares the cost of materials issued to the cost of materials specified on the parts list. The program calculates an actual variance for any discrepancy.

Depending on the costing method that you are using, the system performs the following calculations when you issue materials:

Standard costing (method 07) Calculates the amounts using the cost components frozen value as taken from the Cost Components program (P30026).

Actual costing (method 02 or method 09) Calculates the amounts using the value in the Item Cost File table (F4105) for the component's inventory cost method.

What Happens When You Record 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.

You can enter hours and quantities data in one of two programs:

- Speed Time Entry (P051121)
- Work Order Time Entry (P311221)

The Shop Floor Management system interfaces with Speed Time Entry so that transaction data is usable in both the Shop Floor Management and Payroll systems. You can record hours and quantities per work order or per employee to accommodate both piece-work and hourly-rate employees. The information entered in Payroll can update tables in the

Manufacturing system, but hours and quantities information entered through the Manufacturing programs does not update the tables in the Payroll system.

Use the Work Order Time Entry program to charge actual hours and quantities to a work order. The header information comes from the Work Order Master File table (F4801). The information that you enter is stored in the Work Order Time Transactions table (F3112).

Inquiries and reports allow you to review and revise the hours and quantities reported by employee and by work order. After you have entered hours and quantities data, you post the transactions to the Work Order Routing table (F3112), 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 Work Order Hours and Quantities Update program (R31422). The update takes the hours and quantities recorded against work order operations from the Work Order Time Transactions table and updates their respective fields in the Work Order Routing table (F3112). The transaction data is then available for use by the Manufacturing Journal Entries program (R31802) for work in process or completions.

Standard Costing

When you update labor and machine hours, unaccounted units are stored in the Work Order Routing table (F3112). When you run manufacturing accounting, the system multiplies the unaccounted units by the frozen work center rates to calculate the amounts. Journal entries generated from routing activity are IH journal entries.

When you run Variance Journal Entries (R31804), 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 in the Production Cost table (3102).

Actual Costing

The system retrieves rates from one of three sources, depending on how you set up manufacturing constants.

- | | |
|----------------------|---|
| Labor rates | <ul style="list-style-type: none">• Work Center Rates File table (F30008)• Employee rates from the Generic Message/Rates table (F00191)• Manually entered rates |
| Machine rates | <ul style="list-style-type: none">• Work Center Rates File table• Equipment Rates table (F1301)• Manually entered rates |

What Happens When You Receive Outside Operations?

When you receive a purchase order for outside operations, you enter the quantity received and the system displays Routing Quantities and Status Window (P3103) so that you can complete the transaction. When you receive the purchase order, the system creates an OV transaction to the Item Ledger File (F111) to increase the on-hand inventory for the quantity received. When you complete the routing information, the system updates the Item Ledger File with an offsetting IM transaction. The net effect to the Item Ledger File is zero on-hand balance.

The receipt also updates the unaccounted units in the Work Order Routing table (F3112).

Depending on the cost method that you are using, the system:

Standard costing (method 07)	Uses the frozen standard cost for the outside operations amount for cost method 07
Actual costing (method 02 or 09)	Updates the amounts from the purchase order costs in the Work Order Routing table (F3112) for cost methods 02 and 09

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 (P31116).

When you report the quantity of component material scrapped, you create a memo-only Item Scrap transaction (IO) in the Item Ledger File table (F4111). When 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 percent scrap amount on the bill of material, the system uses this difference to update the amount of the actual variance.

The Shop Floor Control Parts List Tag table (F3111T) stores unaccounted scrap amounts and units.

What Happens When You Record Completions?

When you finish production of a work order on the shop floor, you must record the completions to finished goods inventory. These transactions update records in the Inventory Management and Manufacturing Accounting systems.

Completions occur when you enter finished product into inventory as complete. The Shop Floor Management system provides several ways to complete products into inventory, including:

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

When you record completions and parent scrap, unaccounted units are stored in the Work Order Master File table (4801). Completion transactions (IC) are written to the Item Ledger File table (F4111). Scrap transactions (IS) are written to the Item Ledger table as memo-only transactions.

The main difference between discrete manufacturing accounting and process manufacturing accounting is that with a process, completions are reported against the co-/by-products and not against the parent process. You set a processing option to allow completions of unplanned co-/by-products. However, variances are reported against the process.

Standard Costing

Work Order Completions (P31114) calculates the final value of the cost components for the parent part and updates the amount of the actual cost in the Production Cost table.

Actual Costing

You can record completions to only one location per work order. The Work Order Completions program (P31114) calculates the new unit cost and does the following:

- If the item's cost method is 09, the program revalues on-hand inventory based on the item's cost level. For example, if the item's cost level is 3, the program revalues only the on-hand inventory at the location to which you recorded the completion.
- The program updates the Item Cost Ledger File table (F4105).
- The program updates the unaccounted amounts in the Production Cost table (F3102).

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.

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

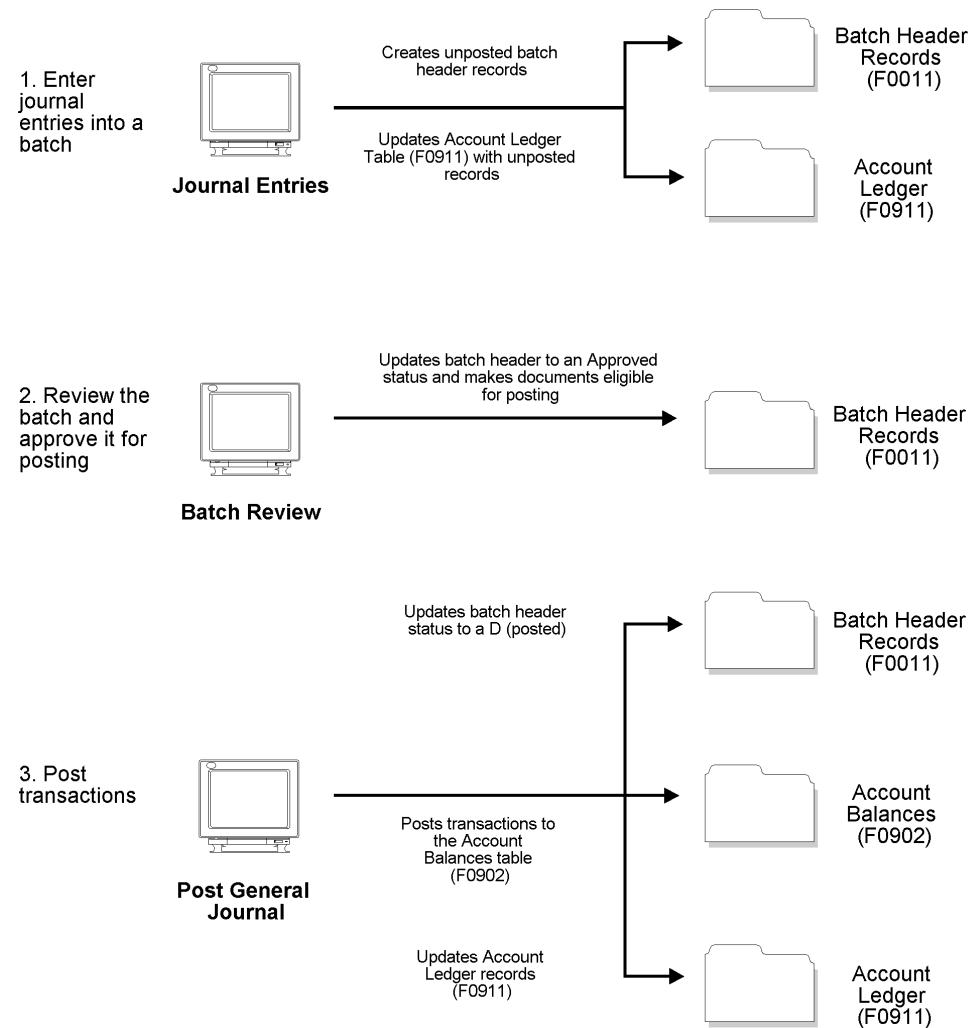
- Appendix B: Purchase Price Variance*
- About Purchase Price Variance*

Understanding Journal Entries and the Three-Tier Process

When you enter daily journal entries, 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 journal entries 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 Manufacturing Journal Entries program (R31802) for work in process or completions generates journal entries based on another system's transactions, such as:
 - Manufacturing Accounting (variances)
 - Shop Floor Management

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 or rate schedule by cost component, enter a different object or subsidiary 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 and subsidiary 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. Each unique combination of account number and work order number has one journal entry.
- Summarize all journal entries by account number across work orders. The summary has 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.

Creating Journal Entries for Work in Process or Completions

From the Manufacturing Accounting menu (G3116), choose Work in Process or Completions.

Manufacturing Journal Entries (R31802) creates journal entries for shop floor activity. You can report transactions for material issues, completions, and labor and machine hours against a work order or rate schedule.

The program produces error messages if it finds any general ledger errors while formatting the journal entries. You can view messages in the Submitted Jobs Queue in the Work Center. See *Viewing Messages* in the *OneWorld Foundation* documentation for more information about messages and queues.

This program uses the following AAI tables to match inventory and cost transactions to general ledger accounts:

3110	Moves inventory cost from inventory during issue reporting. This AAI is not used for variance accounting.
Credit inventory, raw materials/subassemblies	
3120	Moves inventory cost to WIP during inventory issue and shop hours reporting. This AAI also moves inventory from WIP during inventory completion reporting.
Debit/credit work in process	
3130	Moves inventory cost to inventory when completions are reported. This AAI is not used for variance accounting.
Debit inventory, subassemblies/finished goods	
3401	Moves shop hour cost to accruals during shop hours reporting. This AAI is not used for variance accounting.
Credit accruals	

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.

Standard Accounting

When you create journal entries, the program locates unaccounted units in the Work Order Parts List table (F3111), Work Order Routing table (F3112), and Work Order Master File table (F4801), and creates journal entries for them. The program then purges the unaccounted units.

The program also updates information in the Production Cost table (F3102), which Variance Journal Entries (R31804) uses to create journal entries for transactions with variances.

Note

After the Process Work Orders program establishes standard costs for configured items, journal entries for configured items are created in the same way as for nonconfigured items.

Actual Accounting

For actual accounting, the program calculates costs as follows:

Material Costs (Ax)	The program retrieves the unaccounted units and amounts from the Work Order Parts List table (F3111).
Routing Labor Costs (Bx)	The program retrieves the unaccounted units and amounts from the Work Order Routing table (F3112).
Routing Overhead Costs (Cx)	Depending on the Overhead option you selected in the Manufacturing Constants program (P3009), the program calculates overhead costs based on labor and machine costs. To retrieve work center rates, the program uses the item's inventory cost method.
Outside Operations (usually Dx)	When you receive the purchase order for the outside operation, the system updates the Work Order Routing table with the actual purchase order cost.
Extras (usually Xx)	You manually enter extra costs on the Enter Cost Components form.

The program updates the Production Cost table (F3102) with the new unit cost.

See Also

- Reviewing Manufacturing AAs* for additional AAI information
- R31802, Manufacturing Journal Entries* in the *Reports* documentation for a report sample

Processing Options for Manufacturing Journal Entries (R31802)

Default Tab

These processing options define default values.

Default

1. General Ledger Date.

Blank - Default to the current date

Use this processing option to specify the date that appears on journal entries. If you leave this field blank, the program uses the system date.

2. Document Type for Scrapped Transactions.

Blank - "IS"

Use this processing option to specify which document type (00/DT) to assign to scrap transactions. If you leave this field blank, the program uses document type IS.

3. Document Type for Shop Floor Activity.

Blank - "IH"

If you do not use routings, use this processing option to specify the document type (00/DT) for journal entries on extra cost components. If you use routings, the program automatically assigns a document type of IH. If you leave this field blank, the program uses document type IH.

4. Status Code for Work Order.

Blank - No Change

Use this processing option to enter the new status code (00/SS) for the work order. The program updates the work order status whether you run the program in proof mode or in final mode. Enter the new status code or choose it from

the Select User Define Code form. If you leave this processing option blank, the status of the work order does not change.

5. Subledger field .

1 - Default the Work Order Number

Blank - Don't Default WO Number.

Use this processing option to specify whether the work order number is used as the default in the Subledger field. This option does not apply when using summarized journal entries. Valid values are:

Blank Do not supply a default value.

1 Use the work order number as the default.

Process Tab

Use these processing options to define processing criteria.

1. Journal Entries Mode.

1 - Final Mode

Blank - Proof Mode

Use this processing option to indicate whether the program runs in proof mode or final mode.

Regardless of which method you select, the status code on the work order is updated according to the value you enter in the Work Order Status Code processing option.

Valid values are:

1 Final mode. The program creates journal entries and clears unaccounted units.

Blank Proof mode. The program performs all calculations and edits, and prints them in the reports.

2. Summarize Material Issues WITHIN Work Order.

1 - Summarize

Blank - Don't Summarize

Use this processing option to specify whether to summarize material issue journal entries by account within a work order. The program creates one journal entry for each unique combination of account number and work order number.

If you summarize, you will not be able to post detail journal entries using the Enterprise-Wide Profitability Solution.

Valid values are:

1 Summarize by account.

Blank Do not summarize by account.

3. Summarize by Account ACROSS Work Orders.

1 - Summarize

Blank - Don't Summarize

Use this processing option to specify whether to summarize all journal entries

by account across work orders.

Valid values are:

- 1 Summarize all journal entries. This option will reduce the number of journal entries.

Blank Do not summarize.

4. Flex Accounting .

- 1 - Use Flex Accounting**
- Blank - Flex Accounting not used**

Use this processing option to indicate whether this program searches for flex accounting rules to populate cost objects in the Account Ledger table (F0911).

Flex accounting is required to attach cost objects to the journal entries.

Valid values are:

- 1 Use flex accounting.

Blank Do not use flex accounting.

5. Issues of Material credit - Business Unit

- 1 - Use Charge to Cost Center**

Blank - Use Component Branch/Plant

Use this processing option to indicate which branch/plant the program uses as the business unit for the credit side of material issue (IM) transactions.

Valid values are:

- 1 Use the branch/plant from the Charge to Cost Center field on the work order.

Blank Use the component branch/plant.

Print Tab

Use these processing options to define print criteria.

1. Accounting Journal.

1 - Print a Journal Entry Report

Blank - Don't print a Journal Entry

Report

Use this processing option to specify whether to print a report.

Valid values are:

1 Print a report.

Blank Do not print a report.

1 - Subtotal by Document Type

and Document

Blank - Don't Print SubTotals.

Use this processing option to specify whether to print subtotals by document type and document number.

Valid values are:

1 Print subtotals by document type and document number.

Blank Do not print subtotals by document type and number.

3. Summarize Material Issues WITHIN Work Order for Report.

Blank - Don't Summarize on Report.

Use this processing option to specify whether to summarize journal entries from material issues (IM transactions) by account number within a work order on the report. This processing option does not affect the number of journal entries that the program creates. You can summarize the journal entries on the report whether you summarize the actual journal entries.

Valid values are:

1 Summarize journal entries for material issues on the report.

Blank Do not summarize journal entries for material issues on the report.

4. Summarize ACROSS Work Orders for Report.

Blank - Don't Summarize on Report.

Use this processing option to specify whether to summarize all journal entries by account across work orders on the report. This processing option does not affect the number of journal entries that the program creates. You can summarize the journal entries on the report whether you summarize the actual journal entries.

Valid values are:

1 Summarize all journal entries on the report.

Blank Do not summarize all journal entries on the report.

Reviewing Production Costs

The Production Cost Inquiry program displays the costs and variances associated with a work order or rate schedule. 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

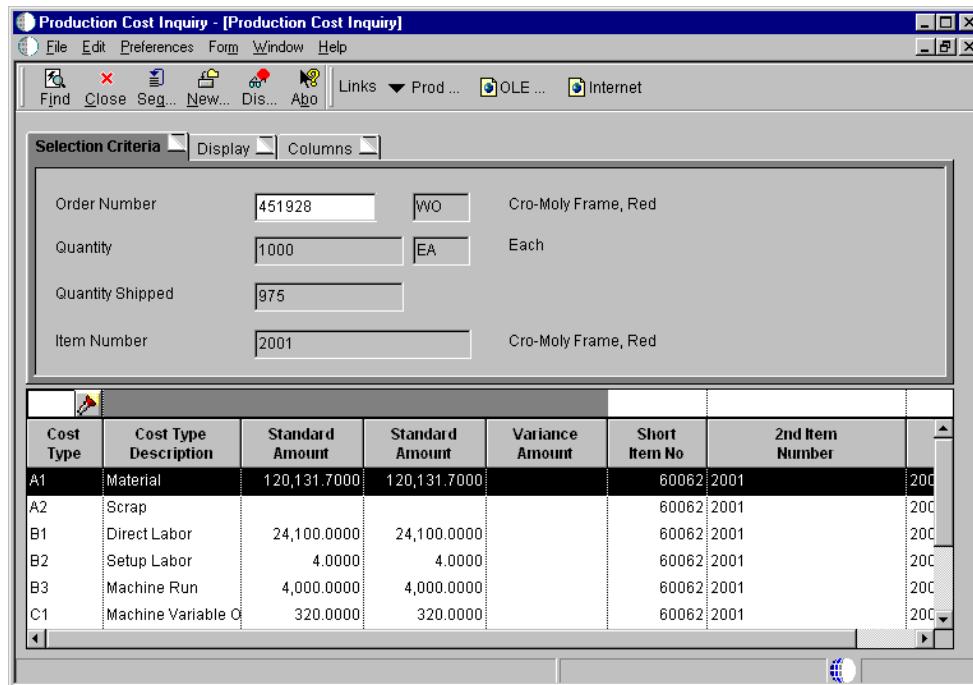
For standard costing, review variances to identify errors before you run Variance Journal Entries (R31804). For example, if you did not issue parts to a work order or rate schedule, a large actual variance appears. You can issue the parts, rerun Manufacturing Journal Entries (R31802), and review the variances again. After you correct any errors, run Variance Journal Entries

Note

You must use standard costing for configured items. If you manufacture configured items no bill of material exists, so no engineering variance exists.

► To review production costs

From the Manufacturing Accounting menu (G3116), choose Production Cost Inquiry.



1. On Production Cost Inquiry, complete the following field on the Selection Criteria tab:
 - Order Number
2. Click the Display tab.

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Cost Type	Cost Type Description	Work Center	Work Center Description	Current Amount	Current Amount	Variance Amount	Current Units	Current Units
<input checked="" type="radio"/> A1	Material			117,194.6400	117,194.6400		1,000.0000	1,000.0
<input type="radio"/> A2	Scrap					1,000.0000	1,000.	
<input type="radio"/> B1	Direct Labor			24,100.0000	24,100.0000	3,010.0000	3,010.0	
<input type="radio"/> B2	Setup Labor			4.0000	4.0000	0.5000	0.5	
<input type="radio"/> B3	Machine Run			6,000.0000	6,000.0000	1,500.0000	1,500.0	
<input type="radio"/> C1	Machine Variable O			480.0000	480.0000	1,500.0000	1,500.0	
<input type="radio"/> C2	Machine Fixed Over			480.0000	480.0000	1,500.0000	1,500.0	
<input type="radio"/> C3	Labor Variable Ove			4,825.8000	4,825.8000	3,010.5000	3,010.5	
<input type="radio"/> C4	Labor Fixed Overhe			4,825.8000	4,825.8000	3,010.5000	3,010.5	
<input type="radio"/> D1	Outside Operation			5,000.0000	5,000.0000	1,000.0000	1,000.0	

3. Specify whether the system displays costs for the parent, component, or co-/by-product by clicking one of the following options:
 - Parent
 - Component
 - CoBy
4. Specify what information the system displays by clicking any or all of the following options under the Display Columns heading:
 - Amounts
 - Units
 - Variance
5. Specify whether the system displays scrap amounts or units by clicking one of the following options under the Completed Total heading:
 - Include Scrap
 - Don't Include Scrap
6. Click the Columns tab.

The screenshot shows the PeopleSoft Production Cost Inquiry screen. At the top, there are navigation links for Portal, MyWorld, Intranet, and Training. Below that is a toolbar with icons for Find, Close, Form, View, Tools, and a magnifying glass. The main area has tabs for Selection Criteria, Display, and Columns. Under Selection Criteria, there are two sets of radio buttons for columns 1 and 2. The first set includes Standard, Current, Planned, Actual, Completed, and Scrapped. The second set includes Standard, Current, Planned, Actual, Completed, and Scrapped. Below this is a grid titled 'Records 1 - 10'. The grid columns are: Cost Type, Cost Type Description, Work Center, Work Center Description, Standard Amount, Planned Amount, Variance Amount, Standard Units, and Planned Units. The data rows are:

Cost Type	Cost Type Description	Work Center	Work Center Description	Standard Amount	Planned Amount	Variance Amount	Standard Units	Planned Units
<input checked="" type="radio"/> A1	Material			120,131.7000	127,843.2200	7,711.5200	1,000.0000	1,000.0
<input type="radio"/> A2	Scrap					1,000.0000		
<input type="radio"/> B1	Direct Labor			24,100.0000	24,950.0000	850.0000	1,000.0000	3,115.0
<input type="radio"/> B2	Setup Labor			4.0000	4.0000		1,000.0000	0.5
<input type="radio"/> B3	Machine Run			4,000.0000	6,200.0000	2,200.0000	1,000.0000	1,550.0
<input type="radio"/> C1	Machine Variable O			320.0000	496.0000	176.0000	1,000.0000	1,550.0
<input type="radio"/> C2	Machine Fixed Over			320.0000	496.0000	176.0000	1,000.0000	1,550.0
<input type="radio"/> C3	Labor Variable Ove			4,905.0000	4,998.3000	93.3000	1,000.0000	3,115.5
<input type="radio"/> C4	Labor Fixed Overhe			4,905.0000	4,998.3000	93.3000	1,000.0000	3,115.5
<input type="radio"/> D1	Outside Operation			5,000.0000	5,000.0000		1,000.0000	1,000.0

7. Specify what mode the system displays in column 1 by clicking one of the following options:
 - Standard
 - Current
 - Planned
 - Actual
 - Completed
 - Scrapped

8. Specify what mode the system displays in column 2 by clicking one of the following options:
 - Standard
 - Current
 - Planned
 - Actual
 - Completed

- Scrapped

9. Click Find.
10. Depending on whether you chose to display amounts, units, or both, and whether you chose to display variances, review the information that displays in the detail area.

See also *About Calculations for Variances*

Processing Options for Production Cost Inquiry

Display

1. Enter default level:

- 1 - Parent
- 2 - Component
- 3 - Co/By Product

If left blank the default value will be Parent.

2. Enter 1 to display Amounts.
3. Enter 1 to display Units.
4. Enter 1 to display the Variances.

Columns

1. Enter amount type to be displayed in column 1:

- 1 - Standard
- 2 - Current
- 3 - Planned
- 4 - Actual
- 5 - Completed
- 6 - Scrapped.

2. Enter amount type to be displayed in column 2:

- 1 - Standard
- 2 - Current
- 3 - Planned
- 4 - Actual
- 5 - Completed
- 6 - Scrapped

Versions

1. Enter the version for Inventory Issues.
 2. Enter the version for Work Order Entry.
 3. Enter the version for Production Status.
-

Creating Journal Entries for Variances

From the Manufacturing Accounting menu (G3116), choose Variances.

The program produces error messages if it finds any general ledger errors while formatting the journal entries. You can view messages in the Submitted Jobs Queue in the Employee Work Center. See *Viewing Messages* in the *OneWorld Foundation* documentation for more information about messages and queues.

When you run this program in final mode, the system creates a batch of journal entries for posting to the general ledger.

Before You Begin

- ❑ Run one or more reports to review your production costs and variances. See *Reviewing Reports for Manufacturing Accounting* for a summary of the available reports.

Standard Costing

In standard cost accounting, Variance Journal Entries creates detail or summary journal entries for work order or rate schedule variances. These include engineering, planned, actual, and other variance transactions for the following items:

- Material issues
- Hours entry
- Material completions

If you use any cost method other than 07 (Standard) for the end product, the system applies the actual costing logic to cost the item.

Actual Costing

If the cost method in the work order header for the end product is any method *except* 07 (Standard), the system applies actual costing logic. The system retrieves the correct account from AAI table 3210 for scrap, completions, and cost of goods sold for account information.

If there are no unaccounted amounts when you run the Variance Journal Entries program (R31804), the system clears work in process and creates a new unit cost based on the following calculation: Total actual amount divided by completed + scrapped units. If any unaccounted amounts exist and the work order is to go to a closed status, the Variances program stops and creates an error message. You must run Manufacturing Journal Entries (R31802) to complete the manufacturing accounting again.

For cost method 02, (Weighted Average Cost) the system:

- Updates the weighted average cost
- Creates IV journal entries to clear work in process
- Creates a record in the Item Ledger File (F4111) table for unaccounted amounts using the following calculation: Actual - Completed + Scrap

For cost method 09 (Actual or Manufacturing Last) the system:

- Revalues on-hand inventory based on the new unit cost (for cost level item, item/branch, or item/branch/lot/location)
- Updates the Item Cost File (F4105)
- Updates the weighted average cost
- Creates IV journal entries to clear work in process
- Creates a record in the Item File table (F4105) for scrapped amounts

The IB transaction is the difference between the work order completions calculation and the journal entries for completions calculation. If you have shipped items before you run journal entries for completions, the IB transaction is prorated between finished goods and cost of goods sold.

If the cost method for the end product is anything other than 02, 07, or 09 the system uses the logic for cost method 02 (Weighted Average).

See Also

- ❑ *Reviewing Manufacturing AAIs* for additional AAI information
- ❑ *R31804, Variance Journal Entries* in the *Reports* documentation for a report sample

Processing Options for Variance Journal Entries (R31804)

Defaults Tab

These processing options define default values.

1. General Ledger Date

Blank - Defaults to the current date

Use this processing option to specify the date that appears on journal entries. If you leave this field blank, the program uses the system date.

2 . Document Type - For Manufacturing Variance

Blank - "IV"

Use this processing option to specify the user defined code (00/DT) that identifies the purpose of the document. The program assigns this document type to variance journal entries. Typically, the document type is IV (variance calculated for work orders).

3. Sub Ledger Value

1 - Default WO Number into

SubLedger Field

Blank - Does not Default WO Number.

Use this processing option to specify whether the work order number is used as the default in the Subledger field.

Valid values are:

- 1 Use the work order number as the default.
- blank Do not supply a default value.

4. Work Order Status Code .

Blank - Status will not be changed

Use this processing option to enter the new status code (00/SS) for the work

order. The program updates the work order status whether you run the program in proof mode or in final mode. Enter the new status code or choose it from the Select User Define Code form. If you leave this processing option blank, the status of the work order does not change.

5. Actual Costing Document Types:

Scrap

Blank - "IS"

Use this processing option to specify the document type that the system uses to retrieve information from AAI 3210. The account debited relieves the scrap portion of Work in Process. If you leave this field blank, the system uses document type IS.

Completion

Blank - "IC"

Use this processing option to specify the document type that the system uses to retrieve information from AAI 3210. The account debited relieves the completed portion of Work in Process. If you leave this field blank, the system uses document type IC.

Cost of Goods Sold

Blank - "SO"

Use this processing option to specify the document type that the system uses to retrieve information from AAI 3210. The account debited relieves the Cost of Goods Sold portion of Work in Process. If you leave this field blank, the system uses document type SO.

Process Tab

These processing options define processing criteria.

1. Journal Entries Mode.

1 - Final Mode

Blank - Proof Mode

Use this processing option to specify whether the program runs in proof mode or final mode.

Regardless of which method you select, the status code on the work order is updated according to the value that you enter in the Work Order Status Code processing option.

Valid values are:

1 Final mode. The program creates journal entries and clears unaccounted units.

Blank Proof mode. The program performs all calculations and edits, and prints them in the reports.

2. Summarize ACROSS Work Orders.

1 - Summarize Across WOs

Blank - Doesn't Summarize Across WOs

Use this processing option to specify whether to summarize all journal entries by account across work orders.

Valid values are:

1 Summarize all journal entries.

Blank Do not summarize journal entries.

3. Flex Accounting.

1 - Use Flex Accounting

Blank - Flex Accounting not used

Use this processing option to indicate whether this program searches for flex accounting rules to populate cost objects in the Account Ledger table (F0911).

Flex accounting is required to attach cost objects to the journal entries.

Valid values are:

1 Use flex accounting.

Blank Do not use flex accounting.

Print Tab

These processing options define print criteria.

1. Accounting Journal.

1 - Print Journal Report

Blank - Don't Print Journal Report

Use this processing option to specify whether to print an Accounting Journal report.

Valid values are:

1 Print an Accounting Journal report.

Blank Do not print an Accounting Journal report.

2. Subtotals

1 - Print Subtotals by Document

Blank - Don't Print SubTotals

Use this processing option to specify whether to print the subtotals by document number.

Valid values are:

1 Print the subtotals by document number.

Blank Do not print subtotals by document number.

3. Summarize Report ACROSS Work Orders.

1 - Summarize Report by Account

Blank - Don't Summarize Report by
Account.

Use this processing option to specify whether to summarize all journal entries by account across work orders on the report. This processing option does not affect the number of journal entries that the program creates. You can summarize the journal entries on the report whether you summarize the actual journal entries.

Valid values are:

- 1 Summarize all journal entries on the report.
 - Blank Do not summarize all journal entries on the report.
-

Over Under Comp Tab

Use these processing options to specify whether the system restates costs and to specify the status to use for a closed work order.

1. Restate Production Costs

1 - Restate Costs

Blank - Don't Restate Costs.

Use this processing option to specify whether to restate the costs. This eliminates variances that are caused by over or under completions or scrapped end items.

Valid values are:

1 Restate the standard, current, and planned production costs based on completed and scrapped quantity.

Blank Do not restate costs.

2. Closed Work Order Status

Blank - 99

Use this processing option to specify the status used to close a work order. Closed work orders do not generate additional journal entries. If you leave this field blank, a status code of 99 is used for a closed work order.

Reviewing G/L Batches

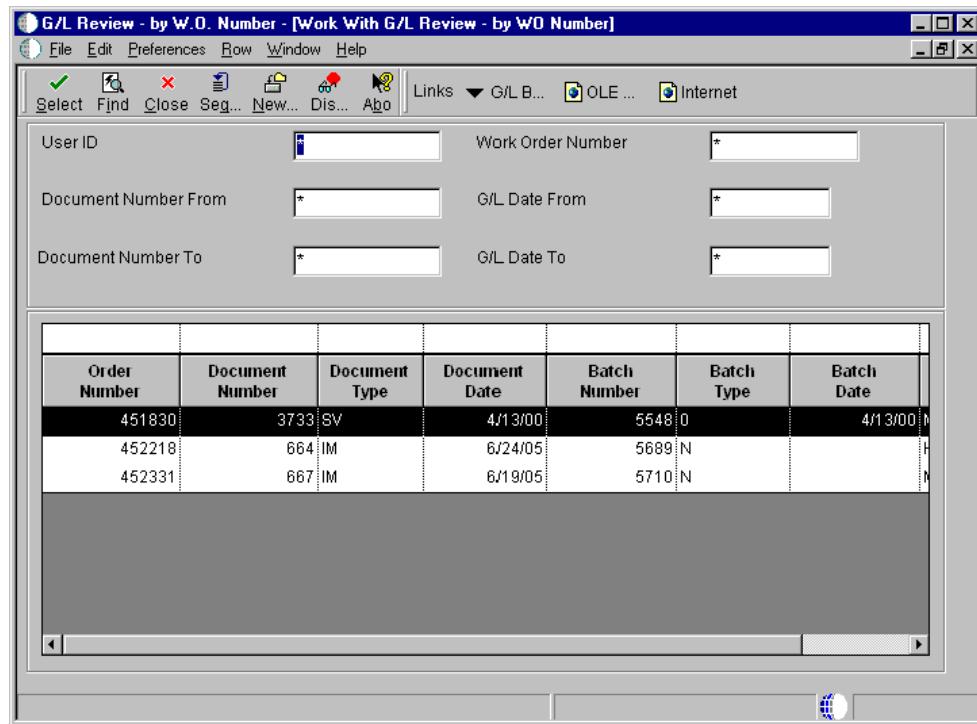
After you generate journal entries, you review and approve them before posting them to the general ledger. This review is the second step in the J.D. Edwards three-tier process. In addition, you can review manufacturing journal entries for summarized work orders.

Before You Begin

- Set the management approval in Branch/Plant Constants (P41001) for approving journal entries for posting. This depends on the workflow and responsibility controls that you establish for your organization. You access Branch/PlantConstants from Work With Branch/Plant Constants.

► To review general ledger batches

From the Manufacturing Accounting menu (G3116), choose G/L Review - by Work Order Number.



1. On Work With G/L Review - by WO Number, complete one or more of the following fields to locate a batch of journal entries and click Find:
 - User ID
 - Document Number From
 - Document Number To
 - Work Order Number
 - G/L Date From
 - G/L Date To
2. Choose a row and click Select.

PeopleSoft®

Select Workspace: Active Foundation

Active Foundation

General Journal Review

Records 1 - 10

Document Type	Document Number	Document Company	G/L Date	Explanation	Domestic Amount	Foreign Amount	Reverse or Void	Currency Code
<input type="checkbox"/> IC	3739 00200		06/30/05	Completed W.O.'s To Inventory				USD
<input type="checkbox"/> IC	3740 00200		06/30/05	Completed W.O.'s To Inventory				USD
<input type="checkbox"/> IC	3741 00200		06/30/05	Completed W.O.'s To Inventory				USD
<input type="checkbox"/> IC	3742 00200		06/30/05	Completed W.O.'s To Inventory				USD
<input type="checkbox"/> IC	3743 00200		06/01/05	Completed W.O.'s To Inventory				USD
<input type="checkbox"/> IC	3744 00200		06/01/05	Completed W.O.'s To Inventory				USD
<input type="checkbox"/> IC	451936 00200		06/01/05	Completed W.O.'s To Inventory				USD
<input type="checkbox"/> IC	451944 00200		06/01/05	Completed W.O.'s To Inventory				USD
<input type="checkbox"/> IH	3739 00200		06/30/05	Labor Charged To W.O.'s				USD
<input type="checkbox"/> IH	3740 00200		06/30/05	Labor Charged To W.O.'s				USD

3. On General Journal Review, choose a transaction and click Select.

PeopleSoft®

Select Workspace: Active Foundation

Active Foundation

Journal Entry

Batch Number: 5789

Doc Type/No/Co:	IC	3739	00200	G/L Date:	06/30/05
Explanation:	Completed W.O.'s To Inventory			Ledger Type:	AA
Currency:	USD	Exchange Rate:		Base Currency:	USD

Records 1 - 10

Account Number	Amount	Account Description	Subledger	Subledger Type	Subledger Description	Remark
200.1411	39,096.35	Inventory	00452411	W	Cro-Moly Frame, Red	Cro-Moly Frame, R
D30.1720.B1	6,025.00	Labor	00452411	W	Cro-Moly Frame, Red	Cro-Moly Frame, R
D30.1720.B2	100.00	Setup	00452411	W	Cro-Moly Frame, Red	Cro-Moly Frame, R
D30.1720.B3	1,500.00	Machine	00452411	W	Cro-Moly Frame, Red	Cro-Moly Frame, R
D30.1730.C1	120.00	Variable Machine	00452411	W	Cro-Moly Frame, Red	Cro-Moly Frame, R
D30.1730.C2	120.00	Fixed Machine	00452411	W	Cro-Moly Frame, Red	Cro-Moly Frame, R
D30.1730.C3	1,226.25	Variable Labor	00452411	W	Cro-Moly Frame, Red	Cro-Moly Frame, R
D30.1730.C4	1,226.25	Fixed Labor	00452411	W	Cro-Moly Frame, Red	Cro-Moly Frame, R
D30.1710.D1	1,250.00	Outside Ops	00452411	W	Cro-Moly Frame, Red	Cro-Moly Frame, R
D30.1710.A1	27,528.85	Material	00452411	W	Cro-Moly Frame, Red	Cro-Moly Frame, R

Remaining Amount: []

4. On Journal Entry, enter any necessary changes and click OK.

See Also

- Creating Journal Entries* if you need to create journal entries
- Approving Batches of Journal Entries for Posting* in the *General Accounting* documentation for basic instructions on reviewing and approving general ledger batches

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 posted journal entries.

Posting Manufacturing Journal Entries

From the Manufacturing Accounting menu (G3116), choose Post General Journal.

After you enter, review, and approve journal entries, use General Ledger Post Report (R09801) 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.

Caution

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.

Before You Begin

- Verify that the batch has an approved status. See *Approving Batches of Journal Entries* in the *General Accounting* documentation.
- Verify that the post is submitted to a single-threaded job queue.

Prepost Process

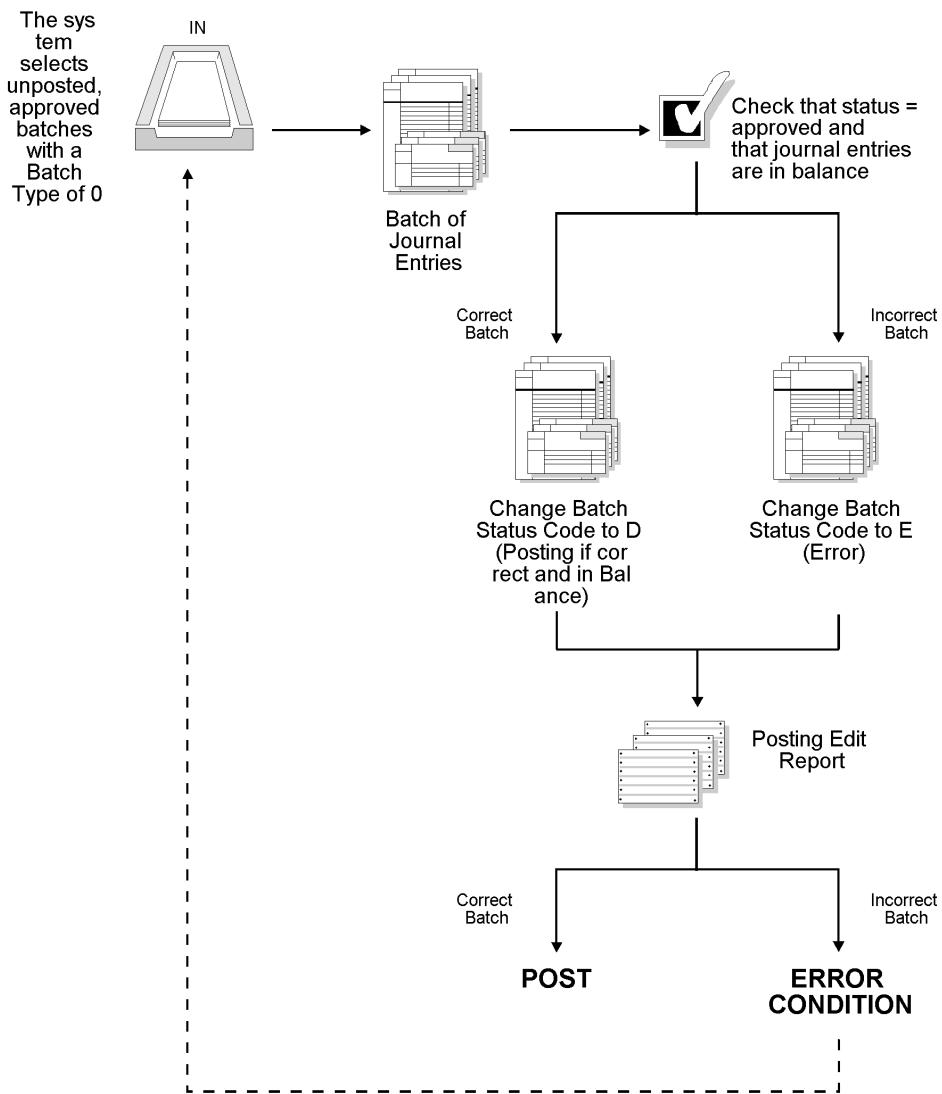
The prepost process consists of several elements:

Selection	The General Ledger Post Report program (R09801) selects unposted, approved transactions with a batch type of 0 and other criteria specified in the processing options. These transactions come from the Account Ledger table (F0911).
Detail edit	The program validates each transaction to determine whether: <ul style="list-style-type: none">• The account exists in the Account Master table (F0901) and is a posting account• The business unit is valid in the Business Unit Master table (F0006)• The G/L date is valid• Intercompany transactions exist• Detail currency restatement should be done
Batch edit	The program validates each batch to ensure that it is approved and in balance. If the program finds any errors, it does not post the batch.
Posting Edit report	This report lists all batch errors that occur. It prints in batch sequence.
Error conditions	If any transaction in the batch is in error, the program places the entire batch in error, which prevents the batch with the error from posting.

Caution

You should not make changes to the accounts, AAIs, intercompany settlements, general accounting constants, or processing options when you run the post.

The following graphic illustrates the prepost process:

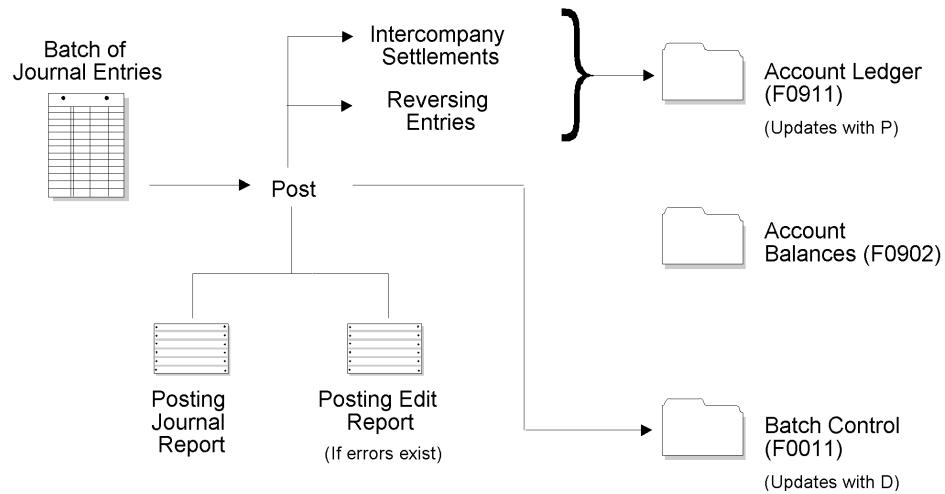


Post Process

The General Ledger Post Report program (R09801) only posts batches for which no errors are found in the prepost 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 (F0911) and the Batch Control Records table (F0011)
- Changes the batch status for the Batch Control Records (F0011) table to D
- Marks each transaction with a status of P (posted)
- Performs intercompany settlements for ledger types AA, XA, YA, CA, AZ, and ZA, if requested
- Creates reversing entries, if requested

The following graphic illustrates the post process:



The General Ledger Post Report program (R09801) produces the following two reports

- Posting edit report
- Posting journal report

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 before you can post the batch.

The following table lists common posting errors and their causes:

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)	<p>Two situations can cause this error message:</p> <ul style="list-style-type: none"> • An undefined account number (designated as # during journal entry) was entered. To correct this, locate the document number and line number on the Journal Entry form (P0911) and 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 in the Accounts program (P0901).
Batch journal entries out-of-balance	<p>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.</p> <p>Other situations can cause a journal entry to be out-of-balance. For example:</p> <ul style="list-style-type: none"> • 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.

Posting Journal Report

This report lists the transactions posted to the Account Balances table (F0902) and to the Account Ledger table (F0911).

See Also

- Creating Journal Entries* if you need to create journal entries
- Posting Journal Entries in the General Accounting documentation* for complete information about posting journal entries
- Appendix D -- Report Examples*

Processing Options for General Ledger Post Report (R09801)

Print

- 1) Enter which Account Number to print on the report. '1' = Structured Account; '2' = Short Account ID; '3' = Unstructured Account; '' = Default Account Format.

Account Format

Versions

- 1) Enter a version of the Detailed Currency Restatement (R11411) to execute. If left blank, Detailed Currency Restatement entries will not be created. (i.e. ZJDE0001)

Detailed Currency Restatement Version

- 2) Enter a version of the Fixed Asset Post (R12800) to execute. If left blank, Fixed Asset Post will not be executed. (i.e. ZJDE0001)

Fixed Asset Post Version

- 3) Enter a version of the 52 Period Post (R098011) to execute. If left blank, 52 Period Post will not be executed. (i.e. ZJDE0001)

52 Period Post Version

Edits

- 1) Enter a '1' if you wish to update Account ID, Company, Fiscal Year, Period Number, Century, and Fiscal Quarter in records being posted, prior to editing and posting the records.

Update Transaction

Taxes

- 1) Enter when to update the Tax File (F0018). '1' = V.A.T. or Use Tax only; '2' = for all Tax Amounts; '3' = for all Tax Explanation Codes; '' = no update to Tax File (Default).

Update Tax File

-
- 2) Adjust V.A.T. 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 only; '2' = Update VAT, Ext. Price and Taxable. (for discounts taken)
3) Adjust V.A.T Account for Receipt Adjustments and Write Offs. Tax explanation must be a 'V'.
'1' = Update VAT only; '2' = Update VAT, Ext. Price and Taxable. (for receipt adjustments and write offs)
Process
1) Enter a '1' 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.)
Explode parent item time.
Cash Basis
1) Enter a '1' to create and post Cash Basis accounting entries. (Applies to batch types G, K, M, W, RB only.)
Obsolete
2) Enter units ledger type for Cash Basis Accounting entries. (Default of blank will use "ZU" ledger type.)
Units Ledger Type
3) Enter a version of "Create Cash Basis Entries" (R11C850) to execute. (Default of blank will use version ZJDE0001.)
Obsolete
-

Reviewing the Item Ledger/Account Integrity Report

From the Inventory Reports menu (G41111), choose Item Ledger/Account Integrity Report.

Item Ledger/Account Integrity report (R41543) displays the following types of discrepancies between the Item Ledger (F4111) and Account Ledger (F0911) tables:

- Item ledger detail records exist with no corresponding general ledger detail records.
- Item ledger does not balance with the corresponding general ledger detail.

The report displays summary lines that represent specific totals by:

- Document type
- Document number
- Key company

The report also displays the solutions to the discrepancies. A blank report indicates that no discrepancies exist. 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.

Certain types of general ledger (G/L) batches, such as procurement and sales, require exceptions to the basic program logic that the system uses to create the report. These batches contain multiple types of journal entries that are not appropriate for the report. To ensure that the program selects only the inventory entries, you set up exception rules in the Inventory Integrity Report UDC (41/IN). The exception rules must be entered in the Description-1 field for the document types that your organization uses. The following table explains the types of exception rules:

Rule 0: Used for Manufacturing Issues of Material	Exception rule 0 is necessary because the Account Ledger table uses frozen standard costs and the Item Ledger table uses the inventory costing method that the user has chosen. If the methods are not the same, enter in this code.
--	--

the user has chosen. If the methods are not the same, set up this code.

For documents to which the integrity check applies, this rule ensures that if records exist in the Item Ledger table, they also exist in the Account Ledger table.

Rule 1: Used for Sales Invoices

Exception rule 1 is necessary because journal entries such as revenue or loss entries, taxes, freight, and intercompany settlements are written to the Account Ledger table when sales transactions take place.

The program checks AAI 4240 from the Distribution/Manufacturing - AAI Values table (F4095) to determine which object accounts to include. The program compares only journal entries with these object accounts in the Account Ledger table to the journal entries in the Item Ledger table.

Rule 2: Used for Purchase Vouchers

Exception rule 2 is necessary because journal entries such as favorable or unfavorable price variances, taxes, and freight are written to the Account Ledger table when purchase transactions take place.

The program checks AAI items 4330, 4340, and 4350 from the Distribution/Manufacturing - AAI Values table to determine which object accounts to include. The program compares only journal entries with these object accounts in the Account Ledger table to the journal entries in the Item Ledger table.

Note

If the exception rules in UDC 41/IN are set up correctly, the report prints only incorrect transactions.

Before You Begin

- Verify that you have set up exception rules in UDC (41/IN).

See Also

- Customizing User Defined Codes in the OneWorld Foundation documentation*
- R41543, Item Ledger/Account Integrity* in the *Reports documentation* for a report sample
- Creating Journal Entries* for more information about summarized journal entries

Data Sequence

You must use the following data sequence:

- Document type
- Document
- Document company

Processing Options for Item Ledger/Account Integrity

Report Display

1. Enter the beginning Item Ledger Date.
Date - For G/L (and Voucher)

2. Enter the ending Item Ledger Date. If it is left blank, the current date would be the default.
Date - For G/L (and Voucher)

Reviewing Reports for Manufacturing Accounting

Manufacturing accounting reports help you review your production costs and variances. You might want to run them before you run Variance Journal Entries (R31804), or you can run them after to verify the accuracy of the journal entries.

Reviewing Work Order Activity by Amounts

From the Manufacturing Accounting menu (G3116), choose Work Order Activity - Amounts.

This report lists standard, current, planned, actual, and completed amounts of work orders. The reports lists the costs of the components first, and then the costs of the parents.

See Also

- R31812A, *Work Order Activity - Amounts* in the *Reports* documentation for a report sample

Reviewing Work Order Activity by Units

From the Manufacturing Accounting menu (G3116), choose Work Order Activity - Units.

This report lists standard, current, planned, actual, and completed units of work orders.

See Also

- R31812B, *Work Order Activity - Units* in the *Reports* documentation for a report sample

Reviewing Engineering Variances

From the Manufacturing Accounting Reports menu (G3123), choose Discrete Engineering Variance.

This report lists work orders, their standard and current amounts, and their engineering variances.

See Also

- R31813, *Engineering Variance* in the *Reports* documentation for a report sample

Reviewing Planned Variances

From the Manufacturing Accounting Reports menu (G3123), choose Discrete Planned Variance.

This report lists all work orders and their planned variances. That is the current amounts are compared to planned amounts.

See Also

- R31814, *Planned Variance* in the *Reports* documentation for a report sample

Reviewing Efficiency Variances

From the Manufacturing Accounting Reports menu (G3123), choose Discrete Labor Efficiency Variances.

This report shows planned and actual labor hours (all cost components except A1), extended by standard rates, and the monetary amount of variance by work order and item number.

See Also

- R31816, Efficiency Variance* in the *Reports* documentation for a report sample

Reviewing Total/WIP and Other Variances

From the Manufacturing Accounting Reports menu (G3123), choose Discrete 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.

See Also

- R31817, Total/WIP and Other Variances* in the *Reports* documentation for a report sample

Reviewing Completed Work Order Valuation

From the Manufacturing Accounting Reports menu (G3123), choose Discrete Completed 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.

See Also

- R31811, Completed Work Order Valuation* in the *Reports* documentation for a report sample

Reviewing Work Order Amount Variances

From the Manufacturing Accounting Reports menu (G3123), choose Discrete Completed Order Variances.

This report shows detailed production costs and variance amounts for your work orders.

See Also

- R31818, Work Order Variances - Amounts* in the *Reports* documentation for a report sample

Reviewing Accounting Summary (Closed Work Orders)

From the Manufacturing Accounting Reports menu (G3123), choose Discrete Summary of Costs by Order or Process Summary of Costs by Order.

Summary of Costs by Order (R31401) lists completed work orders and their accumulated costs. This report lists the total standard and total actual costs and the variance between the two. Actual costs are detailed by material, labor, and overhead.

The system makes the following calculations:

- Labor and miscellaneous costs come from values in the Work order Time Transactions table (F31122) for the work order.
- Overhead costs are the machine costs (type 3) in the Hours and Quantities table multiplied by the overhead rates entered for the work center in the Work Center Rates File table (F30008).
- The total actual cost is the accumulated detail for labor, overhead, material, and miscellaneous costs.
- The total standard cost is the number of items completed on the work order multiplied by the parent item's frozen standard cost from the Item Cost File table (F4105).

See Also

- *R31401, Accounting Summary (Closed Work Orders)* in the *Reports* documentation for a report sample

Reviewing Purchase Price Variance

From the Manufacturing Accounting Reports menu (G3123), choose Discrete Material Price Variance or Process Material Price Variance.

The Purchase Price Variance report (R31425) lists the actual price paid for an item, the standard price that you estimated for the item, and the variance between the two. It also lists a percent of variance for each item and the total costs by item for the entire report.

The system retrieves the information from the following tables:

- Standard costs come from the Item Cost File table (F4105).
- Actual costs come from the Purchase Order Receiver File table (F43121).

See Also

- *R31425, Purchase Price Variance* in the *Reports* documentation for a report sample

Reviewing Material Usage Variances

From the Manufacturing Accounting Reports menu (G3123), choose Discrete Material Usage Variance - Std or Process Material Usage Variance - Std.

The Material Usage Variances report (R31426) lists the standard costs on a work order parts list and the actual costs recorded for the parts issued. The report contains the following elements:

- The standard units required on a work order
- The actual units consumed
- The variance between the two in both units and cost

The system makes the following calculations:

- The standard units are the parent quantity specified on the work order or the quantity of the component specified on the work order's parts list. When the work order is completed (status 99), the report lists the work order quantity completed rather than the original parent quantity ordered.
- The variance percentage is the actual units or amounts divided by the standard units or amounts. The variance percentage provides an accuracy value. For example, an accuracy value of 100.00 would indicate that the planned quantity or amount was the same as the actual quantity or amount used.

See Also

- R31426, Material Usage Variances* in the *Reports* documentation for a report sample

Reviewing Labor Rate Variance

From the Manufacturing Accounting Reports menu (G3123), choose Discrete Labor Rate Variance or Process Labor Rate Variance.

The Labor Rate Variance report (R314271) lists current and standard labor rates, and hours or amounts. It details labor rate variances between the standards estimated and the actual rates charged, and lists the percentage of variance.

The system makes the following calculations:

- The standard rates come from the Work Center Rates File table (F30008).
- The standard hours come from the Work Order Routing table (F3112).
- The actual amounts are the actual hours from the Work Order Time Transactions table multiplied by the standard rate.

See Also

- R314271, Labor Rate Variance* in the *Reports* documentation for a report sample

Reviewing Work Order Labor Efficiency

From the Manufacturing Accounting Reports menu (G3123), choose Discrete Labor Efficiency or Process Labor Efficiency.

The Work Order Labor Efficiency report (R31428) is a detailed analysis of direct labor efficiency hours accumulated for a work order. It lists standard and actual hours, and calculates the cost of the variance between them based on standard labor rates. To select work orders for the report by status, enter a range of statuses in the processing options.

The system retrieves the information from the following tables:

- The actual values are the values from the Work Order Time Transactions table for the operation sequence and employee.
- The frozen standard hours are from the Work Order Routing table (F3112).
- The frozen standard labor rates are from the Work Center Rates File table (F30008) based on the type code for the operation sequence.

See Also

- R31428, Work Order Labor Efficiency* in the *Reports* documentation or a report sample

Appendices

Calculations in Cost Rollup

This topic 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 Cost Simulation – Build Temp (R30812) 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

- Creating a Simulated Rollup* to understand a simulated rollup
- Assigning Values to User Defined Cost Components* for information about how the amounts are assigned to cost components

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 Item Cost File table (F4105).
- If you leave the processing option blank, the program uses the values entered manually on the Enter Cost Components form.

A2 (Material Scrap)

- The cost component is used for items that have a percent of scrap defined in their bill of material.
- The 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 Cost Simulation Build-Temp program (R30812).

B1 (Direct Labor)

- Parent direct labor costs = sum of direct labor calculations for all operations on the item's routing.
- Operation direct labor cost = (((operation direct labor hours / operation time basis) x operation crew size) / (operation cumulative yield % / 100)) x 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 = (operation setup labor hours x work center setup labor rate) / 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 = ((operation machine run hours / operation time basis) / (operation cumulative yield / 100)) x work center machine run rate.

B4 (Labor Efficiency)

- This cost component 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 Cost Simulation Build-Temp (30812). 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 = operation direct labor hours - (operation direct labor hours x (work center efficiency / 100)) x work center direct labor rate.

C1, C2 (Variable/Fixed Machine Overhead)

- Calculated only if you have set the Job Shop 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 File 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 the Work Center Master Revisions form 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:

$$\text{Operation variable labor overhead rate} = (\text{work center variable labor overhead percent} / 100) \times \text{work center direct labor rate}$$

- Calculated only if you have set the Job Shop 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 File 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)

- Outside operations cost components can be entered manually on the Enter Cost Components form or retrieved from the Item Cost File table (F4105) when you run Cost Simulation Build Temp (R30812).
- The Order Processing 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 Cost Simulation Build Temp (R30812), the program uses that cost method to retrieve the cost from the Item Cost File table. If the value is zero and a value previously existed in the Item Cost Component Add-Ons table (F30026), the original value remains.
- If you leave the processing option blank, the program uses the values entered manually on the Enter Cost Components form.

Purchase Price Variance

For purchased items, a purchase price variance (PPV) results when the standard cost differs from the actual purchase price. 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 Item Cost File 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 Item Cost File table (F4105) and the A1 cost, as follows:

PPV = A1 cost - purchase order unit cost

Material burden cost = total standard cost - A1 cost

Example: Purchase Price Variance and Material Burden

Item Cost File Table (F4105)

Average cost = 14.00

Standard cost = 16.00

Item Cost Component Add-Ons Table (F30026)

A1 cost = 13.00

X1 cost = 3.00

Material Inventory	Material Received (AP)	Material Burden	PPV
16.00 total standard cost	12.00 Purchase Order cost	3.00	1.00

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
16.00	16.00

At period end, a manual journal entry closes the PPV to the Cost of Goods Sold account.

PPV

1.00

COGS

1.00

AAI table (4337) posts 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 *Setting Up Landed Costs* in the *Procurement* documentation

