



JD Edwards World

Product Data Management

- Process Guide

Version A9.1

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1 Overview

Overview to Product Data Management – Process

The Product Data Management (PDM) system enables you to organize and maintain information about each item you manufacture. Use the Product Data Management system to define the relationships between inventory items (and other purchased or non-stock items) and how they can be combined to manufacture a saleable product.

This system provides basic data for other manufacturing systems. You should verify that your product data is accurate to ensure the efficiency of associated systems such as Shop Floor Control and Master Production Scheduling.

This section contains the following:

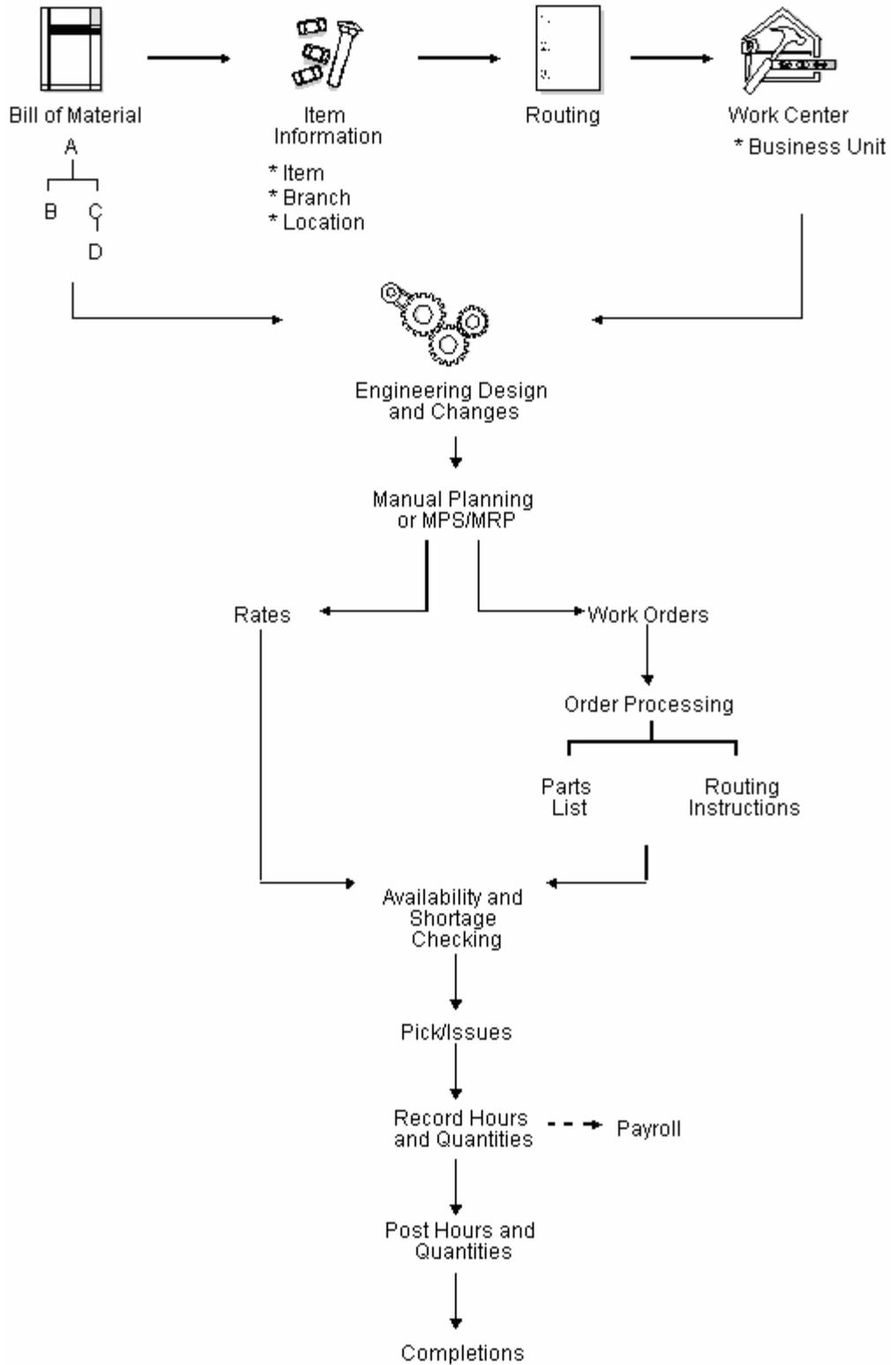
- [System Integration](#)
- [Features](#)
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- [Menu Overview](#)

System Integration

PDM integrates with the following systems:

System	Description
Inventory Management	Supplies the basic information about each item (or ingredient), such as part number, description, unit of measure, stocking type, material cost, and location
Shop Floor Control	Uses bills of material and routings to process work orders and schedule work activity within the plant
Manufacturing and Distribution Planning	Uses the PDM information to plan finished goods and the raw material and purchased parts required to manufacture them Uses sales orders and forecasts to pass demand for items down through the bills of material to the components Uses the bills of material to determine component requirements for planned orders and work orders without a parts list Creates a resource profile by retrieving a master scheduled item's multi-level bill of material and selecting the routings for the components

System	Description
Product Costing and Manufacturing Accounting	Uses bill of material, routing, and work center information during a cost rollup to calculate total material, labor, machine, and overhead costs for assemblies and their components
Sales Order and Purchase Order Management	Use bills of material for kit processing



Features

The Product Data Management system includes the following:

Feature	Description
Bills of material	<ul style="list-style-type: none"> ▪ Enter multiple bills of material to maintain many arrangements for an item without creating additional part numbers ▪ Access items online using item description search ▪ Define quantities of intermediate products in any unit of measure as they progress through the manufacturing process ▪ Enter similar items by copying bills of material, routings, and processes and changing only unique information
Work centers	<ul style="list-style-type: none"> ▪ Define work center number, description and link to business unit ▪ Define queue and move times ▪ Define operator, machine and hours per day capacity ▪ Define set up, labor, machine and overhead rates ▪ Define information for Capacity Planning ▪ Define where an item is produced
Routings	<ul style="list-style-type: none"> ▪ Define each step of the manufacturing process with allowances for anticipated yield and scrap for each operation ▪ Add alternate operations to routings
Process manufacturing	<ul style="list-style-type: none"> ▪ Define processes with co-products, by-products, and intermediates ▪ Define quantities of intermediate products in any unit of measure as they move through the manufacturing process ▪ Enter similar processes by copying ingredients, routings, and co-/by-products and changing only unique information
Engineering Change Management	<ul style="list-style-type: none"> ▪ Control item changes from a single source ▪ Incorporate approved changes to bills of material automatically

System Concepts

The Product Data Management encompasses:

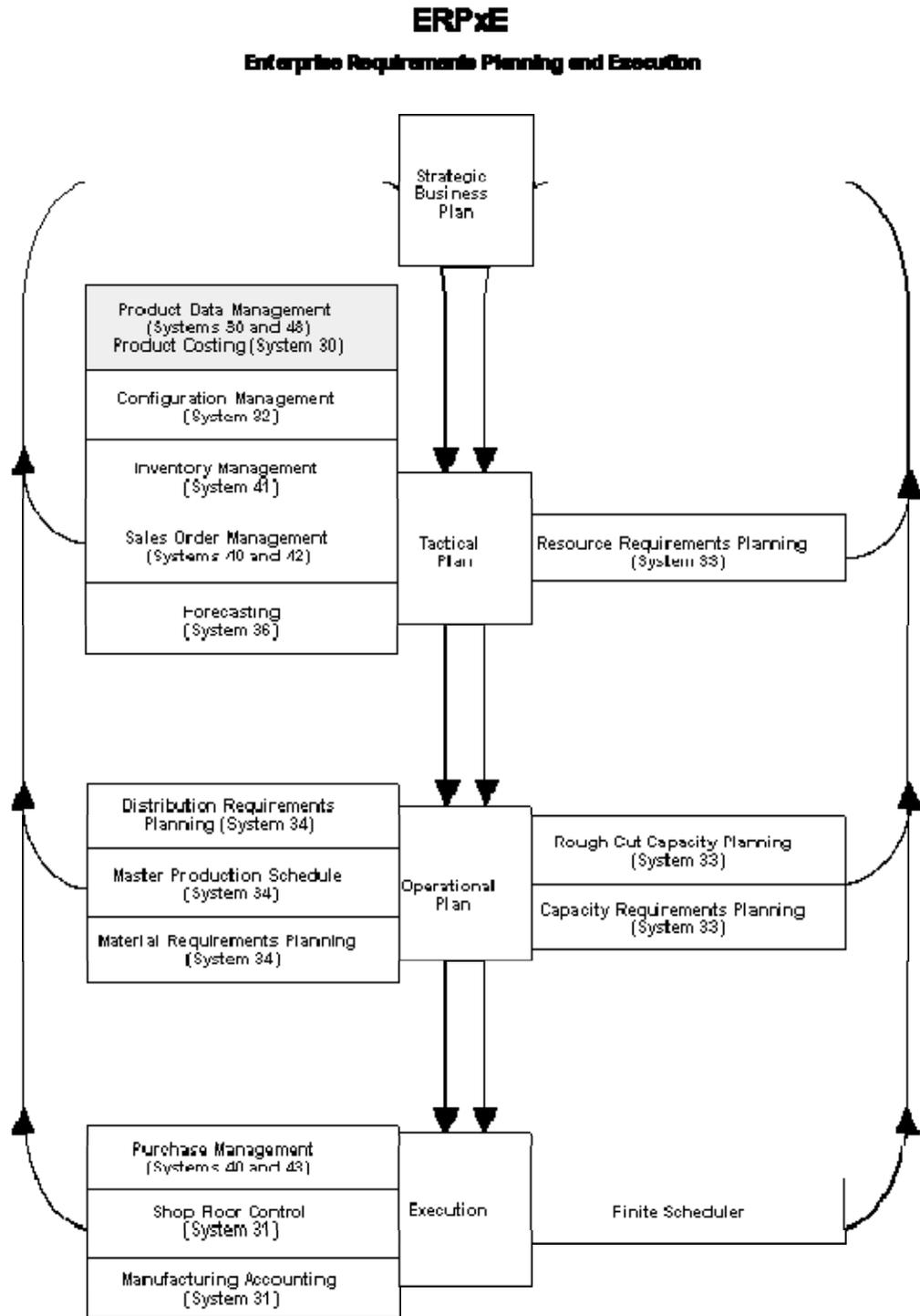
	Description
Bills of material	The components and relationships required to produce a parent item
Routings	The operations required to produce the parent item
Work centers	The facilities on the shop floor where the routing operations occur
Processes	An ingredient list and steps for blending or packaging the ingredients
Engineering change orders (ECOs)	The document that you use to define and implement changes to your products, production lines, and assembly processes

Enterprise Requirements Planning and Execution (ERPx) Review

Product Data Management is one of many systems in the ERPx system.

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

The ERPx system includes the following JD Edwards World systems:



Menu Overview

JD Edwards World systems are menu driven. System functions are organized according to their function and frequency of use. Access the Product Data Management system menus from the Manufacturing Systems menu.

Menu Overview - Manufacturing Systems

Manufacturing Systems G3
Product Data Management G30



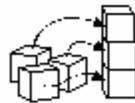
Daily Operations

- * Daily Product Data Discrete Management G3011
- * Daily Product Data Process G3012
- * Engineering Change Management G3013



Periodic Operations

- * Periodic Product Data Discrete Management G3021
- * Periodic Product Data Process Management G3022



Setup Operations

- * Product Data Management G3041



Advanced and Technical Operations

- * Advanced Product Data Management G3031

Fast Path Commands

The following table illustrates the fast path commands you can use to move among the Product Data Management menus. From any menu, enter the fast path command at the command line.

Fast Path	Menu	Title
APD	G3031	Advanced PDM
DEC	G3013	Engineering Change Management
ECO	G3013	Engineering Change Management
DPDD	G3011	Daily PDM Discrete
DPDP	G3012	Daily PDM Process
PPDD	G3021	Periodic PDM Discrete
PPDP	G3022	Periodic PDM Process

Fast Path	Menu	Title
SPD	G3041	Setup PDM

2 Item Entry

Overview to Item Entry

This chapter is an overview of item entry from the Inventory Management system. For information about item entry not included in this chapter, see the *Inventory Management Guide*.

Objectives

- To provide the system with details about the stock and non-stock items in inventory.

About Item Entry

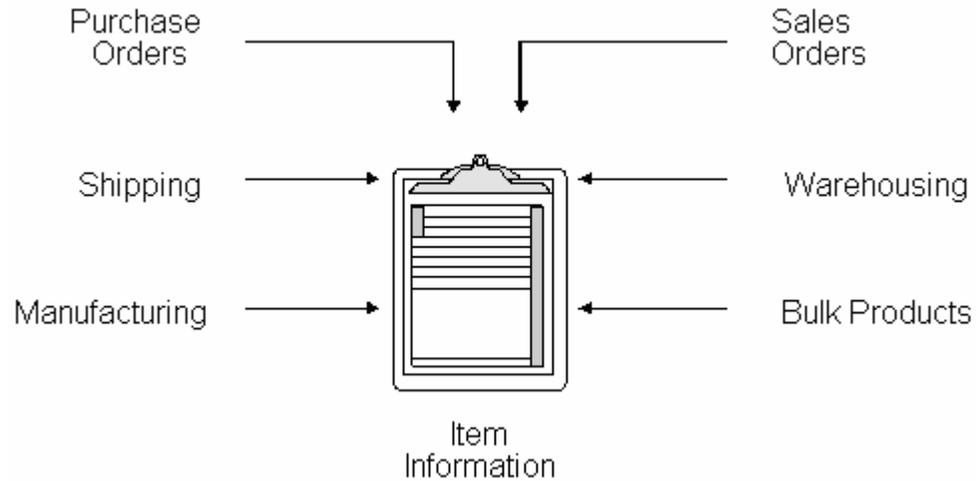
Prior to working with your inventory, you must provide the system with information about the items you stock. When you enter each inventory item, you provide the system with details such as:

- Item identifiers
- Item descriptions (foreign and domestic)
- Item rules
- Item costs and prices
- Item weights and measures

You must also provide the system with information about the location of each item, including:

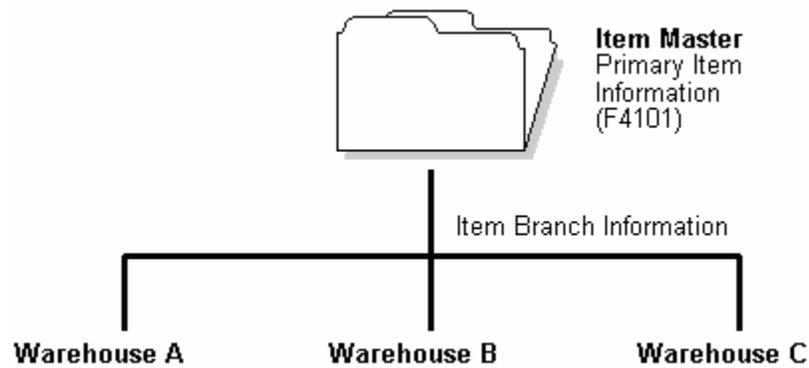
- The branch/plant where each item resides
- The locations used within each branch/plant

The system uses this information to help track and process each item through your distribution and manufacturing systems.



Entering an item includes two steps:

1. Enter item master information, which includes basic information about an item.
2. Customize the item master information to suit each branch or plant that the item occupies.

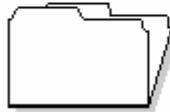


When you enter item master information, the system creates a record in the Item Master table (F4101). When you enter branch/plant information for an item, the system creates records in the Item Branch Master table (F4102) and the Item Location Information table (F41021).

**Item Branch Master
(F4102)**

Item information that applies throughout the branch, such as:

- * Category codes
- * Planner/buyer numbers

**Item Location
(F41021)**

Item information specific to certain locations. For example:

- * On-hand quantities
- * General Ledger class codes

Before You Begin

- Read *System Setup*
- Set up G/L class codes
- Review and modify branch/plant constants
- Set up next numbers
- Set up default locations and printers
- Set up applicable user defined code tables, including:
 - G/L posting categories
 - Stocking type codes
 - Units of measure
 - Classification code categories
 - Cost method codes
 - Language preference codes

Enter Item Master Information

This chapter is an overview of item master information from the Inventory Management system. For information about item master information not included in this chapter, see the *Inventory Management Guide*.

Entering Item Master Information



From Inventory Management (G41), choose **Inventory Master/Transactions**
From Inventory Master/Transactions (G4111), choose **Item Master Information**

You must enter general information for all stock and non-stock items. The system uses this information to identify and process each item in the distribution and manufacturing systems.

This section contains the following:

- [Entering Basic Item Information](#)
- [Entering Item Text](#)
- [Assigning Item Responsibility](#)
- [Entering Item Classification Codes](#)
- [Entering Item Unit of Measure Information](#)
- [Entering Item Manufacturing Information](#)
- [Entering Item Grade and Potency Information](#)

When you enter a new item, the system creates an item master record in the Item Master Information table (F4101).

What You Should Know About

Setting up a template

You might want to set up a template that contains common values for fields. Do this by entering an item with the common field values, later locate the item, and enter the new item information as necessary.

Deleting item master information

You cannot delete master information for an item if any of the following exists:

- Item branch records
- Bills of material
- Item cross-reference numbers
- Supplier relationships
- Sales prices

Displaying additional item information

You can set processing options to display additional item information subsequent to item master information (for example, item branch/plant information).

See Also

- *Entering Item Cost Information (P4105)* for information about entering master information that pertains to item costs
- *Entering Sales Price Information (P4106)* for information about entering master information that pertains to item prices

Entering Basic Item Information

To enter basic item information, complete the following tasks:

- Enter item identifiers
- Enter item descriptions and search text
- Enter item processing information

Each item can have up to three identifiers. You use the identifiers to locate the item. These identifiers can represent universal product codes (UPCs), bar codes, supplier numbers, or a user defined value.

In Branch/Plant Constants, you must specify a primary item identifier. You must also enter an item description and the text on which a user is most likely to search when trying to locate the item. You can also translate item descriptions and search text into multiple languages to accommodate those users who must locate items using alternate languages.

Item processing information consists of values that control how the system processes the item. These values pertain to stocking, packaging, accounting transactions, system interfaces, and so on.

What You Should Know About

Locating other identifiers To locate an item using an identifier other than the primary identifier, you can perform a wildcard search by typing a special symbol, such as an asterisk (*), before the identifier. This only applies for forms that contain the Item Number field.

- *Defining Branch/Plant Constants (P41204)* for more information about specifying the primary item identifier

To enter item identifiers

On Item Master Information

Complete the following fields:

- Item Number - Short
- Product No (Product Number)
- Catalog No (Catalog Number)

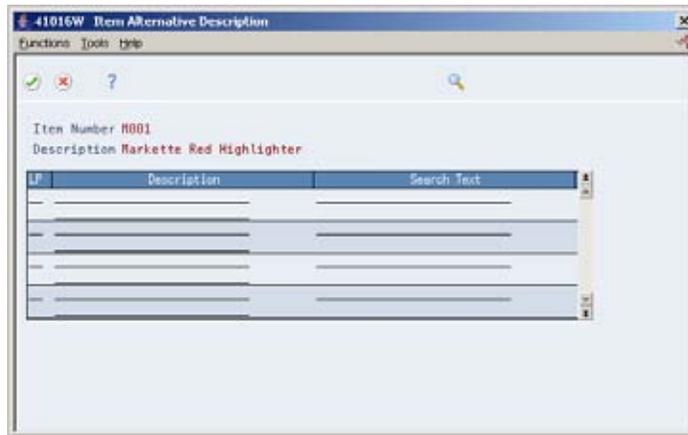
See Also

- *Defining Branch/Plant Constants (P41204)* for more information about specifying the primary item identifier

To enter item descriptions and search text

On Item Master Information

1. To enter descriptions and search text in your native language, complete the following fields:
 - Desc (Description)
 - Srch (Search)
2. To enter descriptions and search text in alternate languages, access Item Alternative Description.



3. On Item Alternative Description, complete the following fields:
 - LP (Language Preference)
 - Description
 - Search Text

To enter item processing information

On Item Master Information

Complete the following fields:

- Stocking Type (R denotes a process)
- G/L Class
- Line Type
- Bulk/Packed Flag
- Backorders Allowed
- Unit of Measure
- Check Availability Y/N
- ABC Codes

Field	Explanation
Item Number - Short	<p>An inventory item number. The system provides three separate item numbers plus an extensive cross reference capability to alternate item numbers (see data item XRT) to accommodate substitute item numbers, replacements, bar codes, customer numbers, supplier numbers, and so forth. The item numbers are:</p> <ol style="list-style-type: none"> 1. Item Number (short) - An eight-digit, computer-assigned item number. 2. 2nd Item Number - The 25-digit, free-form, user-defined alphanumeric item number. 3. 3rd Item Number - Another 25-digit, free-form, user-defined alphanumeric item number. <p style="text-align: center;"><i>Form-specific information</i></p> <p>The first of three identifiers you can assign to an item. The system assigns this number if you activate the Next Number program. This field is numeric only.</p> <p>If you leave the other two item identifier fields blank, the system copies this number to those fields.</p>
Product No	<p>The 2nd Item Number (see number 2, above).</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>The second of three identifiers that you can assign to an item. This field is alphanumeric.</p> <p>If you leave the third identifier field blank, the system copies this number to that field.</p>
Catalog No	<p>The 3rd Item Number (see number 3, above).</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>The third of three identifiers you can assign to an item. This field is alphanumeric.</p> <p>If you leave the second identifier field blank, the system copies that number to this field.</p>
Description:	<p>A brief description of an item, a remark, or an explanation.</p>

Field	Explanation
Srch:	<p>A field that specifies how the system searches for an item. Your entry should be specific and descriptive of the item. Type the words in the order in which you are likely to enter them.</p> <p>In single-byte environments, where computer storage space can contain only Latin-based language character sets, the system inserts the first 30 characters from the item's description if you do not enter search text.</p> <p>In double-byte environments where computer storage space can contain more complex language character sets (in languages such as Japanese, Chinese, and Korean), you must complete this field. This is a single-byte field that you complete with single-byte characters to phonetically represent the item description (which can be single-byte, double-byte, or both).</p>
Stocking Type	<p>A user defined code (41/I) that indicates how you stock an item (for example, as finished goods, or as raw materials). The following stocking types are hard-coded and you should not change them:</p> <p>B Bulk floor stock C Configured item F Feature K Kit parent item N Non-stock</p>
G/L Class	<p>A user defined code that identifies the G/L offset to use when the system is searching for the account to which it will post the transaction. If you do not want to specify a class code, you can enter **** (four asterisks) in this field.</p> <p>The table of Automatic Accounting Instructions (AAIs) allows you to predefine classes of automatic offset accounts for the Inventory, Procurement, and Sales Order Management systems. G/L categories might be assigned as follows:</p> <p>IN20 Direct Ship Orders IN60 Transfer Orders IN80 Stock Sales</p> <p>The system can generate accounting entries based upon a single transaction. As an example, a single sale of a stock item can trigger the generation of accounting entries similar to these:</p> <p>Sales-Stock (Debit) xxxxx.xx A/R Stock Sales (Credit) xxxxx.xx Posting Category: IN80 Stock Inventory (Debit) xxxxx.xx Stock COGS (Credit) xxxxx.xx</p>

Field	Explanation
Line Type	<p>A code that controls how the system processes lines on a transaction. It controls the systems with which the transaction interfaces (General Ledger, Job Cost, Accounts Payable, Accounts Receivable, and Inventory Management). It also specifies the conditions under which a line prints on reports and is included in calculations. Codes include:</p> <p>S Stock item J Job cost N Non-stock item F Freight T Text information M Miscellaneous charges and credits W Work order</p>
Unit of Measure	<p>A user defined code (system 00, type UM) that identifies the unit of measure that the system uses to express the quantity of an item, for example, EA (each) or KG (kilogram).</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>The default for this field is the primary unit of measure you specify in processing options.</p>
Bulk/Packed Flag	<p>A code that indicates if the item is a bulk liquid product. If it is a bulk product, you must perform temperature and density/gravity conversions. To record the movement of bulk products, you must use forms designed specifically for bulk products. If you try to record movement using standard inventory forms, the system prevents the movement. Valid values are:</p> <p>P Packaged B Bulk liquid</p> <p>If you leave this field blank, the system uses P.</p>
Backorders Allowed	<p>A code that indicates whether you allow backorders for this item. You can allow backorders by item (through Item Master or Item Branch/Plant), or by customer (through Billing Instructions).</p> <p>Y Yes, allow backorders for this item. N No, do not allow backorders for this item, regardless of the backorders code assigned to the customer.</p> <p>Note: The system does not use this information if you have set the option on Branch/Plant Constants to indicate that you do not allow backorders in your operating environment.</p>

Field	Explanation
Check Availability Y/N	<p>This field controls whether availability checking is performed throughout the Sales Order Management system. You might want to check availability for some items. For other items, you can assume that an adequate supply is available. Valid values are:</p> <p>Y Check availability</p> <p>N Do not check availability</p>
ABC Codes	<p>A code that specifies this item's ABC ranking by sales amount.</p> <p>Valid values are:</p> <p>A Assign this item to the first (largest) amount ranking.</p> <p>B Assign this item to the second (intermediate) amount ranking.</p> <p>C Assign this item to the third (smallest) amount ranking.</p> <p>D Do not include this item when you run ABC Analysis.</p> <p>There are three types of ABC analysis, which include sales, margin, and on-hand value. Within each type of analysis, you can have three groups, including A, B, and C.</p> <p>The ABC Code fields contain a percentage that defines the A, B, and C groups for categorizing items during ABC analysis. Each group measures a total within the type of analysis.</p> <p>For all groups, the system compares the appropriate sales, margin, or on-hand value totals of a single item to the appropriate total for all items and calculates the value of each item. An item's value is its percentage of the appropriate total. The system arranges the values of all items from highest to lowest value and accumulates the percentages. Then, depending on the group, the system processes the information as follows:</p> <p>A If an item's value causes the accumulated total to exceed the A accumulated percentage, the system assigns the item to the B group.</p> <p>B When the accumulated total reaches the percentage you entered for items in the A group, it continues to add values until it reaches the percentage you entered for items in the B group. The system assigns all items whose value falls between the A and B percentages to the B group.</p> <p>C: The C group consists of items whose accumulated value exceeds the B percentage. The percentage that you usually enter for the C group is .999.</p>

Entering Item Text

You might want to enter text about an item that others can view or print when working with the item. When you enter item master information, you can use one of two methods to enter item text:

- Attach messages to an item
- Enter notes for an item

Item messages are predefined, so you can attach the same message to multiple items.

Unlike item messages, item notes are not predefined. If notes already exist for an item, the words *See Memo* appear as highlighted text at the top of Item Master Information.

Before You Begin

- Before you can attach a predefined message to an item, you must create text for the message. Where you create this text depends on the message type.

To attach messages to an item

On Item Master Information

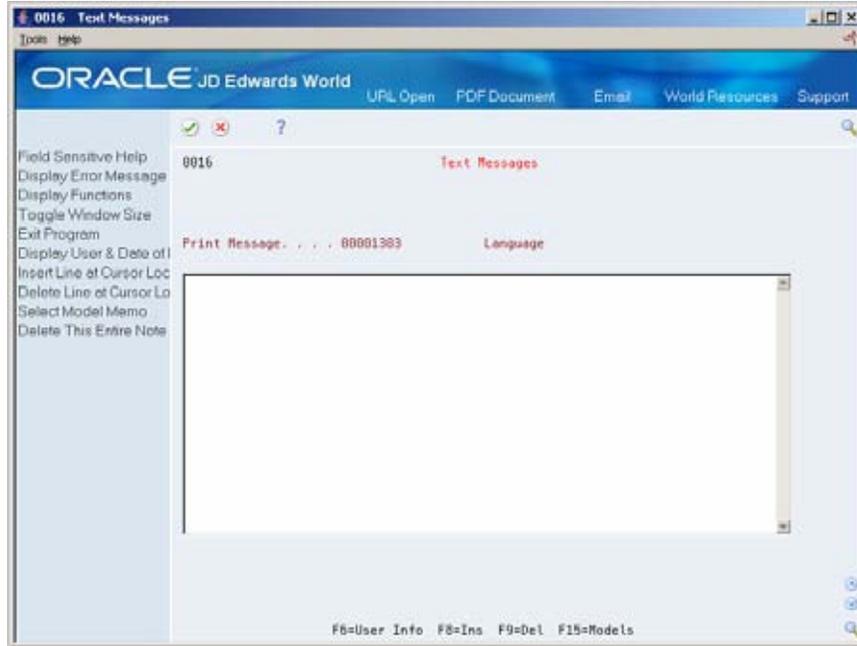
Complete the following fields:

- Print Message
- Item Flash Message

To enter notes for an item

On Item Master Information

1. Access Item Notes.



2. On Text Messages, enter the appropriate text.

Field	Explanation
Print Message	A code that you assign to each print message. Examples of text messages are engineering specifications, hours of operation during holiday periods, and special delivery instructions.
Item Flash Message	User defined code system 40, type FL, which is used to flash a warning message about a particular item.

Assigning Item Responsibility

When you enter master information for an item, you can specify those persons or businesses that are responsible for the item, including the buyer, planner, and preferred carriers.

Before you can assign a responsible person or business to an item, each must have an address book number in the Address Book system.

To assign item responsibility

On Item Master Information

1. Complete the following fields:
 - Planner Number
 - Buyer Number
2. Access Reporting Code (F5) from Item Master Information.

3. On Classification Codes, complete the following fields:

- Sales: Preferred Carrier
- Purchasing: Preferred Carrier

Field	Explanation
Planner Number	The address number of the material planner for this item.
Buyer Number	The address number of the person responsible for setting up and maintaining the correct stocking levels for the item.
Sales: Preferred Carrier	The address number for the preferred carrier of the item. The customer or your organization might prefer a certain carrier due to route or special handling requirements.
Preferred Carrier	The address number for the preferred carrier of the item. The supplier or your organization might prefer a certain carrier because of route or special handling requirements.

See Also

- *Working with Basic Address Book Information (P01051) in the Address Book Guide* for more information about adding address numbers

Entering Item Classification Codes

You might want to group items with similar characteristics so that you can work with the entire group at the same time. For example, for sales analysis, you can group items together for reporting purposes.

To group items, you assign classification codes to them. You can assign classification codes to items when you enter item master information or when you enter item branch/plant information.

There are several categories of classification codes. Each category represents a different item classification or property type, such as shipping conditions. From the shipping conditions category, you can select a code that indicates the condition under which you ship an item, such as fragile.

You can assign one of four groups of classification codes. Each group relates to one of the following JD Edwards World systems:

- Sales Order Management
- Procurement
- Inventory Management
- Advanced Warehouse Management

Complete the following optional tasks:

- Enter sales classification codes
- Enter purchasing classification codes
- Enter inventory classification codes
- Enter warehouse classification codes

To enter sales classification codes

On Item Master Information

1. Access Reporting Code (F5).

2. On Classification Codes, complete the following fields:

- Sales Catalog Section
- Sub Section
- Sales Category Code 3
- Sales Category Code 4
- Sales Category Code 5
- Preferred Carrier
- Category Code 6
- Category Code 7
- Category Code 8
- Category Code 9
- Category Code 10

To enter purchasing classification codes

On Item Master Information

1. Access Classification Codes.
2. On Classification Codes, enter a classification code for each of the following fields:
 - Commodity Class
 - Commodity Sub Class
 - Supplier Rebate Code
 - Master Planning Family
 - Landed Cost Rule

To enter inventory classification codes

On Item Master Information

1. Access Classification Codes.
2. On Classification Codes, enter a classification code for each of the following fields:
 - Shipping Conditions Code
 - Shipping Commodity Class
 - Cycle Count Category

To enter warehouse classification codes

On Item Master Information

1. Access Classification Codes.

2. On Classification Codes, enter a classification code for each of the following fields:
- Item Dimension Group
 - Warehouse Process Group 1
 - Warehouse Process Group 2
 - Warehouse Process Group 3

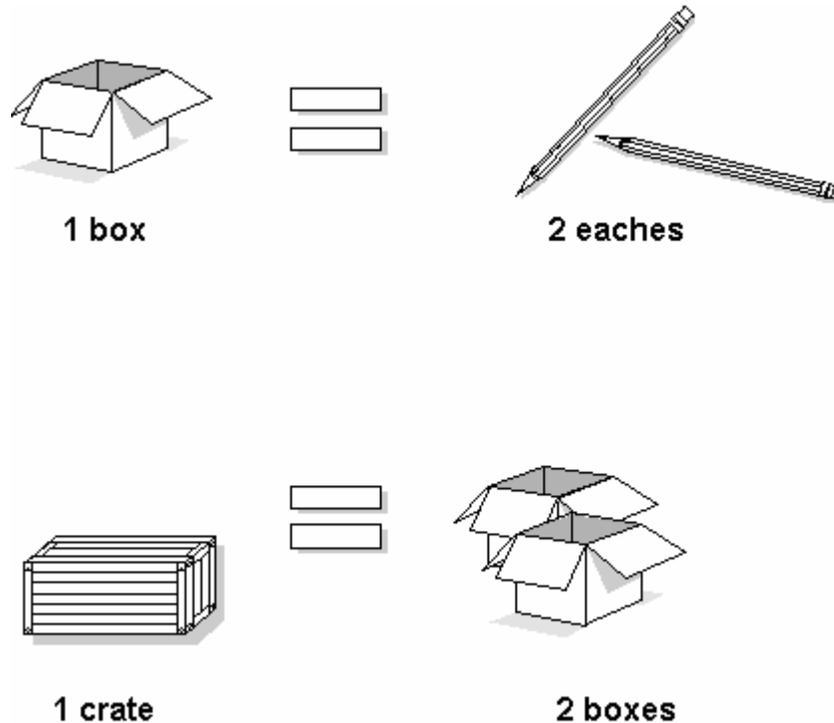
Field	Explanation
Sales Catalog Section	One of ten category codes for sales coding purposes. These codes can represent such things as color, material content, or use.
Sub Section	One of ten category codes for sales coding purposes. These codes can represent such things as color, material content, or use. This field represents one of ten property type categories available for sales purposes.
Sales Category Code 3	One of ten category codes for sales coding purposes. These codes can represent such things as color, material content, or use.
Category Code 7	One of ten category codes to be used for sales coding purposes. These can represent such things as color, material content, or use.
Commodity Class	A code (table 41/P1) that represents an item property type or classification, such as commodity type, planning family, or so forth. The system uses this code to sort and process like items. This field is one of six classification categories available primarily for purchasing purposes.
Commodity Sub Class	A code (table 41/P2) that represents an item property type or classification, such as commodity type, planning family, or so forth. The system uses this code to sort and process like items. This field is one of six classification categories available primarily for purchasing purposes.
Supplier Rebate Code	A code (UDC table 41/P3) that represents an item property type or classification, such as commodity type, planning family, or so forth. The system uses this code to sort and process like items. This field is one of six classification categories available primarily for purchasing purposes.

Field	Explanation
Master Planning Family	<p>A code (table 41/P4) that represents an item property type or classification, such as commodity type, planning family, or so forth. The system uses this code to sort and process like items.</p> <p>This field is one of six classification categories available primarily for purchasing purposes.</p>
Landed Cost Rule	<p>A user defined code (41/P5) that indicates the landed cost rule for an item. The landed cost rule determines purchasing costs that exceed the actual price of an item, such as broker fees, commissions, and so forth. You set up landed cost rules on Landed Cost Revisions.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>When you enter a purchase order for the item, this is the default landed cost rule. If you enter a landed cost rule for the entire purchase order, it overrides the landed cost rule for the item.</p> <p>This is the only purchasing classification category that is hard coded. You can use it for landed cost rules only. This field corresponds to purchasing reporting code 5.</p>
Shipping Conditions Code	<p>A code (table 41/C) that represents an item property type or classification, such as special shipping conditions. The system uses this code to sort and process like items.</p> <p>This field is one of three classification categories available primarily for inventory and shipping purposes.</p>
Shipping Commodity Class	<p>A user defined code (system 41/type E) that represents an item property type or classification, such as international shipment handling. The system uses this code to sort and process like items.</p> <p>This field is one of three classification categories available primarily for inventory and shipping purposes.</p>
Cycle Count Category	<p>A code (table 41/8) that represents the family or cycle in which an item is counted. Cycle counting means that you count different inventory items at different times. Cycle codes commonly represent item values, item locations, time frames, or product groups.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>This inventory classification category is hard coded. You can use it for cycle count codes only.</p>
Item Dimension Group	<p>A code (system 41/type 01) that identifies a group of items that share the same size specifications, such as height and width. An item dimension group defines the size specifications for all items that belong to the group. After you set up an item dimension group, you can assign items to the group through Classification Codes.</p>

Entering Item Unit of Measure Information

You must provide the system with the item units of measure that are most common to each of your distribution processes, such as sales, purchasing, and so on. For example, you might purchase an item in pallets, stock it in boxes, and ship it in individual containers.

If you work with an item in multiple units of measure, you must specify how to convert one unit of measure to another. For example, if you stock items in boxes and crates, you must specify the number of individual items in a box and the number of boxes in a crate.



In some instances, the system must work with an item in its smallest (primary) unit of measure. The item conversions you specify must enable the system to trace all units of measure back to the primary unit of measure.

You can set up unit of measure conversions that are specific to an item or to an item and branch/plant combination. You specify whether item conversions are specific to a branch/plant in System Constants. You can also set up units of measure that are standard for all items.

You must set up all units of measure for an item in the Unit of Measure Conversion table (F41002) or the Standard Unit of Measure Conversion table (F41003). The system verifies the item unit of measure conversions before using standard unit of measure conversions.

Complete the following tasks:

- Enter default units of measure for items
- Define item unit of measure conversions

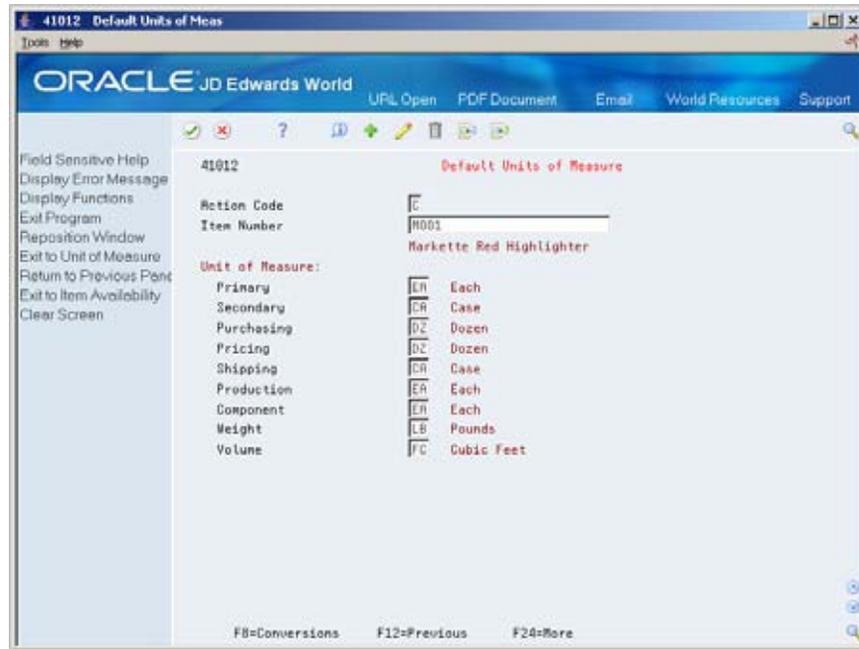
See Also

- *Setting Up Standard Units of Measure (P41003)*

To enter default units of measure for items

On Item Master Information

1. Access Weights & Measures.



2. On Default Units of Measure, complete the following field to locate the item:

- Item Number

3. Complete the following fields:

- Primary
- Secondary
- Purchasing
- Pricing
- Shipping
- Production
- Component
- Weight
- Volume

Field	Explanation
Primary	<p>A user defined code (system 00, type UM) that identifies the unit of measure that the system uses to express the quantity of an item, for example, EA (each) or KG (kilogram).</p> <p><i>Form-specific information</i></p> <p>This is the primary stock accounting unit of measure that the system uses to store all inventory. If you change the primary unit of measure, the conversion factors in the item-level conversion table will no longer be valid.</p> <p>The default for this field is the unit of measure that you specify for the item on Item Master Information.</p>
Secondary	<p>A code that indicates an alternate unit of measure for the item. See the User Defined Code table for system 00, record type UM.</p> <p><i>Form-specific information</i></p> <p>The default for this field is the primary unit of measure that you specify in processing options for Item Master Information.</p>
Purchasing	<p>A user defined code (00/UM) that identifies the unit of measure in which you usually purchase the item.</p> <p><i>Form-specific information</i></p> <p>The default for this field is the primary unit of measure that you specify in processing options for Item Master Information.</p>
Pricing	<p>A code (system 00/type UM) that indicates the unit of measure in which you usually price the item.</p> <p><i>Form-specific information</i></p> <p>The default for this field is the primary unit of measure that you specify in processing options for Item Master Information.</p>
Shipping	<p>A code (table 00/UM) that indicates the unit of measure in which you usually ship the item.</p> <p><i>Form-specific information</i></p> <p>The default for this field is the primary unit of measure that you specify in processing options for Item Master Information.</p>

Field	Explanation
Production	<p>A code (table 00/UM) that indicates the unit of measure in which you produce the item.</p> <p><i>Form-specific information</i></p> <p>The default for this field is the primary unit of measure that you specify in processing options for Item Master Information.</p> <p>This code serves as the default for:</p> <ul style="list-style-type: none">▪ The order quantity when you create a work order▪ The batch quantity when you create a new bill of material or routing▪ The rate schedule quantity in Rate Schedule Revision
Component	<p>A code (table 00/UM) that indicates the unit of measure for an item when it serves as a component.</p> <p><i>Form-specific information</i></p> <p>The default for this field is the primary unit of measure that you specify in the processing options for Item Master Information.</p> <p>This code serves as the default value for:</p> <ul style="list-style-type: none">▪ The quantity per parent when you add the component item to a bill of material or work order parts list▪ The quantity in the assembly inclusion rules in Configuration Management
Weight	<p>A user defined code (system 00/type UM) that identifies the unit of measure that the system uses to display weight for this item. You can specify ounces, grams, kilograms, and so on, as weight standards. The system uses this unit of measure for the item or overrides it for an individual item or container.</p> <p><i>Form-specific information</i></p> <p>The default for this field is the weight unit of measure you specify in processing options for Item Master Information.</p>
Volume	<p>A code (system 00/table UM) that indicates the unit of measure by metric conversion for ambient volume. For example, the unit of measure code for a gallon might be GL, or for a liter might be LT.</p>

Field	Explanation
Structured Only	<p>A code that determines whether the system displays all units of measure for an item and branch/plant or only the structured units of measure that have been set up for the Advanced Warehouse Management system.</p> <p><i>Form-specific information</i></p> <p>If you use the Advanced Warehouse Management system, you must structure conversions from large to small. For example:</p> <ul style="list-style-type: none"> ▪ 1 Pallet (24 Cases) - Structure Code 1 ▪ 1 Case (36 Boxes) - Structure Code 2 ▪ 1 Box (6 Eaches) - Structure Code 3 <p>You assign structure code 1 to the largest unit of measure and codes 2, 3, and so on, to the smaller units of measure.</p> <p>Note: You do not have to define the primary unit of measure within a structure. This value is always the default for the lowest level.</p>
UM	<p>A code (UDC table 00/UM) that indicates a secondary unit of measure.</p> <p><i>Form-specific information</i></p> <p>The unit of measure from which you are converting. This unit of measure, in conjunction with the quantity, equals the unit of measure to which you are converting.</p>
Quantity	<p>The factor that the system uses to convert one unit of measure to another unit of measure.</p> <p><i>Form-specific information</i></p> <p>The quantity and the unit of measure from which you are converting must equal the unit of measure to which you are converting.</p>

Entering Item Manufacturing Information

You can define manufacturing information about an item when you enter item master information. This information includes:

Information	Description
Requirements planning information	You enter requirements planning information to develop a planning forecast for the items that you use to run your distribution and manufacturing operations.
Lead time information	You enter lead time information to calculate the time frames that are necessary to assemble or manufacture an item.

Information	Description
Engineering information	You enter reference information about the drawing plans for an item, so that you can refer back to the plans as necessary.

Complete the following tasks:

- Enter requirements planning information
- Enter lead time information
- Enter engineering information

To enter requirements planning information

On Item Master Information

1. Access Manufacturing Values Entry.
2. On Manufacturing Values Entry, complete the following fields:
 - Value Order Policy
 - Planning Code
 - Planning Fence Rule
 - Accounting Cost Qty
 - Round to Whole Number
 - Planning Fence
 - Freeze Fence
 - Message Display Fence

To enter lead time information

On Item Master Information

1. Access Manufacturing Values Entry.
2. On Manufacturing Values Entry, complete the following fields:
 - MFG Leadtime Quantity
 - Fixed/Variable
 - Leadtime Level
 - Leadtime Manufacturing
 - Leadtime Cumulative
 - Leadtime Per Unit
 - Issue Type Code

To enter engineering information

On Item Master Information

1. Access Manufacturing Values Entry.
2. On Manufacturing Values Entry, complete the following fields:
 - Drawing Size
 - Last Revision No
 - Drawing Number

Field	Explanation
Value Order policy	<p>A field that the system uses in conjunction with the order policy code. It can show three types of data:</p> <ul style="list-style-type: none"> ▪ The value of the fixed order quantity when you select order policy code 2 (fixed order quantity). ▪ The number of additional days of supply after demand is encountered when you select order policy code 4 (periods of supply). ▪ The desired inventory level when you select order policy code 5 (rate scheduled item). If the ending available quantity does not meet or exceed the desired inventory level, then MPS/MRP/DRP generation issues an “increase rate to” or a “decrease rate to” message.

Field	Explanation
Planning Code	<p>A code that indicates how Master Production Schedule (MPS), Material Requirements Planning (MRP), or Distribution Requirements Planning (DRP) processes this item. Valid codes are:</p> <ul style="list-style-type: none"> 0 Not Planned by MPS, MRP, or DRP 1 Planned by MPS or DRP 2 Planned by MRP 3 Planned by MRP with additional independent forecast 4 Planned by MPS, Parent in Planning Bill 5 Planned by MPS, Component in Planning Bill <p>These codes are hard-coded.</p>
Planning Fence Rule	<p>A code (system 34, table TF) that the system uses in conjunction with the Planning Time Fence Days field to determine how forecast demand or actual customer demand is used.</p> <p>For example:</p> <ul style="list-style-type: none"> S Use customer demand before the time fence and forecast after the time fence F Use forecast before the time fence and forecast plus customer demand after the time fence <p>For example, if you enter 5 in the Planning Time Fence Days field and S in this field, then the system uses only customer demand for the regeneration for the first 5 days. After 5 days, the system uses the forecast for the regeneration.</p> <p>Valid codes are:</p> <ul style="list-style-type: none"> C Customer demand before, greater of forecast or customer demand after F Forecast before, forecast plus customer demand after G Greater of forecast or customer demand before, forecast after H Forecast consumption periods S Customer demand before, forecast after 1 Zero before, forecast after 3 Zero before, forecast plus customer demand after
Accounting Cost Qty	<p>An amount that the system uses in the cost rollup program to determine the allocation of setup costs. The system totals the setup costs and divides the sum by this quantity to determine a unit setup cost. The default is 1.</p>

Field	Explanation
Round to Whole Number	<p>A code that determines if an item should be rounded to the closest whole number for planning purposes. Valid codes are:</p> <p>R Round either up or down to the nearest whole number.</p> <p>U Round up to the nearest whole number</p> <p>Blank Do not round.</p> <p>For example, if the calculated requirements for an item are 4.6 and this field contains a Round to Whole Number code of R, the system rounds the quantity required to 5. If the calculated requirements are 4.4, the system rounds the quantity required to 4.</p>
Planning Fence	<p>The number of days that the system uses in conjunction with the time fence rule to determine how the forecast is used. Enter the number of days from the start date, after which the time fence rule changes from the first rule to the second rule.</p> <p>For example, if the time fence rule is S (customer demand before the time fence, forecast after the time fence), and the planning time fence is 5 days, the system plans for the first 5 days using customer demand. After the fifth day, the system plans using the forecast.</p>
Freeze Fence	<p>The number of days from the generation start date within which the system should not generate order messages.</p> <p>For example, if the generation start date is 01/01/18, and the freeze time fence is 6 days, the planning system does not issue messages with dates less than or equal to 01/07/18.</p>
Message Display Fence	<p>The number of days after the generation start date that the system should not generate order messages.</p> <p>For example, if the generation start date is 01/01/18, and the message time fence is 60 days, the system does not issue messages with dates greater than or equal to 03/01/18. However, the planning horizon for orders continues past this date and is reflected in available to promise totals.</p>
MFG Lead time Quantity	<p>The quantity that determines the lead time level for a manufactured item. Each of the routing steps for the item are extended by this quantity. For the system to calculate the lead time level, the quantity in this field must be a value other than zero.</p>

Field	Explanation
Fixed/Variable	<p>A code that determines whether the system uses fixed or variable lead times. This code works in conjunction with the value from either the Level Leadtime field or the Leadtime Per Unit field. Valid codes are:</p> <p>F Fixed lead time - The system calculates work order start dates using the value from the Lead time Level field.</p> <p>V Variable lead time - The system calculates work order start dates using the value from the Lead time Per Unit field.</p>
Level Leadtime	<p>A value that represents the lead time for an item at its assigned level in the production process, as defined on Plant Manufacturing Data. The system uses this value to calculate the start dates for work orders using fixed lead times. Level lead time is different for purchased and manufactured items:</p> <p>You can enter level lead time manually on Manufacturing Values Entry, or you can use the Leadtime Rollup program calculate it. To calculate level lead time using the Leadtime Rollup program, you must first enter a quantity in the Manufacturing Leadtime Quantity field in the Item Branch table (F4102).</p>
Manufacturing Leadtime	<p>The total number of days required to build an item from its lowest level components to the final assembly. This value is the total of the level lead times for all manufactured items, plus the highest manufacturing lead time for all its components.</p> <p>If all components are purchased, the manufacturing lead time equals the item's level lead time. Purchased item lead times are not included in the calculation of manufacturing lead times.</p> <p>You can enter the manufacturing lead time manually or you can have the system calculate it when you run the Lead time Rollup program.</p>
Cumulative Leadtime	<p>The total number of days required to build an item from its lowest level components to the final assembly. The system calculates the value differently for manufactured and purchased items.</p> <p>Manufactured - The total of all level lead times for all manufactured items, plus the highest cumulative lead time of all its components.</p> <p>Purchased - The item's level lead time. Purchased item lead times are included in the calculation of cumulative lead times.</p> <p>You can enter this value manually or you can have the system calculate it when you run the Lead time Rollup program.</p>

Field	Explanation
Leadtime Per Unit	<p>The total number of hours required to build one unit as specified on the routing. This value is factored by the time basis code.</p> <p>You can enter this value manually, or you can have the system calculate it when you run the Leadtime Rollup program. The system overwrites this value when you run the Leadtime Rollup program.</p> <p>The system uses this field to calculate start dates for work orders when you use variable lead times.</p>
Issue Type Code	<p>A code that defines how the system issues each component in the bill of material from stock. In shop floor control, it indicates how the system issues a part to a work order. Valid codes are:</p> <p>I Manual issue (default) F Floor stock (no issue) B Backflush (when part is reported as complete) P Preflush (when parts list is generated) U Super backflush (at pay-point operation) S Sub-contract item (send to supplier)</p> <p>Blank Shippable end item</p> <p>You can issue a component in more than one way within a specific branch/plant by using a different code on the bill of material and work order parts list. The bill of material code overrides the branch/plant value.</p>
Drawing Size	<p>A code that represents the engineering drawing size. For example:</p> <p>A A-size drawing D D-size drawing</p>
Drawing Rev. Level	<p>This number is a subset to the drawing number. It provides an additional description of the drawing and is useful should the system use an engineering drawing as a reference for this item.</p>
Drawing Number	<p>An engineering drawing number that might be the same as the part or item number.</p>

Entering Item Grade and Potency Information

After you enter item master information or item branch/plant information, you specify whether grade or potency applies to an item. Grades enable you to classify items (for example, grade A eggs and grade B eggs). Potency allows you to specify the active ingredient in a product (for example, the percentage of alcohol in liquor).

When you activate grade or potency control for an item, you can enter a standard grade or potency for the item and a range of acceptable values. If you receive or issue items that are not within the range, the system provides a warning message. You cannot perform sales on items that are not within the range.

Item grade and potency are applicable only to items that are produced in lots. You cannot use both grade control and potency control for the same item.

See Also

- *Entering Information for Lots (P4108)* for information about specifying grade and potency values for lots

To enter item grade and potency information

On Item Master Information

1. Access Manufacturing Values Entry.
2. On Manufacturing Values Entry, complete the following fields:
 - Grade/Potency Pricing
 - Potency Control
 - Standard Potency
 - From Potency
 - Thru Potency
 - Grade Control
 - Standard Grade
 - From Grade
 - Thru Grade

Field	Explanation
Grade/Potency Pricing	A code that indicates whether you price the item by grade or potency range. You must control the item by grade to price it by grade, just as you must control the item by potency to price it by potency. Valid values are: Blank No potency or grade pricing 1 Potency pricing 2 Grade pricing
Potency Control	A code that indicates whether you control the item by potency.
Standard Potency	The percentage of active ingredients normally found in an item.

Field	Explanation
From Potency	<p>A number that indicates the minimum potency, or percentage of active ingredients, acceptable for an item.</p> <p>The system displays a warning message if you try to purchase or issue items that do not meet the minimum acceptable potency. The system does not allow you to sell items that do not meet the minimum acceptable potency.</p>
Thru Potency	<p>A number that indicates the maximum potency, or percentage of active ingredients, that is acceptable for an item.</p> <p>The system displays a warning message if you try to purchase or issue items that have a potency that exceeds the maximum potency acceptable. The system does not allow you to sell items that have a potency that exceeds the maximum potency acceptable.</p>
Grade Control	A code that indicates whether you control the item by grade.
Standard Grade	A code (table 40/LG) that represents the normal grade for an item.
From Grade	<p>A code (system 40, type LG) that indicates the minimum grade that is acceptable for an item.</p> <p>The system displays a warning message if you try to purchase or issue items with grades that do not meet the minimum grade acceptable. The system does not allow you to sell items with grades that do not meet the minimum acceptable level.</p>
Thru Grade	<p>A code (system 40, type LG) that indicates the maximum grade that is acceptable for an item.</p> <p>The system displays a warning message if you try to purchase or issue items with grades that exceed the maximum grade acceptable. The system does not allow you to sell items with grades that exceed the maximum grade acceptable.</p>

What You Should Know About

Lots	You can specify the grade or potency of all items in a specific lot on Lot Master Revisions. If you do not specify a grade or potency, the system uses the standard grade or potency from Item Master or Item Branch Information.
Grade and potency ranges for sales purposes	<p>You can specify an acceptable grade or potency range for each of your customers using preference profiles.</p> <p>For more information, see <i>Setting Up Preference Types</i> in the <i>Sales Order Management Guide</i>.</p>

See Also

- *Entering Information for Lots (P4108)* for information about specifying grade and potency values for lots

Processing Options

See [Item Master Revisions \(P4101\)](#).

Enter Branch/Plant Information

This chapter is an overview of branch/plant information from the Inventory Management system. For information about branch/plant information not included in this chapter, see the *Inventory Management Guide*.

Entering Branch/Plant Information

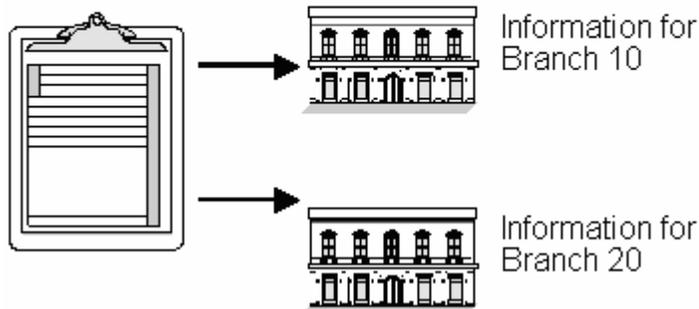


From Inventory Management (G41), choose **Inventory Master/Transactions**
From Inventory Master/Transactions (G4111), choose **Item Branch/Plant Information**

Information about an item might differ from warehouse to warehouse. For example, taxes might be applicable to an item in one warehouse, but not in another. You might also have different quantity requirements for each item based on the warehouse.

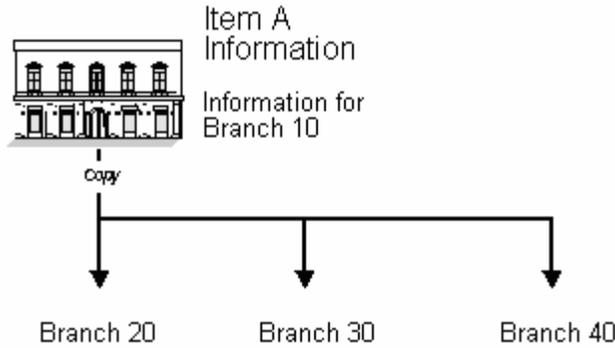
After you enter master information for an item, you can assign the item to different warehouses or branch/plants. You can then customize the item information for each branch/plant. You can also specify the locations in the branch/plant in which the item is stored.

Item A Information Master Information



Every JD Edwards World system that retrieves item information searches for an item's branch/plant information before using an item's master information.

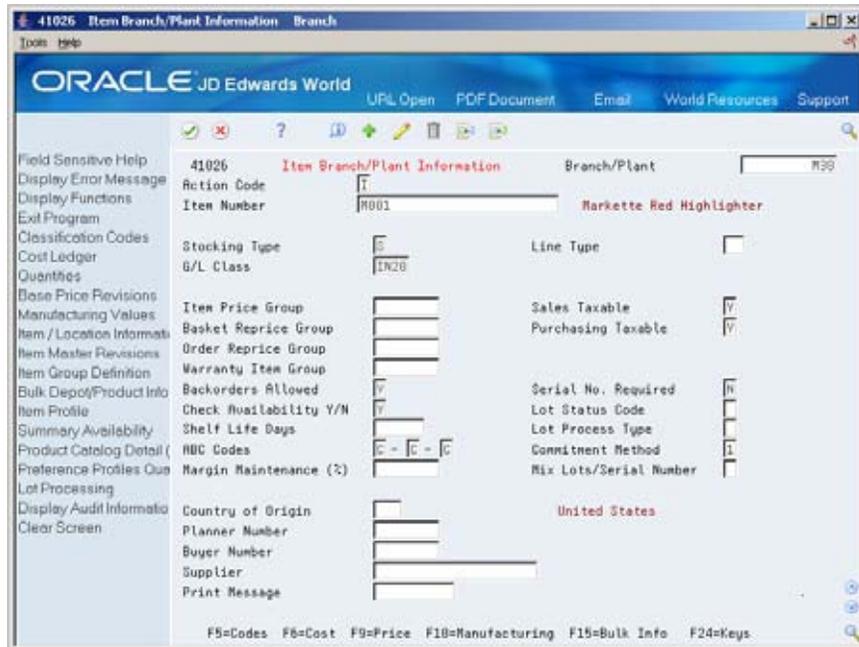
You can enter item information for a single branch/plant or copy existing item information and duplicate it for multiple branch/plants.



This section contains the following:

- [Assigning an Item to a Branch/Plant](#)
- [Working with Item Locations](#)
- [Entering Item Branch/Plant Manufacturing Information](#)

After you enter item information for a specific branch/plant, the system creates a record in the Item Branch table (F4102).



What You Should Know About

Default values

Most fields on Item Branch/Plant Information are identical to those on Item Master Information. The system uses the default values from Item Master Information. Fields that do not exist on Item Master Information are:

- Branch/Plant
- Sales Taxable
- Purchasing Taxable
- Country of Origin
- Supplier
- Margin Maintenance (%)

Accessing other branch/plant information

Use processing options to specify that other item information displays subsequent to item branch/plant information, such as item unit of measure defaults.

Assigning an Item to a Branch/Plant

After you enter master information for an item, you must assign the item to a specific branch/plant. After assigning the branch/plant, you can locate the item and branch/plant to customize the master information.

To assign an item to a branch/plant

On Item Branch/Plant Information

Complete the following fields:

- Branch/Plant
- Item Number

Field	Explanation
Branch/Plant	<p>An alphanumeric field that identifies a separate entity within a business for which you want to track costs. For example, a business unit might be a warehouse location, job, project, work center, or branch/plant.</p> <p>You can assign a business unit to a voucher, invoice, fixed asset, and so on, for purposes of responsibility reporting. For example, the system provides reports of open accounts payable and accounts receivable by business units to track equipment by responsible department.</p> <p>Security for this field can prevent you from locating business units for which you have no authority.</p> <p>Note: The system uses this value for Journal Entries if you do not enter a value in the AAI table.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>This is the branch/plant or warehouse to which this item information is applicable.</p>

Working with Item Locations

After you assign an item to a branch/plant, you can indicate multiple locations in which the item resides. For each branch/plant, you can assign:

- A primary location
- Multiple secondary locations

The system usually processes an item through its primary location. For example, when you receive an item, the system assigns the item to its primary location, unless you specify a secondary location.

The system prompts you for the primary location immediately after you assign an item to a branch/plant. You can assign secondary locations to an item when you enter branch/plant information. The system automatically assigns a secondary location if you enter a location other than the primary location for an item when you receive it.

If you specify location control on Branch/Plant Constants, you can assign an item to only those locations set up on Branch/Plant Location Master. If you do not specify location control, you can assign an item to any location.

Each time you enter a location for an item, the system creates a record in the Item Location table (F41021).

In addition to assigning locations to an item and branch/plant, you can assign multiple lot numbers to each location. You can enter lot numbers manually when you enter item locations or when you receive the items.

Complete the following tasks:

- Assign a primary location to an item
- Assign a secondary location to an item

- Change the primary location for an item

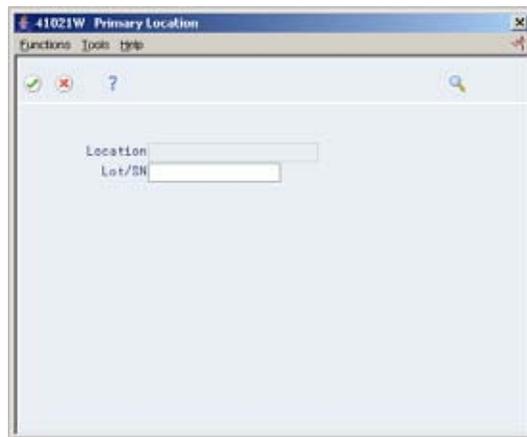
See Also

- *Entering Information for Lots (P4108)* for information about defining lot details
- *Working with Lot Statuses (P00051)* for information about putting lots and locations on hold

To assign a primary location to an item

On Item Branch/Plant Information

1. Assign a branch/plant to an item.



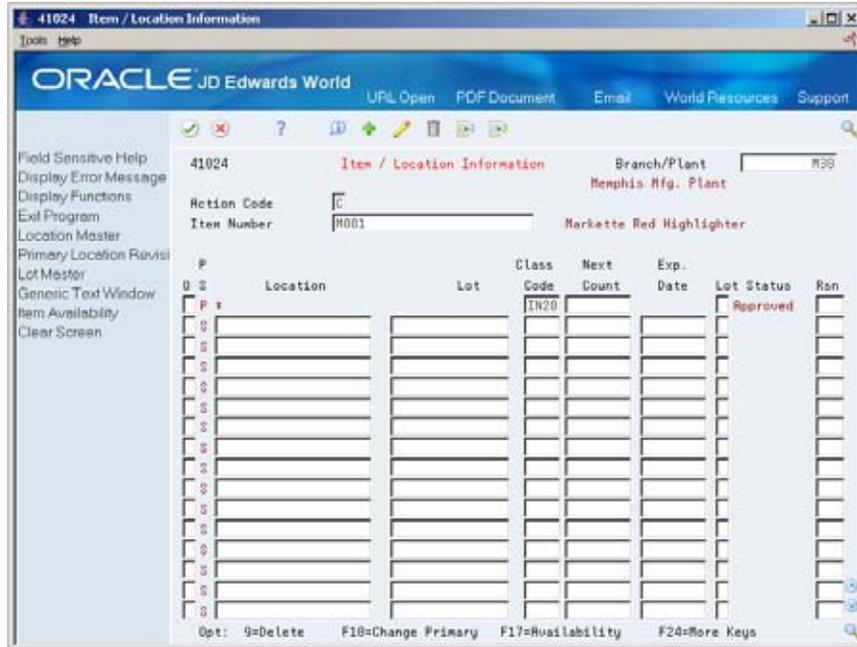
2. On Primary Location, complete the following fields:

- Location
- Lot

To assign a secondary location to an item

On Item Branch/Plant Information

1. Access Item/Location Information.

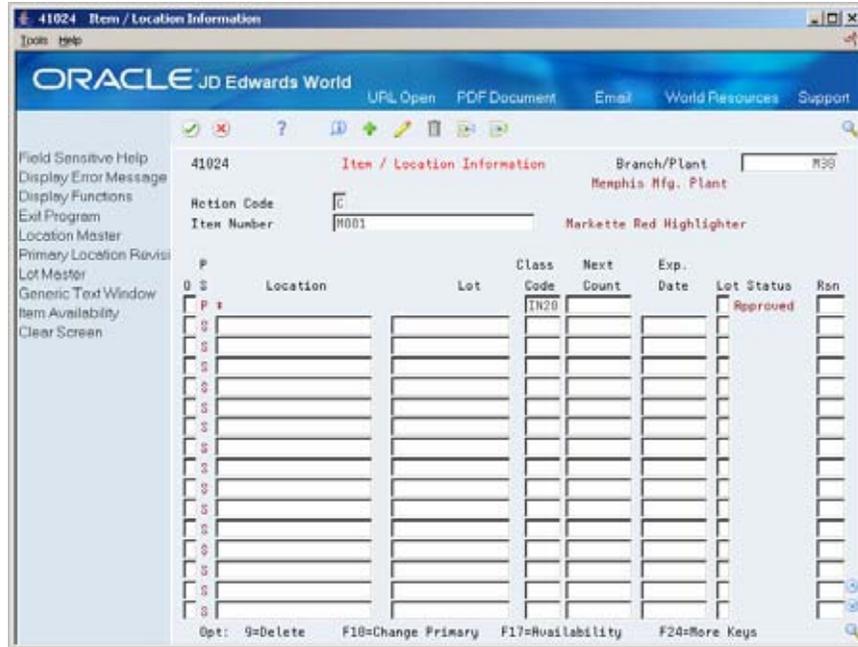


2. On Item/Location Information, enter S in the following field to identify the secondary (S) locations for an item:
 - P/S (Primary/Secondary Location)
3. Complete the following fields for each secondary location and lot:
 - Location
 - Lot
 - Lot Status

To change the primary location for an item

On Item Branch/Plant Information

1. Access Item/Location Information.



2. On Item/Location Information, enter P in the following field to identify the primary (P) location for the item:
 - P/S (Primary/Secondary Location)
3. Access Primary Location.
4. On Primary Location, complete the following fields:
 - Location
 - Lot
5. Return to Item/Location Information.
6. On Item/Location Information, complete the following field:
 - P/S (Primary/Secondary Location)

After you change the primary location for an item, the previous primary location becomes a secondary location.

Field	Explanation
Location	<p>A code that identifies inventory locations in a branch/plant. You define the format of the location identifier by branch/plant.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>If you do not specify a location in this field, the system uses the blank location set up for the branch/plant in Branch/Plant Location Master.</p>
Lot/SN	A number that identifies a lot or a serial number. A lot is a group of items with similar characteristics.
P S	<p>A value that indicates if this is the primary or secondary location for this item within this stocking location. Valid values are:</p> <p>P Primary storage location</p> <p>S Secondary storage location</p> <p>Note: You can only have one storage area within each branch or warehouse marked as primary. In some cases, the system uses the primary storage area as the default.</p>
Lot status change	<p>A user defined code (table 41/L) that indicates the status of the lot. If you leave this field blank, it indicates that the lot is approved. All other codes indicate that the lot is on hold.</p> <p>You can assign a different status code to each location in which a lot resides on Item/Location Information or Location Lot Status Change.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>The default for this field comes from the lot status code (including a blank value) that you assign to the item on Item Master Information or Item Branch/Plant Information.</p> <p>The code that you enter here serves as the lot status default when you assign an item to a secondary location.</p>

What You Should Know About

Effects on quantities

If you change an item's primary location and any of the following quantities exist, the quantities transfer to the new primary location:

- Quantity on backorder
- Quantity on purchase order
- Quantity on work order
- Other purchasing 1
- Quantity on soft commit

Deleting a primary location To delete a primary location, you must first change it to a secondary location. You cannot delete the primary location. No quantities can exist in the locations that you delete.

Entering Item Branch/Plant Manufacturing Information

You can define manufacturing information for an item that is specific to each branch/plant. This information includes:

Information	Description
Requirements planning information	You enter information about inventory shrinkage for the item to plan for the quantity you need to replace due to shrinkage.
Lead time information	You enter lead time information to calculate the time frames that are necessary to assemble or manufacture an item.
Engineering information	You enter reference information about the drawing plans for an item, so that you can refer back to the plans.

Complete the following tasks:

- Enter requirements planning information
- Enter lead time information
- Enter engineering information

What You Should Know About

Default values Most of the items on Plant Manufacturing Data are identical to those on Manufacturing Values Entry. The system uses the default values from Manufacturing Values Entry.

To enter requirements planning information

On Item Branch/Plant Information

1. Access Plant Manufacturing Data.
2. On Plant Manufacturing Data, complete the following fields:
 - Shrink Factor
 - Shrink Factor Method

To enter lead time information

On Item Branch/Plant Information

1. Access Plant Manufacturing Data.
2. On Plant Manufacturing Data, complete the following fields:
 - Time Basis
 - Queue Hours
 - Standard Setup Hours

To enter engineering information

On Item Branch/Plant Information

1. Access Plant Manufacturing Data.
2. On Plant Manufacturing Data, complete the following fields:
 - ECO Reason

- ECO Number
- ECO Date
- Item Revision Level

Field	Explanation
Shrink Factor	<p>A fixed quantity or percentage that the system uses to determine inventory shrinkage for an item. The system increases the planned order quantity by this amount in MPS/MRP/DRP generation. The shrink factor method you specify for the item determines whether the shrink factor is a percentage or a fixed quantity.</p> <p>If you are entering a percentage, enter 5% as 5.00 and 50% as 50.00.</p>
Shrink Factor Method	<p>A value that determines whether the shrink factor you enter for this item is a percentage or a fixed quantity. Valid values are:</p> <p>% Percentage of order or requested quantity</p> <p>F Fixed amount to be added to quantity</p>
Time Basis	<p>A user defined code (system 30, type TB) that identifies the time basis or rate for machine or labor hours entered for any routing step. You can set rates per unit, per 10, per 1000, and so on.</p> <p>The system uses the values in the Description-2 field on the User Defined Codes form for costing and scheduling calculations. The description is what the code represents, but is not used in calculations.</p>
Setup Labor	The standard setup hours you expect to incur in the normal completion of this item.
ECO Reason	A code (table 40/CR) that identifies the reason for the engineering change order.
ECO Number	The number assigned to an engineering change order.
ECO Date	The date of the engineering change order.
Item Revision Level	The revision level for an item. If you enter a revision level, verify that the revision level of the routing for an item matches the revision level on the bill of material for the item.

Processing Options

See [Branch/Plant Item Information \(P41026\)](#).

3 Process Manufacturing

Overview to Process Manufacturing

Objectives

- To understand the concepts of process manufacturing
- To set up and maintain processes
- To maintain ingredients, co- and by-products, substitutes, and intermediates for processes
- To set up and maintain process work centers
- To review and print process information

This section contains the following:

- [About Process Manufacturing](#)
- [About Work Centers](#)
- [About Processes](#)
- [About Lead Times](#)
- [Tables](#)

About Process Manufacturing

Process manufacturing adds value to a product by mixing, separating, forming, or performing chemical reactions.

Process manufacturing companies create a variety of items, including liquids, fibers, powders, or gasses. Pharmaceuticals, foods, and beverages are specific examples of these types of companies.

These manufacturers produce items in a two-step process:

- A mixing or blending step
- A filling or packaging step

This type of manufacturing can include intermediate steps, such as curing, baking, or fermenting.

Process manufacturing consists of the following:

- Setting up process manufacturing
- Working with work centers
- Working with processes
- Reviewing processes (optional)

- Working with lead times

About Work Centers

Work centers consist of people and machines. They are the specific production facilities on the shop floor where the routing operations occur. For each work center, you can define the following:

- Work center number and description
- Queue and move times
- Operator, machine, and work hours per day
- Rates for setup, labor, machine, and overhead

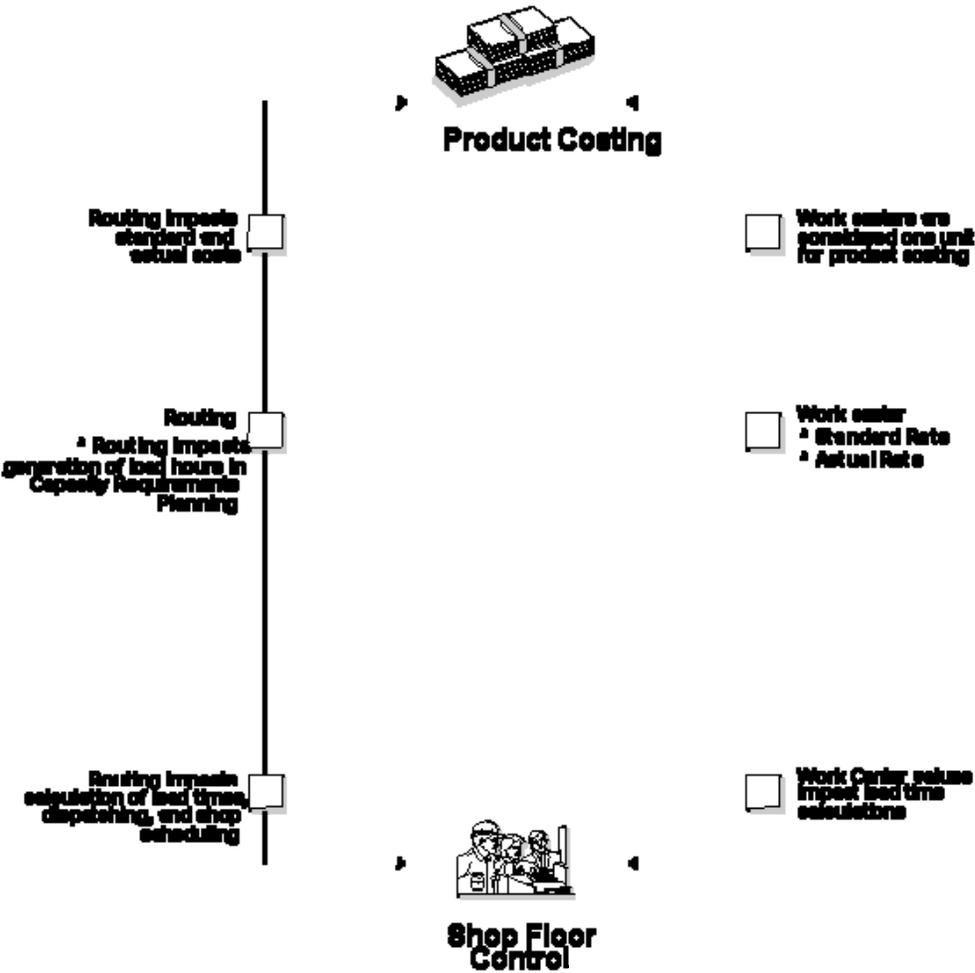
In process manufacturing, examples of work centers include vats, ovens, fermenting tanks, and blenders.

Features

Work centers enable you to:

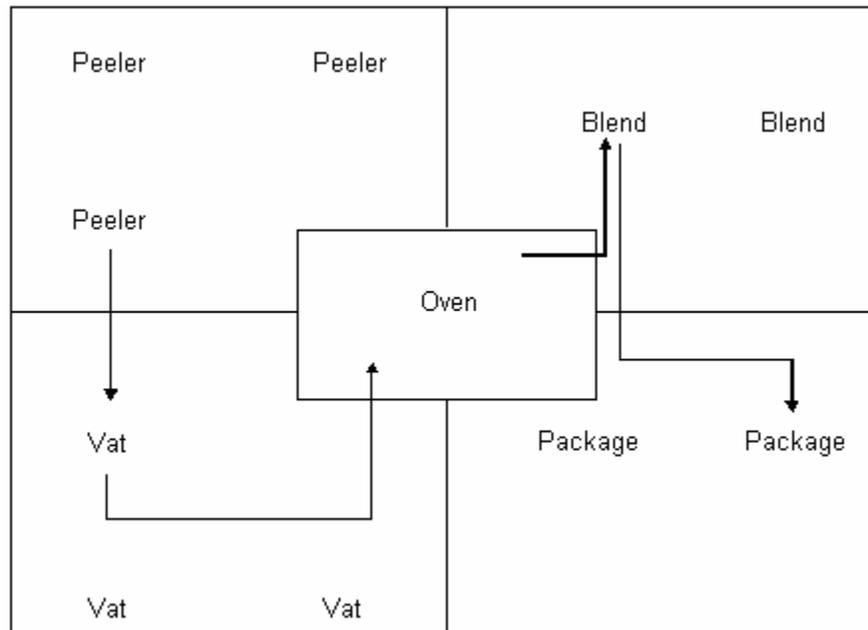
- Set up a dispatch group for departments that perform similar operations
- Specify if an operation is a reporting point for material and or labor
- Define employees per work center
- Specify the work center efficiency for the Product Costing and Capacity Planning systems
- Define work center labor, machine, and setup rates
- Define overhead rates for labor and machine fixed and variable overheads

Work Center System Integration



Work Center Arrangement

This example illustrates a work center layout for sample process 777.



About Processes

Process manufacturing companies must produce, cost, plan, and schedule their products. Processes use a formula or recipe to add value to ingredients by mixing, separating, forming, or performing chemical reactions, in either batch or continuous mode.

Continuous mode does not use lots. Instead, products flow continuously rather than being divided.

Batch mode produces scheduled quantities. Batch mode is based on a formula or recipe that produces a specific number of end items. You can define different processes for items based on batch size, because many processes vary by quantity.

Processes are basis for creating a parts list for a work order in the Shop Floor Control system. Processes include an ingredient relationship and routing. This relationship defines information including effectivity dates, fixed/variable quantities, and queue and move times.

You can define a process item with ingredient relationships on the Enter/Change Process form. These relationships also determine co-products, by-products, intermediates, and substitutions.

You define the steps that are required to produce a manufactured item with process routings. These routings define work centers and labor standards. Process routings are critical for the Capacity Planning and Product Costing systems, and for measuring production efficiency.

Example: Process 777



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

Co-Products

Many process steps create more than one output. A co-product is produced by process steps that are defined for specific ingredients. These are usually the main products that companies sell to customers. For example, the sample process “777 Potato Chips” creates one co-product, potato chips. Material Requirements Planning (MRP) plans for co-product demand, but does not plan for by-product demand.

By-Products

A by-product is produced as a residual or incidental item to the process steps. Companies can recycle, sell, or use by-products for other purposes. For example, the sample process “777 Potato Chips” creates two by-products: used frying oil and waste water. Material Requirements Planning (MRP) plans for co-product demand, but does not plan for by-product demand.

Ingredients

An ingredient is the purchased raw material or item that is combined during process manufacturing to produce the process end item.

Intermediates

Intermediates allow you to track the quantity of output of any operation in a work center at a specific time. You can define intermediates in different units of measure, item, or quantity. You can set up one intermediate per operation, but you cannot define an intermediate for the last operation.

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

Process Routings

A process routing details the method of manufacture for a specific process item. It includes operations, their sequence, work centers, and standards for setup and run. For a process routing, you can also define operator skill levels, inspection operations, and testing requirements.

Substitutes

You can define substitutes for a single ingredient within your process. You might need to do this for several reasons, such as quality concerns, inventory shortages, or supplier delivery problems.

Alternate Operations

You can define an alternate operation to be performed only as required, such as using oven B if oven A is unavailable. This information assists shop floor personnel, but it is not used by the Product Costing or ERPx systems.

Batch Processes

Food, petroleum and pharmaceutical industries use batch processes where items are produced in fixed quantities, or batches. The Batch Process feature allows you to define different processes for items based on quantity or batch size, since processes vary by quantity.

Percent Processes

Percent bills enable you to define processes with ingredient quantities expressed as a percent of the process batch quantity.

The system processes percent information as follows:

- Converts the batch quantity to the primary unit of measure for the process

The system stores quantities for components as follows:

- Calculates a percentage for the ingredient in relation to the batch size
- Converts the batch unit of measure to the ingredient unit of measure and stores the quantity for the ingredient

Example: Percent Process

The parent item is Soft Drink and its batch quantity is 300 GA.

Components	Quantity	UM	F/V
Vanilla	50	GA	%
Water	40	QT	%
Concentrate	10	LT	%

The system calculates the following:

% Calculation and Conversion to Batch Unit of Measure			Storage
Vanilla	= .5 X 300	= 150 GA	150 GA
Water	= .4 X 300	= 120 GA	480 QT
Concentrate	= .1 X 300	= 30 GA	114 LT

The system uses the ingredient unit of measure in the percent process to convert the number of gallons that correspond to the percent for each ingredient. In this example, the system calculates the ingredients water and concentrate to be 120 GA and 30 GA of the batch size. The system converts the unit to ingredient unit of measure and stores them as 480 QT and 114 LT.

Note: You must set up unit of measure conversions for percent bills to work properly. Verify that all components can convert to the Batch Quantity Unit of Measure.

About Lead Times

Determining lead time is an essential part of any manufacturing or scheduling process. For any product that you purchase or manufacture, you encounter a time lag between when you order or start it and when you receive or finish it. To account for the lag, you must estimate the extra time and allow for it in your planning.

First, define lead times for an item at each routing step, then run the Leadtime Rollup program to update lead time information in the item's Manufacturing Data table.

See Also

- *Appendix B – Lead Time Calculations*

Tables

Process Manufacturing uses the following tables:

Table	Description
F3002	The Bill of Material Master table defines warehouse (plant level) information about bills of material, such as quantities of components, features, options, and levels of detail for each bill.
F3009	The Manufacturing Constants table contains constants for maintaining bills of material, such as whether to write changes to the bills to the history file or to perform online validation.
F3011	The Bill of Material Changes table stores all changes made to any bill of material, including dates, ECO reasons, and effectivity dates.
F3003	The Routing Master table contains information describing how an item is manufactured, such as operation numbers, work centers, labor, setup labor, and machine hours, and outside operations.
F30006	The Work Center Master table contains the rates for each work center, such as overhead, crew size, number of machines, number of employees, efficiency, and utilization.
F4101	The Item Master table stores basic information about each defined item, such as item numbers, descriptions, category codes, and units of measure.
F4102	The Branch/Plant Master table defines and maintains plant level information, such as costs, quantities, physical location, and branch level category codes.
F4104	The Item Cross Reference table stores information about relating item numbers together for a specific purpose. You may establish your own codes that define relationships.
F0101	The Address Book table is the central repository for all address information relating to customers, vendors, employees, and prospects.
F0006	The Business Unit Master table identifies branch, plant, warehouse, work center and business unit information, such as company, description (name), and category codes assigned to that unit.
F30008	The Work Center Rates table stores work center rate information, such as simulated and frozen costs for labor, machines, and overhead.

Training Class Case Study

The sample data for process manufacturing within ERPx systems covers the manufacture of hash browns, potato chips, ethanol, and potatoes from processed and purchased ingredients.

Concepts

- Co-products of one process are ingredients in next process.
- The item numbering system provides clues to these relationships. For example, process 222 yields co-product 2221.
- The sample processes are set up for branch/plant M40.
- Processes must be defined with stock type R.

The following table describes the processes:

Process	Part Number	Ingredient (stock type)	Co-product (stock type)	By-product (stock type)
845 Potato	745	Potatoes (P)		
	5215			Waste Water (M)
	8451		Food Grade Potato (M)	
	8452		Non-Food Grade Potato (M)	
888 Peeling	8451	Food Grade Potatoes (M)		
	5215			Waste Water (M)
	8455		Peelings (M)	
			Potato Slices (M)	
222 Hash Browns	8459	Slice/Dice Potatoes (M)		
	2221		Hash Brown Potatoes (M)	
777 Potato Chip	8459	Slice/Dice Potatoes (M)		
	5215			Waste Water (M)

Process	Part Number	Ingredient (stock type)	Co-product (stock type)	By-product (stock type)
	5215			Waste Water (M)
	522	Frying Oil (P)		
	5225			Used Frying Oil (M)
	303	Seasoning (P)		
	7771		Potato Chips (M)	
	938	Nitrogen (P)		
200 Ethanol	8452	Non-food Grade Potato (M)		
	5215	Waste Water (M)		
	2468	Yeast (Sodium Bisulphate) (P)		
	246	Enzymes (P)		
	2381		Potato Solids (M)	
	809	Contaminant (P)		
	2001		Ethanol (M)	

Set Up Process Manufacturing

Setting Up Process Manufacturing

You need to set up several user defined codes and constants that are unique to your branch/plants.

This section contains the following:

- [Setting Up Manufacturing Constants](#)
- [Setting Up Bill of Material Types](#)
- [Setting Up Time Basis Codes](#)
- [Setting Up Standard Procedure Descriptions](#)
- [Setting Up a Shop Floor Calendar](#)
- [Setting Up a Make/Buy Table](#)
- [Setting Up Routing Types](#)
- [Setting Up Kanbans](#)

Before You Begin

- Define your items in the Inventory Management system. See *Entering Item Master Information (P4101)*.

Setting Up Manufacturing Constants



From any Product Data Management menu (G30), enter 29
From Product Data Management Setup (G3041), choose **Manufacturing Constants**

Establish information that is unique to your branch/plants. ERPx systems use manufacturing constants to determine:

- How to allocate, commit, and backflush inventory
- How to calculate overhead costs
- Whether to consider work center efficiency when calculating direct labor and overhead
- If an audit trail tracks all changes to bills of material
- Whether to validate bills of material online as you enter them

To set manufacturing constants

On Manufacturing Constants

The screenshot shows the '3009 Manufacturing Constants' window in Oracle JD Edwards World. The window title is '3009 Manufacturing Constants'. The header includes 'ORACLE JD Edwards World' and navigation links like 'UPL Open', 'PDF Document', 'Email', 'World Resources', and 'Support'. A left-hand menu contains options like 'Field Sensitive Help', 'Display Error Message', 'Display Functions', 'Exit Program', and 'Clear Screen'. The main area shows a form for 'Manufacturing Constants' with fields for 'Action Code' (set to '1'), 'Branch' (set to 'H30 Memphis Rfg. Plant'), and various checkboxes for logging changes, overhead calculations, and routing options. A table for 'Hours Shift Code / Desc.' is partially visible with '6.00' in the first row. At the bottom, there are fields for 'Actual Costing Only', 'Labor Rate Source', and 'Machine Rate Source'.

Complete the following optional fields:

- Log Bill of Material Changes
- Online BOM Validation (Y/N)
- Master Routings (Y/N)
- Status for Changes
- Work Hours Per Day
- Hours
- Shift Code/Description

Field	Explanation
On-Line BOM Validation (Y/N)	<p>Determines whether the system performs an online component/parent validation and low-level code assignment when you revise a bill of material.</p> <p>Valid values are:</p> <p>Y Yes, validate items online.</p> <p>N No, do not validate items online.</p> <p>Note: JD Edwards World recommends that you validate items online (enter Y) unless your bills of material are extremely large.</p> <p>Caution: If you enter N, you must validate the items in batch. Run the Integrity Analysis program (P30601) after bill of material updates and before you run the Frozen Cost Update program (P30835) or perform a DRP/MPS/MRP generation (P3482).</p>
Log Bill of Material Changes	<p>This field determines whether changes to the bill of material are recorded in the Bill of Material Change table (F3011).</p> <p>Valid values are:</p> <p>Y Yes, log changes.</p> <p>N No, do not log changes.</p> <p>Blank will assume an N.</p> <p>When you log bill of material changes, the system saves the old bill of material and the new changed bill of material.</p>
Master Routings (Y/N)	<p>This field controls whether the system uses the master routing for an item or a routing defined for the parent item. Both routings are retrieved from the Routing Master table (F3003). Valid values are:</p> <p>Y Yes, use the master routing for an item, if one exists. The Shop Floor Control system will check the Item Cross Reference table (F4104), Cross Reference Type MR, for the parent item. If it finds a cross-reference, the system uses the master routing from the Routing Master table (F3003). If it does not find a cross-reference, the system uses the routing defined for the parent item.</p> <p>N No, do not check for a master routing for the item. The system will always use the parent item's routing from the Routing Master table (F3003).</p>
Status for Changes	<p>This field specifies the status beyond which work orders and rates can not be changed in the Line Scheduling and Line Sequencing Workbench programs.</p>
Work Hours Per Day	<p>The number of work hours that the manufacturing plant typically operates in a day. This value is calculated based on hours defined in the manufacturing constants fields WRHR + WRH2 + WRH3 (shift hours 1,2,3). This value is used in Back/Forward Scheduling.</p>

Field	Explanation
Hours	<p>The number of work hours that the manufacturing plant operates per day.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>For repetitive manufacturing, identify the number of work hours per shift for the specified branch. The Resource Generation program uses the corresponding shift hours to calculate the available resource units for each shift, and the total for the day.</p> <p>Since the shift hours may apply to different days of the week, the system uses the total of the first three hours to define the work hours per day value.</p>
Shift Code / Desc	<p>A user defined code (07/SH) that identifies daily work shifts. In payroll systems, you can use a shift code to add a percent or amount to the hourly rate on a timecard.</p> <p>For payroll and time entry:</p> <p>If an employee always works a shift for which a shift rate differential is applicable, enter that shift code on the employee's master record. When you enter the shift on the employee's master record, you do not need to enter the code on the timecard when you enter time.</p> <p>If an employee occasionally works a different shift, you enter the shift code on each applicable timecard to override the default.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>For repetitive manufacturing, use the six corresponding shift fields to identify all production line shifts for the specified branch. The Resource Generation program uses the corresponding shift hours to calculate the available resource units for each shift, and the total for the day.</p>

- Capacity Requirements Planning
- Shop Floor Control

To set up a time basis code

On Time Basis Code

Code	Description	Description-2
0	Unit Rate	1
1	Hours per 10 Units	10
2	Hours per 100 Units	100
3	Hours per 1000 Units	1000
4	Hours per 10000 Units	10000
5	Hours per 100000 Units	100000

Complete the following fields:

- Code
- Description
- Description-2

Setting Up Standard Procedure Descriptions

	From any Product Data Management menu (G30), enter 29 From Product Data Management Setup (G3041), choose Standard Procedure Descriptions
---	--

You can set up user defined codes (48/SN) to represent standard procedures for your company. For each code, you can define message text that is standard to your business.

If you use a standard procedure description code when you enter a routing, the system prints the standard procedure text on shop floor documents.

To set up a standard procedure description

On Standard Procedure Descriptions

00191 Std. Procedure Descriptions

ORACLE JD Edwards World

URL Open PDF Document Email World Resources Support

Field Sensitive Help
Display Error Message
Display Functions
Exit Program
Record Types
Redisplay Previous Tab
Print Descriptive Titles
Clear Screen

00191 Std. Procedure Descriptions

Action Code T

System Code 40
User Defined Codes SN
Skip To Code
Standard Descriptions

Code	Description
CHECKLIST	Maintenance Checklist
LOCKOUT	Lockout/Tagout Procedure
VEHICLE	General Work On Vehicles
01-400	Overhaul Motor
1000	1000 hour maintenance steps
1001	General Assembly Procedure
1002	Quality Control General Proc
250	250 hour maintenance steps
500	500 hour maintenance steps

Opt: 1=General Message F5=Record Types F9=Previous F21=Print F24=More

1. Access General Message for a code.

00192 General Message

ORACLE JD Edwards World

URL Open PDF Document Email World Resources Support

Field Sensitive Help
Display Error Message
Display Functions
Exit Program
Display Message Text
Print Messages
Clear Screen

00192 General Message

Action Type C

System Code 40
Record Type SN

Message No. CHECKLIST Maintenance Checklist

To be Checked	Monday	Tuesday	Wednesday	Thursday	Friday
Piping					
Guards					
Motor					
Lubrication					
Vibration					
Alignment					
Flow Meters					
Readings					

Opt: 1=Insert 9=Delete F6=Message Search F21=Print Messages F24=More

2. On General Message, type the text for the message.

Setting Up a Shop Floor Calendar

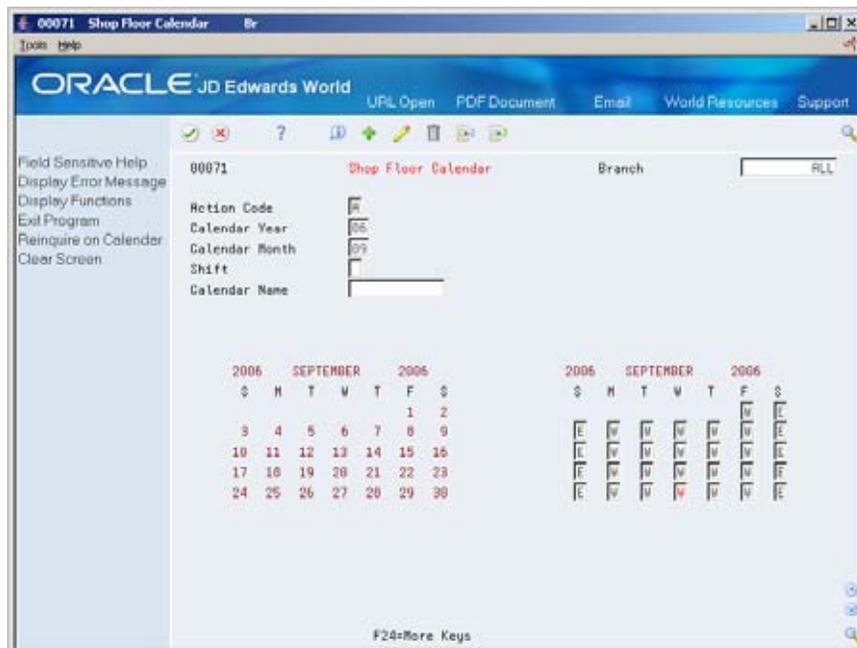
	<p>From any Product Data Management menu (G30), enter 29 From Product Data Management Setup (G3041), choose Shop Floor Calendar</p>
---	--

Use the shop floor calendar to define work days by month and year for all branches/plants. The system uses this calendar to determine:

- Manufacturing schedules
- Start dates for work orders
- Start and complete dates for work order routings

To set up a shop floor calendar

On Shop Floor Calendar



1. Locate the month and year you want to define.

The calendar on the left displays the calendar days for the month and year. The calendar on the right displays the defined work days.

2. To specify a work day, type W.

Note: W is hard-coded. You can specify any other letter to indicate non-work days.

What You Should Know About

Using other day types

Use UDC table 00/TD to define work days. For example:

A	Absent
E	Weekend
H	Holiday
S	Shut down
V	Vacation

Defining shift calendars

You can define up to six shift calendars. The shift hours must match the hours you set up in the manufacturing constants table.

For production lines using the default shop floor calendar, leave the Shift and Calendar fields blank.

Setting Up a Make/Buy Table



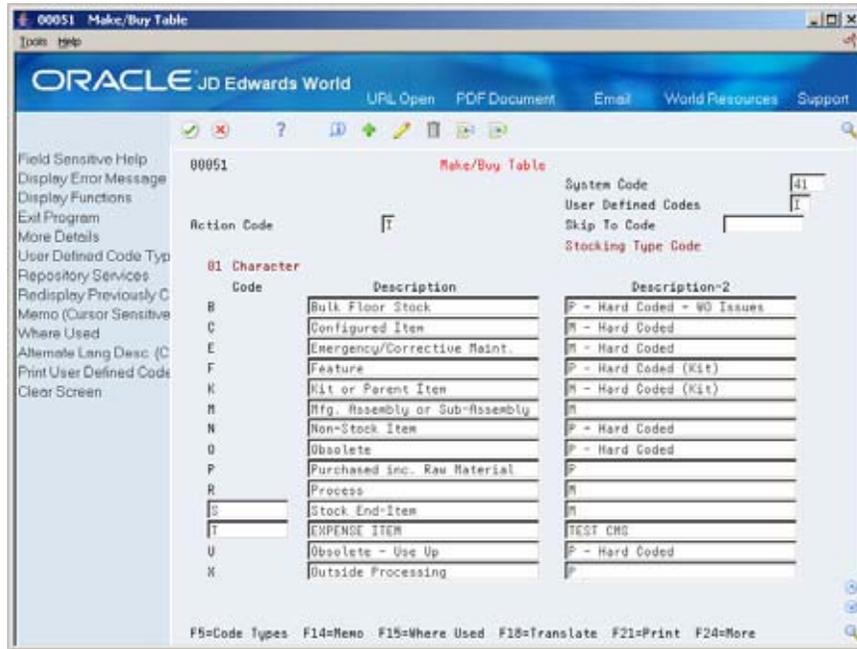
From any Product Data Management menu (G30), enter 29
From Product Data Management Setup (G3041), choose **Make/Buy Table**

Use the Make/Buy table (41/I) to maintain codes that indicate whether an item is purchased or manufactured. For example, you can define types such as subassemblies and purchased raw material.

M (manufactured) and P (purchased) are hard-coded and appear in the first character in Description - 2. You can use any other letter to define additional Make/Buy values.

To set up a make/buy table

On Make/Buy Table



Complete the following fields:

- Code
- Description
- Description-2

What You Should Know About

Process Code R

Process Code R must have an R in the Special Handling Code field.

Each record in the F3016 table has a unique kanban ID. Each of these kanban records can have multiple containers or cards. When you define an item as kanban-controlled, you essentially define the relationship between a supplying location and consuming location. You define a kanban-controlled item by item number, consuming branch/plant, consuming location, supplying branch/plant, and supplying location. The system generates a unique kanban identifier for this specific relationship.

After you define kanban-controlled items, use Kanban Calculation to size the kanban, depending on the amount of inventory available. However, if you set the override flag on, the system does not update the record when you run the calculation program.

To set up kanban controlled items

On Kanban Master Revisions

	Consuming Location	Supplying Location	Kanban Size	Replenish Utl	Lead Time	Src	Type	Phase
P	LR.10	LC.50	30	EA	16.00	1	1	1
	LR.10	LC.50	30	EA	16.00	1	1	1

1. Complete the following fields:

- Item
- Branch/Plant
- Consuming Location
- Supplying Location

2. Complete the following optional fields:

- Kanban Size
- Replenishment Lead Time
- Source Type (this field is required when adding a record)
- Phase

3. Access the detail area (F4).

4. Complete the following optional fields:

- Kanban ID
- Supplier
- Item
- Supplying Location Branch/Plant
- Line/Cell or Source Branch/Plant
- Container Size
- Override Flag
- Receipts Flag
- Related Kanban
- Reorder Point

Field	Explanation
Supplier	A number that identifies an entry in the Address Book system. Use this number to identify employees, applicants, participants, customers, suppliers, tenants, and any other Address Book members.
Replenish Lead Time	The time required before a consuming work center will have a replacement kanban available from its supplying location. This value is used only for kanban card processing in Shop Floor Control.

Field	Explanation
Container Size	The capacity of a container in a kanban controlled environment.
Override Flag	This flag can be used to lock the kanban size and quantity to prevent changes by the Kanban Calculation program.
Kanban Size	The total size of the kanban.
Receipts	Flag used to indicate the receipts process will be executed at kanban check in time. This is only used for a source type 3 (supplier)
Phase	This field indicates the method used to transfer completed units from the supplying to the consuming location: <ol style="list-style-type: none"> 1 One phase transfer. The completion is done directly to the consuming location. 2 Two phase transfer. The completion is performed against the supplying location. A subsequent receipt of inventory is needed at the consuming location.
Kanban ID	Unique identifier for the first kanban assigned to an item in a specified branch/plant, consuming location, or supplying location.
Line/Cell or Source Branch/Plant	Defines a production line or cell. Detailed work center operations can be defined inside the line or cell. For rate based manufacturing to use this value for reporting. <p style="text-align: center;"><i>Form-Specific Information</i></p> When the source type is a 1 (work center), this field identifies the production line producing the kanban item. When the source type is a 5 (branch/plant), this field is used to establish the source branch/plant.
Supplying Location	A code that identifies the location in a branch/plant from which inventory is supplied.
Source Type	Indicates the type of supplying location for a kanban. Valid values are: <ol style="list-style-type: none"> 1 Work center 2 Inventory 3 Supplier 4 (Not Currently Used) 5 Branch/Plant <p>Note: When you check in or complete a kanban that is a source type 5, you must create a transfer order (ST/OT) in order to transfer inventory between the two Branch/Plants. You must then receive the transfer purchase order using the Enter Receipts by PO program (P4312).</p>

Field	Explanation
Consuming Location	A code that identifies the location in a branch/plant to which inventory is received.
Item	A number that the system assigns to an item. It can be in short, long, or 3rd item number format.
Related Kanban	An additional Kanban ID used to replenish quantity of the original Kanban ID during a reorder point assessment of undersupply. If a Kanban is undersupplied, the system checks-out the related kanban and creates either a purchase order or work order, if needed, based on the related kanban source type.
Reorder Point	A quantity to trigger a replenishment Kanban upstream in the supply chain when the available quantity is below this defined order point.

Generating Kanbans

	From Product Data Management (G30), enter 29 From Product Data Management Setup (G3041), choose Kanban Calculation
---	--

After you set up the item on Kanban Master Revisions, you can use the Kanban Calculation program to generate and print a kanban per item. However, you can set the override flag on Kanban Master Revisions to prevent the system from updating the master record.

Use the processing options to:

- Run the program in proof mode
- Print the calculation report
- Update the Kanban Master
- Specify a safety stock other than what is defined in the Item Branch
- Control what percentage the system can change the size of the kanban
- Specify the source for the demand
- Specify a customized calculation program

See Also

- *Process Kanbans in the Shop Floor – Process Guide.*
- *Process Kanbans in the Shop Floor – Discrete Guide.*

Processing Options

See [Kanban Size Calculation \(P30450\)](#).

Work with Work Centers

Working with Work Centers



From Product Data Management (G30), choose **Daily PDM Process**
From Daily PDM Process (G3012), choose **Enter/Change Work Centers**

Work centers consist of people and machines. They are the specific production facilities on the shop floor where the routing operations occur. For each work center, you can define the following:

- Work center number, description, and link to business unit
- Queue and move times
- Operator, machine, and hours per day capacity
- Set up, labor, machine, and overhead rates

In process manufacturing, examples of work centers include ovens, vats, and mixers.

The system stores work center information in the Work Center Master table.

This section contains the following:

- [Entering Work Centers](#)
- [Entering Costing and Accounting Information](#)
- [Reviewing Operations by Work Center](#)

Before You Begin

- Define all work centers as business units. See *Defining Business Units (P0006A)*.

Entering Work Centers

Enter work center information that corresponds to the facilities on your shop floor.

Complete the following tasks:

- Enter a work center
- Enter work center hours

To enter a work center

On Enter/Change Work Center

1. To identify the work center, complete the following fields and click Add:
 - Work Center (required)
 - Dispatch Group
2. To enter repetitive manufacturing information, complete the following fields:
 - Work Center Type
 - Calendar Name
 - Capacity Standard
 - Capacity UOM
 - Capacity Minimum
 - Capacity Maximum
 - Hours
 - Shift Code/Description
3. Complete the following fields:
 - Pay Point Code
 - Prime Load Code
 - Critical Work Center
 - Crew Size
 - Number of Machines

- Number of Employees
- Resource Offset
- Efficiency
- Utilization
- Location
- Branch

Field	Explanation
Work Center	<p>An alphanumeric field that identifies a separate entity within a business for which you want to track costs. For example, a business unit might be a warehouse location, job, project, work center, or branch/plant.</p> <p>You can assign a business unit to a voucher, invoice, fixed asset, and so on, for purposes of responsibility reporting. For example, the system provides reports of open accounts payable and accounts receivable by business units to track equipment by responsible department.</p> <p>Security for this field can prevent you from locating business units for which you have no authority.</p>
Dispatch Group	<p>A super category code to group work centers within an overall business unit. For example, you can group like machines operating out of several work centers that report to one business unit under a dispatch group.</p>
Work Center Type	<p>Defines the type of work center. Possible values are :</p> <p>Blank Stand alone work center</p> <p>1 Production line in a repetitive environment</p> <p>2 Reporting work station within a production line</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>For repetitive manufacturing, the system verifies the value is not valid as a work center for an operation from the routing.</p>
Calendar Name	<p>Enter the value of the calendar which corresponds to the calendar type. For example, if the calendar type is ROUTE, enter a valid route code to display the calendar for a particular route.</p>
Capacity Std	<p>The standard capacity level at which a production line usually operates.</p>
Capacity Min	<p>The lower limit capacity beyond which the production line should not operate. This value is decided by management based on efficiencies, costs, etc.</p>
Capacity Max	<p>The upper limit capacity beyond which a production line can not produce.</p>

Field	Explanation
Hours	<p>The number of work hours that the manufacturing plant operates per day.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>For repetitive manufacturing, identify the number of work hours per shift for the specified work center. Use the six corresponding shift fields to identify all production line shifts for the specified work center.</p>
Shift Code / Description	<p>A user defined code (07/SH) that identifies daily work shifts. In payroll systems, you can use a shift code to add a percent or amount to the hourly rate on a timecard.</p> <p>For payroll and time entry:</p> <p>If an employee always works a shift for which a shift rate differential is applicable, enter that shift code on the employee's master record. When you enter the shift on the employee's master record, you do not need to enter the code on the timecard when you enter time.</p> <p>If an employee occasionally works a different shift, you enter the shift code on each applicable timecard to override the default.</p>
Pay Point Code	<p>A code that indicates if a work center will have labor, material, or both, backflushed through it when quantities are reported against operations occurring in the work center. The default value for this code is the routing sequence record unless overridden when the routing is defined. Valid codes are:</p> <ul style="list-style-type: none"> 0 Not a backflush work center B Backflush material and labor M Backflush material only L Backflush labor only P Preflush material only <p>If you leave this field blank, the system uses the value in the Enter/Change Routing table.</p>
Prime Load Code	<p>This value determines if a work center is machine or labor intensive. These codes are also used in Resource Requirements Planning and Capacity Requirements Planning calculations to develop load profiles.</p> <p>Valid codes are:</p> <ul style="list-style-type: none"> L Run labor hours only M Machine hours only B Run labor plus setup labor hours C Machine plus setup hours O Other (will not generate resource units)

Field	Explanation
Critical Work Center	<p>A code that identifies the work center as critical or not critical when the system calculates capacity. Valid values are:</p> <p>N Not a critical work center</p> <p>1 A critical work center in calculating resource requirement planning only</p> <p>2 A critical work center in calculating capacity requirements planning only</p> <p>3 A critical work center in calculating resource requirements planning and capacity requirements planning</p> <p>4 Not a capacity work center (will not be generated in capacity planning)</p> <p>Note: The system displays Type 3 work centers whenever type 1 or type 2 is selected in this field.</p>
Crew Size	<p>The number of people who work in the specified work center or routing operation.</p> <p>The system multiplies the Run Labor value in the Routing Master table (F3003) by crew size during costing to generate total labor dollars.</p> <p>If the Prime Load Code is L or B, the system uses the total labor hours for back scheduling. If the Prime Load Code is C or M, the system uses the total machine hours for back scheduling without modification by crew size.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>For Shop Floor Control:</p> <p>If you leave the Hours field on the Routing Revisions form blank, the system uses the value entered in this field for lead time and scheduling calculations.</p>
Number of Machines	<p>This represents the normal number of machines in this work center. When you run the Work Center Resource Units Refresh program, this number is multiplied by the number of work hours per day from the Manufacturing Constants table (F3009) to generate the total gross machine hours available in the work center each day.</p>
Number of Employees	<p>This represents the normal number of employees in this work center. When you run the Work Center Resource Units Refresh program, the system multiplies this number by the Number of Work Hours Per Day from the Manufacturing Constants table (F3009) to generate the total gross labor hours available in the work center each day.</p>
Resource Offset	<p>A value used in the Resource Profile table (F3303) to determine the number of days that the actual use of a work center resource should be offset from the forecasted need date.</p>

Field	Explanation
Efficiency	<p>A user defined value that indicates how efficiently a work center operates. This value usually refers to people efficiency. When you enter a value in this field, and the Modify Cost by Work Center Efficiency field in the Manufacturing Constants table (F3009) is set to Y, the system creates a new cost component (B4) from the cost calculated from the direct labor cost (B1). The system also uses this value to calculate rated capacity.</p> <p>Example: If the constant is set to Y, the value of this field is 80%, and the direct labor cost is 10, the system creates a B4 cost component for 2 in the Item Cost Component Add-Ons table (F30026).</p> <p>Enter percents as whole numbers, for example, enter 80% as 80.00.</p>
Utilization	<p>A percentage that indicates how intensively a work center is being used. This value usually refers to machine use. It is the ratio of the direct time charged for production activities to the planned hours. This value is also used to calculate rated capacity.</p> <p>Enter percents as whole numbers, for example, enter 80% as 80.00.</p>
Location Branch	<p>This is the branch plant of the location associated with the work center.</p>

To enter work center hours

On Work Center Master Revisions

Complete the following fields:

- Queue Hours
- Move Hours
- Replenishment Hours

Field	Explanation
Queue Hours	<p>The total time (in hours) that an order is expected to be in queue at work centers and moving between work centers.</p> <p>The system stores this value in the Item Branch table (F4102). You can calculate this value using the Leadtime Rollup program or you can enter it manually. When you run the Leadtime Rollup program, the system overrides manual entries with calculated values.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>If the Routing Master values are blank, the default value comes from the work order routing. However, the system uses these values only for back scheduling variable lead time items.</p>
Move Hours	<p>The planned time in hours that is required to move the order from this operation to the next operation in the same work center.</p> <p>If the Routing Master values are blank, the default value comes from the work order routing. However, the system uses these values only for back scheduling variable lead time items.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>If you leave the Hours field on the Routing Revisions form blank, the system uses the value entered in this field for lead time and scheduling calculations.</p>
Replenishment Hours	<p>The time required before a consuming work center will have a replacement container of goods available from this supplying work center.</p> <p>This value is used only for Kanban card processing in Shop Floor Control.</p>

Entering Costing and Accounting Information

After you enter a work center, you can enter simulated rates for machine and labor hours. The Product Costing and Manufacturing Accounting systems use these values to generate reports, rollups, and journal entries. The Cost Rollup program uses all of these values to calculate the simulated cost.

You can update the simulated rates, but not the frozen values. The system updates frozen values when you run Frozen Update.

To enter costing and accounting information

On Work With Work Centers

1. Select a work center.

On Work Center Master Revisions

2. Select Work Center Rates.

30061 Work Center Rate Revisions

Tools Help

ORACLE JD Edwards World UPL Open PDF Document Email World Resources Support

Field Sensitive Help
Display Error Message
Display Functions
Exit Program
Clear Screen

30061 Work Center Rate Revisions Branch/Plant. R30

Action Code

Work Center Blister Pack

Cost Method Standard

Dispatch Group Assembly Department

	Simulated	Frozen
Direct Labor	<input type="text" value="5.25"/>	5.25
Setup Labor	<input type="text" value="4.25"/>	4.25
Labor Var. Overhead	<input type="text" value="60.00"/>	60.00
Labor Fixed Overhead	<input type="text" value="50.00"/>	50.00
Machine Run	<input type="text" value="3.25"/>	3.25
Machine Var. O/H	<input type="text" value="125.00"/>	125.00
Machine Fixed O/H	<input type="text" value="105.00"/>	105.00

* Overhead values are shown as percents

F24=More Keys

On Work With Work Center Rates

3. Select a work center.

On Work Center Rate Revisions

4. Complete the following fields:

- Cost Method
- Direct Labor (Simulated)
- Setup Labor (Simulated)
- Labor Variable Overhead (Simulated)
- Labor Fixed Overhead (Simulated)
- Machine Run (Simulated)
- Machine Variable Overhead (Simulated)
- Machine Fixed Overhead (Simulated)

Field	Explanation
Cost Method	A user defined code (system 40, type CM) that identifies a cost method. Cost methods 01 through 08 are hard-coded. <i>Form-specific information</i> This code was entered on Branch/Plant Constants.
Direct Labor Simulated	This rate, in cost per hour, is the rate used to calculate the current labor cost as of the last simulation and update.

Field	Explanation
Setup Labor Simulated	This rate, in cost per hour, is the rate used to calculate the current setup labor cost as of the last simulation and update.
Labor Var. Overhead Simulated	This rate, in cost per hour or percent of labor, is the rate used to calculate the current variable labor overhead cost as of the last simulation and update.
Labor Fixed Overhead Simulated	This rate, in cost per hour or percent of labor, is the rate used to calculate the current fixed labor overhead cost as of the last simulation and update.
Machine Run Simulated	This rate, in cost per hour, is the rate used to calculate the current machine cost as of the last simulation and update.
Machine Var. O/H Simulated	This rate, in cost per hour or percent of labor, is the rate used to calculate the current variable machine overhead cost as of the last simulation and update.
Machine Fixed O/H Simulated	This rate, in cost per hour or percent of labor, is the rate used to calculate the current fixed machine overhead cost as of the last simulation and update.

See Also

- *Creating Rate Schedules (P3104) in the Shop Floor Control Guide*
- *Updating Frozen Costs (P30835) in the Product Costing and Manufacturing Accounting Guide*

Reviewing Operations by Work Center

You can review operations by work center to:

- Plan capacity, resource and manpower
- Evaluate equipment needs
- Display which items include routing operations at the work center

To review operations by work center

On Operations By Work Center

Op	Seq	Process/Item	Description	Machine	Labor	Run Hours
10.00	2290		AS/400 Chassis Main Frame	5.50		1
10.00	1770		AS/400 Chassis Frame Supp	3.90		1
10.00	3386		SIDE PANEL, DRK, 28.5x28	1.00		2
10.00	3621		BOTTOM, CENTER DRAWER	1.20		1
10.00	3622		SIDE FOR CENTER DRAWER	1.20		1
10.00	3623		FRONT FOR CENTER DRAWER	.75		1
10.00	3624		BACK FOR CENTER DRAWER	.75		1
10.00	3990		SIDE, DRAWER, 12x30, DESK	2.30		1
10.00	3991		BACK, DRAWER, 12x30, DESK	1.60		1
10.00	3992		BOTTOM, DRAWER, 12x30, DE	.75		1
10.00	3993		FRONT, DRAWER, 12x30, DES	.75		1
10.00	3812		SIDE, FILE DRAWER, DESK	5.50		1
10.00	3813		BACK, FILE DRAWER, DESK	1.20		1
10.00	3814		FRONT, FILE DRAWER, DESK	2.40		1
20.00	2298		AS/400 Chassis Main Frame	4.60		1

Complete the following required fields:

- Work Center
- Branch/Plant

The following fields display work center hour information:

- Machine Hours
- Labor Hours

Field	Explanation
Run Hours Machine	This is the standard machine hours expected to be incurred in the normal production of this item.
Run Hours Labor	This is the standard hours of labor expected in the normal production of this item. The run labor hours in the Routing Master table (F3003) are the total hours it takes the specified crew size to complete the operation. The hours are multiplied by the crew size during shop floor release and product costing.

Work With Processes

Working With Processes

Processes allow process manufacturing companies to produce, cost, plan, and schedule their products. Processes use a formula or recipe that includes an ingredient relationship and routing.

This section contains the following:

- [Enter Processes](#)
- [Working With Operations](#)
- [Working With Ingredients](#)
- [Entering Production Information](#)
- [Entering Co-/By-Products](#)
- [Entering Intermediates](#)
- [Batch Bills](#)
- [Working With Text](#)
- [Updating Component Scrap](#)
- [Changing Multiple Processes](#)
- [Verifying Processes](#)

As you define a process, you combine information from the Manufacturing Constants, Item Master, Routing, and Branch/Plant tables. The resulting process is stored in the Bill of Material table. Changes are stored in the Bill of Material Audit table (if you choose to track them).

Before You Begin

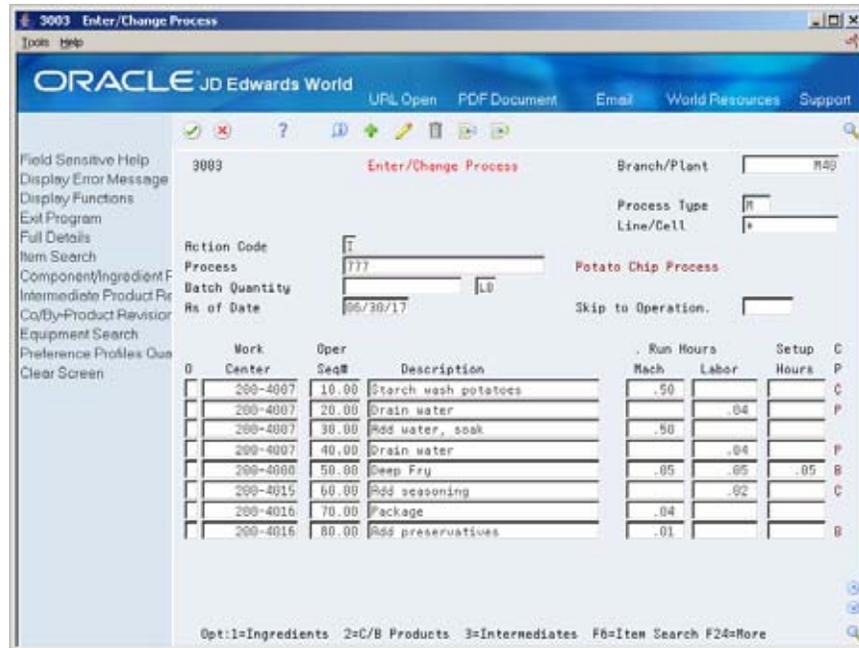
- To use batch processing, set the processing options for Enter/Change Process and Work Order Entry to activate batch and type functions.
- Define routings that correspond to your process types and batch sizes.

Enter Processes

	From Product Data Management (G30), choose Daily PDM Process From Daily PDM Process (G3012), choose Enter/Change Process
---	---

To enter a process

On Enter/Change Process



Work Center	Oper Seq#	Description	Mach	Labor Hours	Setup Hours
200-4007	10.00	Starch wash potatoes	.50		
200-4007	20.00	Drain water		.04	
200-4007	30.00	Add water, soak	.50		
200-4007	40.00	Drain water		.04	
200-4008	50.00	Deep Fry	.05	.05	.05
200-4015	60.00	Add seasoning		.02	
200-4016	70.00	Package	.04		
200-4016	80.00	Add preservatives	.01		

- Complete the following required fields:
 - Branch/Plant
 - Process
- Complete the following optional fields:
 - Routing Type
 - Line/Cell
- Complete the following optional fields with batch information:
 - Batch Quantity
 - Batch Quantity Unit of Measure

Field	Explanation
Item Number	A number that the system assigns to an item. It can be in short, long, or 3rd item number format.

Field	Explanation
Routing Type	<p>User defined code (system 40, type TR) that designates the type of routing. You can define different types of routing instructions for different uses.</p> <p>For example:</p> <p>M Standard Manufacturing Routing</p> <p>RWK Rework Routing</p> <p>RSH Rush Routing</p> <p>You define the routing type on the work order header. The specific type of routing defined will then be used in the work order routing.</p> <p>Product Costing and Capacity Planning systems use only M type routings.</p>
Line/Cell	<p>Defines a production line or cell. Detailed work center operations can be defined inside the line or cell. For rate based manufacturing to use this value for reporting, this value must match the line cell in the header.</p>
Batch Quantity	<p>The quantity of finished units that you expect this bill of material or routing to produce. This field allows you to specify varying quantities of components based on the amount of finished goods produced. For example, 1 ounce of solvent is required per unit up to 100 units of finished product. However, if 200 units of finished product are produced, 2 ounces of solvent are required per finished unit. In this example, you would set up batch quantities for 100 and 200 units of finished product specifying the proper amount of solvent per unit.</p>
UOM	<p>Production unit of measure used to express the capacity of a production line. For example, stamps, injections, etc.</p>

What You Should Know About

Reviewing equipment	On Asset Search & Location, you can review equipment that an operation uses to manufacture a certain part.
Deleting processes	When you delete a process, the system prompts you to confirm the deletion.

Working With Operations

	From Product Data Management (G30), choose Daily PDM Process From Daily PDM Process (G3012), choose Enter/Change Process
---	---

After you enter a process, you must enter the process operations. These operations define the work centers and labor standards required to manufacture the process item.

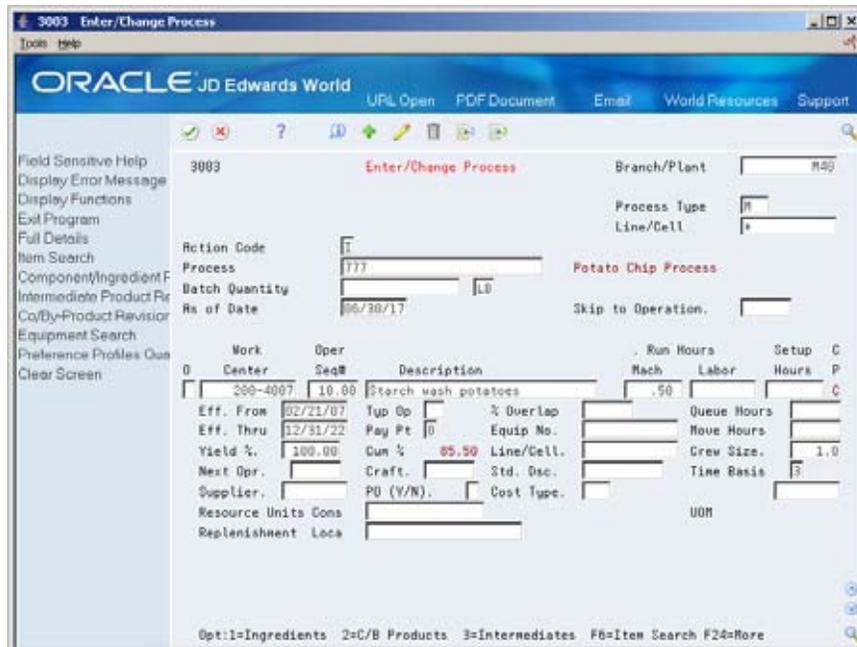
Complete the following tasks:

- Enter operations
- Enter outside operations (optional)
- Enter work center hours

To enter an operation

On Enter/Change Process

1. Access Full Details.



Work Center	Oper Seq#	Description	Mach	Labor	Setup Hours	C
200-4007	10.00	Starch wash potatoes	.50			C

2. Complete the following required fields:

- Work Center
- Operation Sequence Number

3. Complete the following optional fields:

- Description
- Effective From
- Effective Thru

- Next Operation
- Yield Percent
- Type Operation
- Pay Point
- Craft
- Percent of Overlap
- Equipment Number
- Standard Description
- Crew Size
- Time Basis
- Line/Cell

Field	Explanation
Operation Sequence No	<p>In routings, this number is used to sequence the fabrication or assembly steps in the manufacture of an item. You can track costs and charge time by operation.</p> <p>In bills of material, this number designates the routing step in the fabrication or assembly process that requires a specified component part. You define the operation sequence after you create the routing for the item. The Shop Floor Control system uses this field in the backflush/preflush by operation process.</p> <p>In engineering change orders, this number is used to sequence the assembly steps for the engineering change.</p> <p>Skip To fields allow you to enter an operation sequence that you want to begin the display of information.</p> <p>You can use decimals to add steps between existing steps. For example, use 12.5 to add a step between steps 12 and 13.</p>
Eff. From	<p>A date that indicates one of the following:</p> <ul style="list-style-type: none"> ▪ When a component part goes into effect on a bill of material ▪ When a routing step goes into effect as a sequence on the routing for an item ▪ When a rate schedule is in effect <p>The default is the current system date. You can enter future effective dates so that the system plans for upcoming changes. Items that are no longer effective in the future can still be recorded and recognized in Product Costing, Shop Floor Control, and Capacity Requirements Planning. The Material Requirements Planning system determines valid components by effectivity dates, not by the bill of material revision level. Some forms display data based on the effectivity dates you enter.</p>

Field	Explanation
Eff. Thru	<p>A date that indicates one of the following:</p> <ul style="list-style-type: none"> ▪ When a component part is no longer in effect on a bill of material ▪ When a routing step is no longer in effect as a sequence on the routing for an item ▪ When a rate schedule is no longer active <p>The default is December 31 of the default year defined in the Data Dictionary for Century Change Year. You can enter future effective dates so that the system plans for upcoming changes. Items that are no longer effective in the future can still be recorded and recognized in Product Costing, Shop Floor Control, and Capacity Requirements Planning. The Material Requirements Planning system determines valid components by effectivity dates, not by the bill of material revision level. Some forms display data based on the effectivity dates you enter.</p>
Next Operation	<p>The operation number that the current operation can simultaneously be processed with.</p>
Yield %	<p>Represents the planned output yield percent for a step. The Planned Yield Update program uses this value to update the Cumulative Percent in the bill of material and the Operation Scrap Percent in the routing. Materials Requirements Planning uses the step scrap percent and the existing component scrap percent to plan component demand.</p>
Type Operation	<p>A user defined code (system 30, type OT) that indicates the type of operation. For example:</p> <p>A Alternate routing TT Travel time IT Idle time T Text (Enter text at Description)</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>For Product Costing: Only operations with a “blank” type operation code are costed.</p>
Craft. BB	<p>A user defined code (07/G) that defines the jobs within your organization. You can associate pay and benefit information with a job type and apply that information to the employees who are linked to that job type.</p>

Field	Explanation
% Overlap	<p>The overlapping of successive operations. The actual overlap percentage entered for the operation sequence is the percent by which that operation overlaps the prior operation. For example, if you enter 80%, this indicates that work can begin on the overlapped operation when 20% of the prior operation is completed.</p> <p>Note:</p> <ol style="list-style-type: none"> 1. Overlapping has no effect on move and queue calculations. 2. The percent entered must be less than or equal to 100%. <p>Enter percents as whole numbers: 5% as 5.00</p>
Time Basis	<p>A user defined code (system 30, type TB) that identifies the time basis or rate for machine or labor hours entered for any routing step. You can set rates per unit, per 10, per 1000, and so on.</p> <p>The system uses the values in the Description-2 field on the User Defined Codes form for costing and scheduling calculations. The description is what the code represents, but is not used in calculations.</p>

To enter outside operations

On Enter/Change Process

1. Access the detail area.
2. Complete the following fields:
 - Supplier
 - Purchase Order (Y/N)
 - Cost Type

Field	Explanation
Supplier	<p>The address book number of the preferred provider of this item.</p> <p>You can enter the number for the supplier or you can have the system enter it each time that you receive the item from a supplier. You specify whether the system enters the supplier using processing options for Enter Receipts.</p> <p><i>Form-specific information</i></p> <p>The supplier can be entered in the item branch record for an item manually, or you can choose to update this field when the item is first received.</p>

Field	Explanation
PO (Y/N)	<p>Determines if the Work Order Generation program (P31410) creates a purchase order for a subcontracted operation within a routing. Valid values are:</p> <p>Y Yes, create a purchase order.</p> <p>N No, do not create a purchase order.</p>
Cost Type	<p>This code designates each element of cost for an item. An example of the coding structure is:</p> <p>A1 Purchased raw material</p> <p>B1 Direct labor routing sheet rollup</p> <p>B2 Setup labor routing sheet rollup</p> <p>C1 Variable burden routing sheet rollup</p> <p>C2 Fixed burden routing sheet rollup</p> <p>Dx Usually used for outside processing routing sheet rollup</p> <p>Xx Usually used for extra add-ons, such as electricity, water, and so forth . Up to 99 can be defined.</p> <p>The optional add-on computations usually operate with the type "X" extra add-ons. This cost structure allows you to use an unlimited number of cost components to calculate alternative cost rollups. The system then associates these cost components with one of six user defined summary cost buckets.</p>

To enter work center hours

On Enter/Change Process

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

Field	Explanation
Labor Run Hours	<p>This is the standard hours of labor expected in the normal production of this item.</p> <p>The run labor hours in the Routing Master table (F3003) are the total hours it takes the specified crew size to complete the operation. The hours are multiplied by the crew size during shop floor release and product costing.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>For Equipment/Plant:</p> <p>This is the estimated number of hours needed to complete a maintenance activity.</p>
Setup Hours	The standard setup hours you expect to incur in the normal completion of this item.

Working With Ingredients

	<p>From Product Data Management (G30), choose Daily PDM Process</p> <p>From Daily PDM Process (G3012), choose Enter/Change Process</p>
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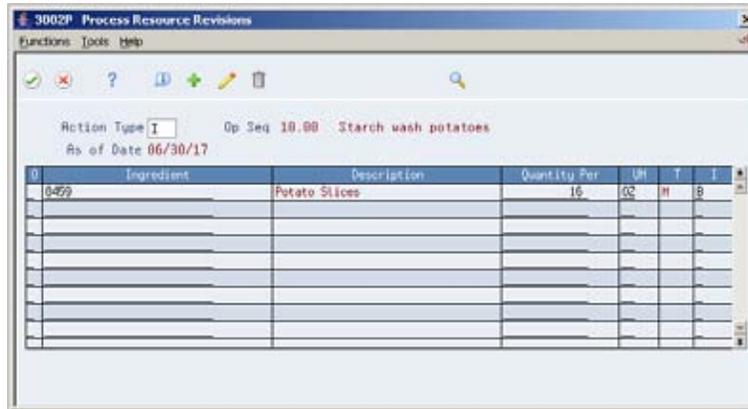
After you define operations for each process, enter the ingredients by selecting a 1 in the option field of each routing step. These are the raw materials or items that are combined during operations to produce the process item.

Complete the following tasks:

- Enter an ingredient (required)
- Enter grade and potency information
- Enter a substitute ingredient
- Enter ingredients as percent

To enter an ingredient

On Process Resource Revisions



Complete the following fields:

- Ingredient
- Quantity Per
- Unit of Measure
- Effective From
- Effective Thru
- Ingredient Branch
- Ingredient Line Number
- Operation Sequence Number
- Percent of Scrap
- Partials Allowed (Y/N)
- Line Type
- Remarks

Field	Explanation
Quantity Per	The number of units to which the system applies the transaction.
	<i>Form-specific information</i>
	The quantity of an ingredient consumed at the current step in the process.

Field	Explanation
Ingredient Branch	<p>A secondary or higher level business unit. Sometimes used to reference a branch or plant with several departments or jobs subordinate to it.</p> <p>Branch/Plant - (MMCU) Dept A - (MCU) Dept B - (MCU) Job 123 - (MCU)</p>
Line Number	<p>A number that indicates the sequence of the components on a bill of material. It initially indicates the relative sequence in which a component was added to a kit or single level bill of material. You can modify this number to change the sequence in which the components appear on the bill of material.</p> <p>Skip To fields allow you to enter a component line number that you want to begin the display of information.</p>
% of Scrap	<p>Scrap is the percentage of unusable component material created during the manufacture of a particular parent item. During DRP/MPS/MRP generation, the system increases gross requirements for the component item to compensate for the loss.</p> <p>Note: Shrink is the expected loss of parent items (and hence, components) due to the manufacturing process. Shrink and scrap are compounded to figure the total loss in the manufacture of a particular item. Accurate shrink and scrap factors can help to produce more accurate planning calculations.</p> <p>Enter percents as whole numbers: 5% as 5.0</p>
Partials Allowed (Y/N)	<p>When you specify component and substitute items on the bill of material, this field indicates whether the total quantity is required to be available or if a partial quantity available is acceptable to commit.</p> <p>Example: 100 lb of item A is available: 150 lb of item A is needed. If substitutes are not used and Partials Allowed is set to Y for item A, then the 100 lb will be committed. If substitute processing is used, substitutes will be checked next, and Partials Allowed on the substitute record will be considered.</p>

Field	Explanation
Line Type	<p>A code that controls how the system processes lines on a transaction. It controls the systems with which the transaction interfaces (General Ledger, Job Cost, Accounts Payable, Accounts Receivable, and Inventory Management). It also specifies the conditions under which a line prints on reports and is included in calculations. Codes include:</p> <p>S Stock item</p> <p>J Job cost</p> <p>N Non-stock item</p> <p>F Freight</p> <p>T Text information</p> <p>M Miscellaneous charges and credits</p> <p>W Work order</p>

To enter grade and potency information

You can enter either grade or potency information, but not both.

On Enter/Change Process

1. Choose the Ingredients option.
2. On Process Resource Revisions, access the detail area.
3. For grade information, complete the following fields:
 - From Grade
 - Thru Grade
4. For potency information, complete the following fields:
 - From Potency
 - Thru Potency

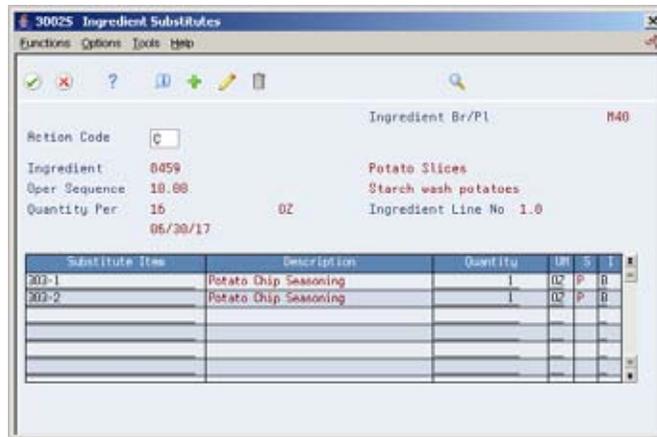
Field	Explanation
From Grade	<p>A code (system 40, type LG) that indicates the minimum grade that is acceptable for an item.</p> <p>The system displays a warning message if you try to purchase or issue items with grades that do not meet the minimum grade acceptable. The system does not allow you to sell items with grades that do not meet the minimum acceptable level.</p>

Field	Explanation
Thru Grade	<p>A code (system 40, type LG) that indicates the maximum grade that is acceptable for an item.</p> <p>The system displays a warning message if you try to purchase or issue items with grades that exceed the maximum grade acceptable. The system does not allow you to sell items with grades that exceed the maximum grade acceptable.</p>
From Potency	<p>A number that indicates the minimum potency, or percentage of active ingredients, acceptable for an item.</p> <p>The system displays a warning message if you try to purchase or issue items that do not meet the minimum acceptable potency. The system does not allow you to sell items that do not meet the minimum acceptable potency.</p>
Thru Potency	<p>A number that indicates the maximum potency, or percentage of active ingredients, that is acceptable for an item.</p> <p>The system displays a warning message if you try to purchase or issue items that have a potency that exceeds the maximum potency acceptable. The system does not allow you to sell items that have a potency that exceeds the maximum potency acceptable.</p>

To enter a substitute ingredient

On Process Resource Revisions

1. Choose the Component Substitute option.



2. On Ingredient Substitutes, complete the following fields:
 - Substitute Item
 - Substitute Item Sequence

Field	Explanation
Substitute Item Sequence Number	Indicates the sequence the substitute items for a component. The system looks for substitute items by this sequence number. For the component being substituted, set this field to zero.

What You Should Know About

Identifying substitutions	The system highlights an ingredient's item description to indicate a substitution.
Global substitutions	Use ingredient substitution for a specific process. Use item cross references for global substitutions.

To enter ingredients as percents

On Enter/Change Process

1. Complete the task to enter a process.
2. Choose the Ingredients option.
3. On Process Resource Revisions, for each ingredient, complete the following field:
 - Fixed/Variable

Field	Explanation
Fixed or Variable Quantity	<p>Indicates if the quantity per assembly for an item on the bill of material varies according to the quantity of the parent item produced or is fixed regardless of the parent quantity. This value also determines if the component quantity is a percent of the parent quantity. Valid values are:</p> <p>F Fixed Quantity</p> <p>V Variable Quantity (Default)</p> <p>% Quantities are expressed as a percentage and must total 100%</p> <p>For fixed quantity components, the Work Order and MRP systems do not extend the component's quantity per assembly value by the order quantity.</p> <p>For Process Manufacturing, the system stores percent components. Therefore, the system treats zero batch sizes like variable quantity components, and treats batch sizes greater than zero like fixed quantity components.</p>

What You Should Know About

Entering ingredients in a percent process

You can enter as many ingredients as necessary, but the sum of the percentages must equal 100%. The system uses the batch size to calculate percentages of the process for each ingredient. Verify that each ingredient can convert to the process unit of measure either by item conversion or standard unit of measure conversion. See *Defining Default Units of Measure (P41012)*.

Entering Production Information



From Product Data Management (G30), choose **Daily PDM Process**
From Daily PDM Process (G3012), choose **Enter/Change Process**

You can enter production and cost information based on demand for a specified feature.

To enter production information

On Process Resource Revisions

1. Access More Details

Ingredient	Description	Quantity Per	UM	T
1855	Potato Slices	16	02	N

Action Type: Op Seq: 10.00 Starch wash potatoes
 As of Date: 06/30/17

Eff From: 02/21/07 Op Seq: 10.00 Feat Plan %: 100.00 Line Type: S
 Thru: 12/31/22 % of Scrap: Feat Cost %: 100.00 Fixed/Var Qty: V
 Leadtime Offset Days: From Potency: From Grade:
 Rev: Thru Potency: Thru Grade:
 Ingredient Branch: H40 Partials Allowed (Y/N): Y
 Ingredient Line Number: 1.0 Operation Scrap Percent: 16.96

2. Complete the following fields:

- Issue Type
- Leadtime Offset
- Feature Plan Percent
- Feature Cost Percent

Field	Explanation
Issue Type Code	<p>A code that defines how the system issues each component in the bill of material from stock. In shop floor control, it indicates how the system issues a part to a work order. Valid codes are:</p> <p>I Manual issue (default) F Floor stock (no issue) B Backflush (when part is reported as complete) P Preflush (when parts list is generated) U Super backflush (at pay-point operation) S Sub-contract item (send to supplier)</p> <p>Blank Shippable end item</p> <p>You can issue a component in more than one way within a specific branch/plant by using a different code on the bill of material and work order parts list. The bill of material code overrides the branch/plant value.</p>
Leadtime Offset Days	<p>Indicates the number of days a part is needed before or after the start date of a manufacturing work order. The system adds the lead time offset days for the part to the start date of the work order to determine the actual date the part is required. To indicate that a part is needed prior to the work order start date, enter the days as a negative number. To indicate how many days after the work order start date that the part is required, enter a positive number.</p>
Feature Plan %	<p>The percentage of demand for a specified feature based on projected sales. For example, a company might sell 35% of their computers with a standard keyboard and 65% of them with an extended keyboard, based on customer demand.</p> <p>The Material Planning system uses this percentage to accurately plan for a feature's component items. Enter percents as whole numbers: 5% as 5.0. The default value is 100%.</p>
Feature Cost %	<p>A percentage used by the Simulate Cost Rollup program to calculate the cost of a feature or option item as a percentage of the total cost of the parent.</p> <p>Enter the percentage as a whole number: 5% as 5.0</p> <p><i>Form-specific information</i></p> <p>This value is used in Cost Rollup to calculate what percent of the cost, up to and including the operation, that the co-/by-product comes out of, is apportioned to the co-/by-products at that step.</p> <p>The total of all percentages at an operation cannot exceed 100%. The total of all percentages at the last operation must equal 100%.</p>

Entering Co-/By-Products



From Product Data Management (G30), choose **Daily PDM Process**
From Daily PDM Process (G3012), choose **Enter/Change Process**

Many process steps create more than one output. You can enter co-products, which are usually the main products that companies sell to customers, or by-products, which are produced as a residual item to the process steps. Enter co-/by-products by selecting a 2 in the option field of each routing step.

Note: If you are entering co-/by-products for a batch process, verify that the ratio of the co-/by-products is the same for each batch quantity. For example, if a batch process with a batch quantity of 10 produces 10 each of a co-/by-product, then a batch quantity of 20 must produce 20 each of the co-/by-product.

To enter co-/by-products

On Process Resource Revisions

C	Co/By Product	Description	Output Qty	U	T
C	2015	Waste Water	20		H

Complete the following fields:

- Co or By designator
- Co/By Product
- Output Quantity
- Unit of Measure
- Co-/By-Product Branch
- Feature Cost Percent
- Resource Percent
- Operation Sequence Number
- Co-/By-Product Line Number
- Remarks

Field	Explanation
Co/By-Product/Intermediate	<p>Distinguishes standard components or ingredients from co-products, by-products and intermediates. Valid values are:</p> <p>C Co-products are (concurrent) end items as the result of a process.</p> <p>B By-products are items that can be produced at any step of a process, but were not planned for.</p> <p>I Intermediate products are items that are defined as a result of a step but are automatically consumed in the following step. Generally, intermediates are non-stock items and are only defined steps with a pay-point for reporting purposes.</p> <p>blank Standard components (Discrete Manufacturing) or ingredients (Process) consumed during the production process.</p>
Resource %	<p>If this option is chosen, this value indicates what percent of the ingredients should be issued separately to co-products and by-products.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>This is used to issue ingredients separately to co-/by-products at work order completion, rather than a total issue for each ingredient.</p> <p>For co-/by-products at the final operation, their resource percent must equal 100 to issue all ingredients.</p>

Entering Intermediates

	<p>From Product Data Management (G30), choose Daily PDM Process</p> <p>From Daily PDM Process (G3012), choose Enter/Change Process</p>
---	--

Intermediates allow you to track the quantity of output of any operation in a work center at a specific time. You can set up one intermediate per operation, but you cannot define an intermediate for the last operation.

To enter intermediates

On Enter/Change Process

1. Choose the intermediates option 3.



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

- Intermediate Product
- Output Quantity
- Unit of Measure
- Effective From
- Effective Thru
- Operation Sequence Number
- Line Type
- Remark
- Fixed/Variable Quantity

Batch Bills

Processes may also be defined in batch quantities. The main difference is that the quantity of the co and by-products produced is considered fixed for the batch.

Batch bills must have co and by-products defined in the same ratio as other batch bills and the '0' bill.

Processing Options

See [Routing Master Revisions \(P3003\)](#).

Working With Text

You can create text for a process and attach this text to the work order parts list and work order routing. Attached text is indicated by a highlight on the form.

You can locate the text on the following forms within the Shop Floor Control system:

- Work Order Parts List

- Routing Revisions
- Rate Based Hours Entry
- Rate Based Inventory Issues

When you locate the text on any of these forms, the text is unique to the parts list, routing, rate based schedule or inventory. You can change the text and it will not impact the text originally entered on the process.

You can create separate generic text for the different batch processes of a parent item.

Working with text consists of the following:

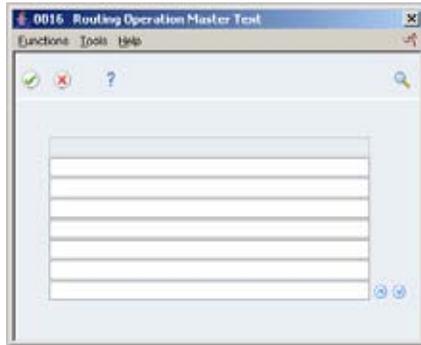
- Entering text
- Copying text models
- Reviewing user information

To enter text

On Enter/Change Process

1. Access the Text option.

On Routing Operation Master Text



2. Type the text and press Enter.

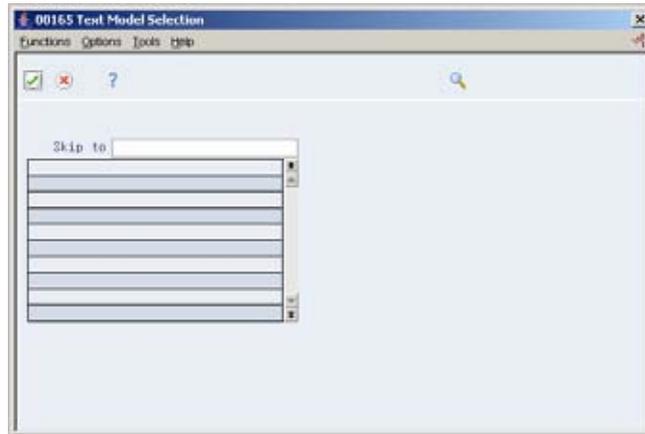
To revise the text

On Routing Operation Master Text

1. Press F9 to delete a line.
2. Press F8 to insert a line.
3. Press Enter to save your revisions.

To copy generic text models

On Routing Operation Master Text, choose Select Model Memo



Select a model.

To review user information

On Routing Operation Master Text, choose Display User & Date of Entry & Update



See Also

- *Attaching Parts List in the Shop Floor Control Guide.*
- *Attaching the Routing in the Shop Floor Control Guide.*
- *Creating Rate Schedules in the Shop Floor Control Guide.*
- *Issuing Materials in the Shop Floor Control Guide.*

Updating Component Scrap

	From Product Data Management (G30), enter 27 From Advanced Product Data Management (G3031), choose Planned Yield Update
---	---

During manufacturing, material loss often occurs during operations. Examples of loss include evaporation or items damaged during move time. You can update the amount of materials and labor hours to account for operation loss by using Planned Yield Update.

For the operations you choose, this program uses the Operational Planned Yield Percent value to update the Cumulative Percent for the bill of material, and the Operation Scrap Percent on the routing. For example:

Step	Operational Planned Yield %	Cumulative Planned Yield %	Operation Scrap %
40	80%	80%	$(100\%/80\%) - 100\% = 25\%$
30	90%	$80\% \times 90\% = 72\%$	$(100\%/72\%) - 100\% = 39\%$
20	100%	$72\% \times 100\% = 72\%$	$(100\%/72\%) - 100\% = 39\%$
10	95%	$72\% \times 95\% = 68\%$	$(100\%/68\%) - 100\% = 25\%$

Value	Description
Operational Planned Yield Percent	<p>You enter this value on Enter/Change Routing.</p> <p>This value represents the planned output yield percent for a step. The system uses this value to adjust the operation scrap percent for the components at that step. This enables the MRP system to use the step scrap percent along with the existing component scrap percent to plan component demand.</p>
Operation Scrap Percent	<p>The system updates this value on Enter/Change Bill of Material.</p> <p>This value represents the expected scrap at each operation. The system calculates this value by compounding the yield percentages from the last operation to the first operation.</p> <p>The system uses this value to increase or decrease the amount of materials to account for loss within the operation.</p>
Cumulative Planned Yield Percent	<p>The system updates this value on Enter/Change Routing.</p> <p>This value represents the item quantity that an operation is expected to produce. It is the ration of usable output to input quantity. This value can be less than 100% due to loss at one or more operations.</p> <p>The system uses this value to increase or decrease the amount labor hours needed to make up for loss within the operation.</p>

Changing Multiple Processes



From Product Data Management (G30), enter 27
From Advanced Product Data Management (G3031), choose **Where Used Update**

You can change multiple processes, for example to replace an old ingredient with a new one. Use **Where Used Update** to change the processes and print a report that indicates the changes. You can use this program to perform mass updates such as:

- Replacing one ingredient with another
- Deleting a process item
- Changing effectivity dates for a process item
- Changing the quantity per assembly value for a process item
- Changing the Issue Type Code
- Changing the unit of measure

Use the Data Selection to specify the process items you want to change and define the change with processing options. This program finds all occurrences of the item (as an ingredient) in the Bill of Material table and updates the process. You can also update an ingredient that has past or future effectivity dates.

You can run this program in either proof or final mode. In proof mode, the system generates a report of the proposed changes for your review but doesn't update the data. In final mode, the system generates a report that lists the changes and updates the data according to your choices.

Caution: This program can potentially change many processes in your system at the same time. Therefore, JD Edwards World recommends that you run it in proof mode first to verify your choices before running it in final mode to change the data. You might want to restrict access to this program.

Before You Begin

- Review your process to verify that the item you are updating is active (within the effectivity dates) and appears in at least one process. See *Reviewing Processes*.

What You Should Know About

Changing and deleting

If you want to make changes to a process and remove the old records, run the program twice. First, create the new records and then delete the old ones.

Change limitations

These changes are stored in the Bill of Material table only. Existing parts lists, MRP calculations, and costing information is not automatically updated.

The program updates the following fields:

- Low Level Code in the Item Master table
- Net Change Flag in the Item Balance table.

Processing Options

See [Where Used BOM Update \(P30520\)](#).

Where Used Update Report

This report indicates that for item 212 the quantity per assembly was changed from 2 to 10, and the issue type code changed from I to B, effective on 12/14/17.

30520		JD Edwards World		Page - 1			
		Where Used BOM Update		Date - 12/14/17			
Parent Item	Parent Description	Component Item	Component Description	I	Qty. Per	From	Effective Thru
333	OAK SHELF UNIT	212	OAK SHELF SIDES	I	2	09/13/13	12/31/20
	Updated to:			B	10	12/14/13	12/31/20

Verifying Processes

From Product Data Management (G30), enter 27
From Advanced Product Data Management (G3031), choose **Integrity Analysis**

To check your processes for low level codes and product structure errors (where a process item is listed as an ingredient of itself), use the Integrity Analysis program.

This program generates a report that identifies any processes you need to correct. If the report indicates errors, you should correct the processes and run the Integrity Analysis program again. When the program does not find errors in the processes, it updates the low level codes in both the Item Master and the Branch/Plant tables.

Note: JD Edwards World recommends that you run the Integrity Analysis program immediately after a data conversion, such as system startup, and then on a periodic basis, such as two or four times a year. You should also run the Integrity Analysis program before running the Simulated Cost Rollup or DRP/MPS/MRP Generation programs.

What You Should Know About

- Verifying processes online** There is an alternate procedure to running the Integrity Analysis. You can activate online validation in Manufacturing Constants so that the system validates process items as you enter them. In this procedure, the system does not allow you to enter recursive ingredients. An error message is displayed and you will not be able to enter a parent process item as an ingredient of itself.
- The program runs when selected from the menu. There are no processing options or data selection. Users should be restricted from F4101, F4102, and F3002 while the program runs. Review the report and correct any errors. Run the report again until no errors appear and the report indicates that the low-level codes are reset.

See Also

- *Setting Up Manufacturing Constants (P3009)*

Integrity Analysis Report With Errors

30601	JD Edwards World	Page	-	2
	Bill of Material Analysis	Date	-	4/08/17
Parent Item	Parent Description	Parent Branch		
Component Item	Component Description	Comp Branch	Seq	Error Message

00007270 was not found in the Item Master file (F4101)				
Structure Analysis Completed with Errors - Correct Errors and Submit Again.				
** Caution ** Low Level Codes have not been adjusted. Report must be rerun!!				

Integrity Analysis Report Without Errors

30601	JD Edwards World	Page	-	2
	Bill of Material Analysis	Date	-	4/08/17
Parent Item	Parent Description	Parent Branch		
Component Item	Component Description	Comp Branch	Seq	Error Message

Product Structure Contains NO Errors.				
All Low Level Codes have been adjusted.				

Review Processes

Reviewing Processes

You can review processes to:

- Plan and research ECOs
- Perform “what if” scenarios such as “If I change the ingredient, what processes are affected?”
- Evaluate capacity, manpower, and resources
- Evaluate equipment needs
- View the results of a pending product change
- Determine the effect of an item shortage

This section contains the following:

- [Locating Processes](#)
- [Printing Process Information](#)

What You Should Know About

Ingredient usability

Ingredient usability is a format you can set with processing options for the review programs. When you locate an ingredient, the forms display processes that use the ingredient, as well as the producible quantity of each. You can also enter an ingredient quantity and the system displays the amount of process item that can be produced using that ingredient quantity. The ingredient usability format also allows you to create a work order or view the item availability for the selected process item and quantity.

Viewing batch bills

When you have defined several batch processes for an item, the system displays them by batch size in a separate window. You must choose one to work with.

Generating reports

JD Edwards World recommends that you do not change the data item sequence for the reports.

Quantity per mode

The system displays the ingredients required for the process item requirements, but does not extend the calculations to the ingredients. The process item in this example would require 2 Ingredient X, 1 Ingredient Y, and 2 Ingredient Z, calculated by totaling each level of ingredients separately.

Extended quantity mode The system factors the relationship between the levels of ingredients into the totals. It explodes the ingredient requirements down to the lowest level. Since each Ingredient X requires 2 of Ingredient Z, the process item would require 4 Ingredient Z.

Bill Comparison When comparing bills of material, components are summarized by work center or item. This is done at a single level or multiple levels.

Locating Processes

Locating processes consists of the following tasks:

- Locating ingredients
- Locating where an ingredient is used
- Locating a co-/by-product
- Locating where a co-/by-product is produced
- Locating resources
- Locating process instructions

To locate ingredients



From Product Data Management (G30), choose **Daily PDM Process**
From Daily PDM Process (G3012), choose **Ingredients Inquiry**

On Ingredients Inquiry

0 Level	Ingredient	Description	Quantity Per	UM	T Line
1	8459	Potato Slices	16	OZ M	1.0
1	522	Frying Oil	30	OZ P	4.0
1	303	Potato Chip Seasoning	1	OZ P	5.0
1	938	Nitrogen	300	CI P	6.0

Complete the following fields:

- Branch/Plant
- Process/Item
- Mode
- Requested Quantity
- As of
- Skip to

Field	Explanation
Mode	<p>Indicates the display mode for the bill of material.</p> <p>1 Single Level Bill of Material. Shows level one (direct) components only.</p> <p>2 Multi-Level Bill of Material. Shows all levels of components, with proximity to the parent item indicated by level 1, 2, 3, and so forth.</p> <p>3 Indented Bill of Material. The multi-level bill of material with each level indented for differentiation.</p> <p>You can also set this value in the processing options.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>You can set the processing options to automatically enter the mode number that you use the most.</p>
As of	<p>An X in this field will display the remark, time and return date for the address number entered above.</p>

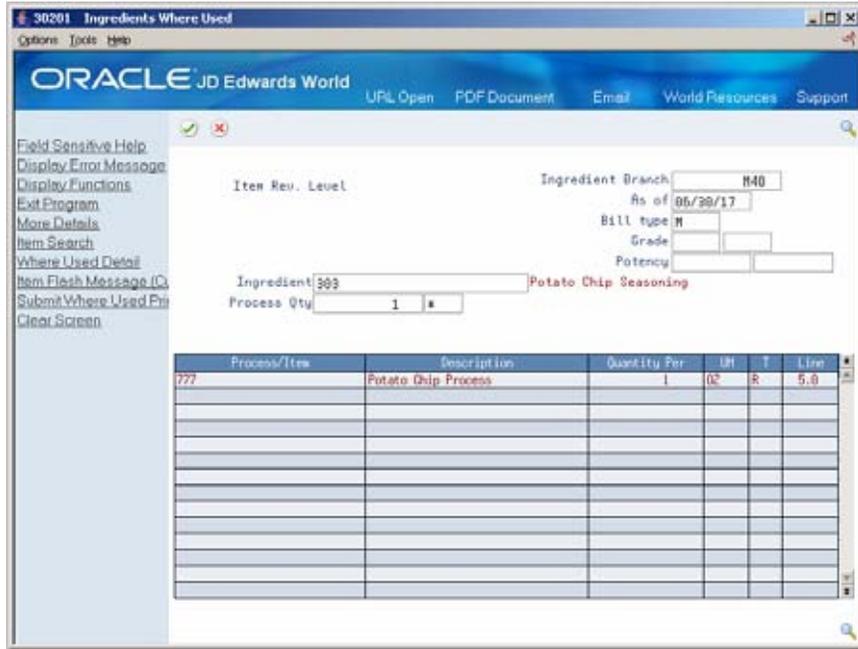
Processing Options

See [Bill of Material Inquiry \(P30200\)](#).

To locate where an ingredient is used

	From Product Data Management (G30), choose Daily PDM Process From Daily PDM Process (G3012), choose Ingredients Where Used
---	---

On Ingredients Where Used



Process/Item	Description	Quantity Per	UH	T	Line
777	Potato Chip Process	1	DC	R	5.0

1. Complete the following required fields:
 - Ingredient Branch
 - Ingredient
2. Complete the following optional fields:
 - As of
 - Bill Type
 - Process Quantity
 - Grade
 - Potency

Field	Explanation
Bill Type	<p>A user defined code (system 40, type TB), that designates the type of bill of material. You can define different types of bills of material for different uses. For example:</p> <p>M (Default) Standard manufacturing bill</p> <p>RWK Rework bill</p> <p>SPR Spare parts bill</p> <p>The system enters bill type M in the work order header when you create a work order, unless you specify another bill type. The system reads the bill type code on the work order header to know which bill of material to use to create the work order parts list. MRP uses the bill type code to identify the bill of material to use when it attaches MRP messages. Batch bills of material must be type M for shop floor control, product costing, and MRP processing.</p>

Processing Options

See [Where Used Inquiry \(P30201\)](#).

To locate a co-/by-product



From Product Data Management (G30), choose **Daily PDM Process**
From Daily PDM Process (G3012), choose **Co-/By-Products Inquiry**

On Co-/By-Products Inquiry

C	B	Co/By-Product	Description	Output Qty	UH	T	Line
C	5215		Waste Water		02	H	1.0
B	5215		Waste Water	9	02	H	1.0
B	5215		Waste Water	9	02	H	2.0
C	7771		Potato Chips	14	02	H	4.0
B	5225		Used Frying Oil	1	02	H	3.0

Complete the following required fields:

- Process Branch/Plant
- Process

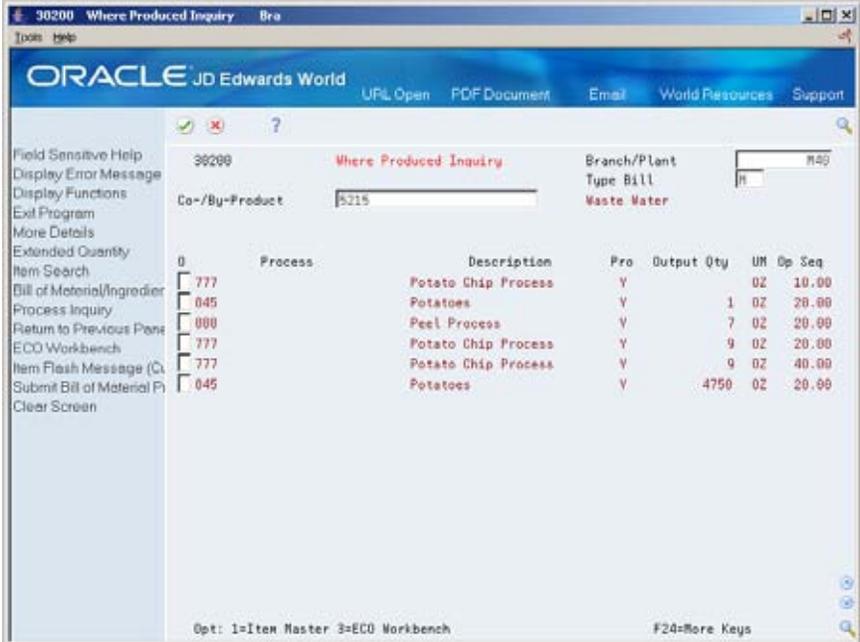
Processing Options

See [Co-/By-Products Produced by Process \(P30201\)](#).

To locate where a co-/by-product is produced

	From Product Data Management (G30), choose Daily PDM Process From Daily PDM Process (G3012), choose Where Produced Inquiry
---	---

On Where Produced Inquiry



Process	Description	Pro	Output Qty	UM	Op Seq
777	Potato Chip Process	Y		02	10.00
045	Potatoes	Y	1	02	20.00
080	Peel Process	Y	7	02	20.00
777	Potato Chip Process	Y	9	02	20.00
777	Potato Chip Process	Y	9	02	40.00
045	Potatoes	Y	4750	02	20.00

Complete the following required fields:

- Branch/Plant
- Co/By Product

Processing Options

See [Co-/By-Product Where Produced Inquiry \(P30200\)](#).

To locate resources

	From Product Data Management (G30), choose Daily PDM Process From Daily PDM Process (G3012), choose Resources Inquiry
---	--

On Resources Inquiry

30240 Resources Inquiry

ORACLE JD Edwards World

URL Open PDF Document Email World Resources Support

Field Sensitive Help
Display Error Message
Display Functions
Exit Program
Process Revisions
Ingredient Revisions
Intermediate Product R
Co/By Product Revision
Intermediate Item Displ
Previous Operation
Next Operation
Clear Screen

30240 Resources Inquiry Branch/Plant R40
Routing Type R

Process 777 Potato Chip Process
Batch Quantity
Skip to Oper Seq

Work	Oper	Description	Machine	Run Hours	Setup Hours	T
Unit	Seq No			Labor	Hours	B

Ingredients	Description	Quantity Per	UM	ST

F5=Revisions F15=Intermediate F19/F20=Preu/Next Oper F24=More Keys

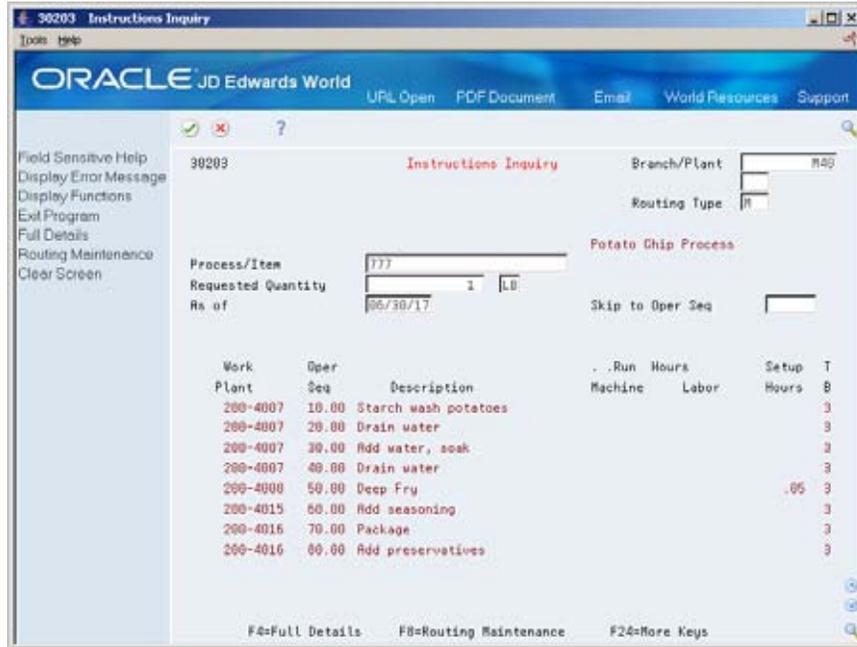
Complete the following required fields:

- Business Unit
- Process

To locate process instructions

	From Product Data Management (G30), choose Daily PDM Process From Daily PDM Process (G3012), choose Instructions Inquiry
---	---

On Instructions Inquiry



Field Sensitive Help
Display Error Message
Display Functions
Exit Program
Full Details
Routing Maintenance
Clear Screen

30203 Instructions Inquiry Branch/Plant
Routing Type
Potato Chip Process
Skip to Oper Seq

Process/Item
Requested Quantity LB
As of

Work Plant	Oper Seq	Description	.Run Hours Machine	Labor	Setup Hours	T
200-4007	10.00	Starch wash potatoes				3
200-4007	20.00	Drain water				3
200-4007	30.00	Add water, soak				3
200-4007	40.00	Drain water				3
200-4000	50.00	Deep Fry			.05	3
200-4015	60.00	Add seasoning				3
200-4016	70.00	Package				3
200-4016	80.00	Add preservatives				3

F4=Full Details F8=Routing Maintenance F24=More Keys

Complete the following required fields:

- Branch/Plant
- Process/Item

The following fields display lead time information:

- Machine Hours
- Labor Hours
- Setup Hours

Field	Explanation
Machine Run Hours	This is the standard machine hours expected to be incurred in the normal production of this item.
Labor Run Hours	This is the standard hours of labor expected in the normal production of this item. The run labor hours in the Routing Master table (F3003) are the total hours it takes the specified crew size to complete the operation. The hours are multiplied by the crew size during shop floor release and product costing.
Setup Setup	The standard setup hours you expect to incur in the normal completion of this item.

Comparing Processes



From Product Data Management (G30), choose **Daily PDM Process**
From Daily PDM Process (G3012), choose **Ingredient Comparison**

Use Ingredient Comparison to compare the ingredients in two processes. The program displays all the ingredients of both processes, or only those components different between the two.

To compare processes

On Ingredient Comparison

Work Center	Item Number	Qty Item 1	UM T Qty Item 2	UM T
200-4004	8459	3 02 M	0	
200-4007	8459	0 02	16 02 M	
200-4008	522	0 02	30 02 P	
200-4015	303	0 02	1 02 P	
200-4016	930	0 CI	300 CI P	

Complete the following fields:

- All/Different
- Mode
- Process 1
- Process 2

Field	Explanation
All/Diff	Display All records or those that have Differences.

Field	Explanation
Mode	Indicates the display mode for the bill of material comparison. 1 Single Level Bill of Material comparison (direct components only). 2 Multi-Level Bill of Material comparison (All levels of components). You can also set this value in processing option.
Item Number	A number that the system assigns to an item. It can be in short, long, or 3rd item number format.

Processing Options

See [Bill of Material Comparison \(P30204\)](#).

Printing Process Information

There are several reports you can generate to review bill of material information.

You can print process information in single, multi, and multi-level indented formats. Specify a process and print the ingredients for that process. If there is more than one process (in the case of different batch sizes), the program prints each process separately.

These reports include:

- Single Level Ingredient Report
- Multi-Level Ingredient Report
- Where Used Ingredient Report
- Ingredient Comparison Report
- Process Information
- Process Instructions

Single Level Ingredient Report



From Product Data Management (G30), choose **Periodic PDM Process**
 From Periodic PDM Process (G3022), choose **Single Level Ingredient**

30410		JD Edwards World		Page	-		2					
		Bill of Material		Date	-		4/10/17					
		Single Level										
Process	Process Description	Branch/Plant	Batch Quantity	. . . Effective . . .			Oper	O	Ln			
Ingredient	Ingredient Description		Quantity Per	UM	T	From	Thru	Level	Seq No	R	F	Ty
845	Potatoes	M40		LB	Type	M	Rev	Draw				
745	Potatoes	M40	5000	LB	P	02/21/15	12/31/20	1	10.00			S
845	Potatoes	M40	5000	LB	Type	M	Rev	Draw				
745	Potatoes	M40	1	LB	P	02/21/15	12/31/20	1	10.00			S
222	Hash Brown Process	M40		OZ	Type	M	Rev	Draw				
8459	Potato Slices	M40	3	OZ	M	02/20/15	12/31/20	1	10.00			S
777	Potato Chip Process	M40		LB	Type	M	Rev	Draw				
8459	Potato Slices	M40	16	OZ	M	02/21/15	12/31/20	1	10.00			S
522	Frying Oil	M40	30	OZ	P	02/21/15	12/31/20	1	50.00			S
303	Potato Chip Seasoning	M40	1	OZ	P	02/21/15	12/31/20	1	60.00			S
938	Nitrogen	M40	300	CI	P	02/21/15	12/31/20	1	80.00			S
888	Peel Process	M40		LB	Type	M	Rev	Draw				
8451	Food Grade Potato	M40	1	LB	M	02/20/15	12/31/20	1	10.00			S
200	Ethanol Process	M40		GA	Type	M	Rev	Draw				
8452	Non-Food Grade Potato	M40	3	LB	M	02/21/15	12/31/20	1	10.00			S
5215	Waste Water	M40	32	OZ	M	02/21/15	12/31/20	1	20.00			S
2468	Yeast	M40	4	OZ	P	02/21/15	12/31/20	1	40.00			S
246	Enzymes	M40	6	OZ	P	02/21/15	12/31/20	1	50.00			S
809	Contaminant	M40	4	OZ	P	02/21/15	12/31/20	1	80.00			S
8455	Peelings	M40	16	OZ	M	02/22/15	12/31/20	1	10.00			S

Processing Options

See [Single Level Bill of Material \(P30410\)](#).

Multi-Level Ingredient Report



From Product Data Management (G30), choose **Periodic PDM Process**
 From Periodic PDM Process (G3022), choose **Multi Level Ingredient**

30415		JD Edwards World		Page	-		2					
		Bill of Material		Date	-		4/10/17					
		Multi-Level										
Process	Process Description	Branch/Plant	Batch Quantity	. . . Effective . . .			Oper	O	Ln			
Ingredient	Ingredient Description		Quantity Per	UM	T	From	Thru	Level	Seq No	R	F	Ty
845	Potatoes	M40		LB	Type	M	Rev	Drawing				
745	Potatoes	M40	5000	LB	P	02/21/15	12/31/20	1	10.00			S
845	Potatoes	M40	5000	LB	Type	M	Rev	Drawing				
745	Potatoes	M40	1	LB	P	02/21/15	12/31/20	1	10.00			S
222	Hash Brown Process	M40		OZ	Type	M	Rev	Drawing				
8459	Potato Slices	M40	3	OZ	M	02/20/15	12/31/20	1	10.00			S
777	Potato Chip Process	M40		LB	Type	M	Rev	Drawing				
8459	Potato Slices	M40	16	OZ	M	02/21/15	12/31/20	1	10.00			S
522	Frying Oil	M40	30	OZ	P	02/21/15	12/31/20	1	50.00			S
303	Potato Chip Seasoning	M40	1	OZ	P	02/21/15	12/31/20	1	60.00			S
938	Nitrogen	M40	300	CI	P	02/21/15	12/31/20	1	80.00			S
888	Peel Process	M40		LB	Type	M	Rev	Drawing				
8451	Food Grade Potato	M40	1	LB	M	02/20/15	12/31/20	1	10.00			S
200	Ethanol Process	M40		GA	Type	M	Rev	Drawing				
1234		M40	0			02/22/15	12/31/20	1	50.00			N
5215	Waste Water	M40	32	OZ	M	02/21/15	12/31/20	1	20.00			S
2468	Yeast	M40	4	OZ	P	02/21/15	12/31/20	1	40.00			S
246	Enzymes	M40	6	OZ	P	02/21/15	12/31/20	1	50.00			S
809	Contaminant	M40	4	OZ	P	02/21/15	12/31/20	1	80.00			S
8455	Peelings	M40	16	OZ	M	02/22/15	12/31/20	1	10.00			S

Processing Options

See [Multi-Level Bill of Material \(P30415\)](#).

Ingredient Where Used Report

	From Product Data Management (G30), choose Periodic PDM Process From Periodic PDM Process (G3022), choose Where Used Ingredient
---	--

The Where Used Ingredient report shows all processes that use a specific ingredient.

Ingredient Process		Ingredient Description Process Description		Plant	Drawing Number	Quantity Per	UM	T	From	Thru	Effective Level	Oper Seq No	O R F Ty
30420 JD Edwards World Material Where Used Page - 2 Date - 4/10/17													
8459		Potato Slices		M40									
222		Hash Brown Process		M40	3	OZ	R		02/20/15	12/31/20	.2	10.00	S
Type M	Leadtime Lvl	Drawing		Batch Qty					Grade -	Potency -			
2221		Hash Brown Potatoes		M40	0	OZ	M		OZ Offset	Revision 1		50.00	S
Type M	Leadtime Lvl	Drawing		Batch Qty					Grade -	Potency -			
3									OZ Offset	Revision		ME Rev	
8459		Potato Slices		M40									
777		Potato Chip Process		M40	16	OZ	R		02/21/15	12/31/20	..4	10.00	S
Type M	Leadtime Lvl	Drawing		Batch Qty					Grade -	Potency -			
5215		Waste Water		M40	0	LB	M		LB Offset	Revision		20.00	S
Type M	Leadtime Lvl	Drawing		Batch Qty					Grade -	Potency -			
200		Ethanol Process		M40	9	OZ	Offset			Revision		ME Rev	
Type M	Leadtime Lvl	Drawing		Batch Qty					32	OZ R	02/21/15	12/31/20	.2
2001		Ethanol		M40	0	GA	M		Grade -	Potency -		90.00	S
Type M	Leadtime Lvl	Drawing		Batch Qty					1	GA Offset		Revision	ME Rev
1													
8459		Potato Slices		M40									
777		Potato Chip Process		M40	16	OZ	R		02/21/15	12/31/20	..4	10.00	S
Type M	Leadtime Lvl	Drawing		Batch Qty					Grade -	Potency -			
5215		Waste Water		M40	0	LB	M		LB Offset	Revision		ME Rev	
Type M	Leadtime Lvl	Drawing		Batch Qty					Grade -	Potency -		20.00	S
200		Ethanol Process		M40	9	OZ	Offset			Revision		ME Rev	
Type M	Leadtime Lvl	Drawing		Batch Qty					32	OZ R	02/21/15	12/31/20	.2
2381		Potato solids		M40	0	GA	M		Grade -	Potency -		60.00	S
Type M	Leadtime Lvl	Drawing		Batch Qty					1	GA Offset		Revision	ME Rev
50													
8459		Potato Slices		M40									
777		Potato Chip Process		M40	16	OZ	R		02/21/15	12/31/20	.2	10.00	S
Type M	Leadtime Lvl	Drawing		Batch Qty					Grade -	Potency -			
7771		Potato Chips		M40	0	LB	M		LB Offset	Revision		ME Rev	
Type M	Leadtime Lvl	Drawing		Batch Qty					Grade -	Potency -		80.00	S
14									OZ Offset	Revision		ME Rev	
8459		Potato Slices		M40									
777		Potato Chip Process		M40	16	OZ	R		02/21/15	12/31/20	.2	10.00	S
Type M	Leadtime Lvl	Drawing		Batch Qty					Grade -	Potency -			
5225		Used Frying Oil		M40	0	LB	M		LB Offset	Revision		ME Rev	
Type M	Leadtime Lvl	Drawing		Batch Qty					Grade -	Potency -		50.00	S
1									OZ Offset	Revision		ME Rev	
8452		Non-Food Grade Potato		M40									
200		Ethanol Process		M40	3	LB	R		02/21/15	12/31/20	.2	10.00	S

Processing Options

See [Material Where Used List \(P30420\)](#).

Ingredient Comparison Report



From Product Data Management (G30), choose **Periodic PDM Process**
 From Periodic PDM Process (G3022), choose **Ingredient Comparison**

Use the Ingredient Comparison report to compare two bills of material. The report prints all the components of both bills of material or only those components different between the two.

30425	JD Edwards World		Page - 3
Process 1 777	Bill Of Material Comparison		Date - 4/08/17
Potato Chip Process	Process 2 200	Ethanol Process	All/Diff. D
Batch Quantity	Batch Quantity	Batch Quantity	Mode. 1
Branch/Plant M40	Branch/Plant M40	Branch/Plant GA	
As of. 04/08/17	As of. 04/08/17	As of. 04/08/17	
Bill Type. M	Bill Type. M	Bill Type. M	

Work Center	Ingredient	Description	Process 1 Quantity Per	UM	T	Process 2 Quantity Per	UM	T
	522	Frying Oil	30	OZ	P			
	303	Potato Chip Seasoning	1	OZ	P			
	938	Nitrogen	300	CI	P			
	8455	Peelings				16	OZ	M
	246	Enzymes				6	OZ	P
	2468	Yeast				4	OZ	P
	5215	Waste Water				32	OZ	M
	8459	Potato Slices	16	OZ	M			
	8452	Non-Food Grade Potato				3	LB	M
	809	Contaminant				4	OZ	P

Processing Options

See [Bill of Material Comparison Print \(P30425\)](#).

Process Report



From Product Data Management (G30), choose **Periodic PDM Process**
 From Periodic PDM Process (G3022), choose **Process Report**

30430	JD Edwards World		Page - 2
	Standard Routing Information		Date - 4/10/17

Item Number	Plan	Run Hours	Setup	Move	Instruct	T	Effective
Work Center	Seq #	Description	Yield	Machine	Labor	% Ovp	Hours
777	Potato Chip Process		Batch Quantity	Branch	M40	Type of Routing.	M
			RRL.. Drawing #..	Leadtime Lvl..			
200-4007	10.00	Starch wash potatoe	100.00	.50	.04	1.0	3 02/21/15 12/31/20
	20.00	Drain water	100.00			1.0	3 02/21/15 12/31/20
	30.00	Add water, soak	100.00	.50		1.0	3 02/21/15 12/31/20
	40.00	Drain water	100.00		.04	1.0	3 02/21/15 12/31/20
200-4008	50.00	Deep Fry	90.00	.05	.05	.05	3 02/21/15 12/31/20
200-4015	60.00	Add seasoning	100.00		.02	1.0	3 02/21/15 12/31/20
200-4016	70.00	Package	95.00	.04		1.0	3 02/21/15 12/31/20
	80.00	Add preservatives	100.00	.01		1.0	3 02/21/15 12/31/20
200	Ethanol Process		Batch Quantity	Branch	M40	Type of Routing.	M
			RRL.. Drawing #..	Leadtime Lvl..			
200-4004	10.00	Grate potatoes with	100.00	.08		.10	3 02/21/15 12/31/20
	20.00	Add liquids from ot	100.00		.10	1.0	3 02/21/15 12/31/20
200-4011	30.00	Transfer liquid to	100.00		.20	1.0	3 02/21/15 12/31/20
	40.00	Add yeast killer	100.00		.01	1.0	3 02/21/15 12/31/20
200-4013	50.00	Transfer to ferment	100.00	96.00		1.0	3 02/21/15 12/31/20
200-4012	60.00	Separate solids fro	100.00		1.00	1.0	3 02/21/15 12/31/20
200-4014	70.00	Distillation of liq	100.00	24.00		1.0	3 02/21/15 12/31/20
	80.00	Add contaminants	100.00		.30	1.0	3 02/21/15 12/31/20
200-4016	90.00	Move to bulk storag	100.00		1.00	1.0	3 02/21/15 12/31/20

Instructions Report

	From Product Data Management (G30), choose Periodic PDM Process From Periodic PDM Process (G3022), choose Instructions Report
---	--

30435	JD Edwards World		Page	-	2
	Process Report		Date	-	4/10/17
Process 200 Ethanol Process Batch Quantity . . GA Branch/Plant . . . M40 Typ M					
Oper	Work		. . Run Hours . .	Setup	T Plan Ty . . Effective . .
Seq#	Center	Description	Machine Labor Hours	Hours	B Yield Op From Thru
-----	-----	-----	-----	-----	-----
10.00	200-4004	Grate potatoes with water	.08	.10	3 100.00 02/21/15 12/31/20
Ingredient Description Quantity Per UM T Line Branch . . Effective . . ----- From Thru					
-	8452	Non-Food Grade Potato		3 LB M 1.0	M40 02/21/15
12/31/20	From Grade A04 Thru Grade A04			Feat Plan % 100.00	Feat Cost % 100.00
	8455	Peelings		16 OZ M 6.0	M40 02/22/15
12/31/20				Feat Plan % 100.00	Feat Cost % 100.00
Oper	Work		. . Run Hours . .	Setup	T Plan Ty . . Effective . .
Seq#	Center	Description	Machine Labor Hours	Hours	B Yield Op From Thru
-----	-----	-----	-----	-----	-----
20.00	200-4004	Add liquids from other process	.10	.10	3 100.00 02/21/15 12/31/20
Ingredient Description Quantity Per UM T Line Branch . . Effective . . ----- From Thru					
-	5215	Waste Water		32 OZ M 2.0	M40 02/21/15
12/31/20				Feat Plan % 100.00	Feat Cost % 100.00
Oper	Work		. . Run Hours . .	Setup	T Plan Ty . . Effective . .
Seq#	Center	Description	Machine Labor Hours	Hours	B Yield Op From Thru
-----	-----	-----	-----	-----	-----
30.00	200-4011	Transfer liquid to vats	.20	.20	3 100.00 02/21/15 12/31/20
Oper	Work		. . Run Hours . .	Setup	T Plan Ty . . Effective . .
Seq#	Center	Description	Machine Labor Hours	Hours	B Yield Op From Thru
-----	-----	-----	-----	-----	-----
40.00	200-4011	Add yeast killer	.01	.01	3 100.00 02/21/15 12/31/20
Ingredient Description Quantity Per UM T Line Branch . . Effective . . ----- From Thru					
-	2468	Yeast		4 OZ P 3.0	M40 02/21/15
12/31/20				Feat Plan % 100.00	Feat Cost % 100.00
Oper	Work		. . Run Hours . .	Setup	T Plan Ty . . Effective . .
Seq#	Center	Description	Machine Labor Hours	Hours	B Yield Op From Thru
-----	-----	-----	-----	-----	-----
50.00	200-4013	Transfer to fermentation	96.00	96.00	3 100.00 02/21/15 12/31/20
Intermediate Output Qty 0 Effective 02/22/15 - 12/31/20					

Work With Lead Times

Working With Lead Times

Determining lead time is an essential part of any manufacturing or scheduling process. For any product that you purchase or manufacture, you encounter a time lag between when you order an item or start production and when you receive the item or finish production. To account for the lag, you must estimate the extra time and allow for it in your planning.

This section contains the following:

- [Reviewing Lead Times](#)
- [Generating Lead Times](#)

The system stores lead time information in the Bill of Material table.

What You Should Know About

Actual lead time

Actual lead times display the lead times as updated in the Branch/Plant table by the Leadtime Rollup program.

Calculated lead time

Calculated lead times display how many days you must start to manufacture a part prior to the need date of the parent.

See Also

- *Appendix A – Lead Time Calculations*
- *Appendix A – Lead Times in the Shop Floor Control –Process Guide*
- *Appendix B – Lead Times in the Shop Floor Control – Discrete Guide*

Reviewing Lead Times

	From Daily Product Data Management (G30), choose Daily PDM Process From Daily PDM Process (G3012), choose Lead time Inquiry
---	--

You can review lead times to compare both actual and calculated lead times for an item.

To review lead times

On Lead time Inquiry



Item/Process	Leadtime	Level	3 Manufacturing	ORK SHELF UNIT	7 Cumulative	19 Actual	Cmn.
1 212				ORK SHELF SIDES	3	3	8
.2 111				1x10x6" ORK S4S	5		5
1 121				ORK SHELF TOP/BOTTOM	2	2	7
.2 111				1x10x6" ORK S4S	5		5
1 424				ORK SHELVES	2	2	7
.2 111				1x10x6" ORK S4S	5		5
1 444				ORK SHELF CABINET INSERT	2	4	9
.2 443				CABINET SIDES, DOOR, BAC	2	2	7
.3 111				1x10x6" ORK S4S	5		5
1 123				HARDWARE KIT	16		16
1 122				BULK HARDWARE	5		5

Opt: 1=Mfg Data F6=Item Search F15=Actual/Crit. Path F24=More Keys

1. Complete the following required fields:

- Parent Item
- Branch/Plant

2. Complete the following optional field:

- Mode
- As Of

3. Select a view from the View menu.

The following fields display lead time information:

- Level
- Manufacturing
- Cumulative

Field	Explanation
Level	<p>A value that represents the lead time for an item at its assigned level in the production process, as defined on Plant Manufacturing Data. The system uses this value to calculate the start dates for work orders using fixed lead times. Level lead time is different for purchased and manufactured items:</p> <p>You can enter level lead time manually on Manufacturing Values Entry, or you can use the Leadtime Rollup program calculate it. To calculate level lead time using the Leadtime Rollup program, you must first enter a quantity in the Manufacturing Leadtime Quantity field in the Item Branch table (F4102).</p>
Manufacturing	<p>The total number of days required to build an item from its lowest level components to the final assembly. This value is the total of the level lead times for all manufactured items, plus the highest manufacturing lead time for all its components.</p> <p>If all components are purchased, the manufacturing lead time equals the item's level lead time. Purchased item lead times are not included in the calculation of manufacturing lead times.</p> <p>You can enter the manufacturing lead time manually or you can have the system calculate it when you run the Leadtime Rollup program.</p>
Cumulative	<p>The total number of days required to build an item from its lowest level components to the final assembly. The system calculates the value differently for manufactured and purchased items.</p> <p>Manufactured - The total of all level lead times for all manufactured items, plus the highest cumulative lead time of all its components.</p> <p>Purchased - The item's level lead time. Purchased item lead times are included in the calculation of cumulative lead times.</p> <p>You can enter this value manually or you can have the system calculate it when you run the Leadtime Rollup program.</p>

What You Should Know About

Critical paths	If a component's cumulative lead time is greater than or equal to the parent item's lead time, the system highlights the Cumulative Leadtime field.
-----------------------	---

Processing Options

See [Lead Time Inquiry \(P30207\)](#).

Generating Lead Times

	From Daily Product Data Management (G30), enter 27 From Advanced PDM Process (G3031), choose Lead time Rollup
---	---

You must generate lead times for the Material Requirements Planning and Capacity Requirements Planning systems. The Leadtime Rollup program calculates planned level lead times for manufactured items and updates them on Manufacturing Data in the Branch/Plant table. This program calculates:

- Queue and setup hours
- Lead time per unit
- Level, manufactured, and cumulative lead times for selected items

You cannot run this program in proof mode. It updates the records according to the data selection and processing options you choose. Plan your data selection carefully, because changes to lead times will affect the Materials Requirements Planning and Capacity Requirements Planning systems. You can update new items by entering them separately in the data selection.

Processing Options

See [Lead Time Generator \(P30822\)](#).

4 Engineering Change Management

Overview to Engineering Change Management

Objectives

- To learn how to create and maintain engineering change orders (ECOs)
- To understand the notification process
- To understand the approval process

About Engineering Change Management

Manufacturers must respond quickly with engineering changes in order to maintain and increase market share. Engineering changes might be necessary to respond to market demand, governmental requirements, safety issues, service requirements, or functional and competitive reasons.

Use the Engineering Change Management system to create, plan, review, approve, and implement ECOs.

Engineering change management consists of the following tasks:

- Setting up engineering change orders
- Working with engineering change orders
- Reviewing engineering change orders
- Approving engineering change orders

What Is an ECO (Engineering Change Order)?

ECOs are numbered documents that you use to track product changes within the Engineering Change Management system. After you have tested and approved an ECO, you can implement it and modify your standard product or process.

Product or process changes can impact many areas within your company, including:

- Customer service
- Tooling
- Standards
- Suppliers
- Master production schedule
- Product cost

- Service parts
- Inventory
- Plant layout

Features

ECOs enable you to:

Action	Description
Define who approves the ECO	<ul style="list-style-type: none"> ▪ Establish levels of approval, so that each member of the first review group must approve the ECO before the next group receives notification ▪ Locate the status of an ECO and review who has approved it and who has yet to approve it ▪ Use electronic mail to notify and approve ECOs ▪ Create and maintain bill of material data that is associated with the change ▪ Notify reviewers during the approval process ▪ Limit access to the approval records
Define which items to change	<ul style="list-style-type: none"> ▪ Describe the change ▪ Define the parts and processes that are necessary to implement the ECO ▪ Include multiple parent item/process or component/ingredient relationships on the same change order
Define the change routing	<ul style="list-style-type: none"> ▪ Itemize the steps required to make the change
Define additional detail	<ul style="list-style-type: none"> ▪ Enter supporting data, such as costs, dates, reasons, status, affected work and purchase orders, approval history, and implementation steps into a centralized database ▪ Identify the originator and reason for the change ▪ Set up user defined codes to define reason, status, and disposition of the change order ▪ Attach supplemental information

System Integration

ECOs integrate with the following systems:

System	Description
Shop Floor Control	<p>Uses the revision level maintained by ECOs to retrieve the appropriate bill of material for a work order.</p> <p>You can create a work order from a prior ECO revision level.</p>

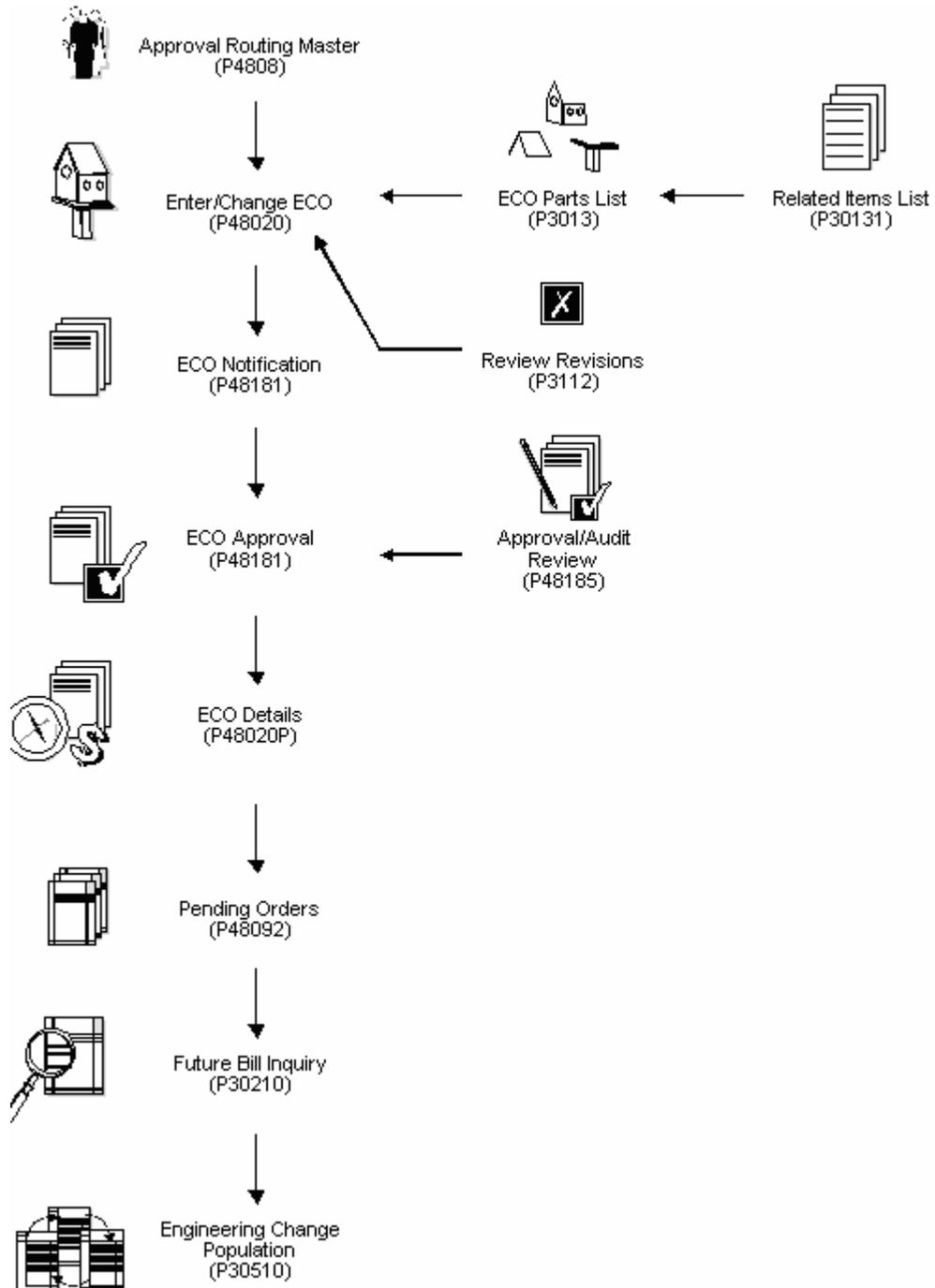
System	Description
Inventory Management	Updates the Item Master revision level.
Product Data Management	Uses the Engineering Change Population program to update bills of material.
ERPx	Activates flash messaging in Material Requirements Planning, Purchase Order Management and Inventory Management to warn of a pending ECO. The Master Production Scheduling system uses the effectivity dates established by ECOs to plan and introduce products.

Who Is Involved in the ECO Process?

The ECO process includes the following personnel:

1. The administrator sets up the ECO by:
 - Setting up the approval routing master
 - Reviewing and modifying the ECO codes
 - Setting up next numbers
2. The coordinator creates the ECO by:
 - Verifying that no prior ECO exists for this change
 - Entering the ECO
 - Defining the change with a list of affected parent and component items
 - Establishing the new routing operations to implement the ECO
 - Maintaining supplemental details
 - Running the notification program
3. The reviewer approves the ECO by:
 - Reviewing the ECO after system notification.
 - Running reports with information for an individual ECO or a list of open ECOs
 - Indicating approval or rejection
 - Periodically checking for outstanding ECOs
4. The coordinator implements the ECO by:
 - Running the Engineering Change Population (P30510) program

The following graphic illustrates the ECO process.



What Kinds of Changes Can I Define?

You can define the engineering change order by determining the type of change to make and identifying parent and component items.

For example, you can determine whether to:

- Add a new part

- Change an existing part
- Swap an old part with a new part
- Remove an existing item

The values you enter in the Change Type and Parent/Child Relationship fields define these changes and determine how the Engineering Change Population program updates the bill of material for the item.

You can use the following values:

Value	Description
Change Type	N Add new part
	C Change existing part
	S Swap old part with new part
	R Remove existing part
Parent/Child Relationship	P Parent item
	C Component item

These fields allow eight possible combinations:

Task	ECO Parts List form Change Type	ECO Parts List form P/C Rel	ECO Parts List form Enter the following:	ECO Parts List form Revision Level	Related Items form Enter the following:	Related Items form Revision Level
Add a new bill	N	P	New parent item for the new bill	New parent revision	Components for the new parent	Revision level of added components
Change the bill	C	P	Current parent item	Current parent revision	Updated parent information	New revision
Swap a parent item	S	P	Swap to parent information in fold Swap from parent	Swap to parent revision in fold Rev of swap from parent in fold	Not allowed	Not allowed
Remove a bill	R	P	Current parent information	Current revision	Not allowed	Not allowed

Task	ECO Parts List form Change Type	ECO Parts List form P/C Rel	ECO Parts List form Enter the following:	ECO Parts List form Revision Level	Related Items form Enter the following:	Related Items form Revision Level
Add a new component	N	C	New component	New component revision	Parent bills using component (where used)	Revision of new component s' parent
Change a component	C	C	The component to change	New revision of component	Parent bills that will have component changes	Parent of new component revision
Swap a component	S	C	Swap to component in fold Swap from component	Revision of swap to component in fold Revision of swap from component in fold	Parent bill having component s swapped	Revision of parent having component swapped
Remove a component	R	C	Component to remove	Revision of component to remove	Parent bills have component removed (where used)	Revision of parent having component removed

About ECO Revision Levels

A revision level is an alphanumeric character that represents the number of times an item has been changed. This usually indicates a permanent change to an item's form, fit, or function. For efficient tracking of changes with revision levels, the revision levels for an item's bill of material and routing should match. You can use an ECO to update an item's revision level and a drawing's revision level.

Use ECOs to manage the following revision level information:

- Set up the next revision levels (30/NR) for ECOs
- Load parent revision levels for component being added or modified
- Locate the revision levels of an ECO
- Assign ECO revision levels automatically
- Maintain drawing revision levels for each item changed by an ECO, and update the drawing revision in either the Bill of Material or Item Master tables.

Tables

The Engineering Change Management system uses the following tables:

Table	Description
F4801	The ECO Work Order Master table stores the ECOs and the manufacturing work orders.
F3002	The Bill of Material Master table defines and maintains branch/plant information about bills of material, such as quantities of components, features and options, effectivity dates, grade/potency and lot constants, and levels of detail.
F48092	The ECO Supplemental table stores additional information about ECOs, such as implementation costs.
F3013	The ECO Parts List table contains the list of parts that are affected by the ECO.
F4808	The ECO Approval Routing Master table contains the address book numbers of the people who are responsible for approving ECOs and determines the order in which they should be notified.
F4818	The ECO Approval Audit table contains the approval history of an ECO.
F0101	The Address Book table is the central repository for all address information pertaining to customers, vendors, employees, prospects, and so forth.
F0006	The Business Unit Master table identifies branch, plant, warehouse, and business unit information, such as company, description (name), and category codes assigned to that entity.
F3112	The Routing Revisions table contains the routing steps for implementing the ECO.
F4102	The Branch/Plant Master table contains the ECO number, date, reason, and item revision level information for the branch/plant.

Before You Begin

- Define your items in the Inventory Management system. See *Entering Item Master Information*.
- Define your work centers. See *Entering Work Centers*.

Set Up Engineering Change Orders

Setting Up Engineering Change Orders

Before you use the Engineering Change Management system, you need to set up various codes and the approval routing master.

This section contains the following:

- [Setting Up Engineering Change Order Codes](#)
- [Setting Up Next Numbers for Engineering Change Orders](#)
- [Setting Up Approval Routings](#)

Setting Up Engineering Change Order Codes

Define ECO codes for information that is unique to your branch/plant:

Information	Description
Revision levels	Revision levels indicate the number of times an item has changed.
Type codes	Type codes indicate the classification of an ECO, such as G for government or R for rework.
Priority codes	Priority codes indicate the priority of an ECO, such as H for high priority and 3 for normal priority.
Status codes	Status codes, such as 90 through 99, indicate the date completed on the order. Examples include EM for emergency and A for approved.
Phase in codes	Phase in codes indicate how an ECO is to be implemented.
Existing disposition codes	Existing disposition codes indicate what to do with an existing item that is affected by the ECO. Examples of existing disposition codes are UAI for use as is and SCP for scrap.
Reason codes	Reason codes indicate why you create an ECO. Examples of ECO reason codes include CC for Customer Change Request and FR for Federal Requirement.

Complete the following tasks:

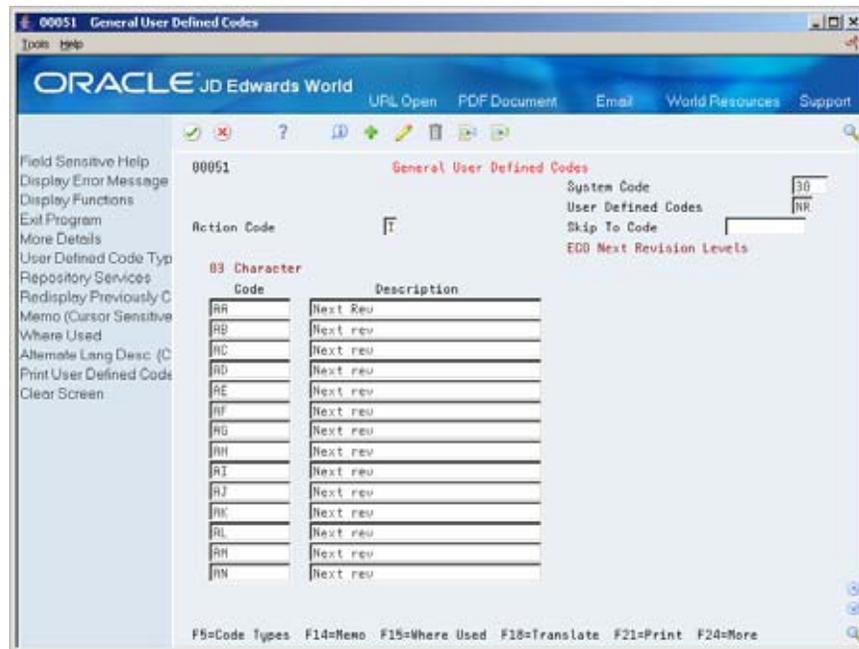
- Set up revision levels

- Set up type codes
- Set up priority codes
- Set up status codes
- Set up phase in codes
- Set up existing disposition codes
- Set up reason codes

To set up revision levels

	From Product Data Management (G30), enter 6 From Product Data Management Setup (G3041), choose Next Revision Levels
---	---

On ECO Next Revision Levels



Complete the following fields:

- Character Code
- Description

To set up type codes

You can set up user defined codes (table 00/TY) to define types of ECOs such as G for government or R for rework.

On Type Code



Complete the following fields:

- Code
- Description
- Description 2

Field	Explanation
User Defined Codes	Identifies the table that contains user defined codes. The table is also referred to as a code type.
Description	A user defined name or remark.
Description-2 Description	A user defined name or remark.

To set up priority codes



From Product Data Management (G30), enter 29
From Product Data Management Setup (G3041), choose Priority Code

You can set up user defined codes (table 00/PR) to define priorities of ECOs such as H for high priority or 3 for normal priority.

On Priority Code

00051 Priority Code

ORACLE JD Edwards World

System Code: 00
User Defined Codes: PR
Skip To Code:
Work Order Priority:
Action Code:
See Memo:
01 Character:
Code: Description

Code	Description
H	High
L	Low
M	Med
1	Emergency
2	Urgent
3	Normal - RERP
4	Low Priority

F5=Code Types F14=Memo F15=Where Used F18=Translate F21=Print F24=More

Complete the following fields:

- Code
- Description

To set up status codes



From Product Data Management (G30), enter 29
From Product Data Management Setup (G3041), choose **Status Code**

You can set up user defined codes (table 00/SS) to define the status of ECOs such as EM for emergency and A for approved.

On Status Code

Code	Description	Description-2
A	Approved ECO	
A1	Additional data required (ECO)	
A1	Entered	WCS/WO
D	Disapproved ECO	
EM	Emergency Order	
E1	ECO Entered	
E2	Preliminary Workup	
E3	Approval Pending	
E4	ECO Approved	
E5	ECO Implemented	
IR	Inactive Work Order	
K1	Scheduled	WCS/WO
M	Maintenance Work Request	

Complete the following fields:

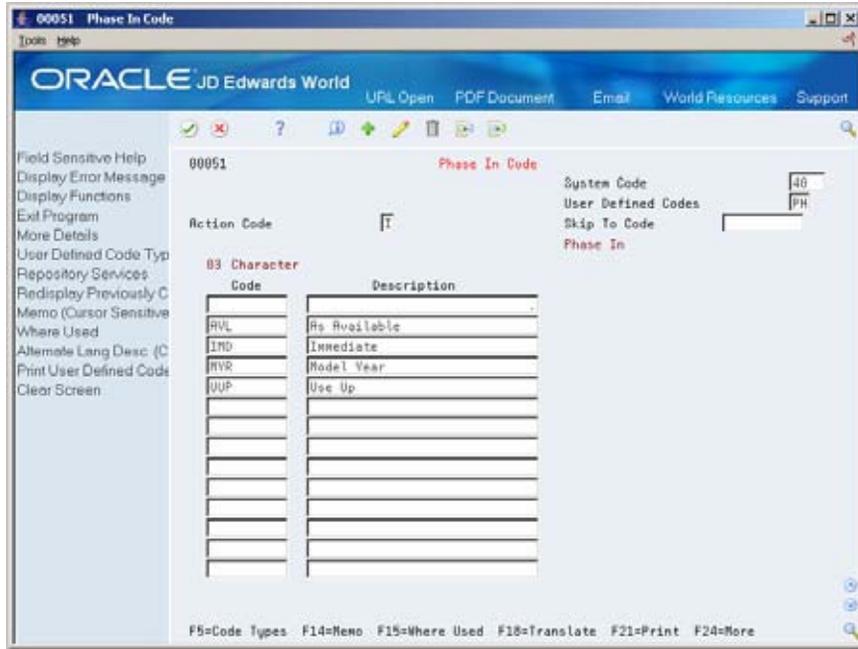
- Code
- Description

To set up phase in codes

	From Product Data Management (G30), enter 29 From Product Data Management Setup (G3041), choose Phase In Code
---	---

You can set up user defined codes (table 00/PH) to define how to phase in ECOs such as IMD for immediate and AVL for as available.

On Phase In Code



Complete the following fields:

- Code
- Description

To set up reason codes



From Product Data Management (G30), enter 29
From Product Data Management Setup (G3041), choose Reason Codes

You can set up user defined codes (table 40/CR) reasons for defining ECOs such as CC for customer change and FR for federal requirements.

On Reason Code

Code	Description
CC	Customer Change Request
DE	Design or Drawing Revision
EP	EPA Related Requirement
EV	Economic or Value Improvement
FR	Federal Requirement
I	Initial Release
M	Manufacturing Engineering
OS	OSHR
S	Superseded By

Complete the following fields:

- Code
- Description

Setting Up Next Numbers for Engineering Change Orders



From Product Data Management (G30), enter 29
From Product Data Management Setup (G3041), choose Next Numbers

Next numbers is an automatic document numbering feature. It allows you to enter a starting document number for each document type such ECOs. If you do not assign an ECO number manually, the system automatically assigns the next number to the ECO.

You can also use a check digit. This is an additional number that the system attaches to the end of the next number. Check digits prevent transpositions and data entry errors. Check digits are not sequential.

Caution: If you change the numbering scheme, you should change the next number to a value that is greater than the previously assigned numbers.

Use	Next Number	Check Digit
Work Order No.	30976	Y
Billing Control	13397	N
Invoice #	1	N
Component Link	2008	N
Split Link	9	N
ECO Number	99355	Y
Schedule Number	40	N

CAUTION:
Changing the data on this screen may make it impossible to retrieve previously added addresses and may result in attempts to assign duplicate numbers.

FB=Next Numbers by Co/FY F24=More Keys

To set up next numbers for engineering change orders:

1. Locate next numbers for system 48 Work Order Processing.
2. For ECO Number, complete the following fields:
 - Next Number
 - Check Digit

See Also

- *Setting Up Next Numbers (P0002) in the General Accounting Guide*

Field	Explanation
Next Number	The next number which will automatically be assigned by the system. Next numbers can be used for many types of documents including voucher numbers, invoice numbers, journal entry numbers, employee numbers, address numbers and so on. Next numbers can be reviewed from the Operations Control Menu. You must adhere to the next numbers that have been pre-established unless custom programming has been provided.

Field	Explanation
Check Digit	A number that prevents the Next Numbers program (P0002) from assigning transposed numbers. If you use check digits, the system automatically adds a number to the end of each number that it assigns through Next Numbers.

Setting Up Approval Routings

Use an approval routing to maintain a list of reviewers by that should receive an electronic mail notification of pending ECOs.

You can set up two types of approval routing. The approval routing master applies to a specific branch/plant and order type combination. Order specific approval routing applies to a specific ECO. After you have set up an approval routing master for your branch/plant, you can customize the routing for a specific ECO.

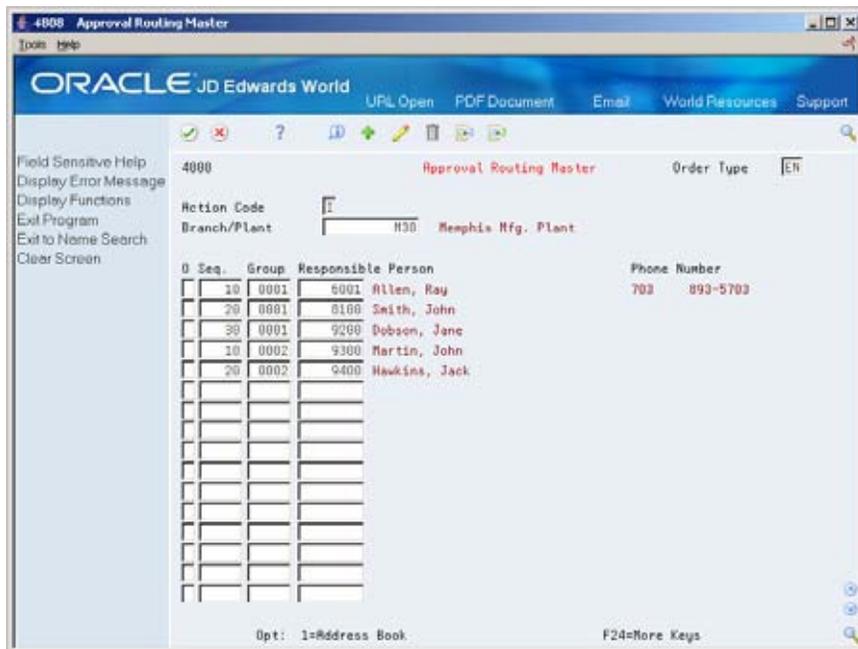
Setting up approval routings consists of the following tasks:

- Setting up an approval routing master
- Setting up an order specific routing (optional)

To set up approval routings

	From Product Data Management (G30), choose Engineering Change Management From Engineering Change Management (G3013), choose Approval Routing Master
---	--

On Approval Routing Master



Complete the following fields:

- Branch/Plant
- Sequence Number
- Group
- Responsible Person

To set up an order-specific approval routing



From Product Data Management (G30), choose **Engineering Change Management**
From Engineering Change Management (G3013), choose **Order Specific Routing**

On Order Specific Routing

Seq.	Group	Responsible Person	Phone Number
10	0001	6001 Allen, Ray	703 893-5703
20	0001	0100 Smith, John	
30	0001	9200 Dobson, Jane	

Complete the following fields:

- Order Number
- Group
- Sequence
- Responsible Person

What You Should Know About

Assigning reviewers to groups

The system notifies all reviewers in a group at the same time. The system notifies the groups in the order that they are defined within the user defined code. The codes do not have to be numeric. The system waits to send notification to a group until all members in the prior group have approved the ECO.

Deleting an approval list

When you delete an approval list, the system prompts you to confirm the deletion.

Work With Engineering Change Orders

Working With Engineering Change Orders

Use ECOs to plan, approve, and implement product changes. The creator of the ECO typically performs the following tasks:

This section contains the following:

- [Locating Existing ECOs](#)
- [Entering ECOs](#)
- [Defining Routings for ECOs](#)
- [Defining Changes](#)
- [Reviewing Pending Orders](#)
- [Defining Details for ECOs](#)
- [Notifying ECO Reviewers](#)

What You Should Know About

Working with rejected ECOs

If any of the ECO reviewers rejects the ECO, the notification process stops. You must start the ECO notification process again.

Locating Existing ECOs



From Manufacturing Systems (G3), choose **Engineering Change Management**
From Engineering Change Management (G3013), choose **ECO Workbench**

Before you create an ECO, you might want to verify that one does not exist for the change. Use the ECO Workbench to view and manage ECO information and check an ECOs progress.

You can locate an ECO using ECO Workbench or ECO Workbench By Item.

To locate existing ECOs

On ECO Workbench

P St	Number	TY	Description	Originat	Rs	Pha	T	P	Target	Actual
ES	203	EN	333z N/P	9200	CC	IND	B	H	06/15/17	06/15/17
ED	2461	EN	Redesign of part 212	9300	DE	UUP	B	H	06/15/17	06/15/17

1. Complete the following fields:

- Branch
- Item Number
- Parent Work Order

2. Access More Details.

Field Sensitive Help
Display Error Message
Display Functions
Exit Program
More Details
Clear Screen

30225 ECO Workbench TY Pha

ORACLE JD Edwards World URL Open PDF Document Email World Resources Support

30225 ECO Workbench TY Pha Reas Pha T P Branch R30

Action Type
Item Number 212 ORK SHELF SIDES
Originator
Status Thru
Category Codes
Target Incorpor Thru Parent W.O. No

ECO											
P	St	Number	TY	Description	Originat	Rs	Pha	T	P	Target	Actual
<input type="checkbox"/>	E5	203	EN	333z N/P	9200	CC	IMD	B	H	08/15/17	08/15/17
				Drawing Change Y BOM Change Y Routing Change Y New Part No. Y							
Parent W.O. No											
<input type="checkbox"/>	40	2461	EN	Redesign of part 212	9300	DE	UUP	B	H	05/15/17	05/15/17
				Drawing Change Y BOM Change N Routing Change Y New Part No. N							
Parent W.O. No											

Opt: 1=Master 2=Details 3=Parts 4=Routing 5=Approval Audit F24=More

The following fields display ECO information:

- Status
- ECO Number
- Type
- Description
- Originator
- Reason
- Phase
- Priority
- Target
- Actual
- Item Number (required)
- Parent Work Order

Field	Explanation
Branch	<p>A code that represents a high-level business unit. It can be used to reference a branch or plant that might have departments or jobs, which represent lower-level business units (data item MCU), subordinate to it. For example:</p> <ul style="list-style-type: none"> ▪ Branch/Plant (MMCU) ▪ Dept A (MCU) ▪ Dept B (MCU) ▪ Job 123 (MCU) <p>Business unit security is based on the higher-level business unit.</p>
Item Number	<p>A number that the system assigns to an item. It can be in short, long, or 3rd item number format.</p>
ECO Number	<p>The number that identifies an original document. This can be a voucher, an order number, an invoice, unapplied cash, a journal entry number, and so on.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>This number identifies the engineering change order. You can either assign the order number or allow the system to assign a number with the Next Numbers feature.</p>
Parent W.O. No	<p>This is the parent work order number. You can use this number to:</p> <ol style="list-style-type: none"> 1. Enter default values for newly added work orders, for example, Type, Priority, Status, or Manager. 2. Group work orders for project setup and reporting
TY (Order Type)	<p>A user defined code (00/DT) that identifies the type of document. This code also indicates the origin of the transaction. JD Edwards World has reserved document type codes for vouchers, invoices, receipts, and time sheets, which create automatic offset entries during the post program. (These entries are not self-balancing when you originally enter them.)</p> <p>The following document types are defined by JD Edwards World and should not be changed:</p> <ul style="list-style-type: none"> P Accounts Payable documents R Accounts Receivable documents T Payroll documents I Inventory documents O Purchase Order Processing documents J General Accounting/Joint Interest Billing documents S Sales Order Processing documents
Originator	<p>The address book number of the person who originated the change request.</p>

Field	Explanation
Reason	User defined code system 40, type CR that indicates the reason for an engineering change order.
Phase In	User defined code system 40, type PH, that indicates how an engineering change order will be phased in.
Type	A user defined code (00/TY) that indicates the type classification of a work order or engineering change order. You can use work order type as a selection criteria for work order approvals.
Priority	A user defined code (system 00, type PR) that indicates the relative priority of a work order or engineering change order in relation to other orders. A processing option for some forms lets you enter a default value for this field. The value then displays automatically in the appropriate fields on any work order you create on those forms and on the Project Setup form. You can either accept or override the default value.
Target	The date the work order is planned to be completed. <i>Form-specific information</i> The date the engineering change order is planned to be completed.
Actual	The date the work order or engineering change order is completed or canceled.

Processing Options

See [ECO Workbench \(P30225\)](#).

Entering ECOs



From Manufacturing Systems (G3), choose **Engineering Change Management**
From Engineering Change Management (G3013), choose **Enter/Change ECO**

You must first define the ECO number and codes that determine its priority, status, effectivity dates, and so on. Later you must define the routing, parts list and detail information.

To enter ECOs

On Enter/Change ECO

Complete the following required fields:

- Branch/Plant
- ECO Number
- ECO Description
- Originator
- ECO Coordinator
- Drawing Change
- BOM Change
- Routing Change
- New Part Number
- Target Design
- Target Engineer

- Target Incorporation
- Type
- Priority
- Status
- Phase In
- Existing Disposition
- Reason
- Actual Design
- Actual Engineer
- Actual Incorporation
- Parent Work Order Number
- Document Type
- Full Description of Request

Field	Explanation
Charge to CC	<p>A code that represents a high-level business unit. It can be used to reference a branch or plant that might have departments or jobs, which represent lower-level business units (data item MCU), subordinate to it. For example:</p> <ul style="list-style-type: none"> ▪ Branch/Plant (MMCU) ▪ Dept A (MCU) ▪ Dept B (MCU) ▪ Job 123 (MCU) <p>Business unit security is based on the higher-level business unit.</p>
Originator	The address book number of the person who originated the change request.
ECO Coordinator	<p>Address number of the person assigned to do the work.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>Address number of the person assigned to coordinate the ECO.</p>
Customer	<p>A number that identifies an entry in the Address Book system. Use this number to identify employees, applicants, participants, customers, suppliers, tenants, and any other Address Book members.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>Use this value to indicate the customer requesting the change.</p>

Field	Explanation
Drawing Change	Indicates whether the engineering change order involves a drawing change. Valid values are: Y Yes, a drawing change is involved. N No, a drawing change is NOT involved. If you leave this field blank, the system uses N.
BOM Change	Indicates whether the engineering change order involves a bill of material change. Valid values are: Y Yes, a bill of material change is involved. N No, a bill of material change is not involved. If left blank the system uses N.
Routing Change	Indicates whether the engineering change order involves a routing change. Valid values are: Y Yes, a routing change is involved. N No, a routing change is not involved. If you leave this field blank, the system uses N.
New Part Number	Indicates whether a new part number is required for an engineering change order. Valid values are: Y Yes, a new part number is required. N No, a new part number is not required. If you leave this field blank, the system uses N.
Cost Code	A subdivision of an object account. Subsidiary accounts include more detailed records of the accounting activity for an object account.
Target Design	The date that an item is to arrive or that an action is to be complete. <i>Form-specific information</i> The planned completion date for the engineering change order.
Target Engineer	The date the person responsible for the work order receives the work order. <i>Form-specific information</i> The date that the person responsible for the ECO receives the ECO.
Target Incorp	The date the work order is planned to be completed. <i>Form-specific information</i> The date the engineering change order is planned to be completed.

Field	Explanation
Status	A user defined code (00/SS) that describes the status of a work order or engineering change order. Any status change from 90 thru 99 automatically updates the date completed.
Existing Disp	User defined code system 40, type ED that identifies the disposition of the existing item affected by the engineering change order.
Actual Design	This is a start date that you can enter, or an automatic start date which the planning system calculates using a back scheduling routine. The routine starts with the required date and offsets the total lead time to calculate the appropriate start date. Will default from system date or you can enter a date. <i>Form-specific information</i> This is the start date for the ECO. You can enter the date manually or leave this field blank and the system enters the current date.
Actual Engineer	The date assigned for final inspection.
Actual Incorp	The date the work order or engineering change order is completed or canceled.

What You Should Know About

Deleting ECOs	To delete an ECO, you must first delete the ECO parts list, and then delete the ECO.
Work orders	Specify a parent work order number on the ECO and you can retrieve related work orders, and review the history of a product.

See Also

- *Defining Next Numbers (P0002)*

Defining Routings for ECOs

	From Manufacturing Systems (G3), choose Engineering Change Management From Engineering Change Management (G3013), choose Enter/Change ECO
---	--

After you enter the ECO, you can define a routing that indicates the steps necessary to implement the ECO. For example, the engineering department might request that your business try a new manufacturing process before implementation.

Note: You cannot use this program to change production routings.

To define routings for ECOs

On Enter/Change ECO

1. Choose the Routing function.

On Routing Revisions

3112 Routing Revisions

ORACLE JD Edwards World

Branch/Plant: M30
Requested: 07/01/17

Action Code: []
ECO Number: 283 EN 333: N/P

Work Center	Oper Seq	St	Description	Start	Request
MECH ENG	10.00		Review Bill of Material	06/30/17	07/01/17
MECH ENG	20.00		Create Item Master	07/01/17	07/01/17
PROD ENG	30.00		Review Routings	07/02/17	07/14/17
IE	40.00		Review Standards	07/14/17	07/15/17
COST ACCT	50.00		Determine New Standard Costs	08/01/17	08/05/17
COST ACCT	60.00		Update New Std Costs (if reqd)	08/05/17	08/05/17
PROD CONTROL	70.00		Incorporate Change	08/05/17	08/15/17

Opt: S=Text F4=Full Details F6=Item Search F10=Copy Routings F24=More

2. Complete the following fields:

- Work Center
- Operations Sequence Number
- Operation Status
- Description
- Start
- Request

3. Access More Details.

3112 Routing Revisions

ORACLE JD Edwards World

URL Open PDF Document Email World Resources Support

Field Sensitive Help
Display Error Message
Display Functions
Exit Program
More Details
Item Search
Copy Routing Instruction
Equipment Search
Test Result Edit
Clear Screen

3112 Routing Revisions Branch/Plant R30
Requested 07/01/17

Action Code
ECO Number 383 EN 333: N/P

Work Center	Oper Seq	St	Description	Start	Request
MECH ENG	10.00		Review Bill of Material	06/30/17	07/01/17
Assigned to				Labor Hours	
MECH ENG	20.00		Create Item Master	07/01/17	07/01/17
Assigned to				Labor Hours	
PRDD ENG	30.00		Review Routings	07/02/17	07/14/17
Assigned to				Labor Hours	
IE	40.00		Review Standards	07/10/17	07/15/17
Assigned to				Labor Hours	
COST ACCT	50.00		Determine New Standard Costs	08/01/17	08/05/17
Assigned to				Labor Hours	
COST ACCT	60.00		Update New Std Costs (If read)	08/05/17	08/05/17
Assigned to				Labor Hours	

Opt: 5=Text F4=Full Details F6=Item Search F18=Copy Routings F24=More

4. Complete the following fields:

- Assigned to
- Labor Hours

Field	Explanation
Work Center	<p>An alphanumeric field that identifies a separate entity within a business for which you want to track costs. For example, a business unit might be a warehouse location, job, project, work center, or branch/plant.</p> <p>You can assign a business unit to a voucher, invoice, fixed asset, and so on, for purposes of responsibility reporting. For example, the system provides reports of open accounts payable and accounts receivable by business units to track equipment by responsible department.</p> <p>Security for this field can prevent you from locating business units for which you have no authority.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>This is the code for the work center or assembly line.</p>

Field	Explanation
Oper Seq	<p>In routings, this number is used to sequence the fabrication or assembly steps in the manufacture of an item. You can track costs and charge time by operation.</p> <p>In bills of material, this number designates the routing step in the fabrication or assembly process that requires a specified component part. You define the operation sequence after you create the routing for the item. The Shop Floor Control system uses this field in the backflush/preflush by operation process.</p> <p>In engineering change orders, this number is used to sequence the assembly steps for the engineering change.</p> <p>Skip To fields allow you to enter an operation sequence that you want to begin the display of information.</p> <p>You can use decimals to add steps between existing steps. For example, use 12.5 to add a step between steps 12 and 13.</p>
St	<p>A user defined code (31/OS) that identifies the current status of a work order or engineering change order as the operation steps in the routing are completed.</p>
Start	<p>This is a start date that you can enter, or an automatic start date which the planning system calculates using a back scheduling routine. The routine starts with the required date and offsets the total lead time to calculate the appropriate start date.</p> <p>Will default from system date or you can enter a date.</p>
Requested	<p>The date that an item is to arrive or that an action is to be complete.</p> <p><i>Form-specific information</i></p> <p>The planned completion date for the engineering change order.</p>
Assigned to	<p>A number that identifies an entry in the Address Book system. Use this number to identify employees, applicants, participants, customers, suppliers, tenants, and any other Address Book members.</p> <p><i>Form-specific information</i></p> <p>Identifies an entry in the Address Book system. Use this number to identify ECO reviewers.</p>

Field	Explanation
Labor	<p>This is the standard hours of labor expected in the normal production of this item.</p> <p>The run labor hours in the Routing Master table (F3003) are the total hours it takes the specified crew size to complete the operation. The hours are multiplied by the crew size during shop floor release and product costing.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>For engineering change orders:</p> <p>This is the standard hours of labor expected to complete this step for the ECO.</p>

Defining Changes

	<p>From Manufacturing Systems (G3), choose Engineering Change Management</p> <p>From Engineering Change Management (G3013), choose ECO Parts List</p>
---	---

After you have created the ECO and defined the routing, you must define the change and identify the affected items.

Complete the following required tasks:

- Define affected items
- Define engineering changes

3. Complete the following fields for the parent item:

- Batch Quantity
- Unit of Measure
- From Revision Level
- Bill Type
- Swap to Item
- Swap to Revision
- To/Current Drawing Revision

Field	Explanation
ECO Number	The number that identifies an original document. This can be a voucher, an order number, an invoice, unapplied cash, a journal entry number, and so on.
Chg Type	A code that describes the type of item change. This value is used by the Related Items window to determine the number and nature of related items allowed. The value is also used during Engineering Change Population to determine the changes. Valid values are: <ul style="list-style-type: none"> N New component or bill S Swapping or replacing one item with another C Change an existing component or bill R Remove an existing component or bill

Field	Explanation
P/C	<p>A code that indicates whether the item is a parent or component. Using this value, the system selects items for you on the Related Items window when you perform a where used inquiry for components or a single/multi-level inquiry for parent items. The Engineering Change Population program uses this value to determine the requested change. Valid values are:</p> <p>P The item is a parent.</p> <p>C The item is a component.</p>
Item Number	<p>A number that the system assigns to an item. It can be in short, long, or 3rd item number format.</p>
Branch/Plant	<p>A code that represents a high-level business unit. It can be used to reference a branch or plant that might have departments or jobs, which represent lower-level business units (data item MCU), subordinate to it. For example:</p> <ul style="list-style-type: none">▪ Branch/Plant (MMCU)▪ Dept A (MCU)▪ Dept B (MCU)▪ Job 123 (MCU) <p>Business unit security is based on the higher-level business unit.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>In the Engineering Change Management system, entering *ALL in this field allows changes across multiple plants.</p>
To Revision Level	<p>The revision level for the part that will be reported next. This might not be the next sequential revision.</p>

Field	Explanation
Effective Dates From	<p>A date that indicates one of the following:</p> <ul style="list-style-type: none"> ▪ When a component part goes into effect on a bill of material ▪ When a routing step goes into effect as a sequence on the routing for an item ▪ When a rate schedule is in effect <p>The default is the current system date. You can enter future effective dates so that the system plans for upcoming changes. Items that are no longer effective in the future can still be recorded and recognized in Product Costing, Shop Floor Control, and Capacity Requirements Planning. The Material Requirements Planning system determines valid components by effectivity dates, not by the bill of material revision level. Some forms display data based on the effectivity dates you enter.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>You must specify effectivity dates for the changes you want to make. The Engineering Change Population program does not process ECOs without effectivity dates.</p>
Thru	<p>A date that indicates one of the following:</p> <ul style="list-style-type: none"> ▪ When a component part is no longer in effect on a bill of material ▪ When a routing step is no longer in effect as a sequence on the routing for an item ▪ When a rate schedule is no longer active <p>The default is December 31 of the default year defined in the Data Dictionary for Century Change Year. You can enter future effective dates so that the system plans for upcoming changes. Items that are no longer effective in the future can still be recorded and recognized in Product Costing, Shop Floor Control, and Capacity Requirements Planning. The Material Requirements Planning system determines valid components by effectivity dates, not by the bill of material revision level. Some forms display data based on the effectivity dates you enter.</p> <p style="text-align: center;"><i>Form-specific information</i></p> <p>You must specify effectivity dates for the changes you want to make. The Engineering Change Population program does not process engineering change orders without effectivity dates. Effectivity dates must not overlap.</p>

Field	Explanation
Batch Qty	The quantity of finished units that you expect this bill of material or routing to produce. This field allows you to specify varying quantities of components based on the amount of finished goods produced. For example, 1 ounce of solvent is required per unit up to 100 units of finished product. However, if 200 units of finished product is produced, 2 ounces of solvent are required per finished unit. In this example, you would set up batch quantities for 100 and 200 units of finished product specifying the proper amount of solvent per unit.
Bill Type of Material	<p>A user defined code (system 40, type TB), that designates the type of bill of material. You can define different types of bills of material for different uses. For example:</p> <p>M (Default) Standard manufacturing bill</p> <p>RWK Rework bill</p> <p>SPR Spare parts bill</p> <p>The system enters bill type M in the work order header when you create a work order, unless you specify another bill type. The system reads the bill type code on the work order header to know which bill of material to use to create the work order parts list. MRP uses the bill type code to identify the bill of material to use when it attaches MRP messages. Batch bills of material must be type M for shop floor control, product costing, and MRP processing.</p>
Swap to Item	The component that will be substituted for another when an item substitution (S) is specified for an ECO change.

What You Should Know About

Related items	For all engineering change types (except swap parent) you must enter information about the change for other items on Related Items. If the related item selected for the ECO is obsolete, the program will issue an error. Additionally, the ECO Bill of Material Population Report will print "This item is obsolete" in the description field of the report.
Updating ECO revision levels	You can use the ECO Next Revision Levels user defined code table (00/NR) to automatically update revision levels based on the sequence you define.
Updating component revision levels	Set a processing option to pre-load all single level parent revision levels for the component you're changing.
Updating drawing revision levels	You can maintain the drawing revision level for each item. The ECO Population program can update the drawing revision level in either the Bill of Material or the Item Master tables.

To define engineering changes

On ECO Parts List

1. Choose the Related Items option.

Note: The name of this form varies depending on the Change Type and Parent/Child Relationship values.

The screenshot shows the Oracle JD Edwards World interface for the 'ECO Parts List' form. The window title is '3013 ECO Parts List'. The form displays the following fields and data:

- Action Code: I
- Parent Item: 212
- Branch/Plant: M30
- Parent Item Description: ORK SHELF SIDES
- Batch Quantity: [Field]
- Type: [Field]

Op	Parent Item	Branch/Plant	Rev	From	Thru	Pending
111	ORK S40	M30	1			1

Additional fields include: Batch Qty, Bill Type, Previous Rev, Current Rev, and New Draw Rev.

Options: Opt: 2=Item Master 3=Mfg. Data F10=Copy BOM F24=More Keys

2. On Related Items, complete the following fields for each related item:
 - Item
 - Branch/Plant
 - To Revision Level
 - Effective From Date
 - Effective Thru Date
3. Access the detail area.
4. Complete the following fields:
 - From Revision
 - Batch Quantity
 - Unit of Measure
 - Bill Type
 - Swap to Item
 - Swap to Revision

- To/Cur Drawing Revision
 - Component Sequence Number
 - Quantity Per
 - Operation Sequence Number
 - Fixed/Variable
5. Press Enter to accept the changes and exit the Related Items window.
 6. Press Enter to accept the changes and exit the Parts List form.

Field	Explanation
Type Bill of Material	<p>A user defined code (system 40, type TB), that designates the type of bill of material. You can define different types of bills of material for different uses. For example:</p> <p>M (Default) Standard manufacturing bill</p> <p>RWK Rework bill</p> <p>SPR Spare parts bill</p> <p>The system enters bill type M in the work order header when you create a work order, unless you specify another bill type. The system reads the bill type code on the work order header to know which bill of material to use to create the work order parts list. MRP uses the bill type code to identify the bill of material to use when it attaches MRP messages. Batch bills of material must be type M for shop floor control, product costing, and MRP processing.</p>
From	<p>A date that indicates one of the following:</p> <ul style="list-style-type: none"> ▪ When a component part goes into effect on a bill of material ▪ When a routing step goes into effect as a sequence on the routing for an item ▪ When a rate schedule is in effect <p>The default is the current system date. You can enter future effective dates so that the system plans for upcoming changes. Items that are no longer effective in the future can still be recorded and recognized in Product Costing, Shop Floor Control, and Capacity Requirements Planning. The Material Requirements Planning system determines valid components by effectivity dates, not by the bill of material revision level. Some forms display data based on the effectivity dates you enter.</p>
Component Sequence	<p>A number that indicates the sequence of the components on a bill of material. It initially indicates the relative sequence in which a component was added to a kit or single level bill of material. You can modify this number to change the sequence in which the components appear on the bill of material.</p> <p>Skip To fields allow you to enter a component line number that you want to begin the display of information.</p>

Field	Explanation
Qty Per	The number of units to which the system applies the transaction.
Fixed/Variable Quantity	<p>Indicates if the quantity per assembly for an item on the bill of material varies according to the quantity of the parent item produced or is fixed regardless of the parent quantity. This value also determines if the component quantity is a percent of the parent quantity. Valid values are:</p> <p>F Fixed Quantity</p> <p>V Variable Quantity (Default)</p> <p>% Quantities are expressed as a percentage and must total 100%</p> <p>For fixed quantity components, the Work Order and MRP systems do not extend the component's quantity per assembly value by the order quantity.</p> <p>For Process Manufacturing, the system stores percent components. Therefore, the system treats zero batch sizes like variable quantity components, and treats batch sizes greater than zero like fixed quantity components.</p>

To remove one of the items listed above, select the row and click Delete before you click OK.

What You Should Know About

Updating the bills of material	<p>This task does not update the work order parts list for the item. You can update your bills of material with engineering change information using one of the following methods:</p> <ul style="list-style-type: none"> ▪ Manually ▪ Run the Where Used Update program ▪ Run the Engineering Change Population program
Deleting or changing the parts list	<p>You cannot delete or change the parts ECO parts list after you have run the Engineering Change Population program.</p>
Using effectivity dates and revision levels	<p>Use effectivity dates to phase in and out any product or process changes. Effectivity dates might not require an ECO process and are for smaller, shorter term or lower impact changes.</p> <p>Revision levels usually require an ECO and are for permanent, long term changes. Revision levels include changes to form, fit, or function and should match on a bill of material and routing for the item. You can track changes in a bill of material with revision levels. Use the Revision Level field to display a revision history of the bill. These revision levels are user defined and for reference only.</p>

Updating revision levels	You can only update an ECO with the next revision level if there are no pending ECOs for the item. If there are pending ECOs, the system displays an error message and does not update the revision level.
Auto Inquiry	The ECO system automatically selects related items based on the change type and parent/child relationship values. An option is available to deselect related items on which you do not want to implement the change.
*ALL	The *ALL function only works with ECOs that use Auto Inquiry. The Engineering Change Population program only updates branch/plant records that match the defined parts list.

Processing Options

See [Parts List Detail \(P3013\)](#).

Reviewing Pending Orders

	From Manufacturing Systems (G3), choose Engineering Change Management From Engineering Change Management (G3013), choose ECO Parts List
---	--

After you process existing work orders and purchase orders, you can review pending orders for items affected by the ECO.

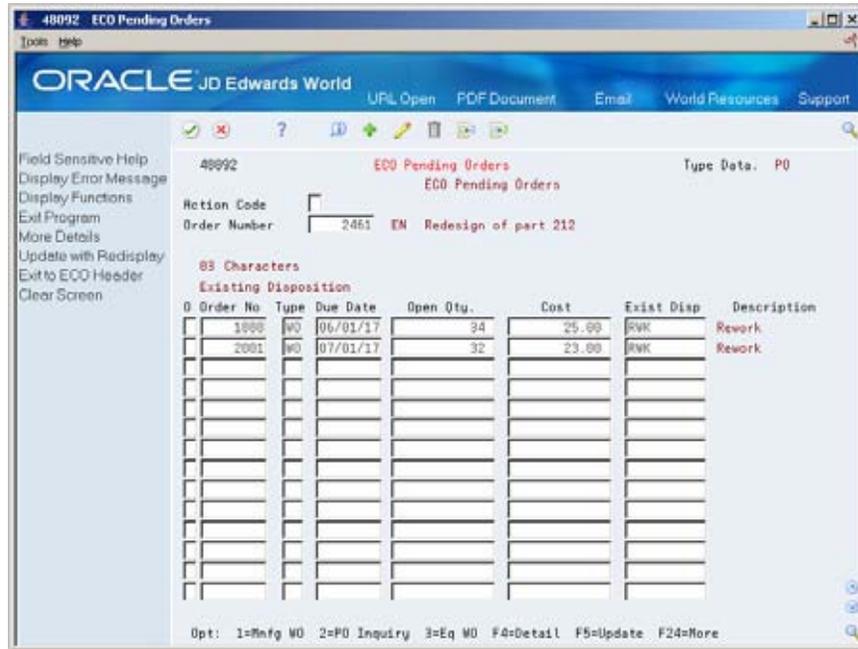
Use pending orders to perform the following:

- Enter a quantity and cost estimate of incorporating the ECO into the work order or part on the purchase order
- Work with existing work orders or purchase orders
- Work with open work orders or purchase orders

The system displays the orders based on the Supply/Demand Inclusion Rules you specify in the processing options.

To review purchase orders

On ECO Parts List, choose the Pending Orders function.



The following fields display ECO information:

- Order Number
- Type
- Due Date
- Open Quantity
- Cost
- Exist Disposition

Field	Explanation
Order Number	The number that identifies an original document. This can be a voucher, an order number, an invoice, unapplied cash, a journal entry number, and so on.
Type Data	User defined code (00/WT) that indicates the type of data being entered within the supplemental database. The code is often an abbreviation for the data it represents, for example, EC might represent Engineering Change.
Characters	The length of the user defined code. It cannot be greater than 10 characters.
Description	A user defined name or remark.

To enter supplemental information

You can enter supplemental data items to track the ECO. For example, you could note the costs and lead times involved in the implementation of the ECO. This screen is for information only and does not affect processing of the ECO.

On ECO Detail Types

Complete the following fields:

- ECO Number
- Code Type
- Quantity
- Cost
- Date
- Leadtime

See Also

- *Setting Up Category Codes (P00051) in the Shop Floor Control Guide*

Processing Options

See [ECO Maintenance \(P48020\)](#).

Notifying ECO Reviewers



From Manufacturing Systems (G3), choose **Engineering Change Management**
From Engineering Change Management (G3013), choose **ECO Notification**

After you define an ECO and its routings and parts list, use the ECO Notification program to send notices to the reviewers that you have defined in the approval routing master.

You run this program once. After all of the reviewers in the first review group have reviewed the ECO, the system sends notification to the next review group.

What You Should Know About

Notifying reviewers

You can run ECO Notification in two ways:

- To process several ECOs, use the data selection in ECO Notification
- To process a single ECO, run ECO Notification from Enter/Change ECO

Item flash notice

You can set a processing option to activate flash messages for the item affected by the ECO. You can then view the flash message from inquiry programs. The system deactivates the flash message when you run the Engineering Change Population program to update the bill of material for the item.

Processing Options

See [Order Approval Notification \(P48181\)](#).

- Verify that the ECO parts list contains the change type and relationship values you want. See *Defining the Change with a Parts List (P3013)*.

Review Engineering Change Orders

Reviewing Engineering Change Orders

An ECO reviewer reviews ECO and checks outstanding ECOs that await approval.

An ECO coordinator reviews ECO information to:

- Check work orders and purchase orders for affected items
- Determine if anyone has rejected an ECO
- Check an ECO's progress
- Plan and schedule work
- Review who is in the process of reviewing an ECO
- Review who is pending notification

This section contains the following:

- [Locating ECO Information](#)
- [Reviewing Future Bills of Material](#)
- [Printing ECO Information](#)

Locating ECO Information

Locating ECO information consists of the following optional tasks:

- Locate ECO revision information
- Locate approval audit information
- Locate open tasks

For an ECO, you can locate all the revision level changes made to the item. In order to view the most current revision information, you should run the ECO Population program daily.

You can review the approval status of an ECO to display which reviewers have approved it, are in the process of reviewing it, and who is pending notification.

You can locate an ECO for requested dates, start dates, and labor hours by operation to help you plan and schedule work.

To locate ECO revision information

	<p>From Manufacturing Systems (G3), choose Engineering Change Management From Engineering Change Management (G3013), choose ECO Revision Inquiry</p>
---	---

On ECO Revisions Inquiry



Complete the following fields:

- Branch/Plant
- Item Number

The following fields display revision information:

- Drawing Revision
- Related Order
- Change Type
- Type Bill
- Batch Quantity
- Unit of Measure
- From Revision

Processing Options

See [ECO Revision Inquiry \(P30135\)](#).

To locate approval audit information



From Manufacturing Systems (G3), choose **Engineering Change Management**
From Engineering Change Management (G3013), choose **ECO Approval/Audit Review**

On ECO Approval/Audit Review

Approver Name	Status	Planned Date	Complete Date	Approved Date	Seq.	Group No.
Allen, Ray	Approved	08/15/17	07/18/10		10	1
Smith, John	In Process	08/15/17			20	1
Bobson, Jane	In Process	08/15/17			30	1

Opt: 1=Approval F5=ECO Master F4=Approval Notes F24=More Keys

Complete the following field:

- ECO Number

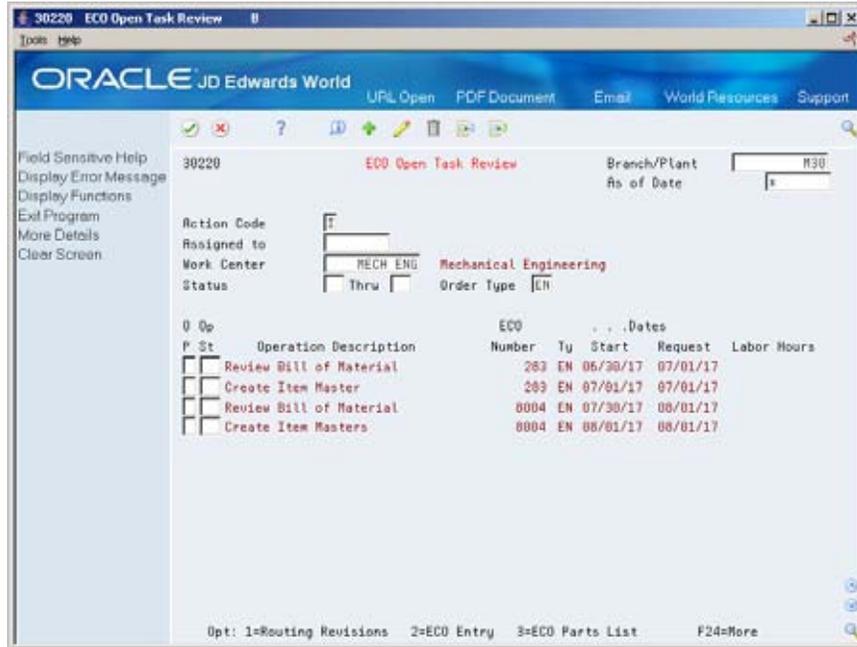
Processing Options

See [Approval Audit/Review \(P48185\)](#).

To locate open tasks

	From Manufacturing Systems (G3), choose Engineering Change Management From Engineering Change Management (G3013), choose ECO Open Task Review
---	--

On ECO Open Task Review



Complete the following fields:

- Branch/Plant
- As of Date
- Assigned to
- Work Center
- Status

Field	Explanation
As of Date	A numeric code that identifies either the period number or the date that you want to locate. If you leave this field blank, the system uses the ending date of the current period that is set up for the company. Valid period numbers are 1 through 14.
Operation Status	A user defined code (31/OS) that identifies the current status of a work order or engineering change order as the operation steps in the routing are completed.
Thru	A user defined code (system 31, type OS) used as an end point to select work order information to display.

Processing Options

See [Assignment Review \(P30220\)](#).

Reviewing Future Bills of Material



From Manufacturing Systems (G3), choose **Engineering Change Management**
From Engineering Change Management (G3013), choose **Future Bill Inquiry**

You can review a bill of material as it would look at a specified date in the future, if pending ECOs are implemented.

To review future bills of material

On Future Bill Inquiry

30210 Future Bill Inquiry Br

ORACLE JD Edwards World

Field Sensitive Help
Display Error Message
Display Functions
Exit Program
More Details
ECO Workbench
Return to Previous Point
Clear Screen

30210 Future Bill Inquiry

Branch/Plant: 159
Bill Type: 11
Bill Rev. Level:

Parent Item: 1261 Multivitamin Tablets
Batch Quantity: 10000 PC
Item Rev. Level:
Rs of Date: 09/27/06
Draw No.:

Component Item	Description	Quantity	Per	UM	V	I
12706	Vitamin A	250	GM	F	I	
12791	Vitamin B1	500	GM	F	I	
12749	Vitamin B2	500	GM	F	I	
12757	Vitamin B6	6000	GM	F	I	
12765	Vitamin B12	1320	GM	F	I	
12773	Vitamin C	3800	GM	F	I	
12781	Minerals, complex	60	GM	F	I	
12845	Buffer, inert	13160	GM	F	I	

Opt: 1=Item Master F5=ECO Workbench F24=More Keys

1. Complete the following fields:

- Branch/Plant
- Parent Item

If more than one selection type exists, the system displays Batch Quantity/Type Selection.



2. On Batch Quantity/Type Selection, enter the selection option next to the future bill of material that you want to review.
3. To review more information about the future bill of material, access the detail area.

Processing Options

See [Future Bill Inquiry \(P30210\)](#).

Printing ECO Information

You can print ECO information to help you manage the ECOs you create. There are two ECO reports available:

- ECO Details Report
- Open ECO Report

ECO Details Report



From Manufacturing Systems (G3), choose **Engineering Change Management**
 From Engineering Change Management (G3013), choose **ECO Details Report**

You can generate the ECO Details report to list all details for a specific ECO. Set up processing options to specify the amount and type of information in the report.

48020P	JD Edwards World ECO Work Order Print	Page - 3 Date - 5/30/17			
ECO Number	2436 EN				
Description	Redesign of part 212	Date Entered 10/15/17			
Originator		Branch/Plant CHI			
Drawing Change	Y	Status 40 Started Labor or Material			
BOM Change	N	Reason DE Design or Drawing Revision			
Routing Change	Y	Phase In UUP Use Up			
New Part Number	N	Existing Disp. RWK Rework			
Type	B Marketing	Priority M Med			
Target Dates	Actual Dates	Category Codes			
Design	07/01/17	Design			
Engineering	08/01/17	Engineering			
Incorporation	08/15/17	Incorporation			
Full Description of Request					
Redesign of part 212 - Sides need to be redesigned so that they fit into a slot in the back of the unit in order to better handle extra weight.					
ECO Parts List					
Parent Item Related Item	Branch	P/C TOC	Effective Dates From To	Frm To Rev Rev	Seq
-----	-----	-----	-----	-----	-----
303-A	CHI	N C		03	
303-A	CHI			03	
212	M30				
111	M30				1.0
XYZ	M30		09/15/17 12/31/20	NEW	
333Z	M30		09/15/17 12/31/20	A	1.0
701	M20		05/15/17 12/31/20	NEW A	
205	M20		05/15/17 12/31/20	A	2.0
303-A	M40			03	

Processing Options

See [ECO Work Order Print \(P48020P\)](#).

Open ECO Report



From Manufacturing Systems (G3), choose **Engineering Change Management**
 From Engineering Change Management (G3013), choose **Open ECO Report**

Use the Open ECOs report to list the ECOs that are currently in the approval process or as a basis for running the ECO Population program.

You can customize this report as follows:

- Set up the report by document type and status code
- Set up the report by category code and product family
- Set up the report by status code for pending approval
- Set up the report by status code for ECOs that have been approved

13BReview Engineering Change Orders

48421		JD Edwards World							Page -	2		
		ECO Summary by Branch/Plant							Date -	5/30/17		
Branch/ Plant	ECO Number	Ty	Date Entered	Description	St	Rea	Pha	Dsp	T P Y R	Target Date	Actual Date	Originator
M30	3421	EN	11/18/13	Redesign Projector Case	E1	EV	UUP	UAI	B H	07/15/17		Dobson, Jane
M30	3439	EN	11/18/13	Redesign chair for Desk Set	E1	EV	MYR	UAI	C H	09/01/17		Allen, Ray
M30	3447	EN	11/18/13	Add extra screws to hardware	A	M	IMD	RWK	B M	03/31/17		Wright, Allen
M20	84531	EN	03/24/15	701A Swap Component in 205	E1	CC	IMD		B M	05/15/17		Planner, Mark
M30	283	EN	07/28/14	333z N/P	E5	CC	IMD		B M	08/15/17	08/15/17	Dobson, Jane
CHI	2436	EN	10/15/13	Redesign of part 212	40	DE	UUP	RWK	B M	08/15/17		
M30	2461	EN	11/18/13	Redesign of part 212	40	DE	UUP	RWK	B M	08/15/17		Martin, John
M30	8004	EN	07/28/14	XYZ N/C in Parent 333z	E1	CC	IMD		B M	09/15/17		Dobson, Jane
M40	84558	EN	03/30/15	Change Seasoning	E1	CC	AVL		B M	07/25/17		Abbot, Dominique

Approve Engineering Change Orders

Approving Engineering Change Orders

After you have located an ECO for review, you must indicate your approval or rejection. The reviewer typically performs this task.

After the last person in the approval routing has approved the ECO, the system updates the status code with the value you specify in a processing option.

This section contains the following:

- [Reviewing ECOs for Approval](#)
- [Updating Bills of Material](#)

Before You Begin

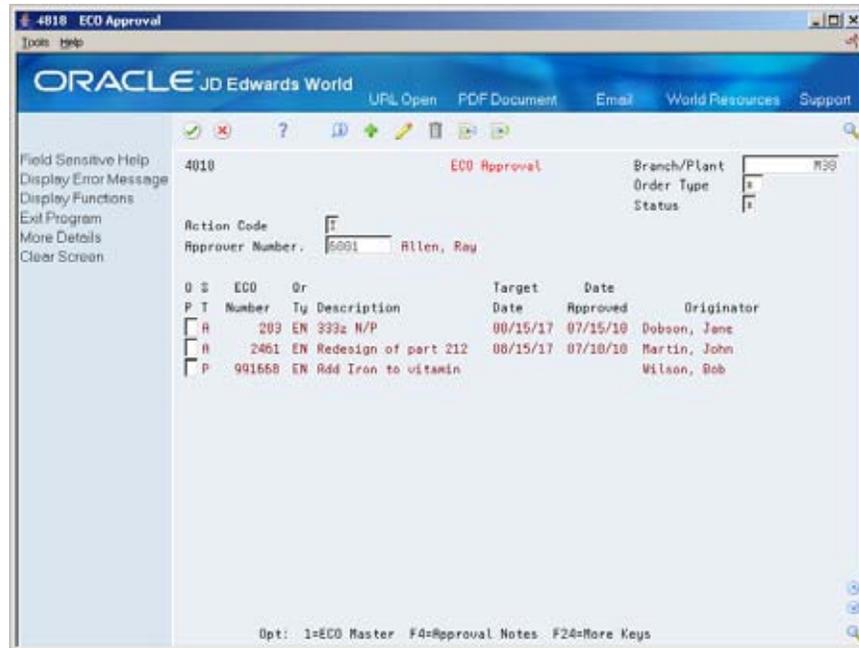
- Locate the ECOs that have been assigned for your review. You can either have the system notify you automatically or you can locate open ECOs with ECO Approval. See *Reviewing ECOs*.

Reviewing ECOs for Approval

	From Manufacturing Systems (G3), choose Engineering Change Management From Engineering Change Management (G3013), choose ECO Approval
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To review an ECO for approval

On ECO Approval



1. Locate the ECOs that await your approval and complete the following fields:
 - Approver Number (required)
 - Branch/Plant (required)
 - Status
2. For each ECO, complete the following fields to indicate your approval or rejection:
 - Status (required)
 - Date Approved
 - Note

What You Should Know About

Protecting the approval field

You can set a processing option to protect the approval field so that only the current user can change approval status.

Defining additional status codes	You can define additional approval status codes on UDC 30/ST. Approval status code A is hard-coded and is the only value that initiates the notification of other review groups.
Entering text	You can type text in the detail area to provide more information regarding your approval.
Rejecting an ECO	To reject an ECO, use status code R. This stops the notification process. After a reviewer rejects an ECO, the creator of the ECO must redefine the ECO and restart the notification process.

Field	Explanation
Approver Number	A number that identifies an entry in the Address Book system. Use this number to identify employees, applicants, participants, customers, suppliers, tenants, and any other Address Book members.
Status	User defined code system 30, type ST, which indicates the approval status of an engineering change order. For example: A Accept (initiates notification of next review group) R Reject (stops the notification process)
Date Approved	The date on which an approval authority has approved or rejected an ECO. The default value is the current system date.
Note	A 40-character generic description.

Processing Options

See [ECO Approval \(P4818\)](#).

Updating Bills of Material

	From Manufacturing Systems (G3), choose Engineering Change Management From Engineering Change Management (G3013), choose Engineering Change Population
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For ECOs with attached parts lists, you can process the ECO parts list and related items list to update the Bill of Material table with the requested changes.

The Engineering Change Population program performs the following:

- Processes the ECOs
- Updates the bills of material for the items on the ECO
- Creates a report in proof or final mode that describes the requested changes
- Updates ECO related information in the Branch/Plant table

- Updates the Item Master table for item flash messages based on other outstanding ECOs
- Validates the ECO for full approval before accepting the requested changes
- Updates the effectivity dates
- Updates the drawing revision level
- Copies substitute items from the old component to the new component
- Updates the parent/component revision level

Caution: JD Edwards World recommends that you first run this program in proof mode. In proof mode, the report lists all requested changes without actually changing any files. Review the report and then run the program in final mode to update files. After you run this program and update the Bills of Material table, you cannot change the parts list and run the program again.

The Engineering Change Population program only updates the bill of material. You must update the routing to include the same item revision level as the bill of material if you want to synchronize them.

As you run the Engineering Change Population program in Proof mode, you may encounter a related item that has become obsolete. The program report will indicate "This item is obsolete" in the description field. You can then replace the item in the bill of material with a valid part before you run the program in Final mode.

Before You Begin

- Verify that the ECO has been approved by all reviewers
- Verify that the ECO parts list contains the change type and relationship values you want. See *Defining the Change*.
- Verify that the ECO related items list contains the items that you want to include in the change.

Example: Engineering Change Population Report

In proof mode, the report lists all requested changes without actually changing any files.

30510	JD Edwards World	Page -	3
	Bill of Material Population	Date -	6/02/17
ECO Number	8004 EN	Date Entered	07/28/94
Description	XYZ N/C in Parent 333z	Branch/Plant	M30 Memphis Mfg. Plant
Originator	9200 Dobson, Jane		
Drawing Change . Y	Status E1 ECO Entered	Type	B Marketing
BOM Change Y	Reason CC Customer Change Request	Priority	M Med
Routing Change . Y	Phase In IMD Immediate		
New Part Number . Y	Existing Disp.		
.Target Dates.Actual Dates.	Category Codes
Design	08/01/17	Design	
Engineering	09/01/17	Engineering	
Incorporation	09/15/17	Incorporation	
Bill of Material Changes - F3002			

BEFORE CHANGE		AFTER CHANGE	

Parent Item	Branch	Typ	Batch
Component Item	Quantity	UM	Rev

			333Z
			OAK SHELF UNIT
			XYZ
			1x10x6' OAK S4S
			Qty Per 2 EA Comp.Seq 1.1
			Fixed/Variable V Op Seq. 10.00
			M30 M
			M30
			Comp. Rev. . . NEW
			Eff From 09/15/17
			Eff Thru 12/31/20
			A
			BOM

What You Should Know About

Revision Level Control

You can protect the item revision level that you set up in Plant Manufacturing Data with a processing option so that it is only updated by the Engineering Change Population program.

Drawing Information

You can protect the item drawing information that you set up in Item Master Revisions with a processing option so that it is only updated by the Engineering Change Population program.

Processing Options

See [ECO - Bill of Material Population \(P30510\)](#).

5 Processing Options

Item Entry Processing Options

Item Master Revisions (P4101)

Processing Option	Processing Options Requiring Further Description
<p>DEFAULT VALUES :</p> <ol style="list-style-type: none"> 1. Primary Unit of Measure (Blanks=EA) 2. Weight Unit of Measure (Blanks=LB) 	
<p>PROCESS CONTROL :</p> <ol style="list-style-type: none"> 3. Specify the from and thru dates to be used for effective dates in the Item Notes File : From Date (Blank = System date) Thru Date (Blank = 12/31 with the year = to the default value for the data dictionary item Century Change Year (#CYR)) 	
<ol style="list-style-type: none"> 4. Enter a '1' for each additional Item Master information screen to display when performing an add or change. If blank, the screen will not display. Classification Codes Cost Revisions (Conditional) Price Revisions (Conditional) Units & Measures Manufacturing Values Bulk Product Information UCC Codes & UOMs Lot Processing 	
<ol style="list-style-type: none"> 5. Enter a '1' to use the window version of the screens selected above. If left blank, the full screen versions will be displayed. 	

Processing Option	Processing Options Requiring Further Description
<p>6. Enter a '1' to automatically call the Item Branch Program (P41026) when adding a new item number and return to the Item Master Screen.</p> <p>Enter a '2' to call the Item Branch program automatically and remain on the Item Branch Screen.</p> <p>If left blank, the Item Branch Program will not be called.</p>	
<p>GLOBAL UPDATE:</p> <p>7. Enter a '1' to transfer changes made to the 2nd (LITM) and the 3rd (AITM) item numbers to the Item Branch (F4102) item records.</p> <p>(F19 from Item Master Revisions allows you to update other files).</p> <p>or</p> <p>Enter a '2' to transfer changes to records in the selected files (see User Defined Codes 40/IC).</p> <p>Press F1 to display the selected files.</p>	
<p>DREAM WRITER VERSIONS:</p> <p>Enter the version to be used for each program.</p> <p>If left blank, ZJDE0001 is used.</p> <p>8. Item Availability (P41202)</p> <p>9. Item Branch (P41026)</p> <p>10. Product Catalog Detail (P41903)</p>	
<p>DRAWING INFORMATION:</p> <p>11. Enter a '1' to protect item drawing information from update.</p>	

Branch/Plant Item Information (P41026)

Processing Option	Processing Options Requiring Further Description
PROCESS CONTROL:	

Processing Option	Processing Options Requiring Further Description
<p>1. Enter a '1' to select the Item Location information screens to automatically call when performing an add or a change. If left blank, screen will not display.</p> <p>Classification Codes Cost Revisions (conditional) Price Revisions (conditional) Unit of Measure Quantities Manufacturing Values Item Profile Bulk Product Information Lot Processing</p>	
<p>2. Enter '1' to use the window version of the screens selected above. If left blank, the full screens will display.</p>	
<p>DREAM WRITER VERSIONS:</p> <p>3. Summary Availability (P41202) 4. Item / Location Information (P41024) 5. Product Catalog Detail Information (P41903)</p>	
<p>REVISION LEVEL CONTROL:</p> <p>6. Enter '1' to protect ECO revision information from update.</p>	

Process Manufacturing Processing Options

Routing Master Revisions (P3003)

Processing Option	Processing Options Requiring Further Description
<p>FIELD DISPLAY:</p> <p>1. Enter a '1' by the following fields to activate them:</p> <p style="padding-left: 20px;">Line/Cell</p> <p style="padding-left: 20px;">Routing Type</p> <p style="padding-left: 20px;">Batch Quantity</p>	
<p>DEFAULT VALUES:</p> <p>2. Routing Type (Optional)</p>	
<p>UPDATE OPTIONS:</p> <p>3. Enter a '1' to update the Component Operation Scrap Percent in the Bill of Material for the components on the operation and the Cumulative Yield Percent on the Routing, when updating the operation yield percent.</p>	
<p>COMPONENT BRANCH:</p> <p>4. Enter a '1' to change Component Branch to that of Parent Branch when copying a routing.</p>	
<p>DATE EFFECTIVITY:</p> <p>5. Enter a date to default into the As of Date or '*' to display all dates.</p> <p style="padding-left: 20px;">If left blank, the system date will be used.</p>	

Where Used BOM Update (P30520)

Processing Option	Processing Options Requiring Further Description
<p>PROCESSING CONTROL:</p> <ol style="list-style-type: none"> Enter a '1' if this is to be run in Final mode. If left blank, the program will run in Proof mode. Enter a '1' to DELETE existing records from the Bill of Materials file (F3002). If left blank, records will not be deleted. <p>Note: Records will not be updated if delete is selected.</p> <ol style="list-style-type: none"> Enter a '1' to validate the new component against the Item Branch File (F4102). If left blank, the new item will not be validated. 	
<p>REPLACEMENT VALUES:</p> <ol style="list-style-type: none"> Component Item Number Quantity Per Effective From Effective Thru Unit of Measure Issue Type Code 	
<p>BILL OF MATERIAL SELECTION:</p> <ol style="list-style-type: none"> Enter the Branch/Plant to be processed. If left blank, no processing will be performed. 	

Bill of Material Inquiry (P30200)

Processing Option	Processing Options Requiring Further Description
<p>DEFAULT VALUES:</p>	

Processing Option	Processing Options Requiring Further Description
<p>1. Enter one of the following:</p> <ul style="list-style-type: none"> 1 = Single-Level 2 = Multi-Level 3 = Indented 4 = All processes where a co- or by-product is produced If left blank, the Single-Level mode will be displayed. <p>2. Bill Type (Optional)</p>	
<p>DREAM WRITER VERSIONS:</p> <p>Enter the version for each program. If left blank, 'ZJDE0001' will be used.</p> <p>NOTE: Options 2a - 2b are used only to set Printer Overrides. No Data Selection or Sequencing is possible.</p> <p>2a. Single-Level BOM Print (P30410)</p> <p>2b. -or- Multi-Level BOM Print (P30415)</p> <p>3. ECO Workbench (P30225)</p>	
<p>DREAM WRITER VERSION FROM WINDOW:</p> <p>4. Enter the version of ECO Revisions (P48020) to call from the Revisions Window (P30BBREV). If left blank, version 'ZJDE0001' will be used.</p>	
<p>COMPONENT SEQUENCING:</p> <p>5. Enter one of the following:</p> <ul style="list-style-type: none"> 1 = Sequence components by component line number 2 = Sequence components by operation sequence number If left blank, components will be sequenced by component line number. 	
<p>DISPLAY OPTIONS:</p> <p>6. Enter a '1' to prevent displaying the components for a Subassembly with a Stocking Type of 'P'.</p> <p>If left blank, the components will display on the video.</p>	

Where Used Inquiry (P30201)

Processing Option	Processing Options Requiring Further Description
<p>DEFAULT VALUES:</p> <ol style="list-style-type: none"> 1. Enter one of the following: <ul style="list-style-type: none"> 1 = Single-Level 2 = Multi-Level 3 = Indented 4 = All processes where a co- or by-product is produced 5 = Part/Ingredient Availability If left blank, the Single-Level mode will be displayed. 2. Bill Type (Optional) 	
<p>DREAM WRITER VERSIONS:</p> <p>Enter the version for each program. If left blank, 'ZJDE0001' will be used.</p> <p>NOTE: Option 6 is only valid if System 13 (Equipment) is available.</p> <ol style="list-style-type: none"> 3. Item Search (P41200) 4. Material Where-Used Print (P30420) 5. Work Order Entry (P48013) 6. Item Availability (P30205) 7. Where-Used Detail (P13226) 	

Co-/By-Products Produced by Process (P30201)

Processing Option	Processing Options Requiring Further Description
DEFAULT VALUES:	

Processing Option	Processing Options Requiring Further Description
<p>1. Enter one of the following:</p> <p>1 = Single-Level</p> <p>2 = Multi-Level</p> <p>3 = Indented</p> <p>4 = All processes where a co- or by-product is produced</p> <p>5 = Part/Ingredient Availability If left blank, the Single-Level mode will be displayed.</p> <p>2. Bill Type (Optional)</p>	
<p>DREAM WRITER VERSIONS:</p> <p>Enter the version for each program. If left blank, 'ZJDE0001' will be used.</p> <p>NOTE: Option 6 is only valid if System 13 (Equipment) is available.</p> <p>3. Item Search (P41200)</p> <p>4. Material Where-Used Print (P30420)</p> <p>5. Work Order Entry (P48013)</p> <p>6. Item Availability (P30205)</p> <p>7. Where-Used Detail (P13226)</p>	

Co-/By-Product Where Produced Inquiry (P30200)

Processing Option	Processing Options Requiring Further Description
<p>DEFAULT VALUES:</p> <p>1. Enter one of the following:</p> <p>1 = Single-Level</p> <p>2 = Multi-Level</p> <p>3 = Indented</p> <p>4 = All processes where a co- or by-product is produced If left blank, the Single-Level mode will be displayed.</p> <p>2. Bill Type (Optional)</p>	

Processing Option	Processing Options Requiring Further Description
<p>DREAM WRITER VERSIONS:</p> <p>Enter the version for each program. If left blank, 'ZJDE0001' will be used.</p> <p>NOTE: Options 2a - 2b are used only to set Printer Overrides. No Data Selection or Sequencing is possible.</p> <p>2. a Single-Level BOM Print (P30410)</p> <p>2. b -or- Multi-Level BOM Print (P30415)</p> <p>3. ECO Workbench (P30225)</p>	
<p>DREAM WRITER VERSION FROM WINDOW:</p> <p>4. Enter the version of ECO Revisions (P48020) to call from the Revisions Window (P30BREV). If left blank, version 'ZJDE0001' will be used.</p>	
<p>COMPONENT SEQUENCING:</p> <p>5. Enter one of the following:</p> <p>1 = Sequence components by component line number</p> <p>2 = Sequence components by operation sequence number If left blank, components will be sequenced by component line number.</p>	
<p>DISPLAY OPTIONS:</p> <p>6. Enter a '1' to prevent displaying the components for a Subassembly with a Stocking Type of 'P'.</p> <p>If left blank, the components will display on the video.</p>	

Bill of Material Comparison (P30204)

Processing Option	Processing Options Requiring Further Description
<p>DEFAULT VALUES:</p> <p>1. Enter bill type.</p> <p>If left blank, 'M' will be used.</p>	

Processing Option	Processing Options Requiring Further Description
<p>2. Enter one of the following:</p> <ul style="list-style-type: none"> 1 - Single-level comparison 2 - Multi-level comparison <p>If left blank, '1' will be used.</p>	
<p>TYPE OF COMPARISON:</p> <p>3. Enter one of the following:</p> <ul style="list-style-type: none"> 1 - Summary by work center 2 - Summary by item <p>If left blank, '1' will be used.</p>	
<p>COMPONENT SELECTION:</p> <p>4. Enter '1' to exclude subassemblies.</p> <p>5. Enter '1' to include phantoms.</p>	
<p>DREAM WRITER VERSION FROM WINDOW:</p> <p>6. Enter the version of ECO Revisions (P48020) to call from the Revisions Window (P30BREV).</p> <p>If left blank, version 'ZJDE0001' will be used.</p>	

Single Level Bill of Material (P30410)

Processing Option	Processing Options Requiring Further Description
<p>BILL EFFECTIVITY:</p> <p>1. Enter the As Of Date for the bill of material.</p> <p>If left blank, the system date will be used.</p>	
<p>REPORT FORMAT:</p> <p>2. Enter a '1' to print a second line of detail for items appearing on the report.</p> <p>If left blank, only one line of detail will be printed.</p>	
<p>GENERIC TEXT:</p> <p>3. Enter '1' to print generic text from the Bill of Materials file (F3002).</p>	

Multi-Level Bill of Material (P30415)

Processing Option	Processing Options Requiring Further Description
<p>BILL EFFECTIVITY:</p> <p>1. Enter the As Of Date for the bill of material. If left blank, the current date will be used.</p>	
<p>REPORT FORMAT:</p> <p>2. Enter a '1' to print an indented bill of material.</p> <p>3. Enter a '1' to print a second line of detail for items appearing on the report. If left blank, only one line of detail will be printed.</p>	
<p>COMPONENT LOCATOR:</p> <p>4. Enter a '1' to print the component locations.</p>	
<p>GENERIC TEXT:</p> <p>5. Enter '1' to print generic text from the Bill of Materials file (F3002).</p>	
<p>COMPONENTS OF A SUBASSEMBLY WITH A STOCKING TYPE 'P':</p> <p>6. Enter a '1' to prevent printing the components for a Subassembly with a Stocking Type of 'P'. If left blank, the components will print on the report.</p>	

Material Where Used List (P30420)

Processing Option	Processing Options Requiring Further Description
<p>REPORT FORMAT:</p>	

Processing Option	Processing Options Requiring Further Description
1. Enter the format of the report to print: 1 = Single-Level 2 = Multi-Level 3 = Multi-Level Indented 2. Enter a '1' to print a second line of detail on the report. If left blank, only one line of detail will be printed.	
BILL EFFECTIVITY: 3. Enter the "as of" date for the bill of material. If left blank, the current date will be used.	

Bill of Material Comparison Print (P30425)

Processing Option	Processing Options Requiring Further Description
ITEM/PROCESS 1: 1. Item Number (Required) 2. Branch/Plant (Required) 3. Batch Quantity (Default = 0) 4. Unit of Measure (Default = Prod) 5. As of Date (Default = System) 6. Bill Type (Default = 'M')	
ITEM/PROCESS 2: 7. Item Number (Required) 8. Branch/Plant (Required) 9. Batch Quantity (Default = 0) 10. Unit of Measure (Default = Prod) 11. As of Date (Default = System) 12. Bill Type (Default = 'M')	
TYPE OF COMPARISON:	

Processing Option	Processing Options Requiring Further Description
<p>13. Enter one of the following:</p> <p> 1 = Single-Level</p> <p> 2 = Multi-Level</p> <p>If left blank, a Single-Level comparison will be printed.</p> <p>14. Enter one of the following:</p> <p> 1 = Item summary by work center</p> <p> 2 = Regardless of work center</p> <p>If left blank, items will be summarized by work center.</p>	
<p>COMPONENT PRINT SELECTION:</p> <p>15. Enter a '1' to exclude subassemblies</p> <p>16. Enter a '1' to include phantoms.</p> <p>17. Enter a '1' to print all items. If left blank, only differences will be printed.</p>	

Lead Time Inquiry (P30207)

Processing Option	Processing Options Requiring Further Description
<p>LEAD TIME CALCULATION:</p> <p>1. Enter a '1' to use the lead time values from the Item Branch File (F4102).</p> <p>If left blank, calculated lead times will be displayed.</p>	
<p>DISPLAY OPTIONS:</p> <p>2. Enter a '1' to prevent displaying the components for a Subassembly with a Stocking Type of 'P'.</p> <p>If left blank, the components will display on the video.</p>	

Lead Time Generator (P30822)

Processing Option	Processing Options Requiring Further Description
PROCESSING CONTROL: 1. Enter the Branch/Plant to be processed or '*' to process all Branch/Plants. 2. Enter the effectivity date for routings. If left blank, the system date will be used.	

Engineering Change Management Processing Options

ECO Workbench (P30225)

Processing Option	Processing Options Requiring Further Description
<p>DREAM WRITER VERSIONS:</p> <p>Enter the version for each program. If left blank, 'ZJDE0001' will be used.</p> <p>Note: Option 3 will use 'ZJDE0002'.</p> <ol style="list-style-type: none"> 1. ECO Entry (P48020) 2. ECO Details (P48092) 3. ECO Pending (P48092) 4. ECO Parts List (P3013) 5. ECO Approval Audit/Review (P48185) 	
<p>DEFAULT VALUES:</p> <ol style="list-style-type: none"> 6. Reason Code (Optional) 7. Phase Code (Optional) 8. Work Order Type (Optional) 9. Priority (Optional) 10. Originator (Optional) 11. From Status (Optional) 12. Thru Status (Optional) 13. Item Number (Optional) 14. Document Type (Optional) 15. Phase (Optional) 	

Processing Option	Processing Options Requiring Further Description
<p>CATEGORY CODE SELECTION DEFAULTS:</p> <p>16. Enter a '1' next to three Category Codes to further define the ECOs displayed:</p> <ul style="list-style-type: none"> a. Category 02 b. Category 03 c. Category 04 d. Category 05 e. Status f. Service Type g. Skill Type h. Experience Level i. Category 10 <p>If left blank, Category Codes 02, 03, and 04 will be used.</p>	

Parts List Detail (P3013)

Processing Option	Processing Options Requiring Further Description
<p>DREAM WRITER VERSIONS:</p> <p>Enter the version for each program.</p> <p>If left blank, 'ZJDE0001' will be used.</p> <p>Note: Option 10 will use 'ZJDE0002'.</p> <ul style="list-style-type: none"> 1. Item Master Revisions (P4101) 2. Item Inquiry w/Word Search (P41200) 3. Supply and Demand Inquiry (P4021) 4. Bill of Material Inquiry (P30200) 5. Where Used Inquiry (P30201) 6. Purchase Order Inquiry (P430301) 7. W.O. Scheduling Workbench (P31225) 8. ECO Revisions (P48020) 9. ECO Details (P48092) 10. ECO Pending (P48092) 	
<p>INCLUSION RULES:</p>	

Processing Option	Processing Options Requiring Further Description
11. Enter the version of Supply/Demand Inclusion Rules to use when adding orders to the ECO Pending Orders Detail. If left blank, no orders will be added.	
REVISION LEVELS: 12. Enter a '1' to default the To Rev field to the Next Revision when no pending ECOs exist. 13. Enter the UDC table to retrieve the Next Revision Level. If left blank, UDC table 30/NR will be used.	

ECO Maintenance (P48020)

Processing Option	Processing Options Requiring Further Description
DEFAULT VALUES: 1. Document Type (Default is 'EN') 2. Status (Optional) 3. Note Type (Default is 'A')	
DREAM WRITER VERSIONS: Enter the version for each program. If left blank, 'ZJDE0001' will be used. 4. ECO Details (P48092) 5. ECO Parts List (P3013) 6. ECO Workbench (P30225) 7. ECO Pending Orders (P48092) 8. ECO Approval Notification (P48181) 9. ECO Approval Audit/Review (P48185)	

Order Approval Notification (P48181)

Processing Option	Processing Options Requiring Further Description
<p>ECO APPROVAL NOTIFICATION:</p> <ol style="list-style-type: none"> 1. Enter the Flash Message to activate. If left blank, the Flash Message will not be updated. 2. Enter a '1' to notify children when a parent is notified of an ECO 	

ECO Revision Inquiry (P30135)

Processing Option	Processing Options Requiring Further Description
<p>DREAM WRITER VERSIONS:</p> <p>Enter the version for each program. If left blank, 'ZJDE0001' will be used.</p> <ol style="list-style-type: none"> 1. ECO Entry (P48020) 2. BOM Revisions (P3002) 	

Approval Audit/Review (P48185)

Processing Option	Processing Options Requiring Further Description
<p>ORDER APPROVAL TYPE:</p> <ol style="list-style-type: none"> 1. Enter a '1' to approve Work Orders. If left blank, ECO orders will be approved. 	
<p>DREAM WRITER VERSIONS:</p> <p>Enter the version for each program. If left blank, 'ZJDE0001' will be used.</p> <ol style="list-style-type: none"> 2. ECO Approval (P4818) 3. Work Order Approval (P4818) 4. ECO Master (P48020) 5. Work Order Header (P48013) 	

Processing Option	Processing Options Requiring Further Description
<p>APPROVAL ACCESS:</p> <p>6. Enter a '1' to allow access to all approval records.</p> <p>If left blank, only current user's records will be available for approval.</p>	

Assignment Review (P30220)

Processing Option	Processing Options Requiring Further Description
<p>DEFAULT VALUES:</p> <p>1. Enter the document type to use or '*' for all document types.</p> <p>If left blank, a '*' will be used.</p> <p>2. From Status (Optional)</p> <p>3. Thru Status (Optional)</p>	
<p>DREAM WRITER VERSIONS:</p> <p>Enter the version for each program. If left blank, 'ZJDE0001' will be used.</p> <p>4. ECO Entry (P48020)</p> <p>5. ECO Parts List (P3013)</p>	

Future Bill Inquiry (P30210)

Processing Option	Processing Options Requiring Further Description
<p>DEFAULT VALUES:</p> <p>1. Bill Type (Optional)</p>	
<p>DATE EFFECTIVITY:</p> <p>2. Enter a date to default into the As of Date or '*' to display all dates.</p> <p>If left blank, the system date will be used.</p>	
<p>DREAM WRITER VERSIONS:</p> <p>Enter the version for each program. If left blank, 'ZJDE0001' will be used.</p>	

Processing Option	Processing Options Requiring Further Description
3. ECO Workbench (P30225)	
DREAM WRITER VERSION FROM WINDOW: 4. Enter the version of ECO Revisions (P48020) to call from the Revisions window (P30BREV). If left blank, version 'ZJDE0001' will be used.	

ECO Work Order Print (P48020P)

Processing Option	Processing Options Requiring Further Description
REPORT FORMAT: Enter a '1' to print the following: 1. ECO Notes 2. ECO Additional Details 2a. Enter the Supplemental Data Base code for the type to be reviewed. E = Engineering Change Order 2b. Enter the specific Type of Data on which to inquire. 3. ECO Parts List	
NOTE TYPE: 4. Enter the Note Type to be printed. If left blank, 'A' will be used.	

ECO Approval (P4818)

Processing Option	Processing Options Requiring Further Description
ORDER APPROVAL TYPE: 1. Enter a '1' to approve Work Orders. If left blank, ECO orders will be approved.	

Processing Option	Processing Options Requiring Further Description
<p>ORDER TYPE:</p> <p>2. Enter the default search order type. If left blank, all order types will be used.</p>	
<p>APPROVAL PROCESSING:</p> <p>3. Enter the default search approval status. If left blank, all statuses will be used.</p>	
<p>DREAM WRITER VERSIONS:</p> <p>Enter the version for each program. If left blank, 'ZJDE0001' will be used.</p> <p>4. ECO Entry (P48020)</p> <p>5. Work Order Entry (P48013)</p> <p>6. ECO Approval Notification (P48181)</p>	
<p>APPROVAL ROUTING COMPLETION:</p> <p>7. Enter the status code to update the Work Order Master file (F4801) when approval routing is complete. If left blank, status will not be updated.</p>	
<p>APPROVAL ACCESS:</p> <p>8. Enter a '1' to allow access to all approval records. If left blank, only current user's records will be available for approval.</p>	

ECO - Bill of Material Population (P30510)

Processing Option	Processing Options Requiring Further Description
<p>PROOF OR FINAL MODE:</p> <p>1. Enter a '1' if this is to be run in Final mode. If left blank, program will run in Proof mode.</p>	
<p>ECO APPROVAL VALIDATION:</p> <p>2. Enter a '1' to validate ECO as fully approved before allowing final mode update.</p>	

Processing Option	Processing Options Requiring Further Description
<p>FINAL MODE UPDATES:</p> <p>3. Enter a '1' to update the ECOs Actual Incorporation Date with system date. If left blank, no date update will occur.</p> <p>4. Enter the ECO Status to use for updating the ECO as incorporated. If left blank, no status change will occur.</p> <p>5. Enter a '1' to update the Item Balance File (F4102) Revision Level when the Bill of Material Revision Level is updated for a parent. If left blank, no change will occur to the Item Balance Revision Level (IBMERL).</p> <p>6. Enter a '1' to update the Item Balance file (F4102) ECO Revision Information. If left blank, no update will occur.</p>	
<p>6a. Enter a '1' to prevent the update of component(s) Item Balance file (F4102) ECO Revision Information when processing a Change Parent ECO. If left blank, parent and component items will be updated per option 6.</p> <p>7. Enter the Item Flash Message to use when resetting the flash message due to other outstanding ECOs. If left blank, no change will occur to the Item Flash Message.</p> <p>8. Enter a '1' to update the Item Master File (F4101) Drawing Revision Level. If left blank, no change will occur to the Drawing Revision Level (IMRVNO).</p> <p>9. Enter a '1' to copy substitute items from old components to new components. If left blank, substitute items will not be copied.</p>	
<p>REVISION LEVEL CONTROL:</p> <p>10. Enter a '1' to update the Component Revision Level in all Bills of Material where a parent item is used.</p> <p>Note: Only items at the current Bill Revision Level will be updated.</p>	

6 Appendices

Appendix A – Functional Servers

About Functional Servers

Several JD Edwards World programs access functional servers. The purpose of functional servers is to provide a central location for standard business rules about entering documents, such as vouchers, invoices, and journal entries. These business rules establish the following:

- Data dictionary default values
- Field edits and valid values
- Error processing
- Relationships between fields or applications

The advantages of a functional server are:

- It reduces maintenance of entry programs because edit rules reside in one central location.
- You can standardize documents across all applications because you create them using the same business rules.
- Generally, the user interface (appearance and interaction) of a form is now separate from how a program works.

To set up business rules for an entry program

The steps for setting up business rules for an entry program are:

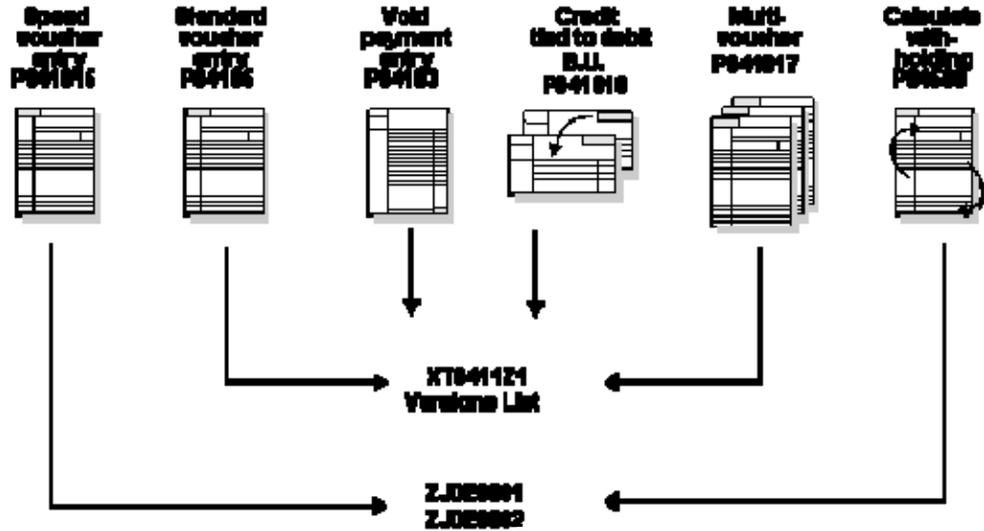
1. Create a DREAM Writer version for a specific functional server program (for example, XT0411Z1 for voucher entry).
2. Set the processing options within the version according to your company requirements.
3. Specify the version you want the entry program to use in the processing options for that entry program.

You can have all your entry programs use the same DREAM Writer version (and thus, use the same rules) or you can set up different DREAM Writer versions. JD Edwards World provides DREAM Writer version ZJDE0001 as the default functional server version for your entry programs.

Caution: Only the person responsible for system-wide setup should make changes to the functional server version. For more information about how to set up DREAM Writer versions, see the *Technical Foundation Guide*.

Example: Voucher Processing Functional Server

The following graphic shows the programs that use the voucher processing functional server. JD Edwards World provides two demo versions of the functional server, ZJDE0001 and ZJDE0002.



Appendix B – Lead Time Calculations

Understanding Lead Time Calculations

Determining lead time is an essential part of any manufacturing or scheduling process. For any product that you purchase or manufacture, you encounter a time lag between when you order or start it and when you receive or finish it. To account for the lag, you must estimate the extra time and allow for it in your planning.

Several JD Edwards World Manufacturing systems use lead times. In Product Data Management, you enter routing and work center information, and run the Leadtime Rollup program to calculate lead times. The Shop Floor Control system uses the lead time information to calculate the start date of a work order based on the order's due date. For more information, see also *Appendix A – Lead Times* in the *Shop Floor Control – Process Guide* or *Appendix B – Lead Times* in the *Shop Floor Control – Discrete Guide*.

This appendix describes how the Leadtime Rollup program calculates lead times. The following information on the Enter/Change Routing form is used by the Leadtime Rollup program.

Information	Description
Time basis code	Identify the rate used for machine or labor hours entered for any routing step. This is how run hours are expressed for an item (for example, 25 hours per 1000 pieces or 15 hours per 10000 pieces). You must define these codes on UDC 30/TB.
Run hours	Run hours consists of: <ul style="list-style-type: none">▪ Machine hours, which are the hours required to produce the amount from the time basis code.▪ Labor hours, which are the number of labor hours necessary to produce the amount from the time basis code.
Move hours	The hours a work order is in transit from the completion of one operation to the beginning of the next.

The Leadtime Rollup program calculates the following:

Total Queue/Move Hours

The amount of time a work order is in queue at an operation and the amount of time to move the work order between operations. Total queue/move hours are the sum of the move hours and the queue hours.

(Move hours + Queue hours) = Total queue/move hours

Operation 30	(1+2)
Operation 60	(2+4)
Operation 80	+ (0+0)
Queue Hours	9

Setup Hours

The hours required to set up machinery to run a specific item, regardless of quantity.

Sum of standard setup hours for each operation

Operation 30	1
Operation 60	0
Operation 80	+0
Setup Hours	1

Level Lead time

The system calculates this value if the Fixed Lead time Flag is set to F and the Manufacturing Leadtime Quantity is greater than zero. Otherwise, the system uses the value you entered manually to calculate start dates of work orders.

The following values are defined:

- The level lead time has been calculated previously:
 - Queue hours = 9
 - Setup hours = 1
- M or L Either the machine or labor hours based on the Prime Load Code
- SUM Sum of all operations
- TIMB Time Basis Code
- MLQ Manufacturing Lead time Quantity
- E Number of employees in work center
- M Number of machines in work center

$$\frac{\left[\frac{\text{SUM } \{(M \text{ or } L)/(E \text{ or } M)\} * \text{MLQ}}{\text{TIMB}} \right] + \text{setup} + \text{total queue/move}}{\text{Work hours per day (from constants file)}}$$

$$\frac{\text{Operation 30}}{\frac{(8/1) * 2000}{10,000}} + \frac{\text{Operation 60}}{\frac{(12/1) * 2000}{10,000}} + \frac{\text{Operation 30}}{\frac{(12/1) * 2000}{10,000}} + 1 + 9$$

8

$$1.6 + 2.4 + 2.4 + 1 + 9 = 16.4$$

$$16.4/8 = 3 \text{ days level leadtime}$$

Per Unit Lead time

The system calculates this value when the Lead time Flag is set to V. It uses the time basis code from the routing to calculate lead time per unit and the time basis code from the Item Master as a common factor to multiply all the lead times per units.

The following values are defined:

- M or L Either the machine or labor hours based on the Prime Load Code
- SUM Sum of all operations
- TIMB Time Basis Code
- E Number of employees in work center
- M Number of machines in work center

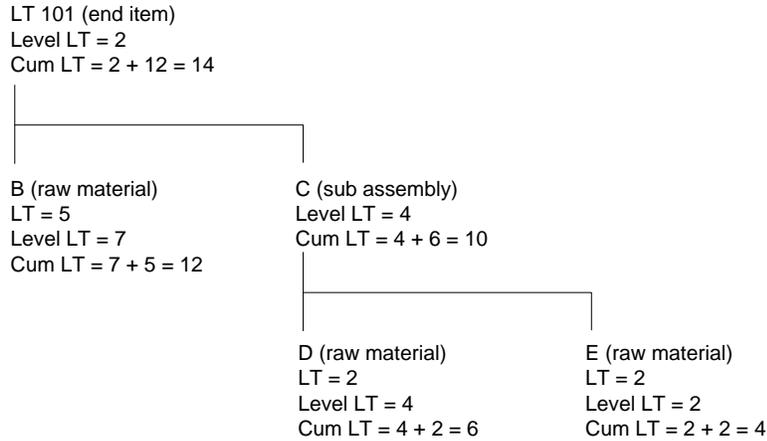
$$\frac{\text{SUM } \{(M \text{ or } L)/(E \text{ or } M)\} * \text{TIMB (item balance)}}{\text{TIMB (Routing)}}$$

$$\frac{\text{Operation 30}}{\frac{(8/1) * 10,000}{10,000}} + \frac{\text{Operation 60}}{\frac{(12/1) * 10,000}{10,000}} + \frac{\text{Operation 30}}{\frac{(12/1) * 10,000}{10,000}}$$

$$8 + 12 + 12 = 32 \text{ hours per unit leadtime}$$

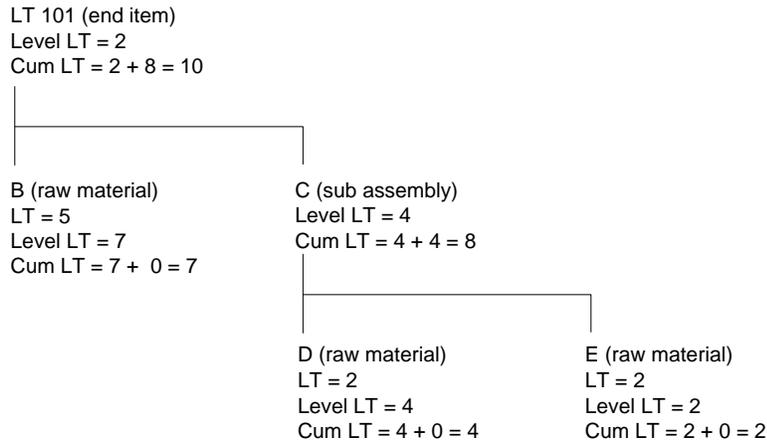
Cumulative Lead Time

The cumulative lead time is the sum of the level lead time and the longest cumulative lead time of any of the item's next lower level components.



Manufacturing Lead Time

Manufacturing Lead Time is the sum of the level lead time and the longest manufacturing lead time of any of the item's lower level components.



Lead Times for Purchased Parts

For purchased parts you must set the level lead time. The cumulative lead time is equal to the level lead time. The following values are zero:

- Manufacturing lead time
- Lead time per unit
- Total queue/move hours
- Setup hours

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A7.3

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