

JD Edwards World

Product Data Management - Process Guide

Release A9.4

E58771-01

April 2015

Describes how to organize and maintain information about each manufactured item. Describes how to define the relationships between inventory items (and other purchased or non-stock items) and how they are combined to manufacture a saleable product. Also includes an ingredient list and steps for blending or packaging the ingredients.

E58771-01

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Preface

Welcome to the JD Edwards World Product Data Management - Process Guide.

Audience

This document is intended for implementers and end users of JD Edwards World Product Data Management - Process system.

Documentation Accessibility

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Conventions

The following text conventions are used in this document:

| Convention | Meaning |
|-----------------|--|
| boldface | Indicates cautionary information or terms defined in the glossary. |
| <i>italic</i> | Indicates book titles or emphasis. |

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 chapter contains these topics:

- [Chapter 1.1, "Features"](#)
- [Chapter 1.2, "System Concepts"](#)
- [Chapter 1.3, "Menu Overview"](#)
- [Chapter 1.4, "System Integration"](#)

1.1 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 |

| Feature | Description |
|-------------------------------|---|
| 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 |

1.2 System Concepts

The Product Data Management encompasses:

| Topic | 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 |

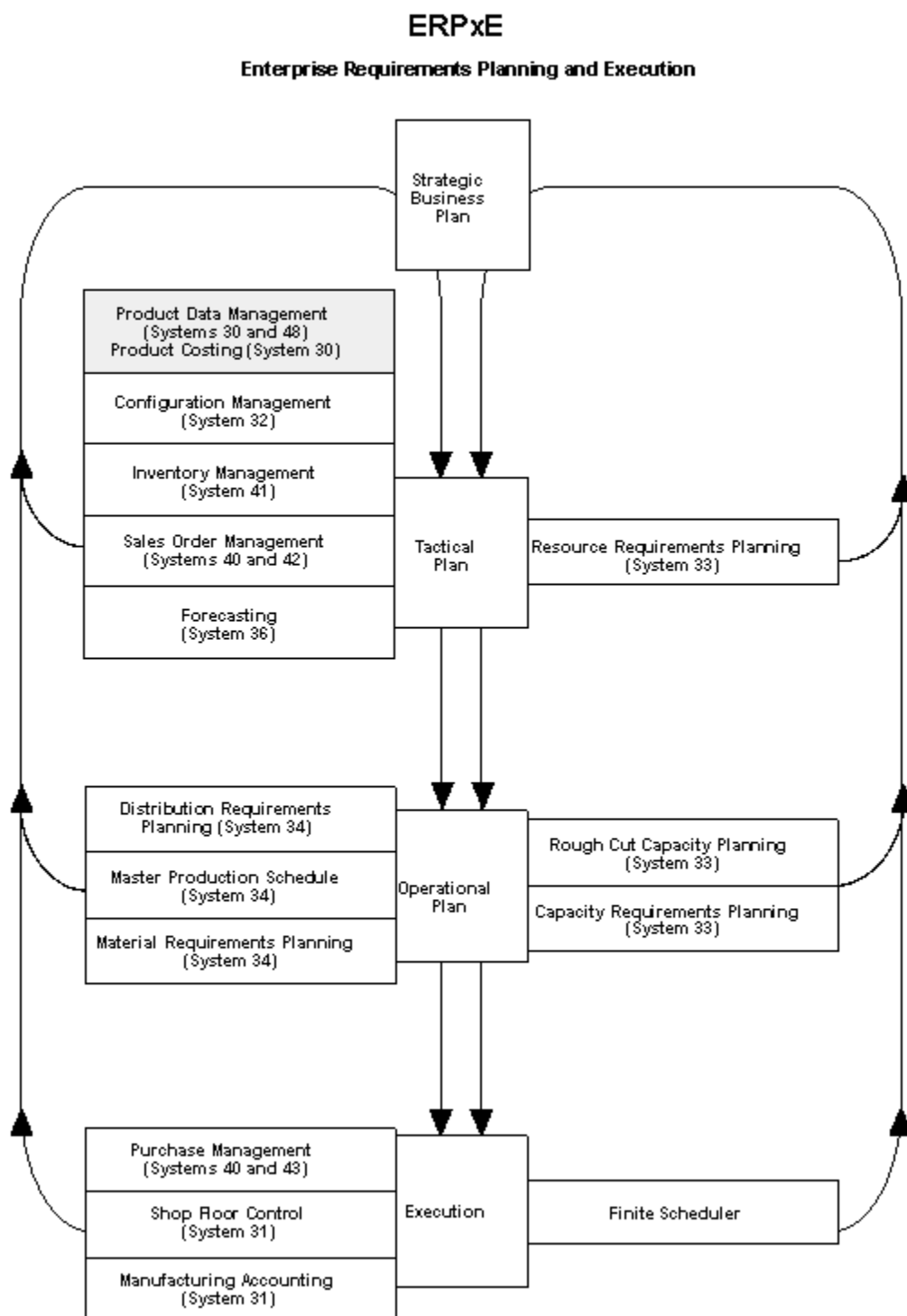
1.2.1 Enterprise Requirements Planning and Execution (ERPx) Review

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:

Figure 1-1 The ERPx system Includes These JD Edwards World Systems



1.3 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.

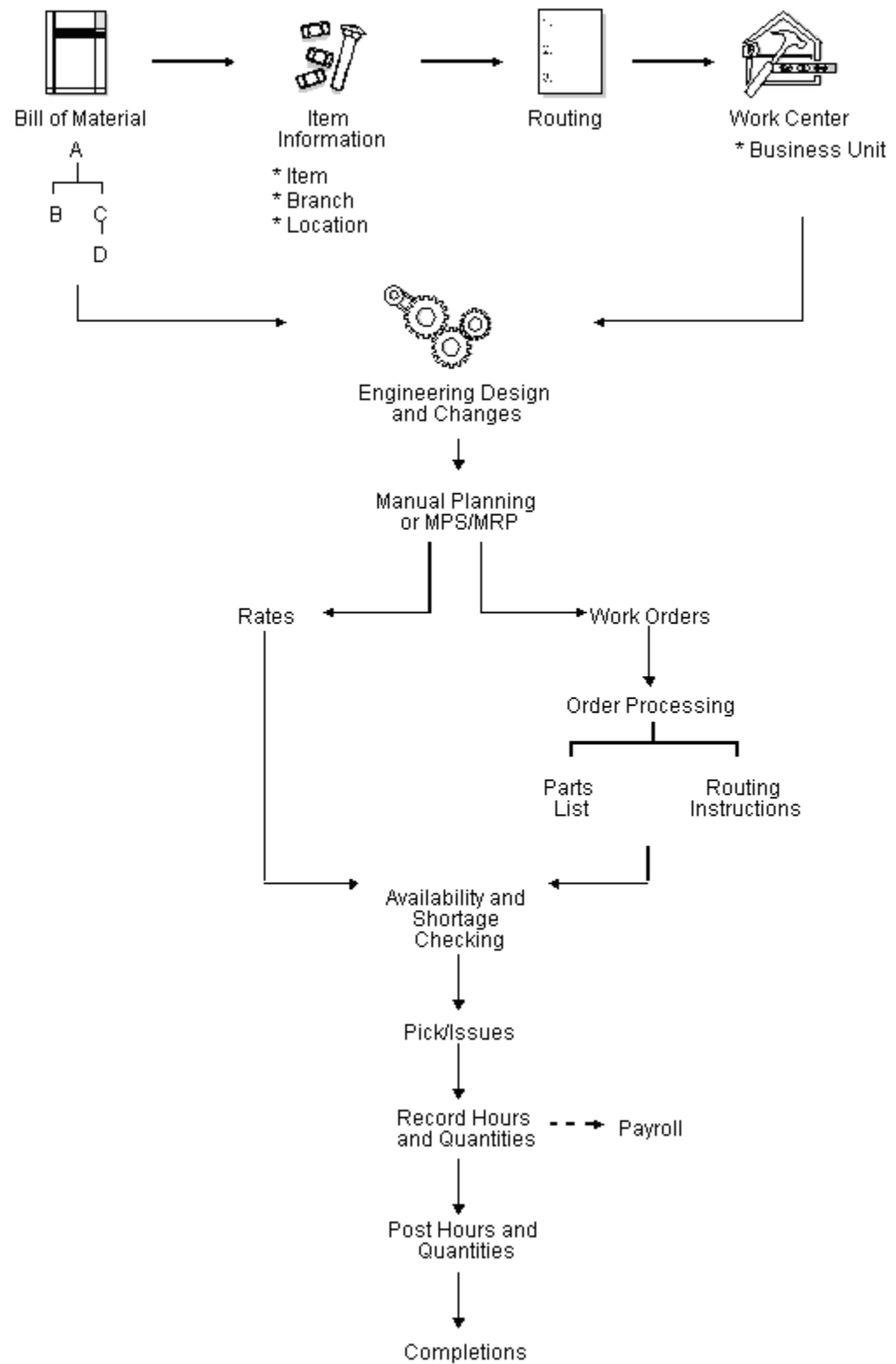
The following table illustrates the fast path commands you can use to move among the Product Data Management menus. From any menu, enter the fast path command at the command line.

| 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 |
| SPD | G3041 | Setup PDM |

1.4 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 | <p>Uses the PDM information to plan finished goods and the raw material and purchased parts required to manufacture them</p> <p>Uses sales orders and forecasts to pass demand for items down through the bills of material to the components</p> <p>Uses the bills of material to determine component requirements for planned orders and work orders without a parts list</p> <p>Creates a resource profile by retrieving a master scheduled item's multi-level bill of material and selecting the routings for the components</p> |
| 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 |

Figure 1-2 Processes Affected by the PDM System

Part I

Item Entry

This part contains these chapters:

- [Chapter 2, "Overview to Item Entry,"](#)
- [Chapter 3, "Enter Item Master Information,"](#)
- [Chapter 4, "Enter Branch/Plant Information."](#)

Overview to Item Entry

This chapter contains these topics:

- [Chapter 2.1, "Objectives"](#)
- [Chapter 2.2, "About Item Entry"](#)
- [Chapter 2.3, "Before You Begin"](#)

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 *JD Edwards World Inventory Management Guide*.

2.1 Objectives

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

2.2 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:

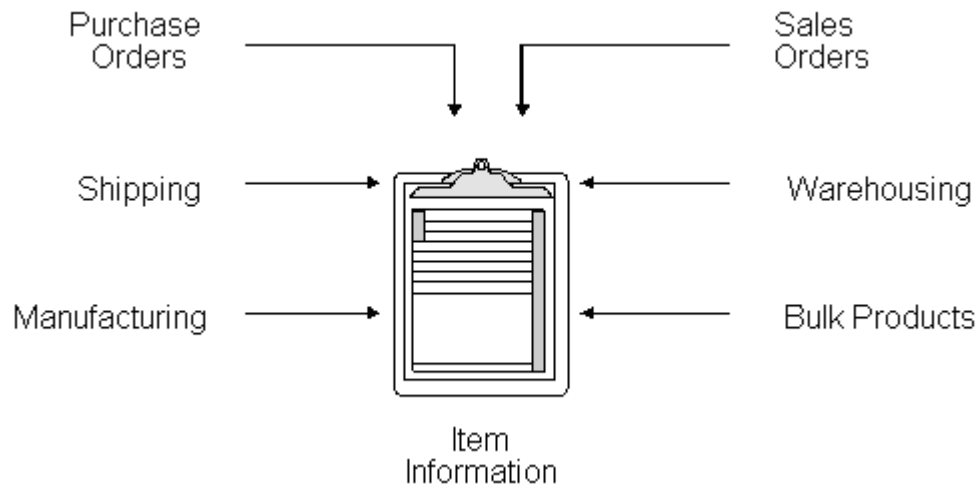
- Item identifiers
- Item descriptions (foreign and domestic)
- Item rules
- Item costs and prices
- Item weights and measures

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.

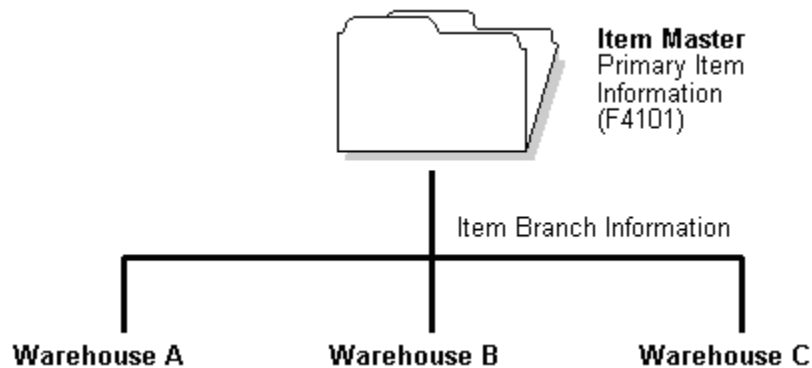
Figure 2–1 Pieces of Item Information



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.

Figure 2–2 Item Master



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).

Figure 2-3 Item Master Includes Item Branch Master and Item Location Information Tables



**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

2.3 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 contains these topics:

- [Chapter 3.1, "Entering Item Master Information"](#)
- [Chapter 3.2, "Entering Basic Item Information"](#)
- [Chapter 3.3, "Entering Item Text"](#)
- [Chapter 3.4, "Assigning Item Responsibility"](#)
- [Chapter 3.5, "Entering Item Classification Codes"](#)
- [Chapter 3.6, "Entering Item Unit of Measure Information"](#)
- [Chapter 3.7, "Entering Item Manufacturing Information"](#)
- [Chapter 3.8, "Entering Item Grade and Potency 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 *JD Edwards World Inventory Management Guide*.

3.1 Entering Item Master Information

Navigation

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.

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

Figure 3–1 Item Master Information screen

3.1.1 What You Should Know About

| Topic | Description |
|--|--|
| 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 | <p>You cannot delete master information for an item if any of the following exists:</p> <ul style="list-style-type: none"> 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

3.2 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.

3.2.1 What You Should Know About

| Topic | Description |
|----------------------------|--|
| 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. |

See Also:

- 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.

Figure 3–2 Item Alternative Description window

| LP | Description | Search Text |
|----|-------------|-------------|
| | | |
| | | |
| | | |
| | | |
| | | |

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><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><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><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: | A brief description of an item, a remark, or an 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> |

| Field | Explanation |
|-----------------|---|
| 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</p> <p>C – Configured item</p> <p>F – Feature</p> <p>K – Kit parent item</p> <p>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</p> <p>IN60 – Transfer Orders</p> <p>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</p> <p>A/R Stock Sales (Credit) xxxxx.xx</p> <p>Posting Category: IN80</p> <p>Stock Inventory (Debit) xxxxx.xx</p> <p>Stock COGS (Credit) xxxxx.xx</p> |
| 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> |
| 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><i>Form-specific information</i></p> <p>The default for this field is the primary unit of measure you specify in processing options.</p> |

| Field | Explanation |
|------------------------|--|
| 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</p> <p>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.</p> <p>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> |
| 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> |

| Field | Explanation |
|-----------|---|
| 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> |

3.3 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.

3.3.1 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:

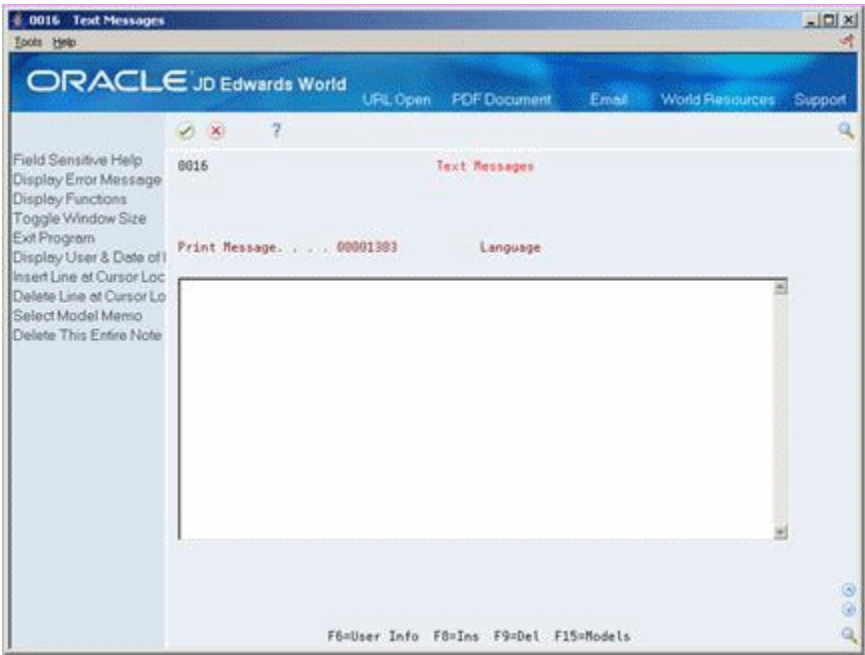
- Print Message
- Item Flash Message

To enter notes for an item

On Item Master Information

1. Access Item Notes.

Figure 3–3 Text Messages screen



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. |

3.4 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.

Figure 3–4 Classification Codes screen

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 *JD Edwards World Address Book and Electronic Mail Guide* for more information about adding address numbers

3.5 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).

Figure 3–5 Classification Codes screen

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><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><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> |

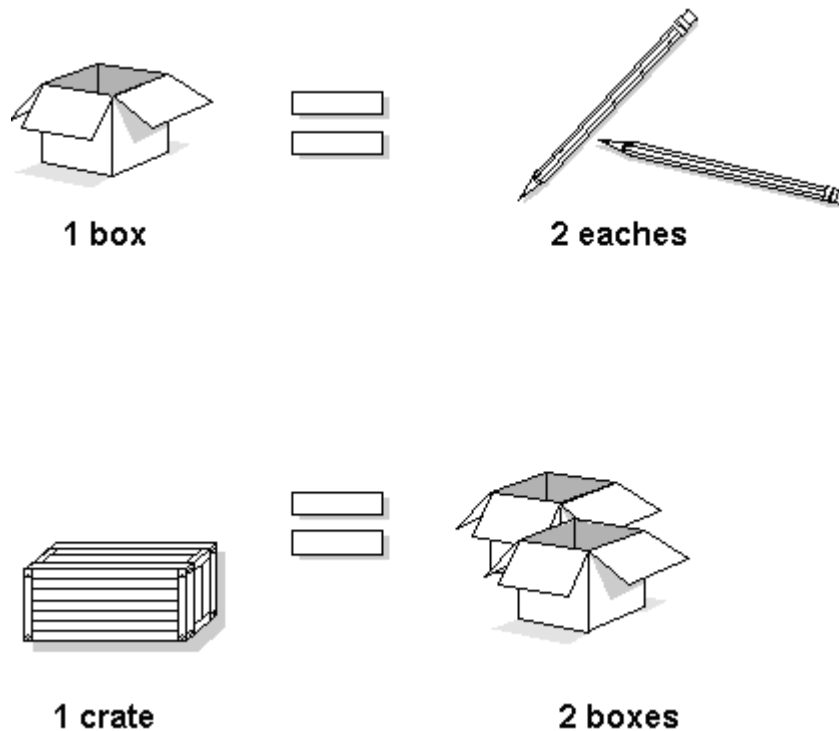
3.6 Entering Item Unit of Measure Information

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.

Figure 3–6 Specifying Item Unit Measurements



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.

Figure 3–7 Default Units of Measure screen

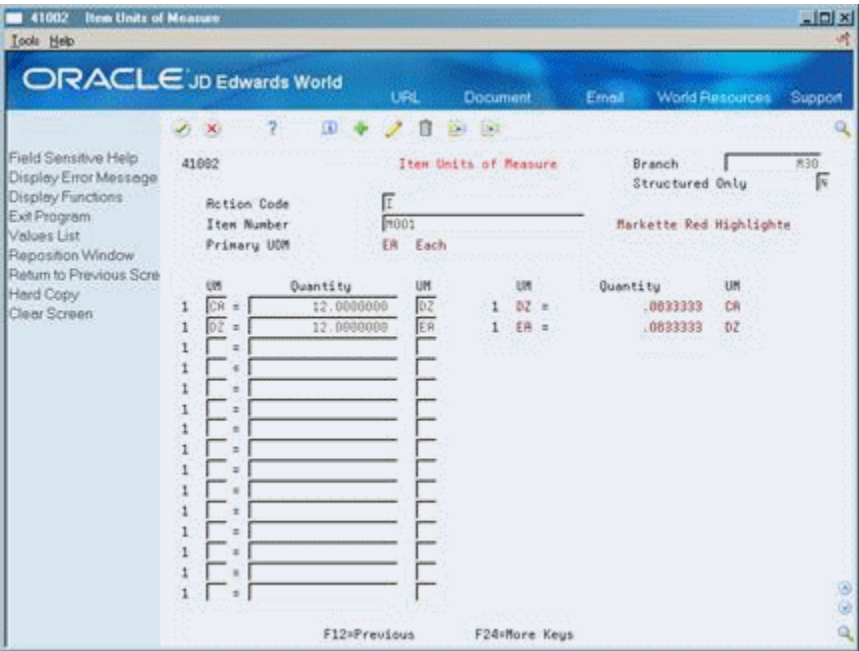
2. On Default Units of Measure, complete the following field to locate the item:
 - Item Number
3. Complete the following fields:
 - Primary
 - Secondary
 - Purchasing
 - Pricing
 - Shipping
 - Production
 - Component
 - Weight
 - Volume

To define item unit of measure conversions

On Item Master Information

1. Access Weights & Measures.
2. On Default Units of Measure, access Exit to Unit of Measure.

Figure 3–8 Item Units of Measure screen



3. On Item Units of Measure, complete the following fields:

- Branch
- Structured Only
- Item Number
- Primary UOM

The Branch field displays only if item unit of measure conversions are specific to branch/plants.

4. For each unit of measure that the system must convert for the item, complete the following fields:

- UM (Unit of Measure To)
- Quantity
- UM (Unit of Measure From)

| 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> |

| Field | Explanation |
|------------|---|
| 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> |
| 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 |

| Field | Explanation |
|-----------------|---|
| 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> |
| 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> |

3.7 Entering Item Manufacturing Information

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

Complete the following tasks:

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

Figure 3–9 Manufacturing Values Entry screen

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

3.8 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 | <p>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:</p> <p>Blank – No potency or grade pricing</p> <p>1 – Potency pricing</p> <p>2 – Grade pricing</p> |
| 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. |
| 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> |

3.8.1 What You Should Know About

| Topic | Description |
|--|--|
| 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 Setting Up Preference Types in the <i>JD Edwards World Sales Order Management Guide</i></p> |

See Also:

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

3.8.2 Processing Options

See [Section 16.1, "Item Master Revisions \(P4101\)"](#).

Enter Branch/Plant Information

This chapter contains these topics:

- [Chapter 4.1, "Entering Branch/Plant Information"](#)
- [Chapter 4.2, "Assigning an Item to a Branch/Plant"](#)
- [Chapter 4.3, "Working with Item Locations"](#)
- [Chapter 4.4, "Entering Item Branch/Plant Manufacturing 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 *JD Edwards World Inventory Management Guide*.

4.1 Entering Branch/Plant Information

Navigation

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

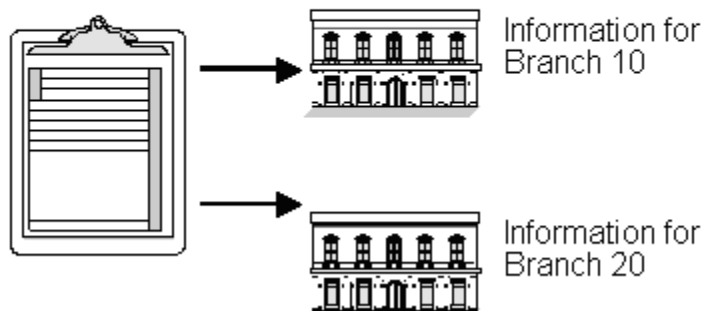
From Inventory Master/Transactions (G4111), choose Item Branch/Plant Information

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.

Figure 4–1 Assigning Master Item Information to a Branch

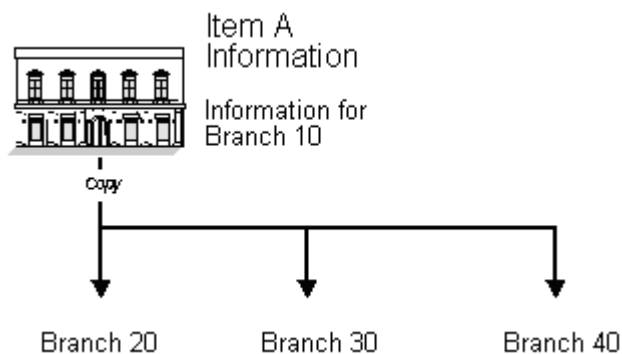
Item A Information
Master Information



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.

Figure 4–2 Copying Item Information to Different Branches



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

Figure 4–3 Item Branch/Plant Information screen

4.1.1 What You Should Know About

| Topic | Description |
|--|---|
| Default values | <p>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:</p> <ul style="list-style-type: none"> ■ Branch/Plant ■ Sales Taxable ■ Purchasing Taxable ■ Country of Origin ■ Supplier ■ Margin Maintenance (%) |
| Accessing other branch/plant information | <p>Use processing options to specify that other item information displays subsequent to item branch/plant information, such as item unit of measure defaults.</p> |

4.2 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><i>Form-specific information</i></p> <p>This is the branch/plant or warehouse to which this item information is applicable.</p> |

4.3 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:

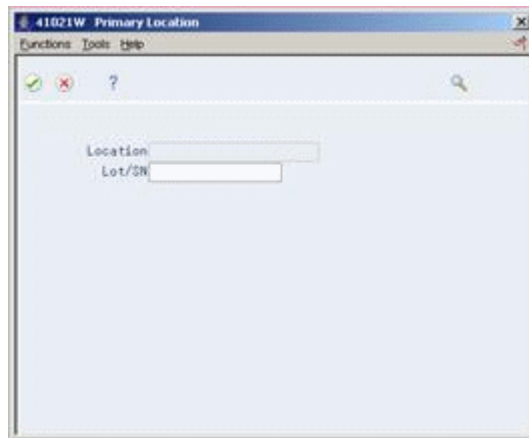
- Entering Information for Lots (P4108) for information about defining lot details
- Working with Lot Statuses (P00051) for information about putting lots and locations on hold

To assign a primary location to an item

On Item Branch/Plant Information

1. Assign a branch/plant to an item.

Figure 4–4 Primary Location window



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.

Figure 4–5 Item/Location Information screen

[illegible]

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.

Figure 4–6 Item/Location Information screen

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><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 | <p>A number that identifies a lot or a serial number. A lot is a group of items with similar characteristics.</p> |

| Field | Explanation |
|-------------------|---|
| 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><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> |

4.3.1 What You Should Know About

| Topic | Description |
|-----------------------------|--|
| Effects on quantities | <p>If you change an item's primary location and any of the following quantities exist, the quantities transfer to the new primary location:</p> <ul style="list-style-type: none"> ■ Quantity on backorder ■ Quantity on purchase order ■ Quantity on work order ■ Other purchasing 1 ■ Quantity on soft commit |
| Deleting a primary location | <p>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.</p> |

4.4 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. |

| Information | Description |
|-------------------------|---|
| 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

4.4.1 What You Should Know About

| Topic | Description |
|----------------|---|
| 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. |

Figure 4–7 Item Branch/Plant Information screen

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. |

4.4.2 Processing Options

See [Section 16.2, "Branch/Plant Item Information \(P41026\)"](#).

Part II

Process Manufacturing

This part contains these chapters:

- [Chapter 5, "Overview to Process Manufacturing,"](#)
- [Chapter 6, "Set Up Process Manufacturing,"](#)
- [Chapter 7, "Work with Work Centers,"](#)
- [Chapter 8, "Work With Processes,"](#)
- [Chapter 9, "Review Processes,"](#)
- [Chapter 10, "Work With Lead Times."](#)

Overview to Process Manufacturing

This chapter contains these topics:

- [Chapter 5.1, "Objectives"](#)
- [Chapter 5.2, "About Process Manufacturing"](#)
- [Chapter 5.3, "About Work Centers"](#)
- [Chapter 5.4, "About Processes"](#)
- [Chapter 5.5, "About Lead Times"](#)
- [Chapter 5.6, "Tables"](#)

5.1 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

5.2 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

5.3 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.

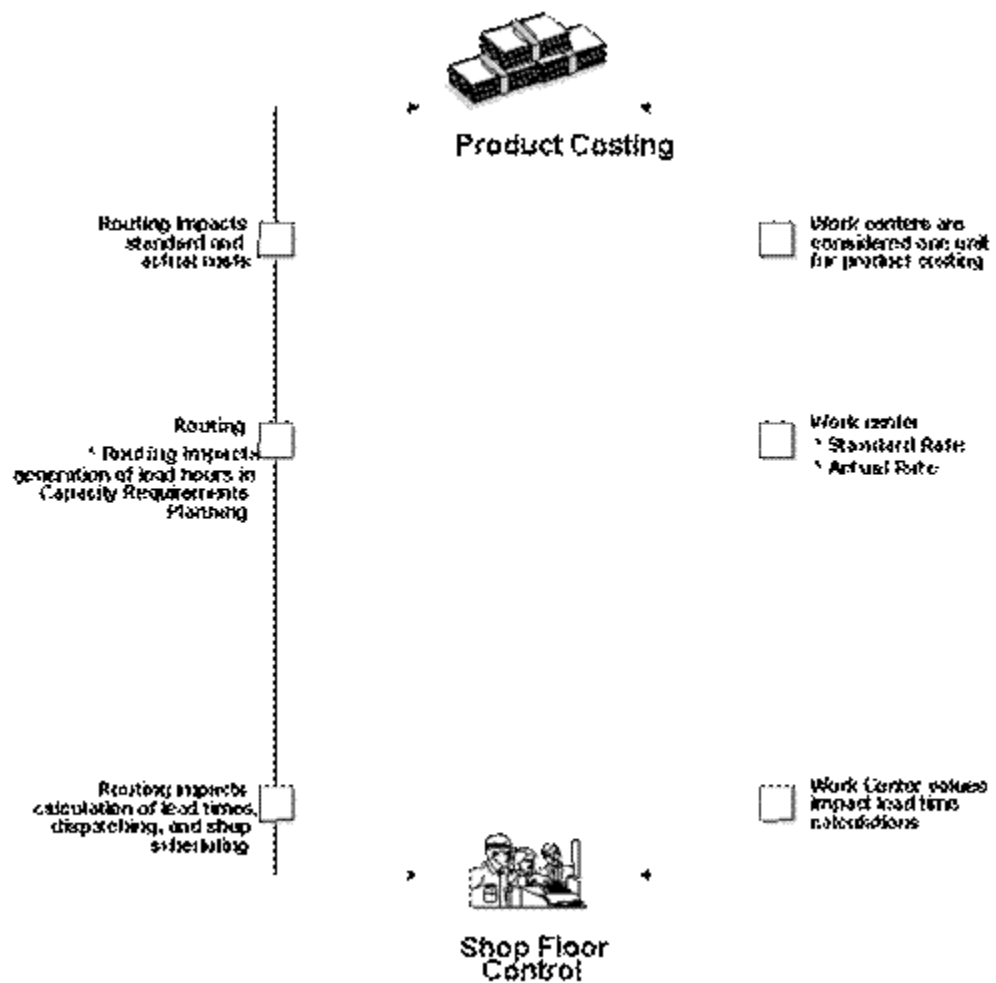
5.3.1 Features

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

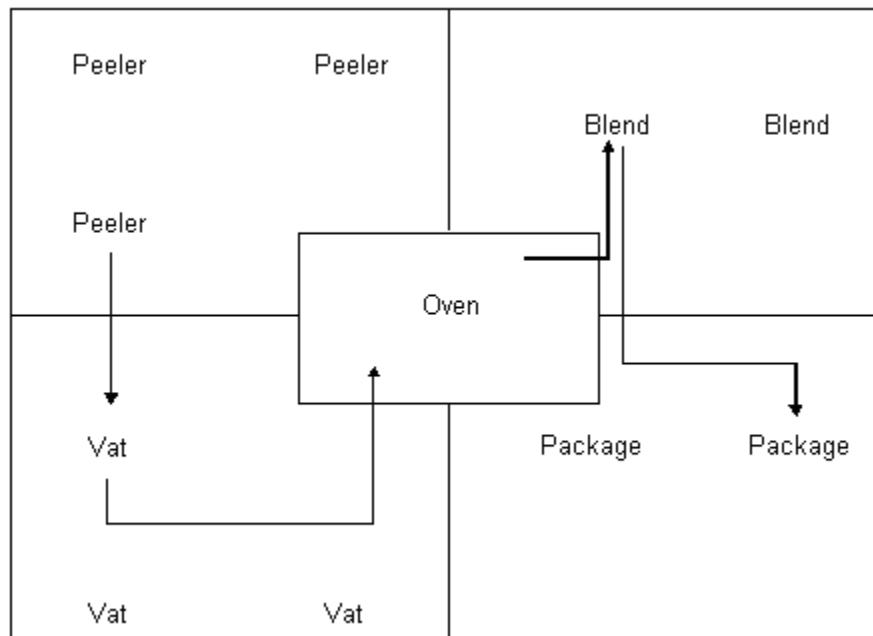
5.3.2 Work Center System Integration

Figure 5-1 Work Center System Integration



5.3.3 Work Center Arrangement

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

Figure 5–2 Example: Work Center Layout for Sample Process 777

5.4 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.

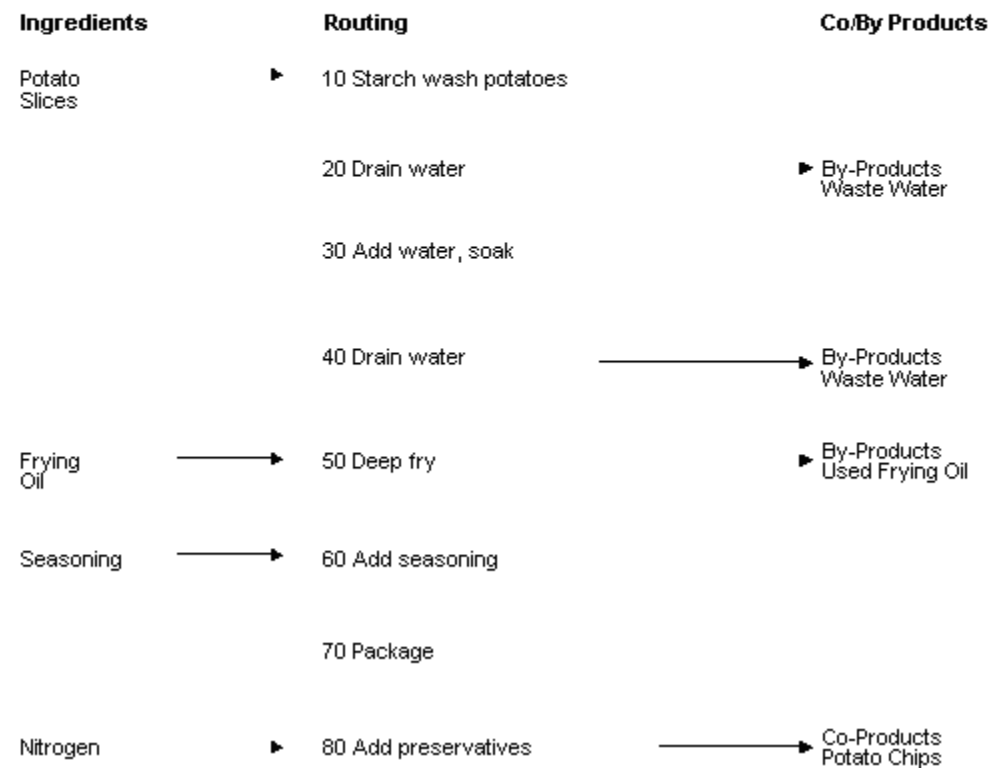
Continuous mode does not use lots. Instead, products flow continuously rather than being divided.

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.

Figure 5–3 Example: Process 777

5.4.1 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.

5.4.2 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.

5.4.3 Ingredients

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

5.4.4 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.

5.4.5 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.

5.4.6 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.

5.4.7 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.

5.4.8 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.

5.4.9 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 | % |

| Components | Quantity | UM | F/V |
|-------------|----------|----|-----|
| 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.

5.5 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"](#)

5.6 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. |

| Table | Description |
|--------|---|
| 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. |

5.6.1 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) | |

| Process | Part Number | Ingredient (stock type) | Co-product (stock type) | By-product (stock type) |
|-----------------|-------------|-------------------------------|----------------------------|----------------------------|
| 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) |
| | 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

This chapter contains these topics:

- Chapter 6.1, "Setting Up Manufacturing Constants"
- Chapter 6.2, "Setting Up Bill of Material Types"
- Chapter 6.3, "Setting Up Time Basis Codes"
- Chapter 6.4, "Setting Up Standard Procedure Descriptions"
- Chapter 6.5, "Setting Up a Shop Floor Calendar"
- Chapter 6.5.2, "Generating Shop Floor Calendar"
- Chapter 6.6, "Setting Up a Make/Buy Table"
- Chapter 6.7, "Setting Up Routing Types"
- Chapter 6.8, "Setting Up Kanbans"

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

Before You Begin

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

6.1 Setting Up Manufacturing Constants

Navigation

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

Figure 6–1 Manufacturing Constants screen

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> |

| Field | Explanation |
|------------------------------|--|
| 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). 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> |
| Hours | <p>The number of work hours that the manufacturing plant operates per day.</p> <p><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> |

| Field | Explanation |
|-------------------|---|
| 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><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> |

6.2 Setting Up Bill of Material Types

Navigation

From any Product Data Management menu (G30), enter 29

From Product Data Management Setup (G3041), choose **Bill of Material Types**

You can set up user defined codes (40/TB) to define bill of material types, such as manufacturing bills, rework bills, and spare parts bills.

To set up a bill of material type

On Bill of Material Types

Figure 6–2 Bill of Material Type screen

Complete the following fields:

- Code
- Description

6.3 Setting Up Time Basis Codes

Navigation

From any Product Data Management menu (G30), enter 29

From Product Data Management Setup (G3041), choose Time Basis Codes

You can set up user defined codes (30/TB) to define time basis codes. You use time basis codes to identify the rate used for machine or labor hours as you enter a routing. The following programs use the time basis code value to determine run time per unit:

- Leadtime Rollup
- Product Costing
- Capacity Requirements Planning
- Shop Floor Control

To set up a time basis code

On Time Basis Code

[illegible]

- Code
- Description
- Description-2

Navigation

From Product Data Management Setup (G3041), choose Standard Procedure Descriptions

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

On Standard Procedure Descriptions

Figure 6–4 Standard Procedure Descriptions screen

00191 Std. Procedure Descriptions

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

00191 Std. Procedure Descriptions

Action Code: 1

System Code: 48
User Defined Codes: SN
Skip To Code:
Standard Descriptions:

| Code | Description |
|-----------|------------------------------|
| CHECKLIST | Maintenance Checklist |
| LOCKOUT | Lockout/Tagout Procedure |
| VEHICLE | General Work On Vehicles |
| 01-405 | 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.

Figure 6–5 General Message screen

00192 General Message

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

00192 General Message

Action Type: C

Message No: CHECKLIST Maintenance Checklist

System Code: 48
Record Type: SN

| 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.

6.5 Setting Up a Shop Floor Calendar

Navigation

From any Product Data Management menu (G30), enter 29

From Product Data Management Setup (G3041), choose Shop Floor Calendar

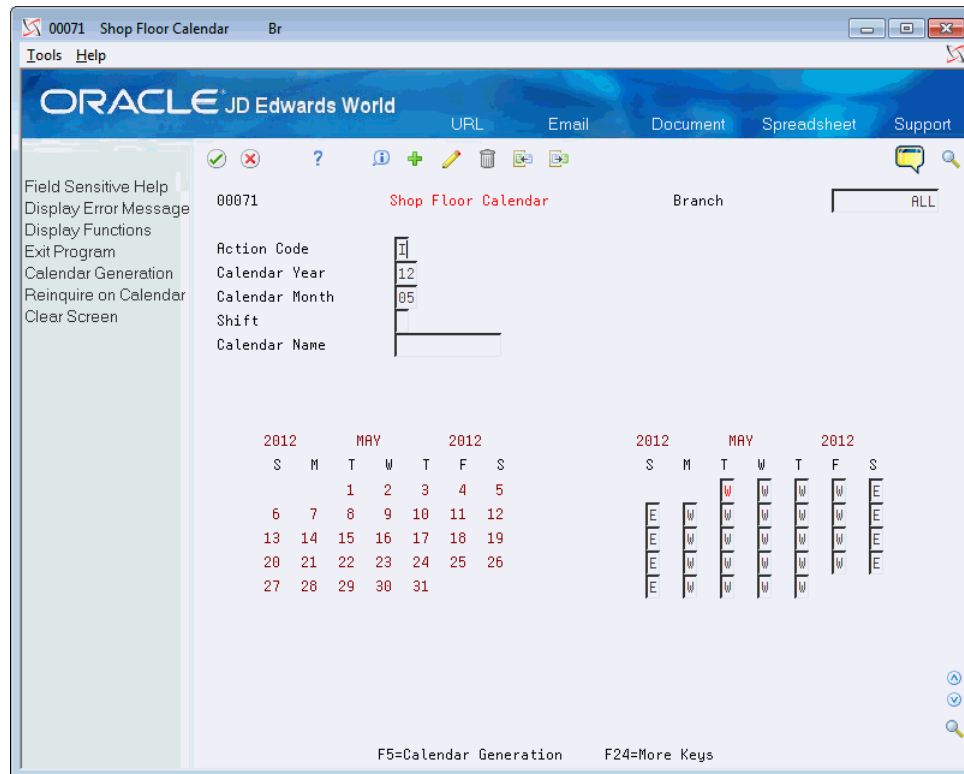
Use the shop floor calendar to define work days by month and year for all branches/plants. The system uses this calendar to determine:

- 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

Figure 6–6 Shop Floor Calendar screen



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.

6.5.1 What You Should Know About

| Topic | Description |
|--------------------------|---|
| 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. |

6.5.2 Generating Shop Floor Calendar

You use the Calendar Generation screen to add, change, or delete multiple calendar months and years for a specified date range simultaneously by establishing a weekly model of working and nonworking days. All systems using the Shop Floor Calendar program can use the Shop Floor Calendar process. A standard five day work week defaults into the Type of Day code fields.

Note: The type of day code is used to define a typical weekly schedule for calendar generation. You have the option to automatically include holidays based on the 98/HL UDC table.

Navigation

From any Product Data Management menu (G30), enter 29

From Product Data Management Setup (G3041), choose Shop Floor Calendar

From Shop Floor Calendar, press F5 (Calendar Generation)

To generate a Shop Floor calendar

1. On Calendar Generation, perform one of the following:
 - Enter your branch unit in the Branch field to create a calendar for your branch
 - Enter All in the Branch field to generate a calendar for your branches

Figure 6–7 Calendar Generation screen

2. Complete the following fields:
 - Shift
 - Calendar Name
 - From Month/Year
 - Thru Month/Year
3. In each of the day fields, enter the appropriate code.
4. Click Change, Add, or Delete.

6.5.3 Processing Options

See [Section 17.14, "Work Day Calendar \(P00071\)"](#)

See [Section 17.15, "Calendar Generation \(P0007G\)"](#)

6.6 Setting Up a Make/Buy Table

Navigation

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

Figure 6–8 Make/Buy Table screen

00051 Make/Buy Table

Field Sensitive Help
Display Error Message
Display Functions
Exit Program
More Details
User Defined Code Typ
Repository Services
Redisplay Previously C
Memo (Cursor Sensitive
Where Used
Alternate Lang Desc (C
Print User Defined Code
Clear Screen

00051 Make/Buy Table

Action Code

System Code
User Defined Codes
Skip To Code
Stocking Type Code

| Code | Description | Description-2 |
|------|-------------------------------|----------------------------|
| B | Bulk floor Stock | P - Hard Coded - NO Issues |
| C | Configured Item | M - Hard Coded |
| E | Emergency/Corrective Maint. | M - Hard Coded |
| F | Feature | P - Hard Coded (Kit) |
| K | Kit or Parent Item | M - Hard Coded (Kit) |
| M | Mfg. Assembly or Sub-Assembly | M |
| N | Non-Stock Item | P - Hard Coded |
| O | Obsolete | P - Hard Coded |
| P | Purchased inc. Raw Material | P |
| R | Process | M |
| S | Stock End-Item | M |
| T | EXPENSE ITEM | TEST CRG |
| U | Obsolete - Use Up | P - Hard Coded |
| X | Outside Processing | P |

F5=Code Types F14=Memo F15=Where Used F16=Translate F21=Print F24=More

Complete the following fields:

- Code
- Description
- Description-2

6.6.1 What You Should Know About

| Topic | Description |
|----------------|---|
| Process Code R | Process Code R must have an R in the Special Handling Code field. |

6.7 Setting Up Routing Types

Navigation

From any Product Data Management menu (G30), enter 29

From Product Data Management Setup (G3041), choose Routing Types

You can set up user defined codes (40/TR) to define routing types such as alternate routing, standard manufacturing routing, rush routing, and rework routing.

To set up a routing type

On Routing Types

Figure 6–9 Routing Types screen

Complete the following fields:

- Code
- Description

6.8 Setting Up Kanbans

Navigation**From Product Data Management menu (G30), enter 29****From Product Data Management Setup (G3041), choose Kanban Master Revisions**

Before you can initiate any kanban transactions, you must set up a kanban master record for the item. You set up kanban master records in the Kanban Master Revisions program (P3016). When you set up the kanban master record, you define the information that the system uses to generate the transaction when you initiate a kanban trigger.

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

Figure 6–10 Kanban Master Revisions screen

[illegible]

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).

Figure 6–11 Kanban Master Revisions screen (Detail area)

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. |
| Container Size | The capacity of a container in a kanban controlled environment. |

| Field | Explanation |
|----------------------------------|--|
| 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 | <p>This field indicates the method used to transfer completed units from the supplying to the consuming location:</p> <p>1 – One phase transfer. The completion is done directly to the consuming location.</p> <p>2 – Two phase transfer. The completion is performed against the supplying location. A subsequent receipt of inventory is needed at the consuming location.</p> |
| 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 | <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.</p> <p><i>Form-Specific Information</i></p> <p>When the source type is a 1 (work center), this field identifies the production line producing the kanban item.</p> <p>When the source type is a 5 (branch/plant), this field is used to establish the source branch/plant.</p> |
| Supplying Location | A code that identifies the location in a branch/plant from which inventory is supplied. |
| Source Type | <p>Indicates the type of supplying location for a kanban. Valid values are:</p> <p>1 – Work center</p> <p>2 – Inventory</p> <p>3 – Supplier</p> <p>4 – (Not Currently Used)</p> <p>5 – Branch/Plant</p> <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> |
| 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. |

| Field | Explanation |
|----------------|--|
| Related Kanban | <p>An additional Kanban ID used to replenish quantity of the original Kanban ID during a reorder point assessment of undersupply.</p> <p>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.</p> |
| Reorder Point | <p>A quantity to trigger a replenishment Kanban upstream in the supply chain when the available quantity is below this defined order point.</p> |

6.8.1 Generating Kanbans

Navigation

From **Product Data Management** menu (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.

6.8.2 Processing Options

See Kanban Size Calculation (P30450).

Work with Work Centers

This chapter contains these topics:

- [Chapter 7.1, "Working with Work Centers"](#)
- [Chapter 7.2, "Entering Work Centers"](#)
- [Chapter 7.3, "Entering Costing and Accounting Information"](#)
- [Chapter 7.4, "Reviewing Operations by Work Center"](#)

7.1 Working with Work Centers

Navigation

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.

7.1.1 Before You Begin

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

7.2 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

Figure 7-1 Enter/Change Work Center screen

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><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> |
| Hours | <p>The number of work hours that the manufacturing plant operates per day.</p> <p><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> |

| Field | Explanation |
|--------------------------|--|
| 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> <p>0 – Not a backflush work center</p> <p>B – Backflush material and labor</p> <p>M – Backflush material only</p> <p>L – Backflush labor only</p> <p>P – Preflush material only</p> <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> <p>L – Run labor hours only</p> <p>M – Machine hours only</p> <p>B – Run labor plus setup labor hours</p> <p>C – Machine plus setup hours</p> <p>O – Other (will not generate resource units)</p> |
| 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> |

| Field | Explanation |
|---------------------|---|
| Crew Size | <p>The number of people who work in the specified work center or routing operation.</p> <p>The system multiplies the Run Labor value in the Routing Master table (F3003) by crew size during costing to generate total labor dollars.</p> <p>If the Prime Load Code is L or B, the system uses the total labor hours for backscheduling. If the Prime Load Code is C or M, the system uses the total machine hours for backscheduling without modification by crew size.</p> <p><i>Form-specific information</i></p> <p>For Shop Floor Control:</p> <p>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> |
| 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><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><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> |

7.3 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.

As an alternative to entering costing and accounting information manually, you can use the Work Center Rate Revisions Z File program (P30061Z) to import an extensive amount of costing and accounting data into your system. See [Appendix C, "Import Mass Data into Manufacturing Systems"](#) for more information.

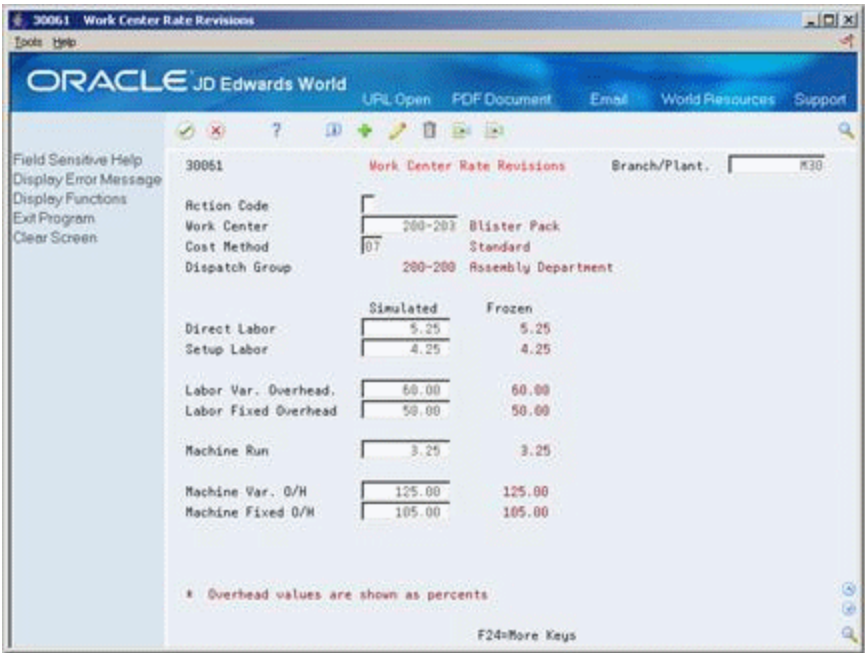
You can update the simulated rates, but not the frozen values. The system updates frozen values when you run Frozen Update.

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.

Figure 7–2 Work Center Rate Revisions screen



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 *JD Edwards World Shop Floor Control - Process Guide*
- Update Frozen Costs (P30835) in the *JD Edwards World Product Costing and Manufacturing Accounting Guide*

7.4 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

Figure 7-3 Operations by Work Center screen

| Op Seq | Process/Item | Description | Machine Run Hours | Labor Run Hours | T |
|------------|--------------|---------------------------|-------------------|-----------------|---|
| 10.00 2299 | | RS/400 Chassis Main Frame | 5.50 | | 1 |
| 10.00 1770 | | RS/400 Chassis Frame Supp | 3.30 | | 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 2299 | | RS/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 | <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> |

Work With Processes

This chapter contains these topics:

- [Chapter 8.1, "Enter Processes"](#)
- [Chapter 8.2, "Working With Operations"](#)
- [Chapter 8.3, "Working With Ingredients"](#)
- [Chapter 8.4, "Entering Production Information"](#)
- [Chapter 8.5, "Entering Co-/By-Products"](#)
- [Chapter 8.6, "Entering Intermediates"](#)
- [Chapter 8.7, "Working With Text"](#)
- [Chapter 8.8, "Updating Component Scrap"](#)
- [Chapter 8.9, "Changing Multiple Processes"](#)
- [Chapter 8.10, "Verifying 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.

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).

As an alternative to entering process information manually, you can use the Routing Master Revisions - Z File program (P3003Z) to import an extensive amount of process data into your system. See [Appendix C, "Import Mass Data into Manufacturing Systems"](#) for more information.

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.

8.1 Enter Processes

Navigation

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

Figure 8–1 Enter/Change Process screen

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

- 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> |

8.1.1 What You Should Know About

| Topic | Description |
|---------------------|--|
| 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. |

8.2 Working With Operations

Navigation

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.

Figure 8–2 Enter/Change Process screen (Details area)

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> |
| 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 | The operation number that the current operation can simultaneously be processed with. |
| Yield % | Represents the planned output yield percent for a step. The Planned Yield Update program uses this value to update the Cumulative Percent in the bill of material and the Operation Scrap Percent in the routing. Materials Requirements Planning uses the step scrap percent and the existing component scrap percent to plan component demand. |

| Field | Explanation |
|----------------|--|
| Type Operation | <p>A user defined code (system 30, type OT) that indicates the type of operation. For example:</p> <p>A – Alternate routing</p> <p>TT – Travel time</p> <p>IT – Idle time</p> <p>T – Text (Enter text at Description)</p> <p><i>Form-specific information</i></p> <p>For Product Costing:</p> <p>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> |
| % 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> |
| 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><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. |

8.3 Working With Ingredients

Navigation

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

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

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

Figure 8–3 Process Resource Revisions screen

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
- Partial Allowed (Y/N)
- Line Type
- Remarks

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

| Field | Explanation |
|------------------------|--|
| 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> |
| 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> |

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> |

8.3.1 To enter a substitute ingredient

On Process Resource Revisions

1. Choose the Component Substitute option.

Figure 8–4 Ingredient Substitutes window

2. On Ingredient Substitutes, complete the following fields:

- Substitute Item
- Substitute Item Sequence

| Field | Explanation |
|---------------------------------|---|
| Substitute Item Sequence Number | <p>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.</p> |

8.3.2 What You Should Know About

| Topic | Description |
|---------------------------|---|
| 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> |

8.3.3 What You Should Know About

| Topic | Description |
|---|--|
| 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). |

8.4 Entering Production Information

Navigation

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

Figure 8–5 Process Resource Revisions screen

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)</p> <p>F – Floor stock (no issue)</p> <p>B – Backflush (when part is reported as complete)</p> <p>P – Preflush (when parts list is generated)</p> <p>U – Super backflush (at pay-point operation)</p> <p>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> |

| Field | Explanation |
|----------------------|---|
| Leadtime Offset Days | 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. |
| 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> |

8.5 Entering Co-/By-Products

Navigation

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

Figure 8–6 Process Resource Revisions screen

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><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> |

8.6 Entering Intermediates

Navigation

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

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

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.

Figure 8–7 Intermediate Product Revisions screen

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

8.6.1 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.

8.6.2 Processing Options

[Section 17.1, "Routing Master Revisions \(P3003\)"](#)

8.7 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

Figure 8-8 Routing Operation Master Text window



2. Type the text and press Enter.

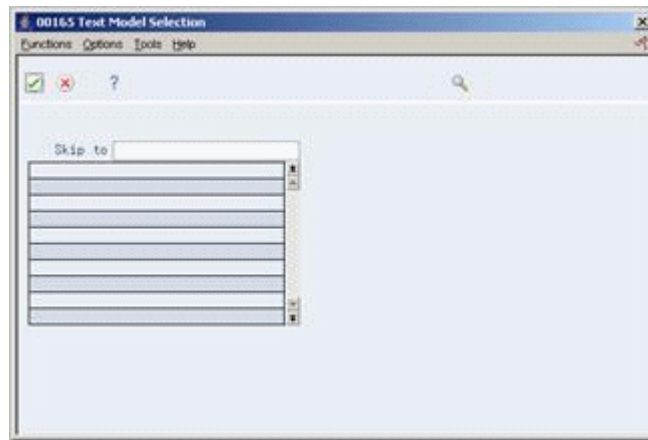
To revise the text

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

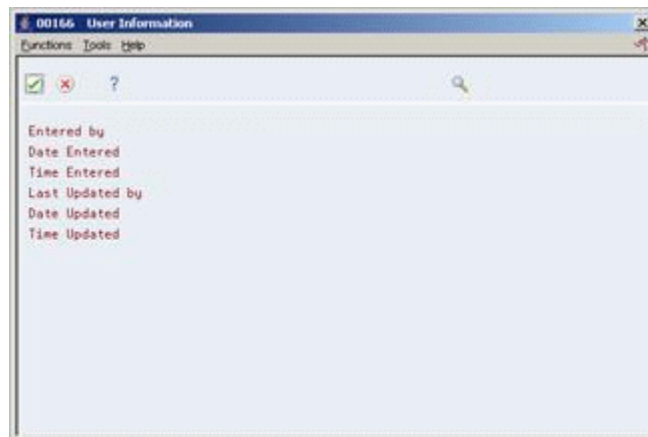
On Routing Operation Master Text, choose Select Model Memo

Figure 8–9 Text Model Selection window

Select a model.

To review user information

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

Figure 8–10 User Information screen

See Also:

- Attaching Parts List in the *JD Edwards World Shop Floor Control - Discrete Guide*
- Attaching the Routing Instructions Interactively in the *JD Edwards World Shop Floor Control - Process Guide*.
- Creating Rate Schedules in the *JD Edwards World Shop Floor Control - Process Guide*
- Issuing Materials in the *JD Edwards World Shop Floor Control - Discrete Guide*.

8.8 Updating Component Scrap

Navigation

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 Planned Yield 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> |

8.9 Changing Multiple Processes

Navigation

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.

8.9.1 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 [Chapter 9, "Review Processes"](#)

8.9.2 What You Should Know About

| Topic | Description |
|-----------------------|---|
| 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 | <p>These changes are stored in the Bill of Material table only. Existing parts lists, MRP calculations, and costing information is not automatically updated.</p> <p>The program updates the following fields:</p> <ul style="list-style-type: none">■ Low Level Code in the Item Master table■ Net Change Flag in the Item Balance table. |

8.9.3 Processing Options

See [Section 17.2, "Where Used BOM Update \(P30520\)"](#)

8.9.4 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.

Figure 8–11 Where Used Update report

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

8.10 Verifying Processes

Navigation

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.

8.10.1 What You Should Know About

| Topic | Description |
|----------------------------|---|
| Verifying processes online | <p>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.</p> <p>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.</p> |

See Also:

- [Section 6.1, "Setting Up Manufacturing Constants"](#)

8.10.2 Integrity Analysis Report With Errors

Figure 8–12 Bill of Material Analysis report

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

8.10.3 Integrity Analysis Report Without Errors

Figure 8–13 Bill of Material Analysis report

| | | | | | | | | | | | |
|---|-----------------------|---------------------------|--|-----|---------------|---|---------|--|--|--|--|
| 30601 | | JD Edwards World | | | Page | - | 2 | | | | |
| | | Bill of Material Analysis | | | Date | - | 4/08/17 | | | | |
| Parent Item | Parent Description | Parent Branch | | Seq | Error Message | | | | | | |
| Component Item | Component Description | Comp Branch | | | | | | | | | |
| ----- | | | | | | | | | | | |
| Product Structure Contains NO Errors. | | | | | | | | | | | |
| All Low Level Codes have been adjusted. | | | | | | | | | | | |

Review Processes

This chapter contains these topics:

- [Section 9.1, "Locating Processes"](#)
- [Section 9.2, "Printing Process Information"](#)

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

What You Should Know About

| Topic | Description |
|-----------------------------|--|
| 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. |

| Topic | Description |
|------------------------|---|
| 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. |

9.1 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

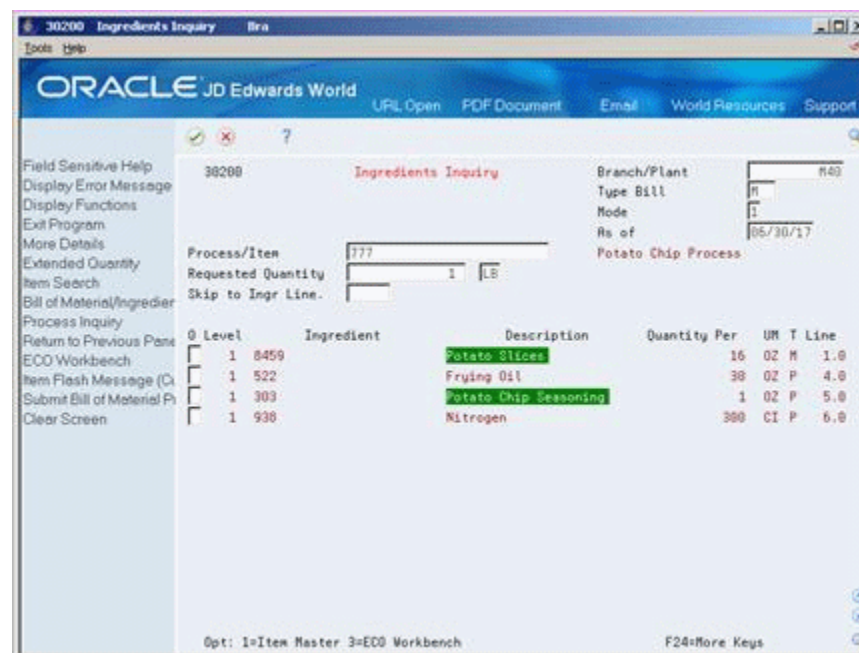
Navigation

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

From Daily PDM Process (G3012), choose Ingredients Inquiry

On Ingredients Inquiry

Figure 9–1 Ingredients Inquiry screen



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><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 | An X in this field will display the remark, time and return date for the address number entered above. |

9.1.1 Processing Options

See [Section 17.3, "Bill of Material Inquiry \(P30200\)"](#)

To locate where an ingredient is used

Navigation

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

From Daily PDM Process (G3012), choose Ingredients Where Used

On Ingredients Inquiry

On Ingredients Where Used

Figure 9–2 Ingredients Where Used screen

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> |

9.1.2 Processing Options

See [Section 17.4, "Where Used Inquiry \(P30201\)"](#)

To locate a co-/by-product

Navigation

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

From Daily PDM Process (G3012), choose Co-/By-Products Inquiry

On Co-/By-Products Inquiry

Figure 9–3 Co-/By-Products Inquiry screen

Oracle JD Edwards World Co-/By-Products Inquiry screen. The screen displays a table with the following data:

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

Complete the following required fields:

- Process Branch/Plant
- Process

9.1.3 Processing Options

See [Section 17.5, "Co-/By-Products Produced by Process \(P30201\)"](#)

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

Navigation

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

From Daily PDM Process (G3012), choose Where Produced Inquiry

On Where Produced Inquiry

Figure 9–4 Where Produced Inquiry screen

30200 Where Produced Inquiry Bra

Oracle JD Edwards World

URL Open PDF Document Email World Resources Support

Field Sensitive Help
Display Error Message
Display Functions
Exit Program
More Details
Extended Quantity
Item Search
Bill of Material/Ingredient
Process Inquiry
Return to Previous Panel
ECO Workbench
Item Flash Message (C)
Submit Bill of Material P
Clear Screen

30200 Where Produced Inquiry

Co-/By-Product 5215

Branch/Plant
Type Bill
Waste Water

| Process | Description | Pro | Output Qty | UM | Op Seq |
|---------|---------------------|-----|------------|----|--------|
| 777 | Potato Chip Process | Y | | 02 | 10.00 |
| 845 | Potatoes | Y | 1 | 02 | 20.00 |
| 888 | 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 |
| 845 | Potatoes | Y | 4750 | 02 | 20.00 |

Opt: 1=Item Master 3=ECO Workbench

F24=More Keys

Complete the following required fields:

- Branch/Plant
- Co-/By Product

9.1.4 Processing Options

See [Section 17.6, "Co-/By-Product Where Produced Inquiry \(P30200\)"](#)

To locate resources

Navigation

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

From Daily PDM Process (G3012), choose Resources Inquiry

On Resources Inquiry

Figure 9–5 Resources Inquiry screen

30240 Resources Inquiry

Tools Help

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

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

30240 Resources Inquiry Branch/Plant R40
Routing Type

Process 777 Potato Chip Process
Batch Quantity 1.8
Skip to Oper Seq

| Work Unit | Oper Seq No | Description | Machine | Labor | Setup Hours | T B |
|---|-------------|-------------|---------|-------|-------------|-----|
| Ingredients Description Quantity Per Unit \$T | | | | | | |

F5=Revisions F15=Intermediate F19/F28=Prev/Next Oper F24=More Keys

Complete the following required fields:

- Business Unit
- Process

To locate process instructions

Navigation

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

From Daily PDM Process (G3012), choose Instructions Inquiry

On Instructions Inquiry

Figure 9–6 Instructions Inquiry screen

30203 Instructions Inquiry

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

30203 Instructions Inquiry Branch/Plant R40
Routing Type R
Process/Item 777
Requested Quantity 1
As of 06/30/17
Potato Chip Process
Skip to Oper Seq

| Work Plant | Oper Seq | Description | .Run Machine | Hours Labor | Setup Hours |
|------------|----------|----------------------|--------------|-------------|-------------|
| 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 |
| 200-4008 | 50.00 | Deep Fry | | | .05 3 |
| 200-4015 | 60.00 | Add seasoning | | | 3 |
| 200-4015 | 70.00 | Package | | | 3 |
| 200-4015 | 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. |

9.1.5 Comparing Processes

Navigation

From Product Data Management menu (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

Figure 9–7 Ingredient Comparison screen

| Work Center | Item Number | Qty Item 1 | UM | T | Qty Item 2 | UM | T |
|-------------|-------------|------------|----|---|------------|----|---|
| 200-4004 | 0459 | 3 | OZ | M | 0 | | |
| 200-4007 | 0459 | 0 | OZ | | 16 | OZ | M |
| 200-4008 | 522 | 0 | OZ | | 30 | OZ | P |
| 200-4015 | 303 | 0 | OZ | | 1 | OZ | P |
| 200-4016 | 938 | 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. |
| 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. |

9.1.6 Processing Options

See [Section 17.7, "Bill of Material Comparison \(P30204\)"](#)

9.2 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

9.2.1 Single Level Ingredient Report

Navigation

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

From Periodic PDM Process (G3022), choose Single Level Ingredient

Figure 9–8 Single Level Ingredient Report

| 30410 | JD Edwards World | | | | Page | - | 2 | | |
|-----------------------|---|--------------|--------------------------------|------|---------------------|-------|----------------|----------|----------|
| | Bill of Material | | | | Date | - | 4/10/17 | | |
| | Single Level | | | | | | | | |
| Process Ingredient | Process Description Ingredient Description | Branch/Plant | Batch Quantity Quantity Per | UM T | Effective From | Level | Oper Seq No | O R F | Ln 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 | Feelings | M40 | 16 | OZ | M 02/22/15 12/31/20 | 1 | 10.00 | | S |

9.2.2 Processing Options

See [Section 17.8, "Single Level Bill of Material \(P30410\)"](#)

9.2.3 Multi-Level Ingredient Report

Navigation

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

From Periodic PDM Process (G3022), choose Multi Level Ingredient

Figure 9–9 Multi-Level Ingredient Report

| 30415 | | JD Edwards World Bill of Material Multi-Level | | Page Date | - 4/10/17 | 2 | | | |
|-----------------------|---|---|--------------------------------|--------------|-------------------|----------|---------|----------------|----------------|
| Process Ingredient | Process Description Ingredient Description | Branch/Plant | Batch Quantity Quantity Per | UM | Effective From | Thru | Level | Oper Seq No | O Ln 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 | Feelings | M40 | 16 | OZ | M 02/22/15 | 12/31/20 | 1 | 10.00 | S |

9.2.4 Processing Options

See [Section 17.9, "Multi-Level Bill of Material \(P30415\)"](#)

9.2.5 Ingredient Where Used Report

Navigation

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.

Figure 9–10 Ingredient Where Used Report

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

9.2.6 Processing Options

See [Section 17.10, "Material Where Used List \(P30420\)"](#)

9.2.7 Ingredient Comparison Report

Navigation

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.

Figure 9–11 Ingredient Comparison Report

| | | | | | |
|--------------------------|------------|-----------------------------|--------------|--------------------------|-------------------|
| 30425 | | JD Edwards World | | Page - 3 | |
| | | Bill Of Material Comparison | | Date - 4/08/17 | |
| Process 1 777 | | Process 2 200 | | All/Diff. D | |
| Potato Chip Process | | Ethanol Process | | Mode 1 | |
| Batch Quantity | | Batch Quantity | | | |
| Branch/Plant | | Branch/Plant | | | |
| As of 04/08/17 | | As of 04/08/17 | | | |
| Bill Type M | | Bill Type M | | | |
| | | Process 1 | | Process 2 | |
| Work Center | Ingredient | Description | Quantity Per | UM T | Quantity Per UM T |
| ----- | | | | | |
| | 522 | Frying Oil | 30 | OZ F | |
| | 303 | Potato Chip Seasoning | 1 | OZ F | |
| | 938 | Nitrogen | 300 | CI F | |
| | 8455 | Peelings | | | 16 OZ M |
| | 246 | Enzymes | | | 6 OZ F |
| | 2468 | Yeast | | | 4 OZ F |
| | 5215 | Waste Water | | | 32 OZ M |
| | 8459 | Potato Slices | 16 | OZ M | |
| | 8452 | Non-Food Grade Potato | | | 3 LB M |
| | 809 | Contaminant | | | 4 OZ F |

9.2.8 Processing Options

See [Section 17.11, "Bill of Material Comparison Print \(P30425\)"](#)

9.2.9 Process Report

Navigation

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

From Periodic PDM Process (G3022), choose Process Report

Figure 9–12 Standard Routing Information Report

| | | | | | | | | | | | | |
|-------------|-------|--|--------|-------|---------|-------------|-------------|------------|----------------------------|------|----------------|--------------------|
| 30430 | | JD Edwards World Standard Routing Information | | | | | | | Page - 2 Date - 4/10/17 | | | |
| Item Number | Seq # | Description | Plan | Yield | Machine | Run Hours | Setup Hours | Move Hours | Instruct | T Cd | Effective From | Effective Thru |
| Work Center | | | | | | Labor % Ovp | | Crew | | B | | |
| <hr/> | | | | | | | | | | | | |
| 777 | | Potato Chip Process | | | | | | | | | | |
| | | Batch Quantity | | | | | | | | | M40 | Type of Routing. M |
| | | RRL.. | | | | Drawing #.. | | | | | Leadtime Lvl.. | |
| | | Branch | | | | | | | | | | |
| | | M40 Type of Routing. M | | | | | | | | | | |
| | | Leadtime Lvl.. | | | | | | | | | | |
| 200-4007 | 10.00 | Starch wash potatoe | 100.00 | | .50 | | | 1.0 | | | 3 | 02/21/15 12/31/20 |
| | 20.00 | Drain water | 100.00 | | | .04 | | 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 | 1.0 | | | 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 |
| <hr/> | | | | | | | | | | | | |
| 200 | | Ethanol Process | | | | | | | | | | |
| | | Batch Quantity | | | | | | | | | M40 | Type of Routing. M |
| | | RRL.. | | | | Drawing #.. | | | | | Leadtime Lvl.. | |
| | | Branch | | | | | | | | | | |
| | | M40 Type of Routing. M | | | | | | | | | | |
| | | Leadtime Lvl.. | | | | | | | | | | |
| 200-4004 | 10.00 | Grate potatoes with | 100.00 | | .08 | | .10 | 1.0 | | | 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 |

9.2.10 Instructions Report

Navigation

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

From Periodic PDM Process (G3022), choose Instructions Report

Figure 9-13 Process Report

| 30435 | | JD Edwards World Process Report | | | | Page | - | 2 |
|----------------------------|----------------|------------------------------------|-----------------------|--------------|----------------|--------------------|----------|------------------------|
| | | | | | | Date | - | 4/10/17 |
| Process 200 | | Ethanol Process | | | | | | |
| Batch Quantity . . | | GA | | | | | | |
| Branch/Plant . . . | | M40 Typ M | | | | | | |
| Oper Seq# | Work Center | Description | Run Hours Machine | Labor | Setup Hours | T Plan B Yield | Ty Op | Effective 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 | Feelings | | 16 | OZ M 6.0 | | M40 02/22/15 |
| 12/31/20 | | | | | | Feat Plan % 100.00 | | Feat Cost % 100.00 |
| Oper Seq# | Work Center | Description | Run Hours Machine | Labor | Setup Hours | T Plan B Yield | Ty Op | Effective From Thru |
| 20.00 | 200-4004 | Add liquids from other process | | .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 Seq# | Work Center | Description | Run Hours Machine | Labor | Setup Hours | T Plan B Yield | Ty Op | Effective From Thru |
| 30.00 | 200-4011 | Transfer liquid to vats | | .20 | | 3 100.00 | | 02/21/15 12/31/20 |
| Oper Seq# | Work Center | Description | Run Hours Machine | Labor | Setup Hours | T Plan B Yield | Ty Op | Effective From Thru |
| 40.00 | 200-4011 | Add yeast killer | | .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 Seq# | Work Center | Description | Run Hours Machine | Labor | Setup Hours | T Plan B Yield | Ty Op | Effective From Thru |
| 50.00 | 200-4013 | Transfer to fermentation | 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

This chapter contains these topics:

- [Section 10.1, "Reviewing Lead Times"](#)
- [Section 10.2, "Generating 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.

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

What You Should Know About

| Topic | Description |
|----------------------|--|
| 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 B, "Lead Time Calculations"](#)
- Appendix A - Lead Times in the *JD Edwards World Shop Floor Control - Process Guide*
- Appendix B - Lead Times in the *JD Edwards World Shop Floor Control - Discrete Guide*

10.1 Reviewing Lead Times

Navigation

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

Figure 10–1 Leadtime Inquiry screen

30207 Leadtime Inquiry

ORACLE JD Edwards World

URL Open PDF Document Email World Resources Support

Field Sensitive Help
Display Error Message
Display Functions
Exit Program
Item Search
Actual/Calculated Lead
Clear Screen

30207 Leadtime Inquiry Branch/Plant R30
Mode 3
As of 09/27/95

| Item/Process | Level | Description | 7 Cumulative | 19 |
|--------------|----------------------|---------------------------|--------------|-----------|
| 333 | 3 | MANUFACTURING | 7 | 19 |
| 0 Level | Component/Ingredient | Description | Level | Ref. Cum. |
| 1 | 212 | ORAK SHELF SIDES | 3 | 3 8 |
| 2 | 111 | 1x10x6" ORAK S4S | 5 | 5 |
| 1 | 121 | ORAK SHELF TOP/BOTTOM | 2 | 2 7 |
| 2 | 111 | 1x10x6" ORAK S4S | 5 | 5 |
| 1 | 424 | ORAK SHELVES | 2 | 2 7 |
| 2 | 111 | 1x10x6" ORAK S4S | 5 | 5 |
| 1 | 444 | ORAK SHELF CABINET INSERT | 2 | 4 9 |
| 2 | 443 | CABINET SIDES, DOOR, BAC | 2 | 2 7 |
| 3 | 111 | 1x10x6" ORAK 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> |

| Field | Explanation |
|---------------|--|
| 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> |

10.1.1 What You Should Know About

| Topic | Description |
|----------------|---|
| 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. |

10.1.2 Processing Options

See [Section 17.12, "Lead Time Inquiry \(P30207\)"](#)

10.2 Generating Lead Times

Navigation

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.

10.2.1 Processing Options

See [Section 17.13, "Lead Time Generator \(P30822\)"](#)

Part III

Engineering Change Management

This part contains these chapters:

- [Chapter 11, "Overview to Engineering Change Management,"](#)
- [Chapter 12, "Set Up Engineering Change Orders,"](#)
- [Chapter 13, "Work With Engineering Change Orders,"](#)
- [Chapter 14, "Review Engineering Change Orders,"](#)
- [Chapter 15, "Approve Engineering Change Orders."](#)

Overview to Engineering Change Management

This chapter contains these topics:

- [Chapter 11.1, "Objectives"](#)
- [Chapter 11.2, "About Engineering Change Management"](#)
- [Chapter 11.3, "About ECO Revision Levels"](#)

11.1 Objectives

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

11.2 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

11.2.1 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

11.2.2 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 |

11.2.3 System Integration

ECOs integrate with the following systems:

| System | Description |
|----------------------|---|
| Shop Floor Control | Uses the revision level maintained by ECOs to retrieve the appropriate bill of material for a work order. You can create a work order from a prior ECO revision level. |
| Inventory Management | Updates the Item Master revision level. |

| System | Description |
|-------------------------|--|
| 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. |

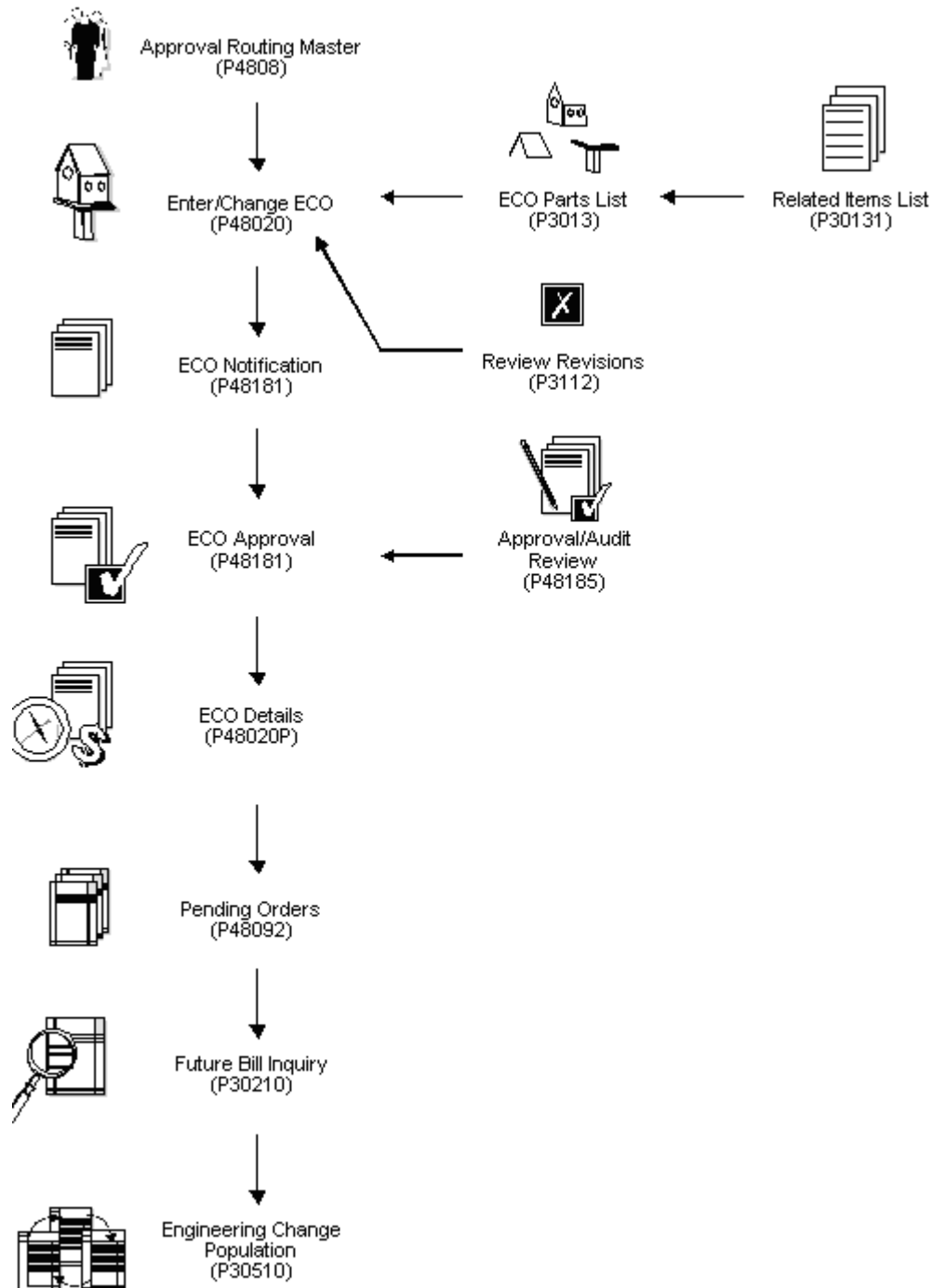
11.2.4 Who Is Involved in the ECO Process?

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.

Figure 11-1 ECO Process



11.2.5 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 rev 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 |
| Add a new component | N | C | New component | New component revision | Parent bills using component (where used) | Revision of new components '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 |

| 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 |
|--------------------|---------------------------------|-----------------------------|--|--|--|---|
| 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 components 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 |

11.3 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.

11.3.1 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. |

| Table | Description |
|-------|---|
| 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. |

11.3.2 Before You Begin

- Define your items in the Inventory Management system. See [Section 3.1, "Entering Item Master Information"](#)
- Define your work centers. See [Section 7.2, "Entering Work Centers"](#)

Set Up Engineering Change Orders

This chapter contains these topics:

- [Section 12.1, "Setting Up Engineering Change Order Codes"](#)
- [Section 12.2, "Setting Up Next Numbers for Engineering Change Orders"](#)
- [Section 12.3, "Setting Up Approval Routings"](#)

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

12.1 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

Navigation

From Product Data Management (G30), enter 6

From Product Data Management Setup (G3041), choose Next Revision Levels

On ECO Next Revision Levels

Figure 12–1 General User Defined Codes screen, Next Revision Levels field

00051 General User Defined Codes

ORACLE JD Edwards World

URL Open PDF Document Email World Resources Support

Field Sensitive Help
Display Error Message
Display Functions
Exit Program
More Details
User Defined Code Typ
Repository Services
Redisplay Previously C
Memo (Cursor Sensitive
Where Used
Alternate Lang Desc (C
Print User Defined Code
Clear Screen

00051 General User Defined Codes

Action Code

03 Character

| Code | Description |
|------|-------------|
| RA | Next rev |
| RB | Next rev |
| RC | Next rev |
| RD | Next rev |
| RE | Next rev |
| RF | Next rev |
| RG | Next rev |
| RH | Next rev |
| RI | Next rev |
| RJ | Next rev |
| RK | Next rev |
| RL | Next rev |
| RM | Next rev |
| RN | Next rev |

System Code
User Defined Codes
Skip To Code
ECO Next Revision Levels

F5=Code Types F14=Memo F15=Where Used F16=Translate F21=Print F24=More

Complete the following fields:

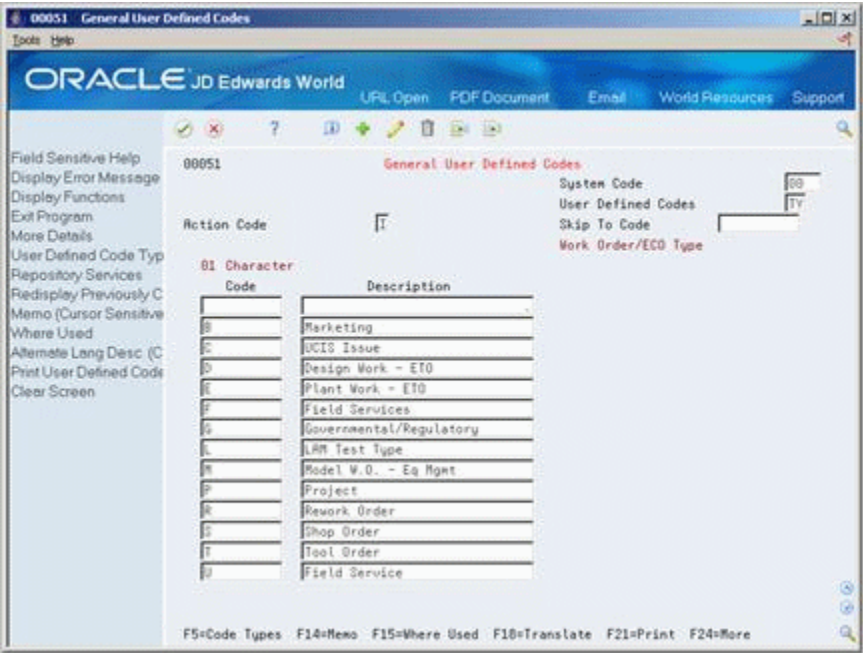
- Character Code
- Description

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

Figure 12-2 General User Defined Codes screen, Work Order/ECO Type field



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. |

12.1.1 To set up priority codes

Navigation

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

Figure 12–3 Priority Code screen

00051 Priority Code

Field Sensitive Help
 Display Error Message
 Display Functions
 Exit Program
 More Details
 User Defined Code Typ
 Repository Services
 Redisplay Previously C
 Memo (Cursor Sensitive
 Where Used
 Alternate Long Desc (C
 Print User Defined Code
 Clear Screen

00051 Priority Code

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

| Code | Description |
|------|---------------|
| H | High |
| L | Low |
| M | Med |
| E | Emergency |
| U | Urgent |
| | Normal - RSRP |
| | 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

Navigation

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

Figure 12–4 Status Code screen

00051 Status Code

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Field Sensitive Help
Display Error Message
Display Functions
Exit Program
More Details
User Defined Code Typ
Repository Services
Redisplay Previously C
Memo (Cursor Sensitive
Where Used
Alternate Lang Desc (C
Print User Defined Code
Clear Screen

00051 Status Code

Action Code

System Code
User Defined Codes
Skip To Code
Work Order Status

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

F5=Code Types F14=Memo F15=Where Used F16=Translate F21=Print F24=More

Complete the following fields:

- Code
- Description

To set up phase in codes

Navigation

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

Figure 12–5 Phase In Code screen

00051 Phase In Code

Field Sensitive Help
Display Error Message
Display Functions
Exit Program
More Details
User Defined Code Typ
Repository Services
Redisplay Previously C
Memo (Cursor Sensitive
Where Used
Alternate Long Desc (C
Print User Defined Code
Clear Screen

00051 Phase In Code

Action Code

System Code
User Defined Codes
Skip To Code
Phase In

| Code | Description |
|------|--------------|
| RVL | As Available |
| IRI | Immediate |
| MYR | Model Year |
| RUP | Use Up |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

F5=Code Types F14=Memo F15=Where Used F16=Translate F21=Print F24=More

Complete the following fields:

- Code
- Description

To set up existing disposition codes

Navigation

From Product Data Management (G30), enter 29

From Product Data Management Setup (G3041), choose Existing Disposition Codes

On Existing Disposition Code

Figure 12-6 Existing Disposition Code screen

Complete the following fields:

You can set up user defined codes (table 00/ED) to define what to do with existing items that are affected by the ECO, such as CNL for cancel and RWK for rework.

Navigation

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

On Reason Code

Figure 12–7 Reason Code screen

Complete the following fields:

- Code
- Description

12.2 Setting Up Next Numbers for Engineering Change Orders

Navigation

From Product Data Management (G30), enter 29

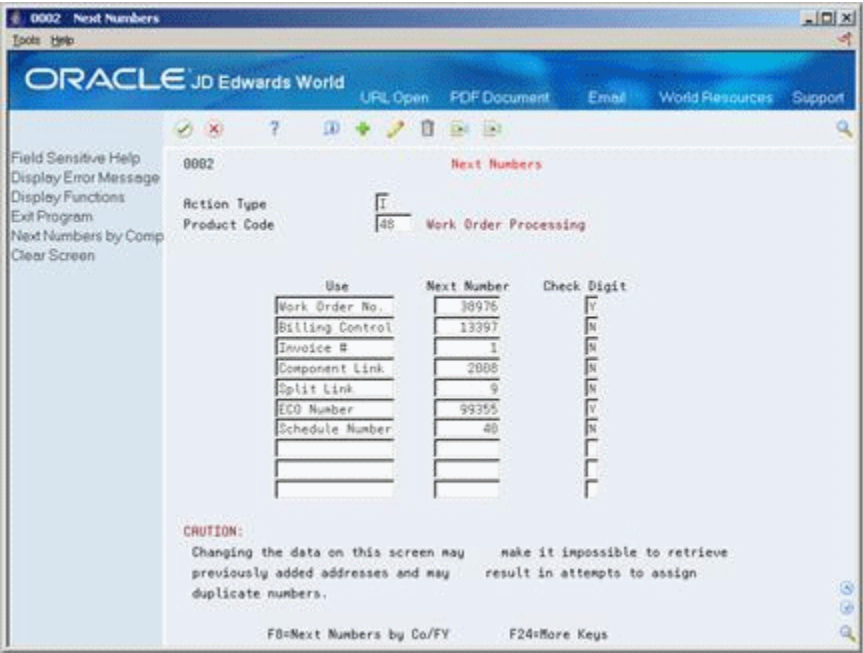
From Product Data Management Setup (G3041), choose Next Numbers

Next numbers is an automatic document numbering feature. It allows you to enter a starting document number for each document type such as 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.

Figure 12–8 Next Numbers screen



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 *JD Edwards World General Accounting I 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. |
| 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. |

12.3 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)

12.3.1 To set up approval routings

Navigation

From Product Data Management (G30), choose Engineering Change Management

From Engineering Change Management (G3013), choose Approval Routing Master

On Approval Routing Master

Figure 12–9 Approval Routing Master screen

The screenshot shows the 'Approval Routing Master' screen in Oracle JD Edwards World. The title bar indicates '4008 Approval Routing Master'. The screen has a menu bar with 'Tools' and 'Help'. Below the menu bar, there are several icons and a search bar. The main area contains a table with the following data:

| Seq. | Group | Responsible Person | Phone Number |
|------|-------|--------------------|--------------|
| 10 | 0001 | 5001 Allen, Ray | 783 593-5783 |
| 20 | 0001 | 6100 Smith, John | |
| 30 | 0001 | 9200 Dobson, Jane | |
| 10 | 0002 | 9300 Martin, John | |
| 20 | 0002 | 9400 Hawkins, Jack | |

At the bottom of the screen, there are two status bars: 'Opt: 1=Address Book' and 'F24=More Keys'.

Complete the following fields:

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

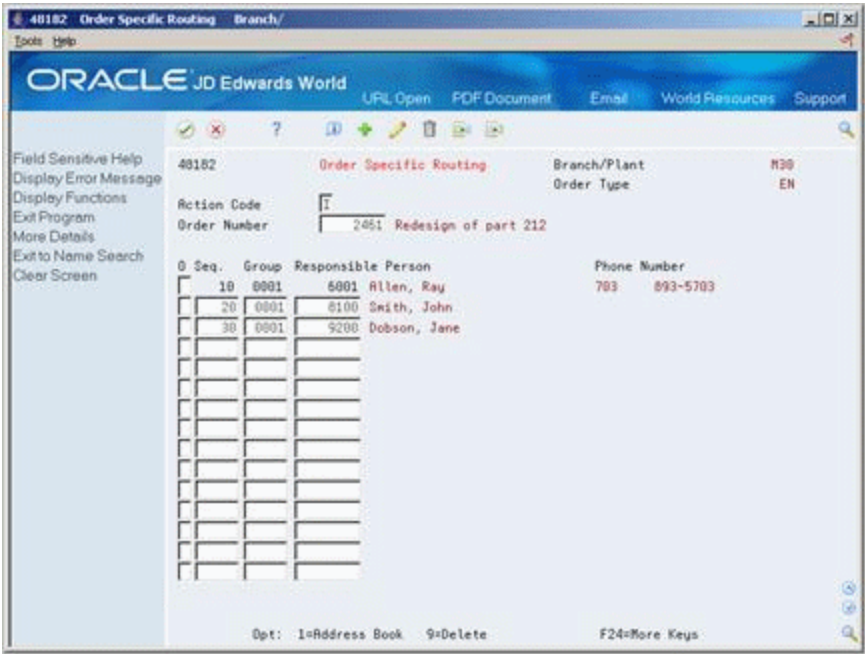
12.3.2 To set up an order-specific approval routing

Navigation

From Product Data Management (G30), choose Engineering Change Management

From Engineering Change Management (G3013), choose Order Specific Routing
On Order Specific Routing

Figure 12–10 Order Specific Routing screen



Complete the following fields:

- Order Number
- Group
- Sequence
- Responsible Person

12.3.3 What You Should Know About

| Topic | Description |
|-------------------------------|--|
| 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

This chapter contains these topics:

- [Section 13.1, "Locating Existing ECOs"](#)
- [Section 13.2, "Entering ECOs"](#)
- [Section 13.3, "Defining Routings for ECOs"](#)
- [Section 13.4, "Defining Changes"](#)
- [Section 13.5, "Reviewing Pending Orders"](#)
- [Section 13.6, "Defining Details for ECOs"](#)
- [Section 13.7, "Notifying ECO Reviewers"](#)

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

What You Should Know About

| Topic | Description |
|----------------------------|---|
| 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. |

13.1 Locating Existing ECOs

Navigation

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

Figure 13–1 ECO Workbench screen

30225 ECO Workbench TY Pha

Tools Help

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

30225 ECO Workbench

TV Phas Reas Pha T P Branch

Action Type [I]
Item Number 212
Originator
Status
Category Codes
Target Incorp Thru

Parent W.O. No

0 ECO

| P St | Number | TY | Description | Originat | Ro | Pha | T | P | Target | Actual |
|------|--------|----|----------------------|----------|----|-----|---|---|----------|----------|
| [E] | 283 | EN | 333z N/P | 9200 | CC | IMD | B | M | 08/15/17 | 08/15/17 |
| [D] | 2461 | EN | Redesign of part 212 | 9300 | DE | UUP | B | M | 08/15/17 | 08/15/17 |

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

1. Complete the following fields:

- Branch
- Item Number
- Parent Work Order

2. Access More Details.

Figure 13–2 ECO Workbench screen (More Details area)

30225 ECO Workbench TY Pha

Tools Help

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

30225 ECO Workbench

TV Phas Reas Pha T P Branch

Action Type [I]
Item Number 212
Originator
Status
Category Codes
Target Incorp Thru

Parent W.O. No

0 ECO

| P St | Number | TY | Description | Originat | Ro | Pha | T | P | Target | Actual |
|------|--------|----|---|----------|----|-----|---|---|----------|----------|
| [E] | 283 | EN | 333z N/P | 9200 | CC | IMD | B | M | 08/15/17 | 08/15/17 |
| | | | Drawing Change Y BOM Change Y Routing Change Y New Part No. Y | | | | | | | |
| | | | Parent W.O. No | | | | | | | |
| [D] | 2461 | EN | Redesign of part 212 | 9300 | DE | UUP | B | M | 08/15/17 | 08/15/17 |
| | | | 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 | A number that the system assigns to an item. It can be in short, long, or 3rd item number format. |
| 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><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 |

| Field | Explanation |
|-----------------|---|
| 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> <p>P – Accounts Payable documents</p> <p>R – Accounts Receivable documents</p> <p>T – Payroll documents</p> <p>I – Inventory documents</p> <p>O – Purchase Order Processing documents</p> <p>J – General Accounting/Joint Interest Billing documents</p> <p>S – Sales Order Processing documents</p> |
| Originator | The address book number of the person who originated the change request. |
| 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 | <p>A user defined code (00/TY) that indicates the type classification of a work order or engineering change order.</p> <p>You can use work order type as a selection criteria for work order approvals.</p> |
| Priority | <p>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.</p> <p>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.</p> |
| Target | <p>The date the work order is planned to be completed.</p> <p><i>Form-specific information</i></p> <p>The date the engineering change order is planned to be completed.</p> |
| Actual | The date the work order or engineering change order is completed or canceled. |

13.1.1 Processing Options

See [Section 18.1, "ECO Workbench \(P30225\)"](#)

13.2 Entering ECOs

Navigation

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

Figure 13–3 Enter/Change ECO screen

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><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><i>Form-specific information</i></p> <p>Use this value to indicate the customer requesting the change.</p> |
| Drawing Change | <p>Indicates whether the engineering change order involves a drawing change. Valid values are:</p> <p>Y – Yes, a drawing change is involved.</p> <p>N – No, a drawing change is NOT involved.</p> <p>If you leave this field blank, the system uses N.</p> |
| BOM Change | <p>Indicates whether the engineering change order involves a bill of material change. Valid values are:</p> <p>Y – Yes, a bill of material change is involved.</p> <p>N – No, a bill of material change is not involved.</p> <p>If left blank the system uses N.</p> |
| Routing Change | <p>Indicates whether the engineering change order involves a routing change. Valid values are:</p> <p>Y – Yes, a routing change is involved.</p> <p>N – No, a routing change is not involved.</p> <p>If you leave this field blank, the system uses N.</p> |

| Field | Explanation |
|-----------------|---|
| 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. |
| 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. |

13.2.1 What You Should Know About

| Topic | Description |
|---------------|--|
| 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:

- Set Up Next Numbers (P0002)

13.3 Defining Routings for ECOs

Navigation

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

Figure 13–4 Routing Revisions screen

| 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 |

2. Complete the following fields:

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

- Start
 - Request
3. Access More Details.

Figure 13–5 Routing Revisions screen (More Details area)

| 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 | |
| PROD ENG | 30.00 | | Review Routings | 07/02/17 | 07/14/17 |
| Assigned to | | | | Labor Hours | |
| IE | 40.00 | | Review Standards | 07/14/17 | 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 reqd) | 08/05/17 | 08/05/17 |
| Assigned to | | | | Labor Hours | |

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

13.4 Defining Changes

Navigation

From Manufacturing Systems (G3), choose Engineering Change Management

From Engineering Change Management (G3013), choose ECO Parts List

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

As an alternative to defining changes manually, you can use the following programs to import an extensive amount of data into your system:

- ECO Parts List - Z File (P3013Z)
- Related Items List Window - Z File (P30131Z)

See [Appendix C, "Import Mass Data into Manufacturing Systems"](#) for more information.

Complete the following required tasks:

- Define affected items
- Define engineering changes

To define affected items

On ECO Parts List

Figure 13–6 ECO Parts List screen

1. Complete the following fields:

- ECO Number
- Change Type
- Parent/Child Relationship
- Item Number
- Branch/Plant
- To Revision
- Effective From Date
- Effective Thru Date

- Access the detail area (F4).

Figure 13–7 ECO Parts List screen (Detail area)

- 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 | <p>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:</p> <p>N – New component or bill</p> <p>S – Swapping or replacing one item with another</p> <p>C – Change an existing component or bill</p> <p>R – Remove an existing component or bill</p> |

| 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 | A number that the system assigns to an item. It can be in short, long, or 3rd item number format. |
| 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><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 | The revision level for the part that will be reported next. This might not be the next sequential revision. |
| 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><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> |

| Field | Explanation |
|-----------------------|--|
| 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><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> |
| Batch Qty | <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 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.</p> |
| 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 | <p>The component that will be substituted for another when an item substitution (S) is specified for an ECO change.</p> |

13.4.1 What You Should Know About

| Topic | Description |
|------------------------------------|--|
| 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.

Figure 13–8 ECO Parts List screen (Related Items area)

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> |

| Field | Explanation |
|-------------------------|--|
| 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> |
| Qty Per | <p>The number of units to which the system applies the transaction.</p> |
| 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.

13.4.2 What You Should Know About

| Topic | Description |
|---|--|
| 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 | You cannot delete or change the parts ECO parts list after you have run the Engineering Change Population program. |
| 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. |

13.4.3 Processing Options

See [Section 18.2, "Parts List Detail \(P3013\)"](#)

13.5 Reviewing Pending Orders

Navigation

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:

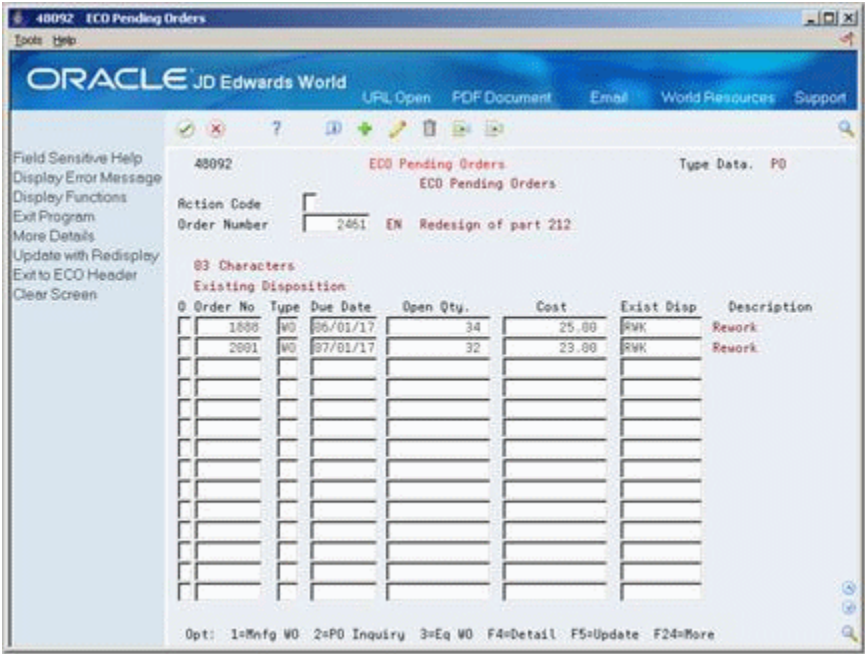
- Enter a quantity and cost estimate of incorporating the ECO into the work order or part on the purchase order
- Work with existing work orders or purchase orders
- Work with open work orders or purchase orders

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.

Figure 13–9 ECO Pending Orders screen



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. |

13.6 Defining Details for ECOs

Navigation

From Manufacturing Systems (G3), choose Engineering Change Management

From Engineering Change Management (G3013), choose Enter/Change ECO

Access ECO Details to enter supporting data such as costs, dates, affected work orders, purchase orders, and approval history.

Complete the following optional tasks:

- Enter a text description
- Enter supplemental info

Figure 13–10 ECO Detail Types screen

To enter a text description

On Enter/Change Parts List

1. Choose the ECO Detail option.
2. Complete the following fields:
 - Record Type
 - ECO Number
 - ECO Description

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 *JD Edwards World Shop Floor Control - Discrete Guide*

13.6.1 Processing Options

See [Section 18.3, "ECO Maintenance \(P48020\)"](#)

13.7 Notifying ECO Reviewers

Navigation

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.

13.7.1 What You Should Know About

| Topic | Description |
|---------------------|---|
| Notifying reviewers | <p>You can run ECO Notification in two ways:</p> <ul style="list-style-type: none"> ■ 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 | <p>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.</p> |

13.7.2 Processing Options

See [Section 18.4, "Order Approval Notification \(P48181\)"](#)

- Verify that the ECO parts list contains the change type and relationship values you want. See [Section 18.2, "Parts List Detail \(P3013\)"](#)

Review Engineering Change Orders

This chapter contains these topics:

- [Chapter 14.1, "Locating ECO Information"](#)
- [Chapter 14.2, "Reviewing Future Bills of Material"](#)
- [Chapter 14.3, "Printing ECO Information"](#)

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

14.1 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

Navigation

From Manufacturing Systems (G3), choose Engineering Change Management

From Engineering Change Management (G3013), choose ECO Revision Inquiry

On ECO Revisions Inquiry

Figure 14–1 ECO Revision Inquiry screen

30135 ECO Revision Inquiry

Tools Help

ORACLE JD Edwards World

URL Open PDF Document Email World Resources Support

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

30135 ECO Revision Inquiry Branch/Plant. R30

Item Number 212 DARK SHELF SIDES

Skip to Revision Level

| G Rev | ECO No. | TY | Effect From | Effect Thru | Dwg | Rev | Related Order | Chg Type |
|-------|---------|----|-------------|-------------|-----|-----|---------------|----------|
| 1 | 283 | EN | 08/15/10 | 12/31/22 | 1 | 1 | N | P |

Opt: 1=ECO 4=BOM Revisions F24=More Keys

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

14.1.1 Processing Options

See [Section 18.5, "ECO Revision Inquiry \(P30135\)"](#)

To locate approval audit information

Navigation

From Manufacturing Systems (G3), choose Engineering Change Management

From Engineering Change Management (G3013), choose ECO Approval/Audit Review

On ECO Approval/ Audit Review

Figure 14–2 ECO Approval/Audit Review screen

40185 ECO Approval/Audit Review

Tools Help

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

Field Sensitive Help
Display Error Message
Display Functions
Exit Program
More Details
ECO Master/WD Master
Clear Screen

40185 ECO Approval/Audit Review Branch/Plant R30

Action Code I
ECO Number 2451 EN Redesign of part 212

| | Planned | Date | Group |
|------------------------|------------|-------------------|----------|
| P Approver Name Status | Complete | Approved | Seq. No. |
| Allen, Ray | Approved | 08/15/17 07/18/10 | 10 1 |
| Smith, John | In Process | 08/15/17 | 20 1 |
| Dobson, 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

14.1.2 Processing Options

See [Section 18.6, "Approval Audit/Review \(P48185\)"](#)

To locate open tasks

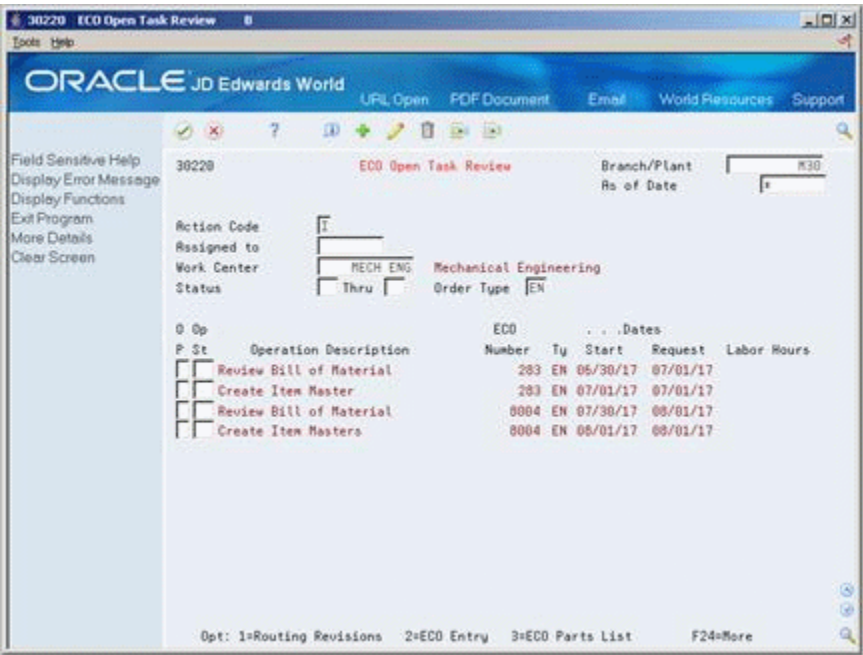
Navigation

From Manufacturing Systems (G3), choose Engineering Change Management

From Engineering Change Management (G3013), choose ECO Open Task Review

On ECO Open Task Review

Figure 14–3 ECO Open Task Review screen



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. |

14.1.3 Processing Options

See [Section 18.7, "Assignment Review \(P30220\)"](#)

14.2 Reviewing Future Bills of Material

Navigation

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

Figure 14–4 Future Bill Inquiry screen

30210 Future Bill Inquiry

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

30210 Future Bill Inquiry

Branch/Plant: R30
Bill Type: R
Bill Rev. Level:

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

Multi-vitamin Tablets

| Component Item | Description | Quantity Per | UM | V | I |
|----------------|-------------------|--------------|----|---|---|
| 12706 | Vitamin A | 250 | GM | F | I |
| 12731 | 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 | 3000 | GM | F | I |
| 12781 | Minerals, complex | 60 | GM | F | I |
| 12845 | Buffer, inert | 13100 | 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.

Figure 14–5 Batch Quantity/Type Selection screen

3002W Batch Quantity/Type Selection

Process/Item 1261
Multi-vitamin Tablets

| Branch | Type | Description | Batch Size | UM |
|--------|------|-----------------------------|------------|----|
| R30 | R | Standard Manufacturing Bill | 10000 | PC |
| R30 | R | Standard Manufacturing Bill | 30000 | PC |

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.

14.2.1 Processing Options

See [Section 18.8, "Future Bill Inquiry \(P30210\)"](#)

14.3 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

14.3.1 ECO Details Report

Navigation

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.

Figure 14–6 ECO Work Order report

48020P

JD Edwards World
ECO Work Order Print

Page - 3
Date - 5/30/17

ECO Number . . . 2436 EN

Description. . . Redesign of part 212
Originator . . .

Date Entered . . 10/15/17
Branch/Plant . . CHI

Drawing Change . Y
BOM Change . . . N
Routing Change . Y
New Part Number. N

Status 40
Reason DE
Phase In UUP
Existing Disp. . RWK

Started Labor or Material
Design or Drawing Revision
UUP Use Up
Rework

Type B Marketing
Priority M Med

. . . .Target Dates. . . .
Design 07/01/17
Engineering. . . 08/01/17
Incorporation. . 08/15/17

. . . .Actual Dates. . . .
Design
Engineering. . .
Incorporation. .

.Category Codes

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 | Branch | P/C | TOC | Effective Dates | From | To | Frm To Rev Rev | Seq |
|--------------|--------|-----|-----|-----------------|----------|----|-------------------|-----|
| Related Item | | | | | | | | |
| 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 | |

14.3.2 Processing Options

See [Section 18.9, "ECO Work Order Print \(P48020P\)"](#)

14.3.3 Open ECO Report

Navigation

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

Figure 14–7 ECO Summary by Branch/Plant report

| 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 | Dep | T F Target Y R Date | Actual Date | Originator |
| M30 | 3421 | EN | 11/18/13 | Redesign Projector Case | E1 | EV | UUP | UAT | B H 07/15/17 | | Dobson, Jane |
| M30 | 3439 | EN | 11/18/13 | Redesign chair for Desk Set | E1 | EV | MYR | UAT | 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

This chapter contains these topics:

- [Chapter 15.1, "Reviewing ECOs for Approval"](#)
- [Chapter 15.2, "Updating Bills of Material"](#)

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.

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 "[Review Engineering Change Orders](#)".

15.1 Reviewing ECOs for Approval

Navigation

From Manufacturing Systems (G3), choose Engineering Change Management

From Engineering Change Management (G3013), choose ECO Approval

To review an ECO for approval

On ECO Approval

Figure 15–1 ECO Approval screen

| O S | ECO | Or | Target | Date | Approved | Originator |
|-----|--------|-------------------------|----------|----------|--------------|------------|
| R | 283 | EN 333z M/P | 08/15/17 | 07/15/18 | Dobson, Jane | |
| R | 2461 | EN Redesign of part 212 | 08/15/17 | 07/19/18 | Martin, John | |
| P | 991668 | EN Add Iron to vitamin | | | Wilson, Bob | |

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

15.1.1 What You Should Know About

| Topic | Description |
|----------------------------------|---|
| 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. |

15.1.2 Processing Options

See [Section 18.10, "ECO Approval \(P4818\)"](#)

15.2 Updating Bills of Material

Navigation

From Manufacturing Systems (G3), choose Engineering Change Management

From Engineering Change Management (G3013), choose Engineering Change Population

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.

15.2.1 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 [Section 11.2.5, "What Kinds of Changes Can I Define?"](#)
- Verify that the ECO related items list contains the items that you want to include in the change.

15.2.2 Example: Engineering Change Population Report

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

Figure 15–2 Bill of Material Population report

| | | | | |
|----------------------------------|-----------------------------|------------------------------------|---------------------------|--------------------|
| 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 . . | |
| Originator . . . | 9200 Dobson, Jane | | M30 Memphis Mfg. Plant | |
| | | | | |
| 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 | Batch | BOM | Parent Item |
| Component Item | | Quantity | UM Rev | Component Item |
| ----- | | ----- | | |
| | | 333z | | M30 M |
| | | OAK SHELF UNIT | | A |
| | | XYZ | | M30 |
| | | 1x10x6' OAK S4S | | Comp. Rev. . . NEW |
| | | Qty Per | | Eff From 09/15/17 |
| | | Fixed/Variable V | | Eff Thru 12/31/20 |
| | | 2 EA Comp. Seq | | |
| | | Op Seq. 10.00 | | |

15.2.3 What You Should Know About

| Topic | Description |
|------------------------|---|
| 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. |

15.2.4 Processing Options

See [Section 18.11, "ECO - Bill of Material Population \(P30510\)"](#)

Part IV

Processing Options

This part contains these chapters:

- [Chapter 16, "Item Entry Processing Options,"](#)
- [Chapter 17, "Process Manufacturing Processing Options,"](#)
- [Chapter 18, "Engineering Change Management Processing Options."](#)

Item Entry Processing Options

This chapter contains these topics:

- [Chapter 16.1, "Item Master Revisions \(P4101\)"](#)
- [Chapter 16.2, "Branch/Plant Item Information \(P41026\)"](#)

16.1 Item Master Revisions (P4101)

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| DEFAULT VALUES : | |
| 1. Primary Unit of Measure (Blanks = EA) | |
| 2. Weight Unit of Measure (Blanks = LB) | |
| PROCESS CONTROL : | |
| 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)) | |
| 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 | |
| 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> | |

16.2 Branch/Plant Item Information (P41026)

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| <p>PROCESS CONTROL:</p> <p>1. Enter a '1' to select the Item Location information screens to automatically call when performing an add or a change.</p> <p>If left blank, screen will not display.</p> <p>Classification Codes</p> <p>Cost Revisions (conditional)</p> <p>Price Revisions (conditional)</p> <p>Unit of Measure</p> <p>Quantities</p> <p>Manufacturing Values</p> <p>Item Profile</p> <p>Bulk Product Information</p> <p>Lot Processing</p> | |

| Processing Option | Processing Options Requiring Further Description |
|---|--|
| 2. Enter '1' to use the window version of the screens selected above. | |
| If left blank, the full screens will display. | |
| DREAM WRITER VERSIONS: | |
| 3. Summary Availability (P41202) | |
| 4. Item / Location Information (P41024) | |
| 5. Product Catalog Detail Information (P41903) | |
| REVISION LEVEL CONTROL: | |
| 6. Enter '1' to protect ECO revision information from update. | |

Process Manufacturing Processing Options

This chapter contains these topics:

- Chapter 17.1, "Routing Master Revisions (P3003)"
- Chapter 17.2, "Where Used BOM Update (P30520)"
- Chapter 17.3, "Bill of Material Inquiry (P30200)"
- Chapter 17.4, "Where Used Inquiry (P30201)"
- Chapter 17.5, "Co-/By-Products Produced by Process (P30201)"
- Chapter 17.6, "Co-/By-Product Where Produced Inquiry (P30200)"
- Chapter 17.7, "Bill of Material Comparison (P30204)"
- Chapter 17.8, "Single Level Bill of Material (P30410)"
- Chapter 17.9, "Multi-Level Bill of Material (P30415)"
- Chapter 17.10, "Material Where Used List (P30420)"
- Chapter 17.11, "Bill of Material Comparison Print (P30425)"
- Chapter 17.12, "Lead Time Inquiry (P30207)"
- Chapter 17.13, "Lead Time Generator (P30822)"
- Chapter 17.14, "Work Day Calendar (P00071)"
- Chapter 17.15, "Calendar Generation (P0007G)"
- Section 17.16, "Routing Master Revisions - Z File (P3003Z)"
- Section 17.17, "Work Center Rate Revisions - Z File (P30061Z)"

17.1 Routing Master Revisions (P3003)

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| FIELD DISPLAY: | |
| 1. Enter a '1' by the following fields to activate them: | |
| Line/Cell | |
| Routing Type | |
| Batch Quantity | |
| DEFAULT VALUES: | |

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| 2. Routing Type (Optional) | |
| UPDATE OPTIONS: | |
| 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. | |
| COMPONENT BRANCH: | |
| 4. Enter a '1' to change Component Branch to that of Parent Branch when copying a routing. | |
| DATE EFFECTIVITY: | |
| 5. Enter a date to default into the As of Date or '*' to display all dates. | |
| If left blank, the system date will be used. | |

17.2 Where Used BOM Update (P30520)

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| PROCESSING CONTROL: | |
| 1. Enter a '1' if this is to be run in Final mode. | |
| If left blank, the program will run in Proof mode. | |
| 2. Enter a '1' to DELETE existing records from the Bill of Materials file (F3002). | |
| If left blank, records will not be deleted. | |
| Note: Records will not be updated if delete is selected. | |
| 3. Enter a '1' to validate the new component against the Item Branch File (F4102). | |
| If left blank, the new item will not be validated. | |
| REPLACEMENT VALUES: | |
| 4. Component Item Number | |
| 5. Quantity Per | |
| 6. Effective From | |
| 7. Effective Thru | |
| 8. Unit of Measure | |
| 9. Issue Type Code | |
| BILL OF MATERIAL SELECTION: | |
| 10. Enter the Branch/Plant to be processed. | |
| If left blank, no processing will be performed. | |

17.3 Bill of Material Inquiry (P30200)

| Processing Option | Processing Options Requiring Further Description |
|---|--|
| DEFAULT VALUES: | |
| 1. Enter one of the following: | |
| 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. | |
| 2. Bill Type (Optional) | |
| DREAM WRITER VERSIONS: | |
| Enter the version for each program. If left blank, 'ZJDE0001' will be used. | |
| Note: Options 2a - 2b are used only to set Printer Overrides. No Data Selection or Sequencing is possible. | |
| 2a. Single-Level BOM Print (P30410) | |
| 2b. -or- Multi-Level BOM Print (P30415) | |
| 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. | |
| COMPONENT SEQUENCING: | |
| 5. Enter one of the following: | |
| 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. | |
| DISPLAY OPTIONS: | |
| 6. Enter a '1' to prevent displaying the components for a Subassembly with a Stocking Type of 'P'. | |
| If left blank, the components will display on the video. | |

17.4 Where Used Inquiry (P30201)

| Processing Option | Processing Options Requiring Further Description |
|-------------------|--|
| DEFAULT VALUES: | |

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| 1. Enter one of the following: 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) DREAM WRITER VERSIONS: Enter the version for each program. If left blank, 'ZJDE0001' will be used. NOTE: Option 6 is only valid if System 13 (Equipment) is available. | |
| 3. Item Search (P41200) | |
| 4. Material Where-Used Print (P30420) | |
| 5. Work Order Entry (P48013) | |
| 6. Item Availability (P30205) | |
| 7. Where-Used Detail (P13226) | |

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

| Processing Option | Processing Options Requiring Further Description |
|---|--|
| DEFAULT VALUES: 1. Enter one of the following: 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) DREAM WRITER VERSIONS: Enter the version for each program. If left blank, 'ZJDE0001' will be used. NOTE: Option 6 is only valid if System 13 (Equipment) is available. | |
| 3. Item Search (P41200) | |
| 4. Material Where-Used Print (P30420) | |
| 5. Work Order Entry (P48013) | |
| 6. Item Availability (P30205) | |

| Processing Option | Processing Options Requiring Further Description |
|-------------------------------|--|
| 7. Where-Used Detail (P13226) | |

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

| Processing Option | Processing Options Requiring Further Description |
|---|--|
| DEFAULT VALUES: | |
| 1. Enter one of the following: | |
| 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. | |
| 2. Bill Type (Optional) | |
| DREAM WRITER VERSIONS: | |
| Enter the version for each program. If left blank, 'ZJDE0001' will be used. | |
| NOTE: Options 2a - 2b are used only to set Printer Overrides. No Data Selection or Sequencing is possible. | |
| 2. a Single-Level BOM Print (P30410) | |
| 2. b -or- Multi-Level BOM Print (P30415) | |
| 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. | |
| COMPONENT SEQUENCING: | |
| 5. Enter one of the following: | |
| 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. | |
| DISPLAY OPTIONS: | |
| 6. Enter a '1' to prevent displaying the components for a Subassembly with a Stocking Type of 'P'. | |
| If left blank, the components will display on the video. | |

17.7 Bill of Material Comparison (P30204)

| Processing Option | Processing Options Requiring Further Description |
|-------------------|--|
| DEFAULT VALUES: | |

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| 1. Enter bill type. If left blank, 'M' will be used. | |
| 2. Enter one of the following: 1 - Single-level comparison 2 - Multi-level comparison If left blank, '1' will be used. TYPE OF COMPARISON: | |
| 3. Enter one of the following: 1 - Summary by work center 2 - Summary by item If left blank, '1' will be used. COMPONENT SELECTION: | |
| 4. Enter '1' to exclude subassemblies. | |
| 5. Enter '1' to include phantoms. DREAM WRITER VERSION FROM WINDOW: | |
| 6. Enter the version of ECO Revisions (P48020) to call from the Revisions Window (P30BREV). If left blank, version 'ZJDE0001' will be used. | |

17.8 Single Level Bill of Material (P30410)

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| BILL EFFECTIVITY: | |
| 1. Enter the As Of Date for the bill of material. If left blank, the system date will be used. REPORT FORMAT: | |
| 2. 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. GENERIC TEXT: | |
| 3. Enter '1' to print generic text from the Bill of Materials file (F3002). | |

17.9 Multi-Level Bill of Material (P30415)

| Processing Option | Processing Options Requiring Further Description |
|-------------------|--|
| BILL EFFECTIVITY: | |

| Processing Option | Processing Options Requiring Further Description |
|---|--|
| 1. Enter the As Of Date for the bill of material. If left blank, the current date will be used. REPORT FORMAT: | |
| 2. Enter a '1' to print an indented bill of material. | |
| 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. COMPONENT LOCATOR: | |
| 4. Enter a '1' to print the component locations. GENERIC TEXT: | |
| 5. Enter '1' to print generic text from the Bill of Materials file (F3002). COMPONENTS OF A SUBASSEMBLY WITH A STOCKING TYPE '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. | |

17.10 Material Where Used List (P30420)

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| REPORT FORMAT: | |
| 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. | |

17.11 Bill of Material Comparison Print (P30425)

| Processing Option | Processing Options Requiring Further Description |
|---------------------------|--|
| ITEM/PROCESS 1: | |
| 1. Item Number (Required) | |

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

17.12 Lead Time Inquiry (P30207)

| Processing Option | Processing Options Requiring Further Description |
|---|--|
| LEAD TIME CALCULATION: | |
| 1. Enter a '1' to use the lead time values from the Item Branch File (F4102). | |
| If left blank, calculated lead times will be displayed. | |
| DISPLAY OPTIONS: | |

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| 2. Enter a '1' to prevent displaying the components for a Subassembly with a Stocking Type of 'P'. | |
| If left blank, the components will display on the video. | |

17.13 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. | |

17.14 Work Day Calendar (P00071)

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| DREAM WRITER VERSIONS: | |
| 1. Enter the Dream Writer Version to be used for the Calendar Generation program P0007G. If left blank, version 'ZJDE0001' will be used. | |

17.15 Calendar Generation (P0007G)

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| 1. Enter the number of years to generate calendars. If left blank, the program will use the value in Data Dictionary Item #CYR as the Thru Date Year. | |
| 2. Enter a '1' to use the Calendar Holidays User Defined Code 98/HL table to insert holidays when generating calendars within the date range. If left blank, no holidays will be inserted in the generation process. | |

17.16 Routing Master Revisions - Z File (P3003Z)

| Processing Option | Processing Options Requiring Further Description |
|---|--|
| DREAM WRITER VERSIONS: | |
| 1. Enter the version to be used to call Routing Master Revisions (P3003). If left blank, ZJDE0001 will be used. | |
| ERROR REPORTING: | |

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| 2. Enter '1' to skip printing the error report. If left blanks, the report will print. | |
| 3. Enter the version to be used to call the error report program (P41ZERR). If left blank, XJDE0010 will be used | |

17.17 Work Center Rate Revisions - Z File (P30061Z)

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| ERROR REPORTING: | |
| 1. Enter '1' to skip printing the error report. If left blanks, the report will print. | |
| 2. Enter the version to be used to call the error report program (P41ZERR). If left blank, XJDE0010 will be used | |

Engineering Change Management Processing Options

This chapter contains these topics:

- Chapter 18.1, "ECO Workbench (P30225)"
- Chapter 18.2, "Parts List Detail (P3013)"
- Chapter 18.3, "ECO Maintenance (P48020)"
- Chapter 18.4, "Order Approval Notification (P48181)"
- Chapter 18.5, "ECO Revision Inquiry (P30135)"
- Chapter 18.6, "Approval Audit/Review (P48185)"
- Chapter 18.7, "Assignment Review (P30220)"
- Chapter 18.8, "Future Bill Inquiry (P30210)"
- Chapter 18.9, "ECO Work Order Print (P48020P)"
- Chapter 18.10, "ECO Approval (P4818)"
- Chapter 18.11, "ECO - Bill of Material Population (P30510)"
- Section 18.12, "Related Items List Window - Z File (P30131Z)"
- Section 18.13, "ECO Parts List - Z File (P3013Z)"

18.1 ECO Workbench (P30225)

| Processing Option | Processing Options Requiring Further Description |
|---|--|
| DREAM WRITER VERSIONS: | |
| Enter the version for each program. If left blank, 'ZJDE0001' will be used. | |
| Note: Option 3 will use 'ZJDE0002'. | |
| 1. ECO Entry (P48020) | |
| 2. ECO Details (P48092) | |
| 3. ECO Pending (P48092) | |
| 4. ECO Parts List (P3013) | |
| 5. ECO Approval Audit/Review (P48185) | |
| DEFAULT VALUES: | |

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| 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) | |
| CATEGORY CODE SELECTION DEFAULTS: | |
| 16. Enter a '1' next to three Category Codes to further define the ECOs displayed: | |
| 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 | |
| If left blank, Category Codes 02, 03, and 04 will be used. | |

18.2 Parts List Detail (P3013)

| Processing Option | Processing Options Requiring Further Description |
|---|--|
| DREAM WRITER VERSIONS: | |
| Enter the version for each program. | |
| If left blank, 'ZJDE0001' will be used. | |
| Note: Option 10 will use 'ZJDE0002'. | |
| 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) | |

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| 10. ECO Pending (P48092) | |
| INCLUSION RULES: | |
| 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. | |

18.3 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) | |

18.4 Order Approval Notification (P48181)

| Processing Option | Processing Options Requiring Further Description |
|---|--|
| ECO APPROVAL NOTIFICATION: | |
| 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 | |

18.5 ECO Revision Inquiry (P30135)

| Processing Option | Processing Options Requiring Further Description |
|---|--|
| DREAM WRITER VERSIONS: Enter the version for each program. If left blank, 'ZJDE0001' will be used. | |
| 1. ECO Entry (P48020) | |
| 2. BOM Revisions (P3002) | |

18.6 Approval Audit/Review (P48185)

| 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. | |
| DREAM WRITER VERSIONS: Enter the version for each program. If left blank, 'ZJDE0001' will be used. | |
| 2. ECO Approval (P4818) | |
| 3. Work Order Approval (P4818) | |
| 4. ECO Master (P48020) | |
| 5. Work Order Header (P48013) | |
| APPROVAL ACCESS: 6. Enter a '1' to allow access to all approval records. If left blank, only current user's records will be available for approval. | |

18.7 Assignment Review (P30220)

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

18.8 Future Bill Inquiry (P30210)

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

18.9 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. | |

18.10 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. | |
| ORDER TYPE: | |

| Processing Option | Processing Options Requiring Further Description |
|---|--|
| 2. Enter the default search order type. If left blank, all order types will be used. APPROVAL PROCESSING: 3. Enter the default search approval status. If left blank, all statuses will be used. DREAM WRITER VERSIONS: Enter the version for each program. If left blank, 'ZJDE0001' will be used. | |
| 4. ECO Entry (P48020) | |
| 5. Work Order Entry (P48013) | |
| 6. ECO Approval Notification (P48181) | |
| APPROVAL ROUTING COMPLETION: 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. APPROVAL ACCESS: 8. Enter a '1' to allow access to all approval records. If left blank, only current user's records will be available for approval. | |

18.11 ECO - Bill of Material Population (P30510)

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| PROOF OR FINAL MODE: 1. Enter a '1' if this is to be run in Final mode. If left blank, program will run in Proof mode. ECO APPROVAL VALIDATION: 2. Enter a '1' to validate ECO as fully approved before allowing final mode update. FINAL MODE UPDATES: 3. Enter a '1' to update the ECOs Actual Incorporation Date with system date. If left blank, no date update will occur. 4. Enter the ECO Status to use for updating the ECO as incorporated. If left blank, no status change will occur. 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). | |

| Processing Option | Processing Options Requiring Further Description |
|--|--|
| 6. Enter a '1' to update the Item Balance file (F4102) ECO Revision Information. If left blank, no update will occur. | |
| 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. | |
| 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. | |
| 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). | |
| 9. Enter a '1' to copy substitute items from old components to new components. If left blank, substitute items will not be copied. | |
| REVISION LEVEL CONTROL: | |
| 10. Enter a '1' to update the Component Revision Level in all Bills of Material where a parent item is used. Note: Only items at the current Bill Revision Level will be updated. | |

18.12 Related Items List Window - Z File (P30131Z)

| Processing Option | Processing Options Requiring Further Description |
|---|--|
| ECO PARTS LIST VERSIONS: | |
| 1. Enter version of ECO Parts List (P3013). If left blank, ZJDE0001 will be used. | |
| ERROR REPORTING: | |
| 2. Enter '1' to suppress error report. If left blank, the report will be generated. | |
| 3. Enter version of error report program (P41ZERR). If left blank, XJDE0001 will be used. | |

18.13 ECO Parts List - Z File (P3013Z)

| Processing Option | Processing Options Requiring Further Description |
|--------------------------|--|
| ECO PARTS LIST VERSIONS: | |

| Processing Option | Processing Options Requiring Further Description |
|---|--|
| 1. Enter version of ECO Parts List (P3013). If left blank, ZJDE0001 will be used. | |
| ERROR REPORTING: | |
| 2. Enter '1' to suppress error report. If left blank, the report will be generated. | |
| 3. Enter version of error report program (P41ZERR). If left blank, XJDE0001 will be used. | |

Functional Servers

This appendix contains this topic:

- [Appendix A.1, "About Functional Servers"](#)

A.1 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 *JD Edwards World Technical Foundation Guide*.

Example: Voucher Processing Functional Server

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

- Speed Voucher Entry (P040015)
- Standard Voucher Entry (P04105)
- Void Payment Entry (P4704103)
- Credit Tied to Debit Bill (P041010)
- Multi-Voucher (P041017)
- Calculate Withholding (P04580)

Lead Time Calculations

This appendix contains this topic:

- [Appendix B.1, "Understanding Lead Time Calculations"](#)

B.1 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.

Figure B-1 Total queue/move hours calculation

(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.

Figure B-2 Standard setup hours calculation

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

Figure B-3 Level Lead Time calculation

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

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

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

Figure B-4 Per Unit Lead Time calculation

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

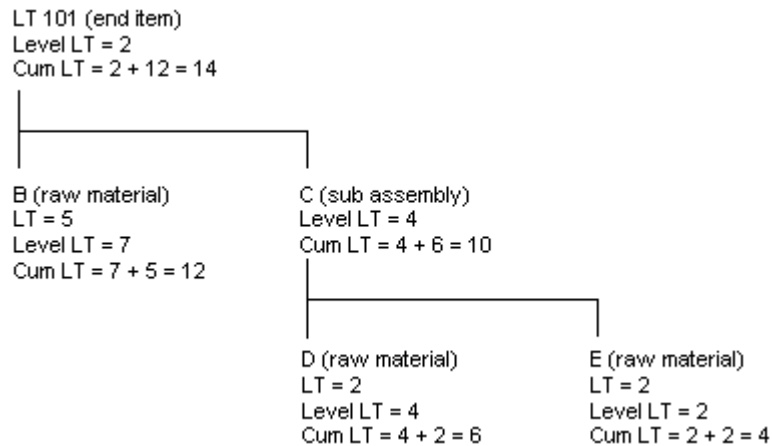
$$\frac{\text{Operation 30}}{\frac{(8/1) * 10,000}{10,000}} + \frac{\text{Operation 60}}{\frac{(12/1) * 10,000}{10,000}} + \frac{\text{Operation 30}}{\frac{(12/1) * 10,000}{10,000}}$$

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

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.

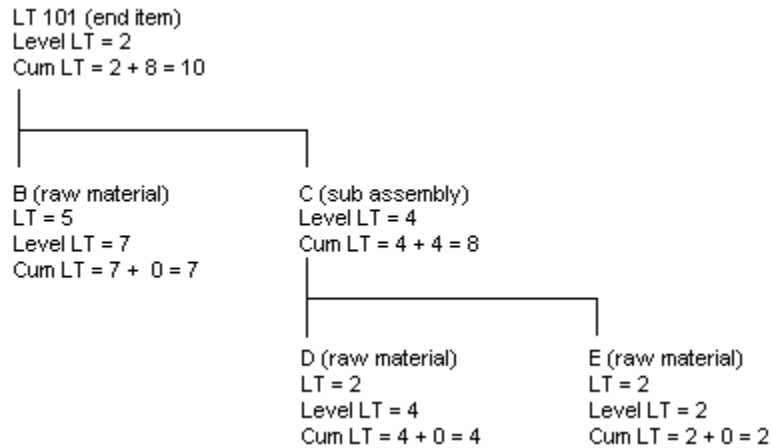
Figure B-5 Cumulative Lead Time calculation



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.

Figure B-6 Manufacturing Lead Time calculation



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

Import Mass Data into Manufacturing Systems

Several interactive Manufacturing programs can run in batch mode and accept data from a Z file, allowing you to process mass amounts of data from an outside source easily and efficiently using existing programs to validate the data.

You can process any number of records to add, change, or delete. You also have the advantage of:

- Data selection to limit the records you want to process.
- Processing options that allow you to choose the version of the interactive program to process the records.
- Error report printing.

Generally, the DREAM Writer program number corresponds to the screen and program number with a Z appended to the end. For example, P3003Z corresponds to the Routing Master Revisions program (P3003).

See:

- Import Using Z File Processing in the *JD Edwards World Technical Tools Guide* for detailed information about Z file processing.
- Overview to Import/Export in the *JD Edwards World Technical Tools Guide* for information about importing data into the system.

The following table includes the Manufacturing Z file processing programs.

| Program | Program Name | Z File Program | Z File |
|---------|----------------------------|----------------|---|
| P30061 | Work Center Rate Revisions | P30061Z | F30008Z |
| P3003 | Routing Master Revisions | P3003Z | F3003HZ (header) and F3003DZ (detail) |
| P30131 | Related Items List Window | P30131Z | F30131HZ (header) and F30131DZ (detail) |

| Program | Program Name | Z File Program | Z File |
|---------|----------------|----------------|---------------------------------------|
| P3013 | ECO Parts List | P3013Z | F3013HZ (header) and F3013DZ (detail) |

Navigation

From Manufacturing Z File Processes (G3001Z), choose an appropriate option

Processing Options

See the appropriate set of processing options in:

- [Section 17.16, "Routing Master Revisions - Z File \(P3003Z\)"](#)
- [Section 17.17, "Work Center Rate Revisions - Z File \(P30061Z\)"](#)
- [Section 18.12, "Related Items List Window - Z File \(P30131Z\)"](#)
- [Section 18.13, "ECO Parts List - Z File \(P3013Z\)"](#)

Technical Considerations

You can only add data using the Routing Master Revisions - Z File program (P3003Z). You *cannot* use this program to change or delete data.

Data Selection

Do not change the existing data selection. The Processed Y/N field is set to NE Y. This prevents the program from processing records more than once.

You can add additional selections to limit the data.

Data Sequence

Do not change the data sequence.

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