Guide
June 1996

Configuration Management

Release A7.3

JDEdwards®

Item # A73CEACF

J.D. Edwards & Company
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Denver, CO 80237

Where Do I Look?

CD–ROM Guides

Guides

Technical Foundation

System Administration and Environment Fundamentals

- Understanding Your Environment
- Creating and Maintaining Environments
- Setting Up Security
- Upgrading Your System

Common Foundation

Prerequisite J.D. Edwards Software Fundamentals

- Using Menus
- Getting Help
- Customizing Data
- Reporting

Important Note for Students in Training Classes

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

Welcome

About this Guide

This guide provides overviews, illustrations, procedures, examples, and exercises for release A7.3 of J.D. Edwards software. Screens and windows shown are only examples. If your company operates at a different software level, you might find discrepancies between what is shown in this guide and what you see on your screen.

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

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

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

Audience

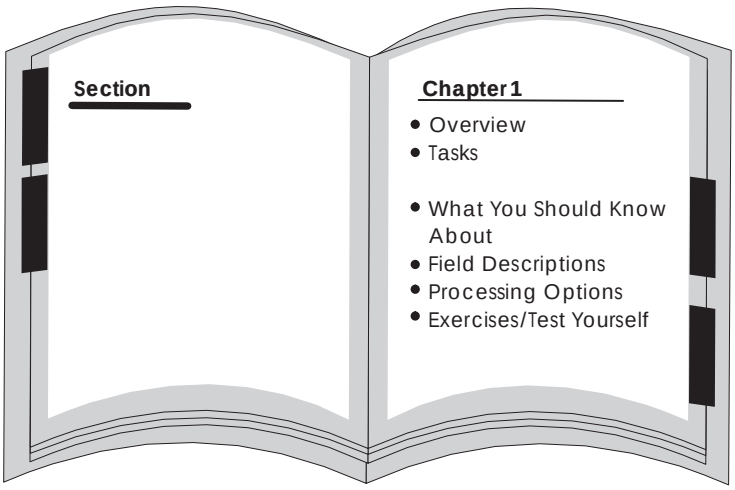
This guide is intended primarily for the following audiences:

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

Organization

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

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



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

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

Conventions Used in this Guide

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

- *Form* refers to a screen in the AS/400 environment or a window in the OneWorld environment.
- *Table* generally means "file" in the AS/400 environment.

We assume an "implied completion" at the end of a series of steps. That is, to complete the procedure described in the series of steps, either press Enter (AS/400) or click OK (OneWorld), except where noted.

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Overview

Configuration Management Overview

Many manufacturers sell products that are an arrangement of components that a customer orders. In this environment, a manufacturer assembles a large variety of end products from relatively few components. When customers place orders, they specify features and options about the product.

When you enter a sales order for a configured item, the Configuration Management system displays a series of windows within which you answer questions about the item's segments (features and options). The system verifies each segment value against user defined information, such as rules and user defined code tables of choices. If the configuration is valid, the system processes the order.

Although setup for Configuration Management can be complex, there are many benefits. During setup you must define the following information:

- Constants
- Segments
- Cross-segment editing rules
- Assembly inclusion rules

However, as a result of using Configuration Management, you can:

- Use fewer end part numbers
- Create dynamic work order parts lists and routings
- Provide for order history and configuration audit trails
- Improve order accuracy
- Shorten leadtimes
- Provide better margin information
- Improve customer service

Examples of manufacturers who typically use Configuration Management include:

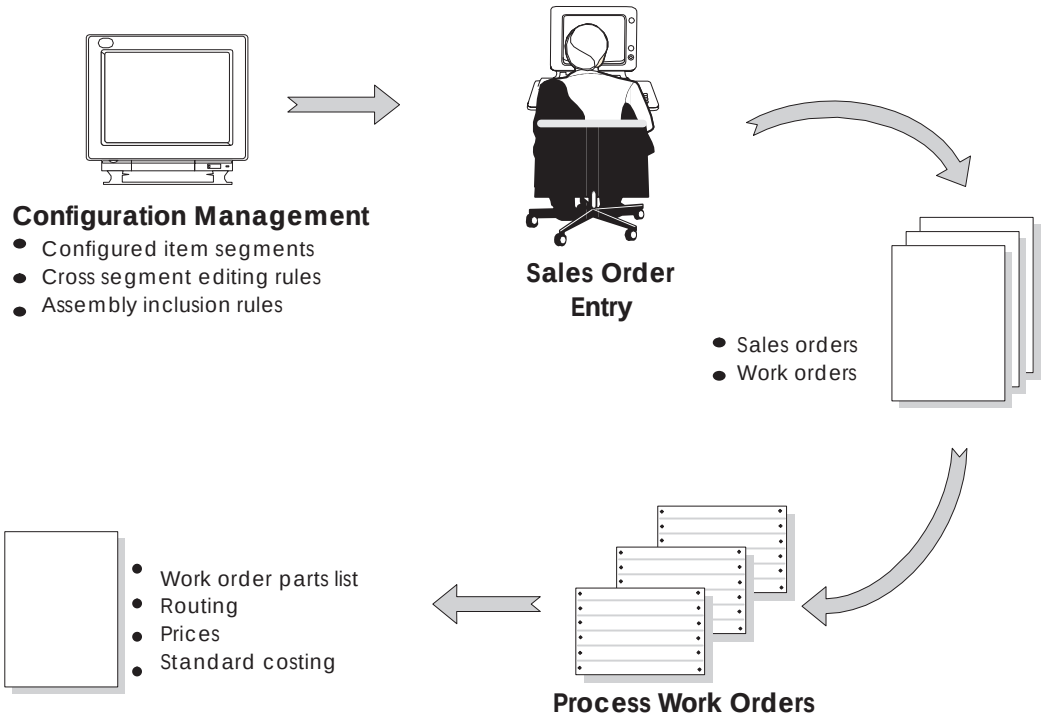
- Furniture and fixtures
- Paper products
- Building products
- Commercial printing

- Control and measurement equipment
- Transportation equipment
- Windows and doors
- Other dimensional products

System Integration

The Configuration Management system works with other J.D. Edwards systems to generate the following for configured items:

- Sales orders
- Parts lists
- Routings
- Work orders
- Price information
- Work order costing
- Invoices



J.D. Edwards also offers kit processing that enables feature and option processing. However, kit processing might not be appropriate for features or complex specifications, such as conditional part requirements. Configuration Management is appropriate for items that:

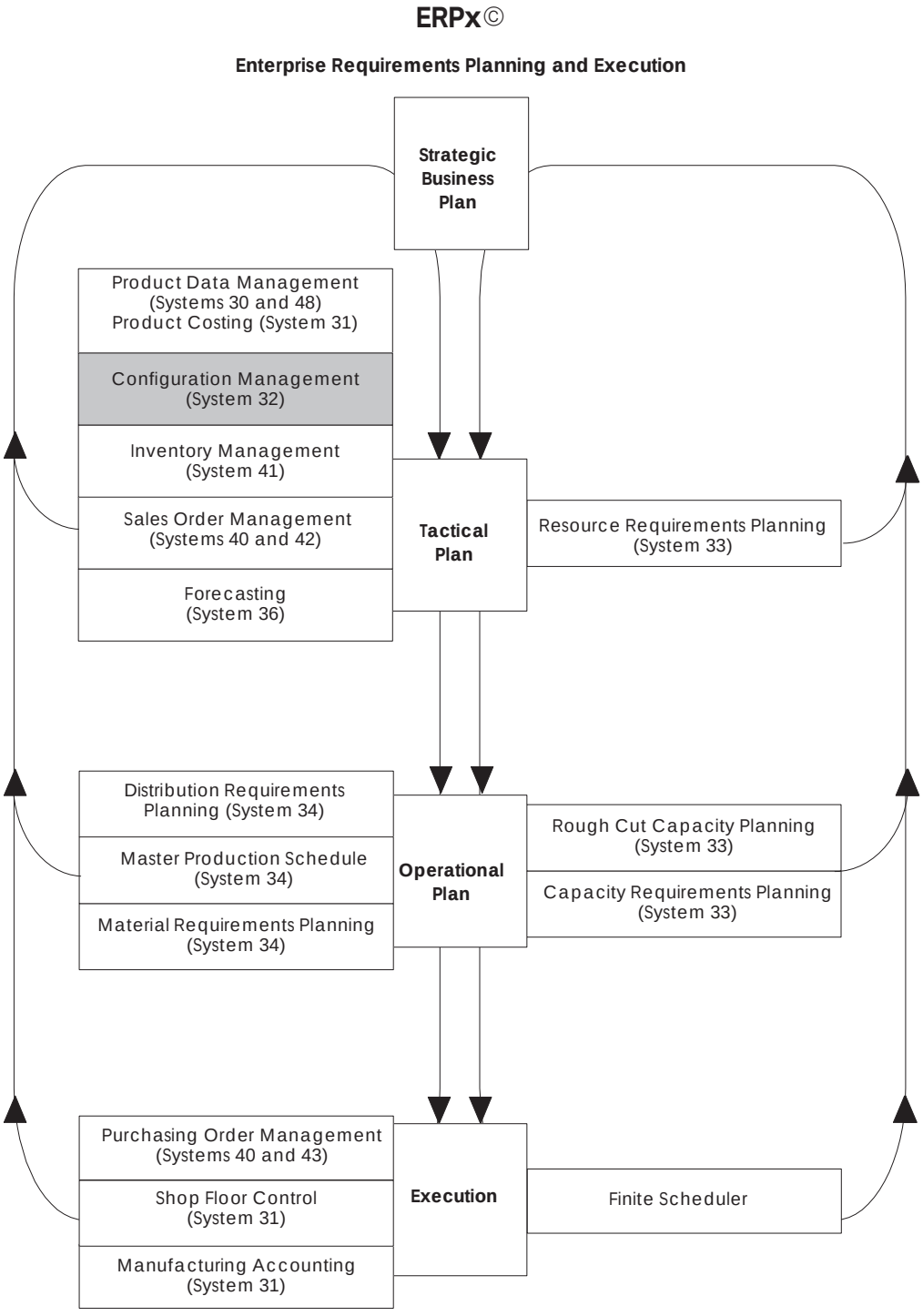
- Are complex
- Require routings that change based on features or options
- Include features that are not compatible with other features
- Require multiple work orders to define an assembly

Enterprise Requirements Planning and Execution Review

Configuration Management is one of many systems in the Enterprise Requirements Planning and Execution system.

Use the Enterprise Requirements Planning and Execution 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 Enterprise Requirements Planning and Execution system includes the following J.D. Edwards systems:


ERPx©
Enterprise Requirements Planning and Execution
Strategic Business Plan
Product Data Management (Systems 30 and 48) Product Costing (System 31)
Configuration Management (System 32)
Inventory Management (System 41)
Sales Order Management (Systems 40 and 42)
Forecasting (System 36)
Tactical Plan
Resource Requirements Planning (System 33)
Distribution Requirements Planning (System 34)
Master Production Schedule (System 34)
Material Requirements Planning (System 34)
Operational Plan
Rough Cut Capacity Planning (System 33)
Capacity Requirements Planning (System 33)
Purchasing Order Management (Systems 40 and 43)
Shop Floor Control (System 31)
Manufacturing Accounting (System 31)
Execution
Finite Scheduler

Terms and Concepts

Configured item

A configured item is comprised of different features requested by a customer, for example, a forklift. The configured item name can be alphanumeric. You associate segments with the configured item. For example, the configured item FORKLIFT–A contains the following segments:

FORKLIFT–A

- Segment 10 (Lift Rating)
- Segment 20 (Power Type)
- Segment 30 (Boom Height)

Segment

When you set up a configured item, you define segments to represent characteristics of a configured item, such as an optional paint color or a lift rating. For example:

Segment 10 (Lift Rating)

- 2000 pounds
- 4000 pounds
- 6000 pounds

Segment 40 (Paint)

- STANDARD
- CUSTOM

A segment might also be called a feature or an option.

Configured string

During sales order entry, the system joins the segments and expresses the configuration as a string of segments separated by a delimiter. For example:

2000/PROPANE/10/BLUE/P

Multi-level configured item

You can set up a configured subassembly within a configured item. For example, the configured item FORKLIFT–A contains a configured subassembly for a BOOM.

Cross-segment editing rules

Use cross-segment editing rules to establish the relationships between the configured item segments with logic statements. This enables you to avoid invalid combinations and prevent invalid sales orders. The system edits the segments on the sales order against these cross-segment editing rules and displays error messages for information that violates the rules. For example:

If segment 10 (Lift Rating) = 6000 pounds, *then* segment 30 (Boom Height) must = 12 (feet) *else* segment 30 must be <= 10 (feet).

Assembly inclusion rules

Use assembly inclusion rules to translate requested options and values from sales order entry into the specific components, operations, and calculated values necessary to build and price the configured item. For example:

If segment 10 = 6000 *and* segment 30 >= 10, *then* use part F170, *else* use part F175.

Analyzing Your Configured Item

Before you work with Configuration Management, ensure that you can answer the following questions about your configured items:

- How do customers order the configured item?
- How will the configured item be priced?
- Which components make up the configured items?
- Which routings do the configured items require?
- Which calculations are required to support prices, components, and routing steps?

This information will help you determine the sequence of questions. This is important because you can define levels of questions within multi-level configured items. Knowing this information before you set up this system will save time during setup.

Features

The Configuration Management system enables you to perform the following functions:

- Specify a variety of features and options with configured item segments
- Establish relationships between options to prevent invalid product configurations
- Define multi-level configured items and multiple associated work orders
- Establish default values or ranges for options and features
- Calculate values for options with algebraic definitions
- Create generic rules that can be used across branch/plants
- Create assembly inclusion rules that control price adjustments, routings, and parts
- Define a table of values that is referenced by assembly inclusion rules

Tables

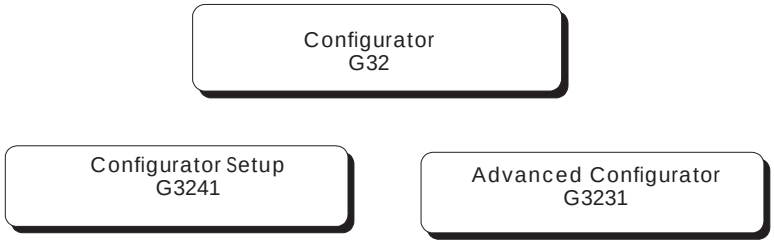
The Configuration Management system uses the following tables:

Configured Item Segments (F3291)	Contains the segments for the configured items defined on the Item Master and Branch/Plant
Cross-Segment Editing Rules (F3292)	Defines the relationships among the configured items' segments
Configurator Constants (F3209)	Stores constants that you define to control processing at the branch/plant level
Values Detail (F32921)	Stores the *VALUES definitions for cross-segment editing rules and assembly inclusion rules
Range Detail (F32922)	Stores the *RANGE definitions for cross-segment editing rules and assembly inclusion rules
Assembly Inclusion Rules (F3293)	Stores the components, routings, calculations, and price adjustments for configured items
Configured String History (F3294)	Stores the history for the configured items of all the configurations ordered

Configured String Master (F32941)	Contains the configured string identifier for each configuration
Configured String Segments (F32942)	Stores the configured string for each segment
Rules Table Definition (F3281)	Stores table information such as description, table type, number of segments and return values
Configured Item/Rules Table Cross Reference (F3282)	Defines which segment values reference tables for each configured item
Rules Table Value Definition (F32821)	Defines which segments will be be populated with the returned values
Table Detail (F3283)	Stores the actual table values for each combination of segment values that you define for the table
Item Master (F4101)	Stores basic information about each item in inventory, such as item numbers, description, category codes, and units of measure
Branch/Plant (F4102)	Stores branch/plant information, such as quantities and branch level category codes
Item Location (F41021)	Stores primary and secondary locations for an item.
Cost Ledger (F4102)	Stores cost information for an item
Base Price (F4106)	Stores base price information for an item
Sales Order Detail (F4211)	Defines which level of the configured item is related to a component and complete information for each line of the sales order
Sales Order Header (F4201)	Maintains the billing instruction, address, and delivery information for a customer order

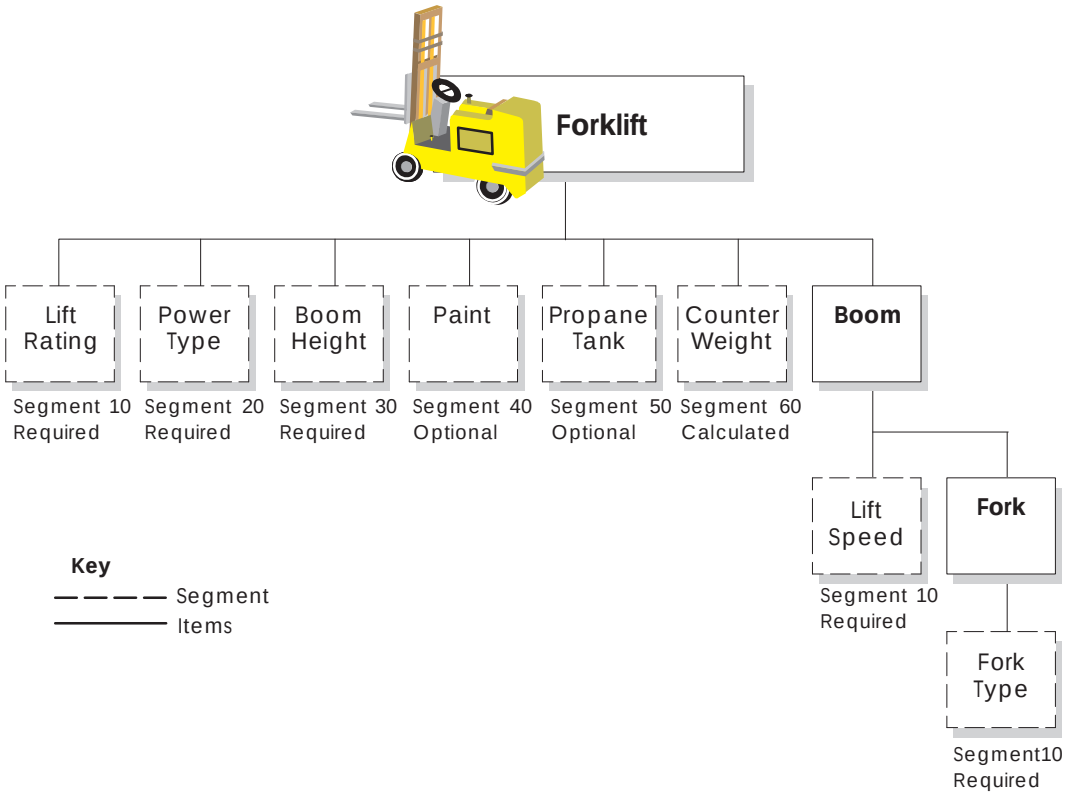
Menu Overview

The J.D. Edwards Configuration Management system uses the following menus.



Training Class Case Study

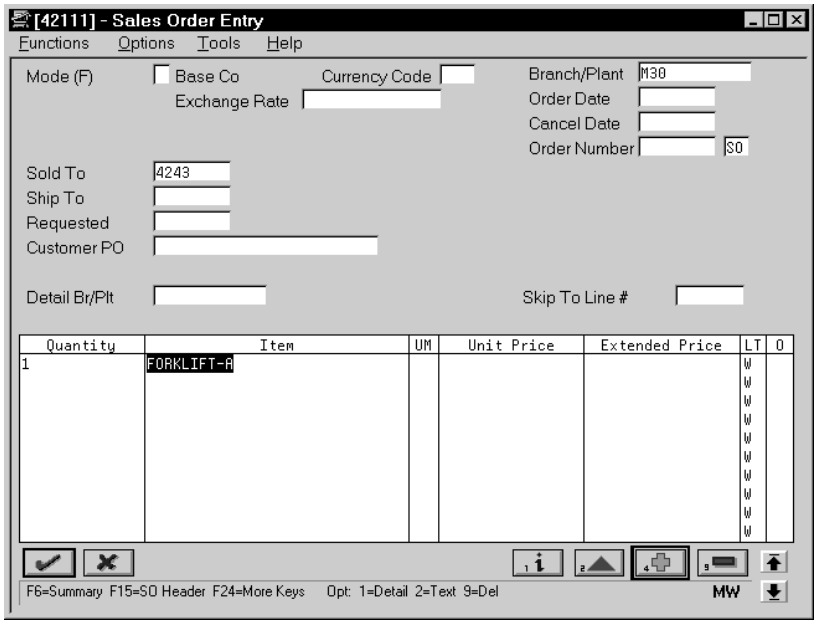
In the case study, a forklift is an example of a multi-level configured item. Its subassemblies include the boom and fork. For the item and each subassembly in the forklift, segments represent features and options.



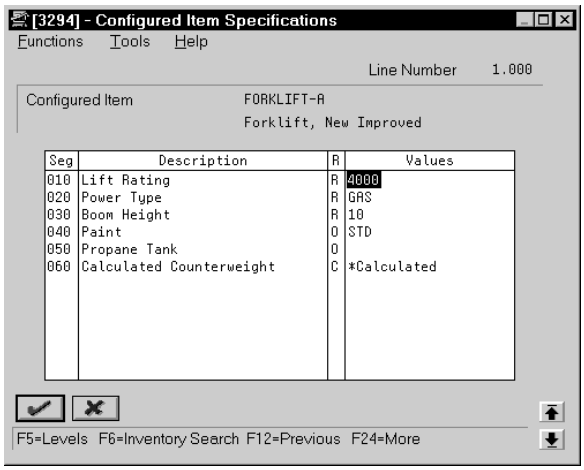
Example: Entering a Sales Order for a Forklift

You enter a sales order to record information about your customers and the items they order. When you enter a configured item, the system prompts you to answer option and feature questions to define the correct components, prices, and work orders.

On Sales Order Entry

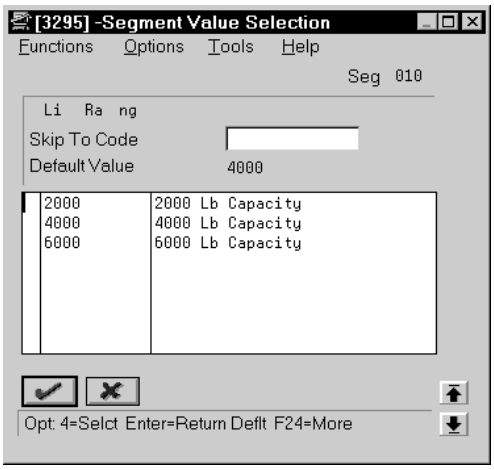


1. Complete the following required fields and press Enter:
    - Sold To
    - Branch/Plant
    - Quantity
    - Item

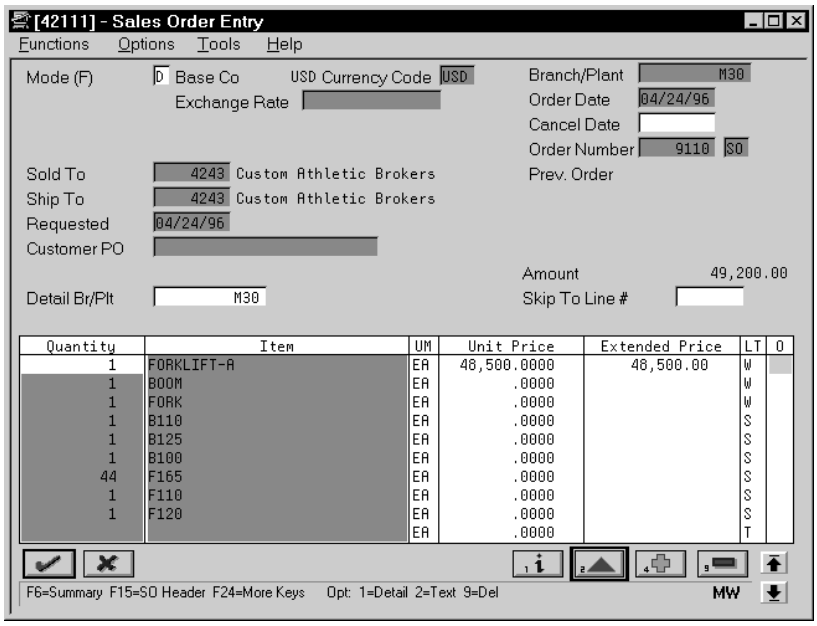


On Configured Item Specifications

2. Do one of the following:
   - To accept the default values, press Enter.
   - To select another value, access Segment Value Selection and select a value.



3. Repeat steps 2 for the remaining segments and lower level items.
4. To process the sales order, press Enter.
5. On Sales Order Entry, locate your sales order to display the price, component item, and configured text information.


[42111] - Sales Order Entry
Functions
Options
Tools
Help
Mode (F)
D Base Co
USD Currency Code USD
Exchange Rate
Branch/Plant M30
Order Date 04/24/96
Cancel Date
Order Number 9110 SO
Sold To 4243 Custom Athletic Brokers
Ship To 4243 Custom Athletic Brokers
Requested 04/24/96
Customer PO
Prev. Order
Amount 49,200.00
Detail Br/Plt M30
Skip To Line #
Quantity
Item
UM
Unit Price
Extended Price
LT
O
1 FORKLIFT-A EA 48,500.0000 48,500.00 W
1 BOOM EA .0000 W
1 FORK EA .0000 W
1 B110 EA .0000 S
1 B125 EA .0000 S
1 B100 EA .0000 S
44 F165 EA .0000 S
1 F110 EA .0000 S
1 F120 EA .0000 S
EA .0000 T
F6=Summary F15=SO Header F24=More Keys Opt: 1=Detail 2=Text 9=Del
MW

Setup

Configuration Management Setup

Objectives

- To identify a configured item
- To set up segments that identify the main features of a configured item
- To set up the relationships among features
- To establish which parts are included on the sales order
- To specify increases or decreases in the price of the configured item based on which options are chosen
- To specify how the item is to be manufactured by choosing the proper routing steps
- To review configuration management information

About Configuration Management Setup

You must set up the Configuration Management system before you can enter sales orders for configured items. You must first set up the following information:

- Configured item information
- Constants
- Segments
- Cross-segment editing rules
- Assembly inclusion rules
- Tables

You set up configured item information for other systems, including:

- Inventory Management
- Pricing Management
- Sales Order Management

Configuration Management constants control processing for your business. You can use constants to control:

- Branch/plant-specific information about work order processing
- Sales quote processing
- Availablility checking
- Displaying calculated segments

Segments are the features and options of the configured item. Segments represent product characteristics such as color, material, or size. You assign numbers to each segment of the configured item. The numeric sequence determines the order in which you specify the segment value during sales order entry.

You set up cross-segment editing rules with logic statements to establish the relationship between the segments. Use these rules to prevent invalid configurations during sales order entry. You can define custom error messages for a cross-segment editing rule.

Assembly inclusion rules process requested features from sales order entry into the specific components and routing operations necessary to build the configured item. Different types of assembly inclusion rules allow you to define:

- Components
- Price/cost adjustments
- Routings
- Calculated values

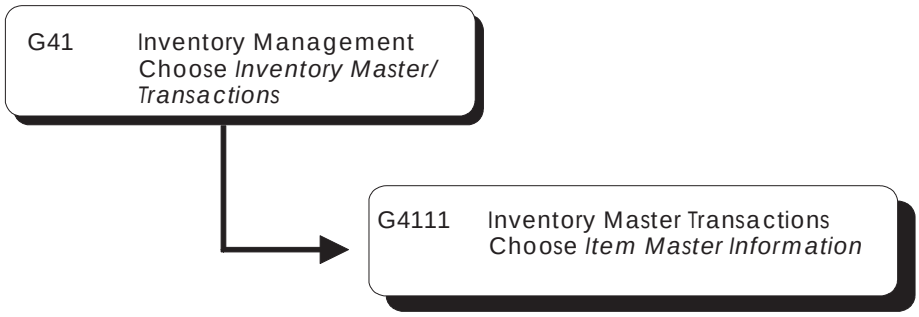
You can also set up tables for assembly inclusion rules to reference information that is based on segment values. Table processing might also be referred to as matrix processing. You might define tables for components, prices, and calculated values. Using tables reduces the amount of rules that are required, simplifies rule maintenance, and improves processing time.

Configuration Management setup consists of the following:

- ❑ Setting up item information
- ❑ Setting up distribution information
- ❑ Setting up constants
- ❑ Setting up segments
- ❑ Setting up cross-segment editing rules
- ❑ Understanding derived calculations

- ❑ Setting up assembly inclusion rules
- ❑ Understanding tables
- ❑ Setting up tables
- ❑ Printing reports

Set Up Item Information



Setting Up Item Information

You must set up item information for your configured item and its components and configured subassemblies. Use programs in the Inventory Management and Product Data Management systems to define item information.

Setting up item information consists of the following tasks:

- ❑ Entering Item Master information
- ❑ Entering Branch/Plant information
- ❑ Entering a bill of material (optional)
- ❑ Entering a routing

Entering Item Master Information

You enter Item Master information that is unique to the item across all branch/plants. This includes stocking and pricing information.

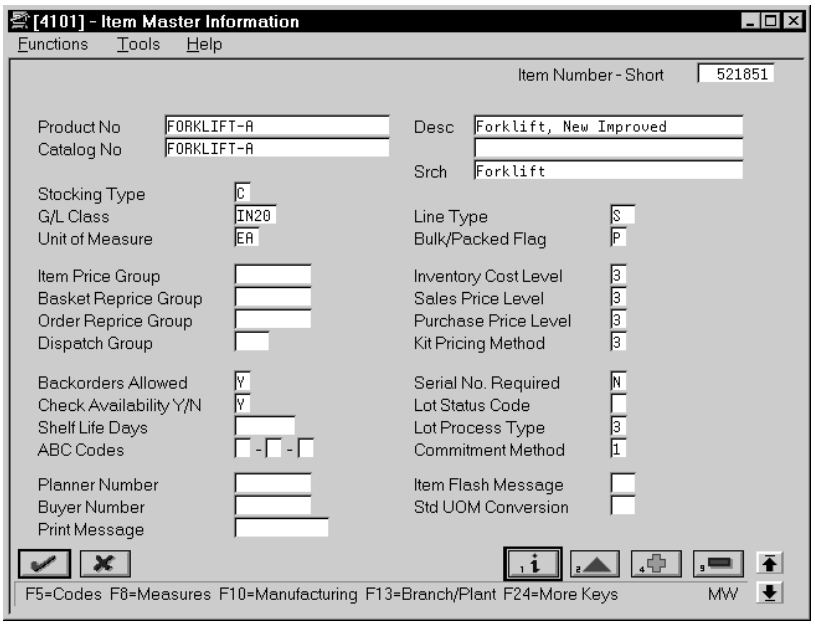
You have several options for pricing a configured item. Choose from the following pricing methods:

1. Total the list prices of components to determine the configured item price
2. Use the list price of the configured item
3. Use assembly inclusion pricing rules to determine the price

4. Total the discounted price of components

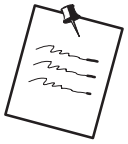
To enter Item Master information

On Item Master Information



Complete the following fields:

- Stocking Type
- Line Type
- Inventory Cost Level
- Kit Pricing Method
- Lot Process Type



For the configured item, you must set the Stocking Type to C, and the Inventory Cost Level to 3.

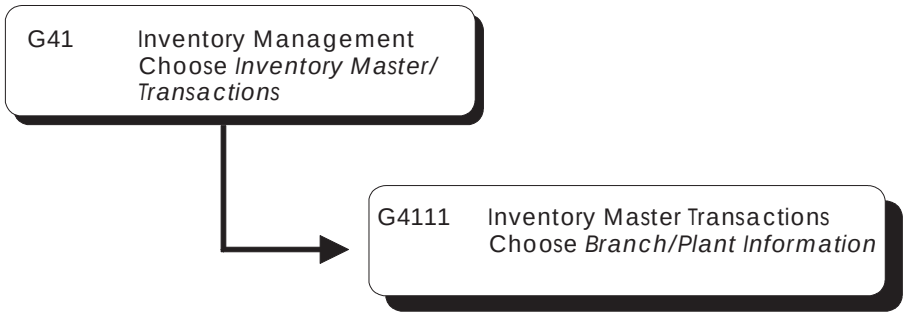
Field	Explanation
Stocking Type	A user defined code (system 41/type I) that indicates how you stock an item(for example, as finished goods, or as raw materials). The following stocking types are hard coded and you should not change them: B Bulk Floor Stock C Configured item F Feature K Kit parent item N Non-stock
Line Type	A code that controls how the system treats 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. For example: S Stock item J Job cost N Non-stock item F Freight T Text information M Miscellaneous charges and credits
Inventory Cost Level	A code that indicates whether the system maintains one overall inventory cost for the item, a different cost for each branch/plant, or a different cost for each location and lot within a branch/plant. The system maintains inventory costs in the Inventory Cost table (F4105). Valid codes are: 1 Item level 2 Item/Branch level 3 Item/Branch/Location level
Kit Pricing Method	A code that indicates how the system determines the sales price of a kit or configured item. Valid codes are: 1 The system totals list prices of components to determine the kit or product family price. 2 The list price of the final kit. This is the kit or product family price from the Base Price file (F4106). 3 The price inclusion rules for the product family determine the product family price (for configured items only). 4 The kit or product family price is the sum of the components' discounted prices. There is no discount on the parent.

Field	Explanation
Lot Process Type	A code that indicates whether lot or serial number is assigned. Lot and serial number processes use the Lot Master table (F4108). Valid codes are: 0 Lot assignment is optional. You can manually assign numbers. Quantity can be greater than one. (Default) 1 Lot assignment is required. The system assigns numbers using the system date in YYMMDD format. Quantity can be greater than one. 2 Lot assignment is required. The system assigns numbers in ascending order using Next Numbers. Quantity can be greater than one. 3 Lot assignment is required. You must manually assign numbers. Quantity can be greater than one. 4 Serial number assignment is optional except during shipment confirmation. Quantity must not exceed one. 5 Serial number assignment is required. The system assigns numbers using the system date in YYMMDD format. Quantity must not exceed one. 6 Serial number assignment is required. The system assigns numbers in ascending order using Next Numbers. Quantity must not exceed one. 7 Serial number assignment is required. You must manually assign numbers. Quantity must not exceed one. . . . . . *Form-specific information* . . . . . . Use codes 4 through 7 for advanced serial number processing. In Purchase Management, you add serial numbers using the Lot field on Purchase Order Detail. Each item must have a unique serial number. For items requiring serial numbers as well as lot assignments, use the Lot Process Type field in conjunction with the Serial No Required field. Codes 3 through 5 for the Serial No Required field indicate the setup requirements necessary for these items.

See Also

- *Entering Basic Item Information (P4101)* in the *Inventory Management Guide*

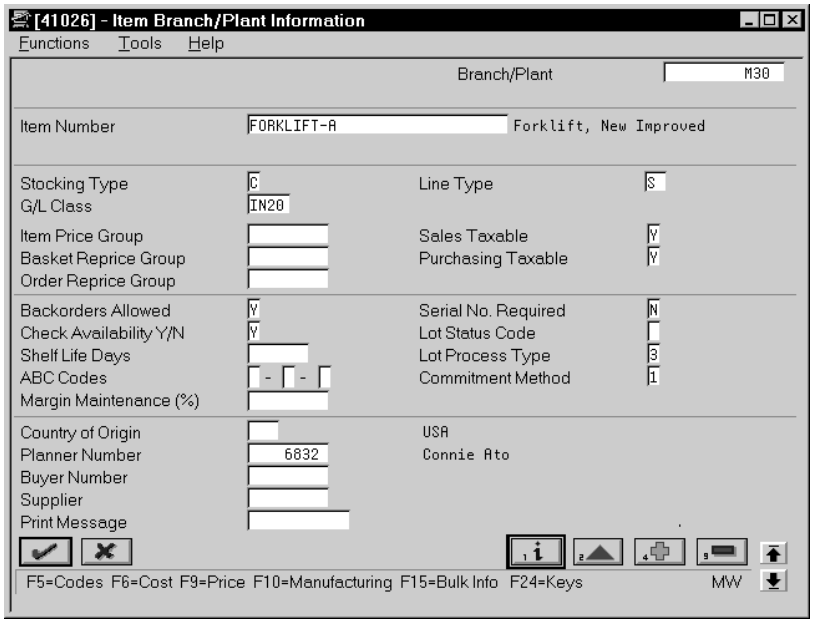
Entering Branch/Plant Information



You enter branch/plant information that is unique to an item for a specific branch/plant. This includes lot and leadtime information.

▶ To enter branch/plant information

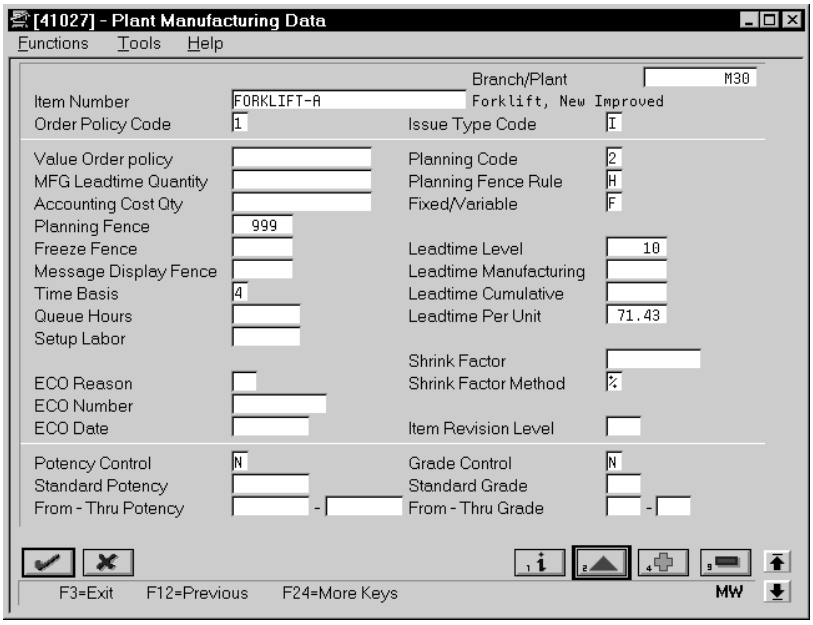
On Item Branch/Plant Information



5. Locate your configured item.
6. Complete the following fields:
    - Stocking Type
    - Serial Number Required
    - Lot Status Code
    - Lot Process Type

For the configured end item, you must set the Stocking Type to C.

7. Access Plant Manufacturing Data.



8. On Plant Manufacturing Data, complete the following fields:
   - Leadtime Level
   - Leadtime Manufacturing
   - Leadtime Cumulative
   - Leadtime Per Unit

Field	Explanation
Serial Number Required	A code that indicates whether you must attach a serial number to this item at the time of receipt or sale for basic serial number processing, or if memo lot information is required for advanced serial number processing. You can use basic serial number processing for informational purposes only. For example, you can add a serial number for an item, and review the number later. For basic serial number processing, valid values are: Y Yes, the system requires a serial number for all transactions pertaining to this item in related inventory, sales, and purchase order programs N No, the system does not require a serial number The system does not use this information if you use advanced serial number processing. Advanced serial number processing lets you track an item through purchasing and sales based on a serial number. To specify serial number requirements, you must use the Lot Process Type field in Item Master Information (P4101). Values 3 through 5 indicate whether lot assignment is required for items with serial numbers. You can require assignment of up to three lot numbers, including Supplier Lot, Memo Lot 1, and Memo Lot 2. To specify lots for items with serial numbers, you must use the following values: 3 Supplier lot number required (purchasing only) 4 Supplier lot number required (purchasing only), and Memo Lot 1 required 5 Supplier lot number required (purchasing only), Memo Lot 1 required, and Memo Lot 2 required
Lot Status	A user defined code (table 41/L) that indicates the status of the lot. If this field is blank, it indicates that the lot is approved. All other codes indicate that the lot is on hold. You can assign a different status code to each location in which a lot resides on Item/Location Information or Location Lot Status Change.

Field	Explanation
Leadtime Level	The leadtime 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 leadtimes. Level leadtime is different for purchased and manufactured items: • Purchased – The number of calendar days required for the item to arrive at your branch/plant after the supplier receives your purchase order. • Manufactured – The number of workdays required to complete the fabrication or assembly of an item once all the components are available. You can enter level leadtime manually on Manufacturing Values Entry, or you can let the Leadtime Rollup program calculate it. To calculate level leadtime using the Leadtime Rollup program, you must first enter a quantity in the Manufacturing Leadtime Quantity field in the Item Branch table (F4102).
Leadtime Manufacturing	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 leadtimes for all manufactured items, plus the highest manufacturing leadtime for all its components. If all components are purchased, the manufacturing leadtime equals the item's level leadtime. Purchased item leadtimes are not included in the calculation of manufacturing leadtimes. You can enter the manufacturing leadtime manually or you can have the system calculate it when you run the Leadtime Rollup program.
Leadtime Cumulative	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. Manufactured – The total of all level leadtimes for all manufactured items, plus the highest cumulative leadtime of all its components. Purchased – The item's level leadtime. Purchased item leadtimes are included in the calculation of cumulative leadtimes. You can enter this value manually or you can have the system calculate it when you run the Leadtime Rollup program.

Field	Explanation
Leadtime Per Unit	The total number of hours required to build one unit as specified on the routing. This value is factored by the time basis code. You can enter this value manually, or you can have the system calculate it when you run the Leadtime Rollup program. The system overwrites this value when you run the Leadtime Rollup program. The system uses this field to calculate start dates for work orders when you use variable leadtimes.

See Also

- *Entering Branch/Plant Information (P41026)* in the *Inventory Management Guide*

Entering a Bill of Material

Although you do not need to create a bill of material for a configured item, you can create a bill of material for the configured item's manufactured components. Assembly inclusion rules define component relationships for configured items. The system adds configured components to sales orders and work orders based on these rules.

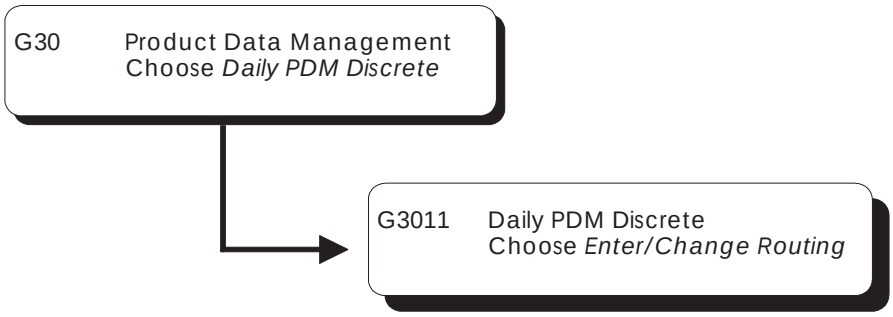
During setup, consider creating modular bills of material that group common parts for a specific feature or options. For example, a car might have an interior trim package with two choices, standard or deluxe. Each choice includes specific parts, and might represent two different modular bills.

Although planning bills are not required for Configuration Management, you can use them to help manage demand for specific features and options.

See Also

- *Working With Bills of Material (P3002)* in the *Product Management Guide*
- *Reviewing and Revising Simulated Cost Components (P30026)* in the *Product Costing and Manufacturing Accounting Guide*
- *Entering a Planning Bill (P3002)* in the *Forecasting Guide*

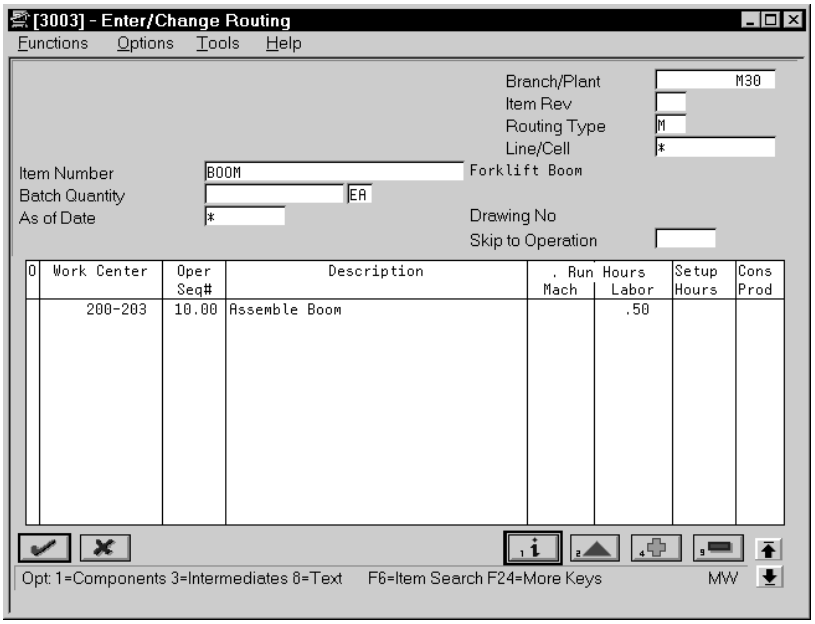
Entering Routings



You define all possible routings for the configured item and later use assembly inclusion rules to choose which routing to attach to the work order. The routing assembly inclusion rule allows you to define any complete routing or specific routing operation to attach to a configured item work order. You do not need to enter a routing for the configured item's part number.

▶ To enter routings

On Enter/Change Routing



Complete the following fields:

- Item Number
- Branch/Plant
- Work Center

- Operation Sequence Number

Field	Explanation
Sequence Number – Operations	In routings, used to sequence the fabrication or assembly steps in the manufacture of an item. You can track costs and charge time by operation. In bills of material, 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. In engineering change orders, used to sequence the assembly steps for the engineering change. Skip To fields allow you to enter an operation sequence that you want to begin the display of information. You can use decimals to add steps between existing steps. For example, use 12.5 to add a step between steps 12 and 13. In the process, the sequence number that produces the intermediate product.

See Also

- *Entering a Routing (P3003)* in the *Product Data Management Guide*

Set Up Distribution Information

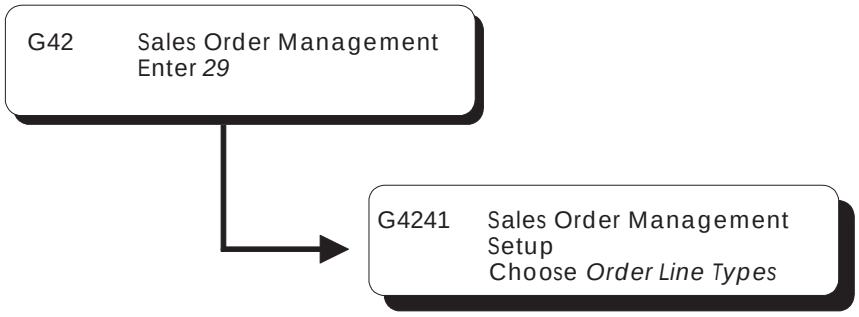
Setting Up Distribution Information

Before you can enter configured item sales orders, you must provide information that is specific to your business for the Sales Order Management system.

Setting up distribution information consists of the following tasks:

- ❑ Setting up line types
- ❑ Setting up order activity rules
- ❑ Setting up price information
- ❑ Setting up pricing groups (optional)
- ❑ Setting up discounting information (optional)

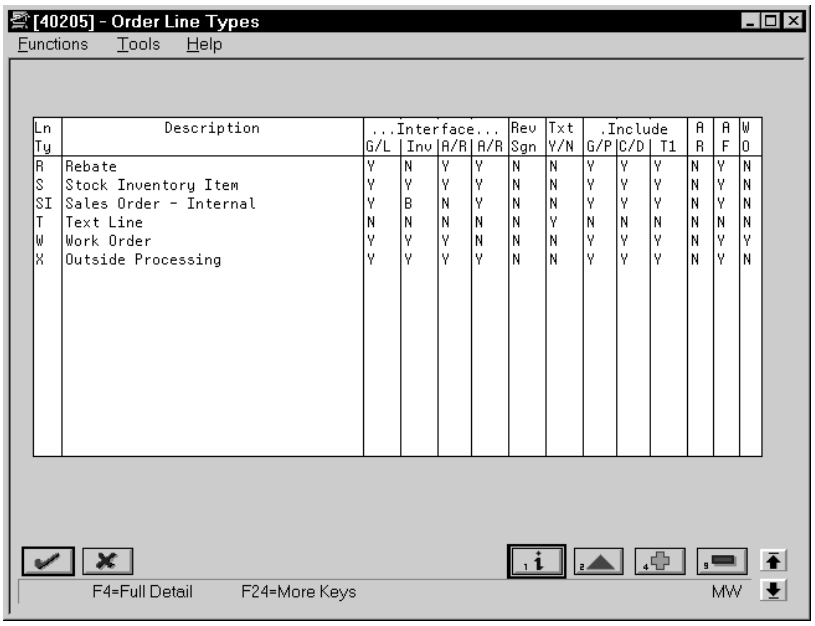
Setting Up Line Types



You set up line types to generate work orders (in addition to sales orders) for configured items during sales order entry. The W line type generates a work order.

To set up line types

On Order Line Types



Ln Ty	Description	...Interface... G/L	Inv	A/R	A/R	Rev Sgn	Txt Y/N	.Include G/P	C/D	T1	A R	A F	W O
R	Rebate	Y	N	Y	Y	N	N	Y	Y	Y	N	Y	N
S	Stock Inventory Item	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	N
SI	Sales Order - Internal	Y	B	N	Y	N	N	Y	Y	Y	N	Y	N
T	Text Line	N	N	N	N	N	Y	N	N	N	N	N	N
W	Work Order	Y	Y	Y	N	N	N	Y	Y	Y	N	Y	Y
X	Outside Processing	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	N

Complete the following fields:

- Generate Work Order
- Inventory Interface

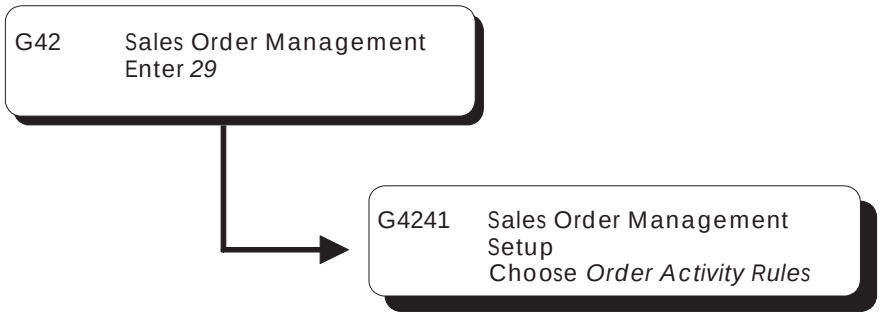
Field	Explanation
Generate Workorder	A code indicating whether the system automatically generates an internal work order for this line. Valid codes are Y (yes) and N (no, which is the default).

Field	Explanation
Inventory Interface Y/N – Distribution	A code that identifies the type of interface to the Inventory Management system. Valid codes are: Y The dollar or unit value of any activity containing this line type will be reflected in inventory. The system also edits the item you enter to ensure that it is a valid item. Y is the default. A The number entered will be recognized as a G/L account number. This code is used in purchasing only. B The sytem edits when using format 4 in purchase order entry. The system retrieves price data from the inventory tables, but does not update to the quantity on the purchase order. This code is valid only when the G/L Interface field is Y (yes). Budget checking is fully functional with this interface type. D The item in this line is an inventory item that will not affect availability or quantities. N This item is not an inventory item.

See Also

- *Setting Up Order Line Types (P40205)* in the *Sales Order Management Guide*

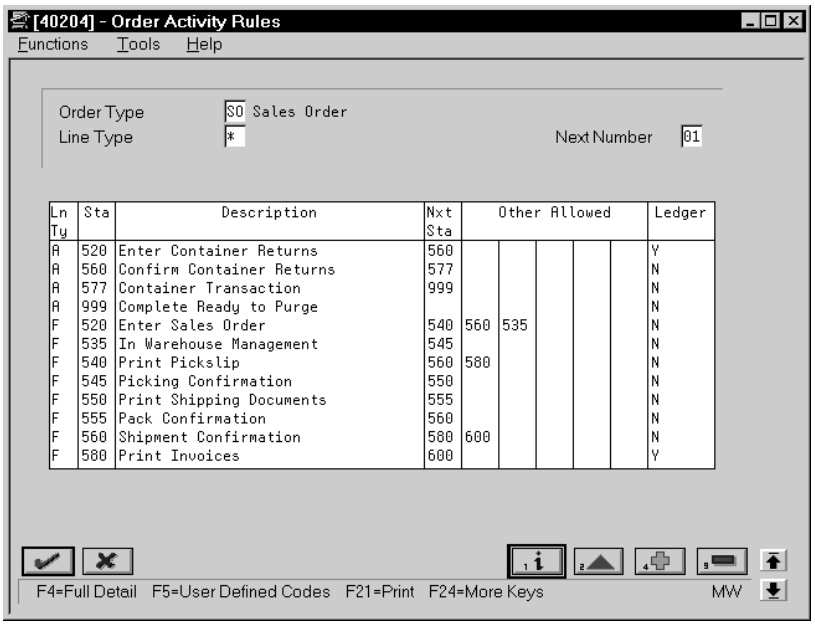
Setting Up Order Activity Rules



You can set up order activity rules before you enter sales orders for configured items to define the specific steps in the sales order processing cycle for your business. A typical sales order cycle includes sales order entry, packing, shipping, and invoicing. For a work order-generated line item and sales order document type, you can add steps to the cycle for creating the work order parts lists and completing work orders for configured items. Both of these manufacturing processes can optionally update associated sales order activity.

To set up order activity rules

On Order Activity Rules



Ln Ty	Sta	Description	Nxt Sta	Other Allowed				Ledger
A	520	Enter Container Returns	560					Y
A	560	Confirm Container Returns	577					N
A	577	Container Transaction	999					N
A	999	Complete Ready to Purge						N
F	520	Enter Sales Order	540	560	535			N
F	535	In Warehouse Management	545					N
F	540	Print Pickslip	560	580				N
F	545	Picking Confirmation	550					N
F	550	Print Shipping Documents	555					N
F	555	Pack Confirmation	560					N
F	560	Shipment Confirmation	580	600				N
F	580	Print Invoices	600					Y

Complete the following fields:

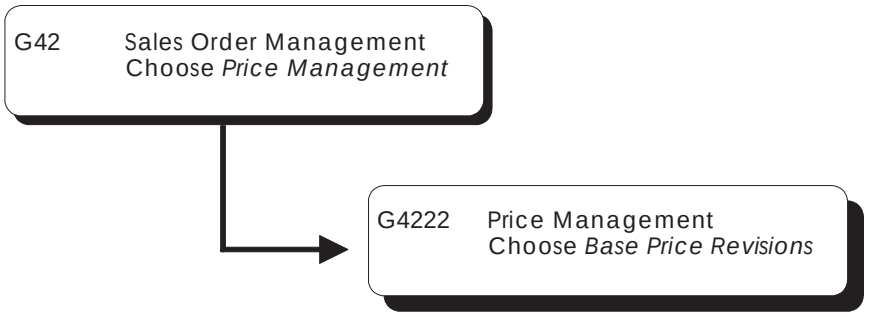
- Order Type
- Line Type
- Status
- Next Status

Field	Explanation
Order Type	A user defined code (system 00/type DT) that identifies the type of document. This code also indicates the origin of the transaction. J.D. Edwards has reserved document type codes for vouchers, invoices, receipts, and time sheets, which create automatic offset entries during the post program. (These entries are not self-balancing when you originally enter them.) The following document types are defined by J.D. Edwards and should not be changed: P Accounts Payable Documents R Accounts Receivable Documents T Payroll Documents I Inventory Documents O Order Processing Documents J General Accounting/Joint Interest Billing Documents
Line Type	A code that controls how the system treats 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. For example: S Stock item J Job cost N Non-stock item F Freight T Text information M Miscellaneous charges and credits . . . . . *Form-specific information* . . . . . . Header field: Use this field to help define an inquiry. You can enter a specific code or you can enter an asterisk (*) to indicate all line types. Detail field: The code identifying the line type of the order activity rule.
Status – Line	A user defined code (system 40/type AT) that indicates the status of the line.
Status Code – Next	A user defined code (system 40/type AT) indicating the next step in the order flow of the line type.

See Also

- *Setting Up Order Activity Rules (P40204)* in the *Sales Order Management Guide*

Setting Up Price Information



After you have defined the pricing method on Item Master Information, you must define base prices for the components and the configured item. The system uses the base price to price the item. If you define special pricing or discounts for the item, the system bases the calculation of the discounted price on the base price.

For price method codes 1, 2, and 3, you can apply discounts to the configured item. For price method code 4, you can apply discounts to the configured item's components. You can define price adjustment assembly inclusion rules for all price method codes.

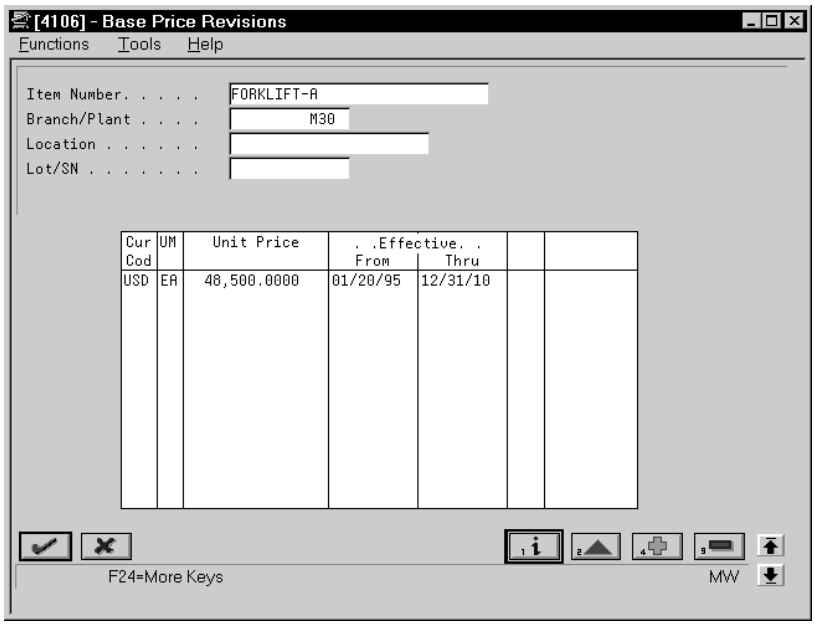
The price method code determines whether to price components or parents. Use base pricing to define prices for:

- An item or group of items
- A specific time period
- Different units of measure
- Different currencies

You can also use advanced pricing schedules for configured items in association with the price method code. However, advanced pricing does not support placing a new line item on the sales order, for example, for free items.

To set up base price information

On Base Price Revisions



Complete the following fields:

- Item Number
- Branch/Plant
- UM
- Unit Price
- Effective From
- Effective Thru

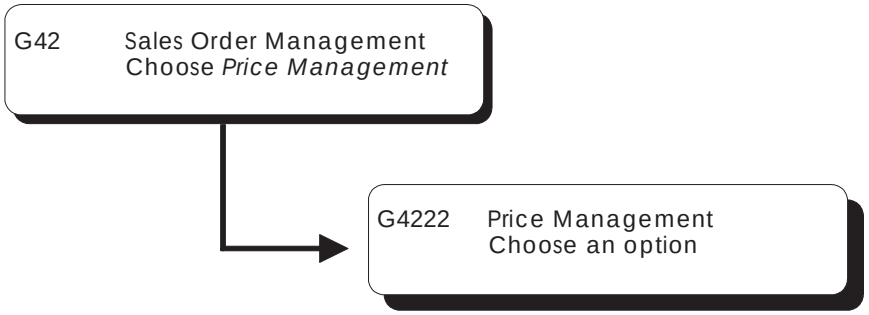
Field	Explanation
Unit of Measure	A user defined code (system 00/ type UM) that indicates in what quantity an inventory item is expressed; for example, CS (case) or BX (box).
Amount – Price per Unit	The list or base price to be charged for one unit of this item. In sales order entry, all prices must be set up in the Base Price table (F4106).

Field	Explanation
Effective From	The date that a transaction, text message, contract, obligation, or preference becomes effective. . . . . . *Form-specific information* . . . . . . The date that this price becomes effective.
Effective Thru	The date that a transaction, text message, agreement, obligation, or preference has expired or been completed. . . . . . *Form-specific information* . . . . . . The date that this price expires.

See Also

- *Defining Base Prices (P4106)* in the *Sales Order Management Guide*
- *Price and Adjustment Schedule (P4070)* in the *Advanced Pricing Guide*
- *Entering Basic Item Information (P4101)* in the *Inventory Management Guide*

Setting Up Pricing Groups



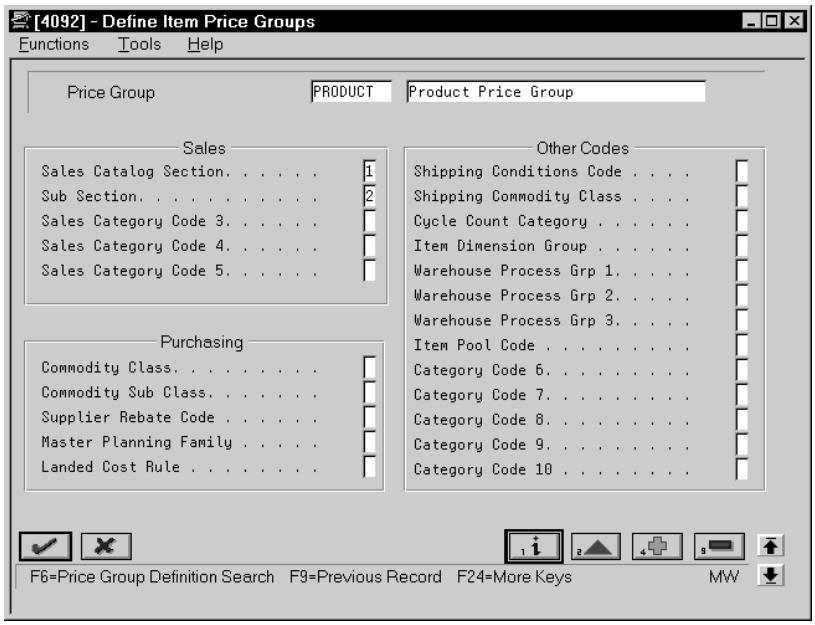
Use pricing groups to group items or customers with similar characteristics. This streamlines the processes of entering and maintaining base prices.

Complete the following tasks:

- Set up item price groups
- Set up customer price groups

To set up item price groups

On Define Item Price Groups



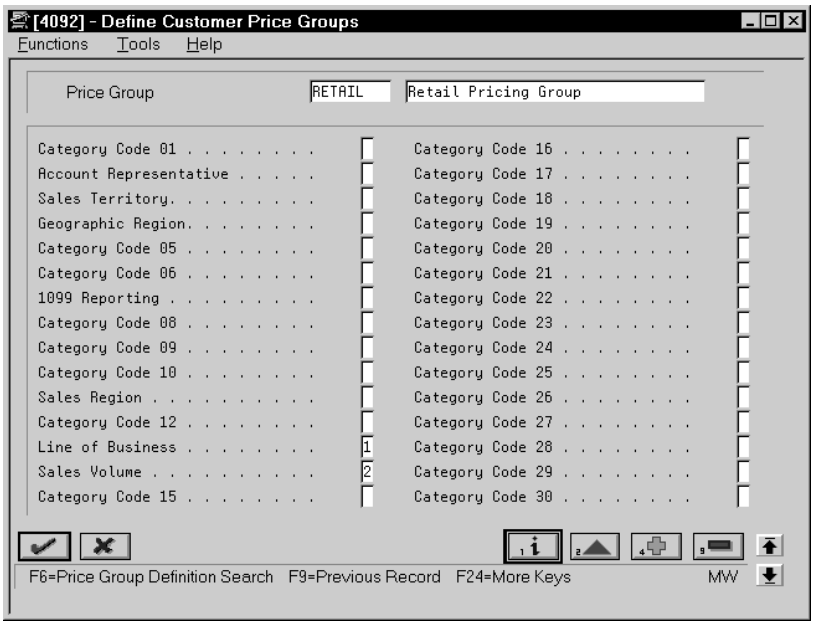
Complete the following required field:

- Price Group

Field	Explanation
Item Price Group	A user defined code (system 40/type PI) that identifies an inventory price group for an item. Inventory price groups have unique pricing structures that direct the system to incorporate discounts or markups on items on sales and purchase orders. The discounts or markups are based on the quantity, dollar amount, or weight of the item ordered. When you assign a price group to an item, the item takes on the same pricing structure defined for the inventory price group. You must assign an inventory price group to the supplier or customer, as well as to the item, for the system to interactively calculate discounts and markups on sales orders and purchase orders.

To set up customer price groups

On Define Customer Price Groups



Complete the following required field:

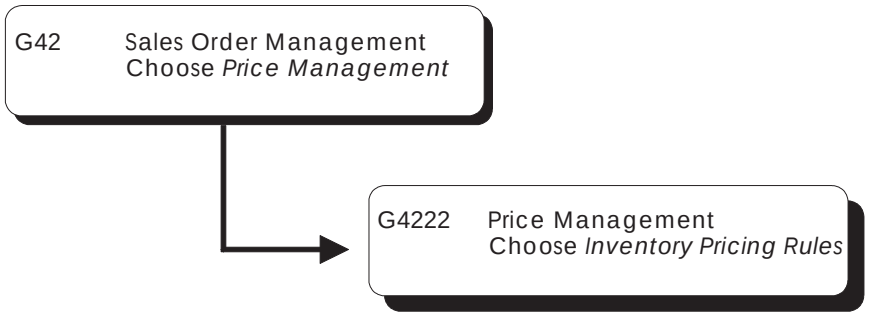
- Price Group

Field	Explanation
Price Group	A user defined code (system 40, type PC) that identifies a customer group. You can group customers with similar characteristics, such as comparable pricing. . . . . . *Form-specific information* . . . . . . A group of category codes from the Address Book that defines the customer's pricing structure.

See Also

- *Setting Up Customer Price Groups (P4092)* in the *Sales Order Management Guide*

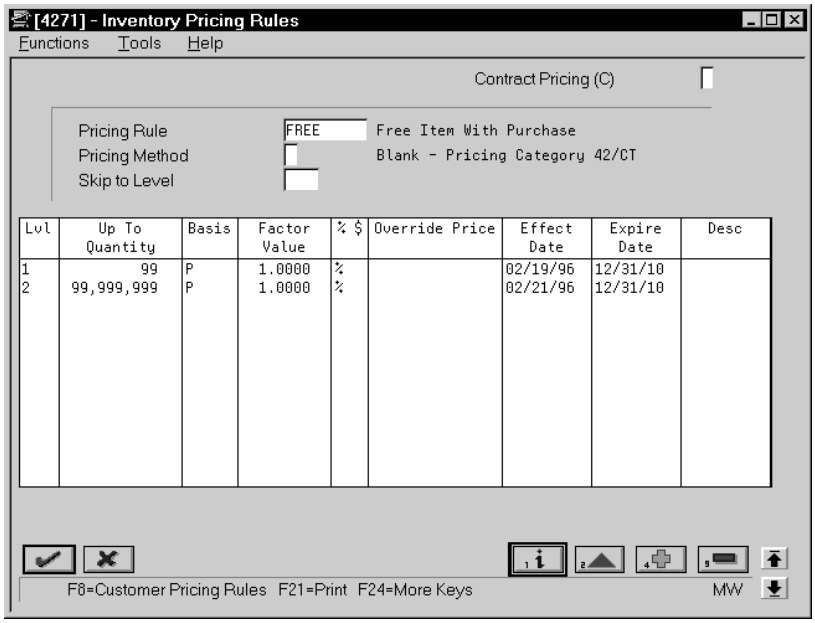
Setting Up Discounting Information



After you set up base prices or rules based pricing, you can define how to apply discounts or markups for different circumstances.

▶ To set up discounting information

On Inventory Pricing Rules



Complete the following fields:

- Pricing Rule
- Pricing Method
- Level
- Up To Quantity
- Basis

- Factor Value
- %
- $
- Override Price
- Effect Date
- Expire Date
- Description

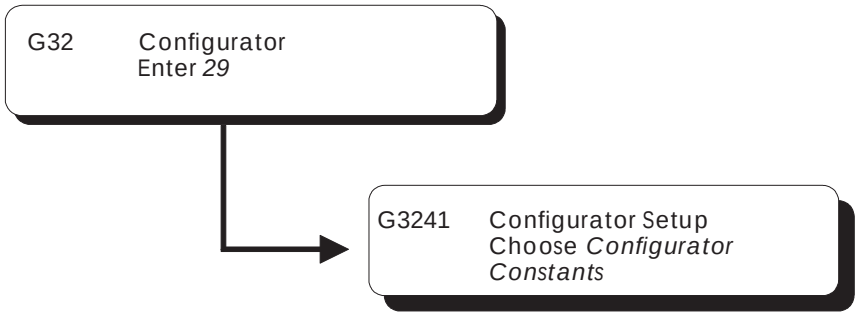
Field	Explanation
Pricing Rule	User defined code (table 40/PI) used to classify inventory by pricing rules. Typically, these categories correspond to the major sections in the inventory price book. You can set up as many detail categories as you need. A single code can be used for sales, purchasing, order/basket, and contract pricing. If you set up a contract rule, it must equal the short number for the item under contract.
Pricing Method	A user defined code (system 42, type CT) that indicates the pricing method you want to establish within the inventory pricing rule. Valid values are: P Purchase order discounts O Order repricing R Line repricing (basket repricing)
Pricing Category Level	An alphanumeric code that determines the sequence in which the system displays the rules within the pricing group. You define levels when you set up the pricing groups.
Units – Over	The volume or quantity breaks commonly used in pricing tables. If the quantity shown on the first level of a rule is 5, then the pricing logic shown on this level applies only to sales of five or fewer items. If the quantity shown in the next level is 10, then the pricing logic applies to sales of 6 through 10 items. 99,999,999 indicates all quantities.

Field	Explanation
Basis — For Cost or Price	A costing method on which the system bases the order's net price. The following codes are valid for pricing and repricing: 1 Last-In Cost 5 Future Cost P Unit Price 2 Average Cost 6 Lot Cost 3 Memo Cost 1 7 Standard Cost 4 Current Cost 8 Purchasing Cost The system uses the method you enter here to determine the order's net price. In sales order repricing, the system bases all reprice calculations on either the unit cost or price in the sales detail. Specify P if you want the system to use unit price in the sales order as the basis for reprice calculations. Otherwise, specify a value between 1 to 8 to use the unit cost in the sales detail as the base on value for all reprice calculations.
Factor Value – Numeric	The discount that the system uses when it calculates the price of an item attached to this inventory pricing rule. Discounts can be expressed as multipliers, additional amounts, or deductible amounts. For example, a 10% discount would be expressed as .90. You can use the same factor for markups over cost. For example, a 10% markup would be expressed as 1.10.
Factor Value – Type	A code that indicates whether the factor value is a multiplier (%) or an additional/deductible cash amount ($) when applied to an order's price.
Amount – Override List Price	Any price you enter here overrides all other rules or prices.
Date – Effective (Julian)	The date on which a level within a pricing method takes effect. There can be multiple records within a pricing method that have the same level identifier, discount percentage, and so forth, with the only difference being the effective date. This may occur due to special promotion periods.
Date — Expiration (Julian)	The date a particular pricing level within a pricing method expires. Within a pricing method there might be multiple records that have the same level identifier, discount percentage and so forth, but have different expiration dates. This might occur due to special promotion periods.

See Also

- *Defining Price Adjustments (P4271)* in the *Sales Order Management Guide*

Set Up Constants



Setting Up Constants

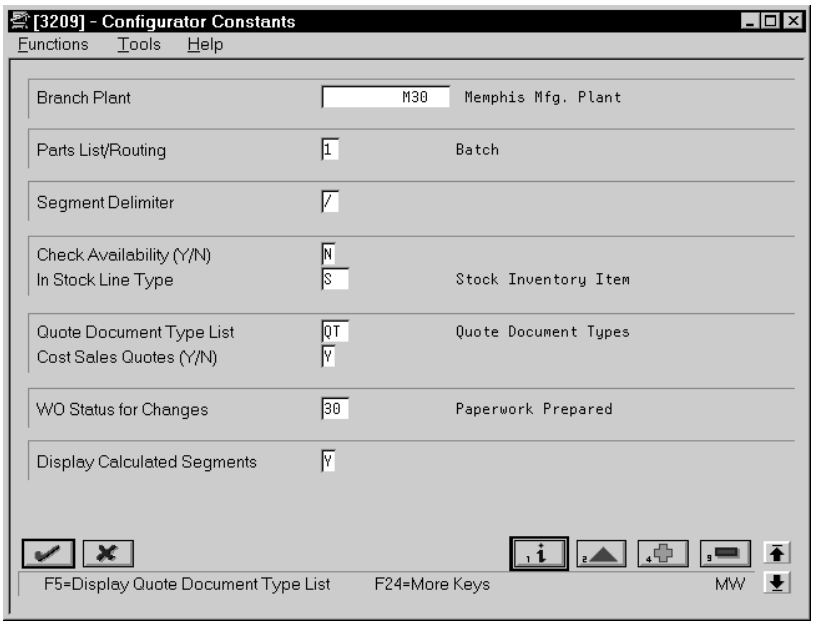
Use constants to control Configuration Management processing for your branch/plants. For each branch/plant, you can:

- Control whether parts lists and routings are attached to work orders with batch or subsystem processing
- Define the configured string delimiter
- Display the calculated segments during sales order entry
- Perform parent availability checking during sales order entry
- Cost sales quotes with manufacturing labor and overhead
- Define which stocked line type to use if the system finds a matching configuration in stock during sales order entry
- Indicate sales quote document types
- Define the status code beyond which changes to the sales order will result only in a status change to the associated work order

The system stores constants in the Configured Constants table (F3209).

To set up constants

On Configurator Constants

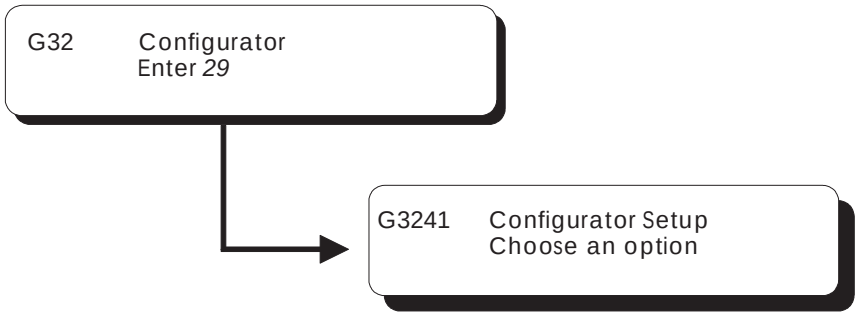


1. Locate the branch/plant.
2. Complete the following fields:
   - Parts List/Routing
   - Segment Delimiter
   - Check Availability
   - In Stock Line Type
   - Quote Document Type List
   - Cost Sales Quotes
   - Work Order Status for Changes
   - Display Calculated Segments

Field	Explanation
Parts List/Routing	Controls whether the parts list and routing for configured item work orders will be created using subsystem or batch processing. Both methods use the Order Processing DREAM Writer (P31410) to write parts list and routing records. Valid values are: 1 Batch processing. You must run the Order Processing program and change the selection options to accommodate the different sales order numbers being processed. 2 Subsystem processing. After you start the subsystem, the Order Processing program automatically processes any new work orders generated from a configured item sales order. Subsystem processing involves less user interaction and does not generate shop floor paperwork.
Configurator Segment Delimiter	A character separator for configured item sales order entry. The default character is a forward slash (/). This character should be the same for each branch/plant. Notes: • Although you can define a different character, do not use an asterisk (*). • Do not change this value after you have established it. • The segment delimiter should not be part of an answer to a segment question.
Check Availability	Indicates whether to verify that a configured parent item is in stock during sales order entry. The default value is Y. The system searches inventory for a configuration that matches the parent item during sales order update. If more than one of the item is located, a window displays all matching locations, lots, and their available quantities. From the window, you can select an item to hard commit during the update. If one item is located, the item is hard committed to inventory during the update.
Sales Quote Document Type List	The Sales Quote Document Type List is a user defined code table (32/QL) that is used to define valid document types for sales quotes in your company. For example, you could define sales quote document types by branch/plant or by type of quote, such as corporate or seasonal quotes.
Cost Sales Quotes	Indicates which costs are accumulated when the Order Type matches one of the Sales Quote Document Types. Y All costs from all rules are accumulated. This is the default value. N Only the costs of the P rules are accumulated.

Field	Explanation
W.O. Change Status	This field determines the value of the work order status field (user defined code 00/SS) for a configured item. Sales Order Entry has processing options that determine the beginning status and the change status of a work order for a configured item. The processing options work as follows: • If the current status of the work order is greater than or equal to the work order change status, the system enters the code value from the change status processing option into the status field on the work order. • If the current status of the work order is less than the work order change status, the system enters the code value from the beginning status processing option into the status field on the work order.
Display Calculated Segments	Indicates whether calculated segments will display during sales order entry. If this value is N, segments will not display when entering a sales order, however, the value of the segment will be stored in history. If entering a multi-level configured item, levels that have only calculated segments will not display. The default value is N.

Set Up Segments



Setting Up Segments

A segment is a feature of a configured item, such as color, size, fabric, or power type. You assign segments for the configured item in a numeric sequence. This sequence determines the order in which you provide information about each configured item during sales order entry.

For example, FORKLIFT–A contains the following segments:

- 10 Lift Rating
- 20 Power Type
- 30 Boom Height
- 40 Paint
- 50 Propane Tank
- 60 Calculated Counterweight

Each segment question might have one answer, which can be restricted by:

- Numeric or alpha checking
- Range checking
- User defined code table containing all valid answers

You use segments to define cross-segment editing rules that ensure valid configurations. During sales order entry, the system checks the combination of features and options to ensure that the item can be manufactured.

You use segments to define assembly inclusion rules that determine configuration-specific prices, components, calculated values, and routing steps.

You can define three types of segments:

Required During sales order entry, you must provide this required information. For required segments, you can define a table of values, a range of values, or alphanumeric conditions to perform edit checking during sales order entry.

Optional During sales order entry, this information is optional. For optional segments, you can define a table of values, a range of values, or alphanumeric conditions to perform edit checking during sales order entry.

Calculated During sales order entry, the system calculates the value for this segment. You define the calculation with assembly inclusion rules.

The segment information for a configured item should be the same across branch/plants.

Setting segments is the starting point for Configuration Management. You must know information about each segment to determine the configured item's price and to manufacture the item.

Complete the following tasks:

- ❑ Set up a segment
- ❑ Set up user defined codes (optional)
- ❑ Locate segment information (optional)

Before You Begin

- ❑ Verify that the stocking type for a configured item is C (configured). For more information, see *Entering Basic Item Information* in the *Inventory Management Guide.*
- ❑ Verify that the manufactured configured components have bills of material. For more information, see *Working with Bills of Material* in the *Product Data Management Guide.*
- ❑ Create routings for the configured item and for the components that are manufactured. For more information, see *Entering a Routing* in the *Product Data Management Guide.*

❑ Set the pricing method on Item Master Information. For more information, see *Entering Basic Item Information* in the *Inventory Management Guide.*

What You Should Know About

Multi-level items

You can define multi-level configured items with up to 10 levels. You use assembly inclusion rules to define item levels, and associated work orders.

Setting up generic branch/plants

You can define segments, rules, and configured items that are specific to a branch/plant or generic across all branch/plants.

A blank Branch/Plant field identifies a generic branch/plant.

If you don't use the generic branch plants, then segment information should be the same across branch plants.

If you define generic branch/plants segments, you must also define generic cross-segment editing and assembly inclusion rules.

Sequence

You must enter configured item segments in the sequence that you want to prompt the user for information during sales order entry.

Configured item text

You can choose the format for displaying configured item text. You can display the configured string or use the fold area to create custom text that prints on sales orders, work orders, pick lists, and invoices.

Calculated segments

If you define a segment as calculated, you do not need to enter user defined codes or define range checking. Use assembly inclusion rules to define the calculation for that segment. Calculated segments can be numeric or alpha numeric.

Deleting segments

You cannot delete a configured item segment if cross-segment editing or assembly inclusion rules exist for that configured item.

Adding new segments

When you add new segments to an existing configured item, enter them at the end of the list of existing segments.

Updating category codes You can specify which work order category code will be populated with the segment value during sales order entry.

See Also

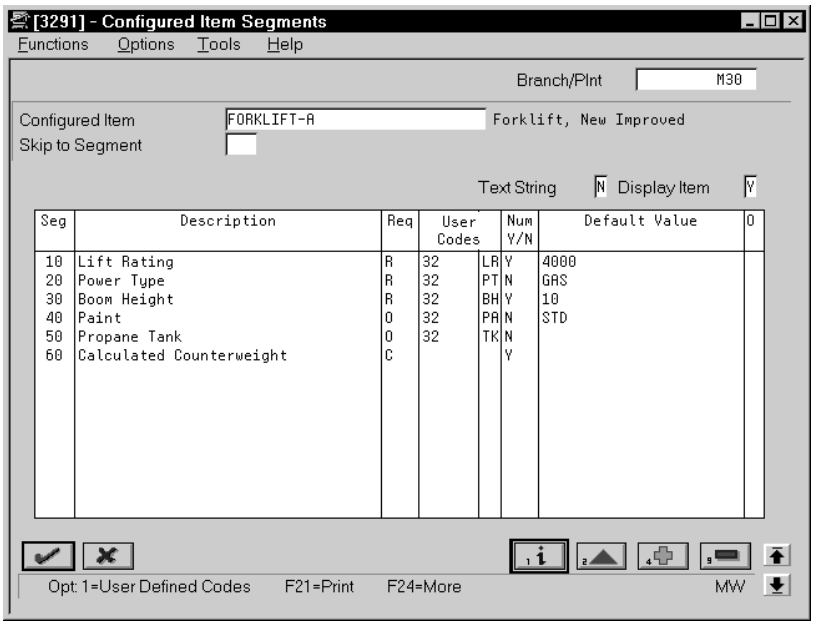
- *Setting up Assembly Inclusion Rules (P3293)*

Setting Up a Segment

Setting up segments is the starting point for Configuration Management. Both cross-segment editing rules and assembly inclusion rules use segments within logic statements.

▶ To set up a segment

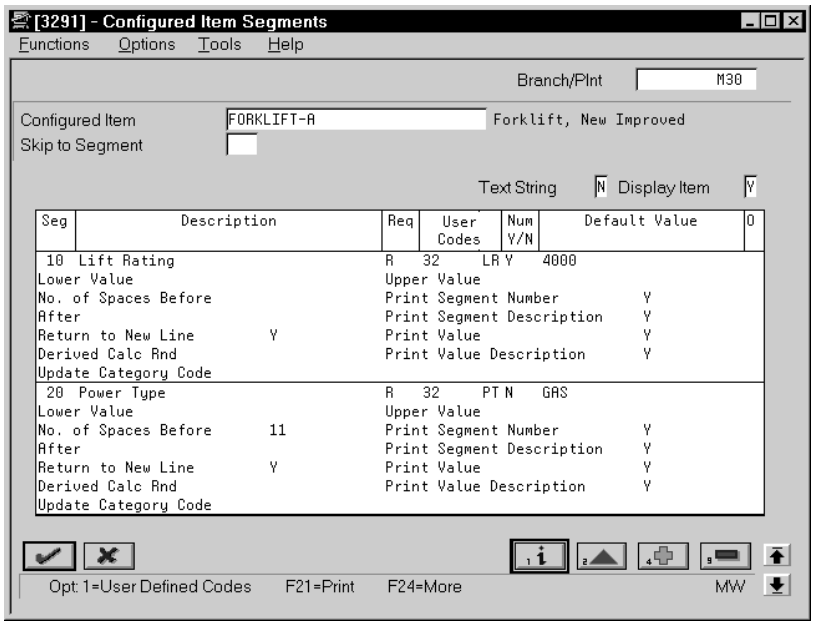
On Configured Item Segments



1. Complete the following fields:
   - Branch/Plant
   - Configured Item
   - Text String
   - Display Item

- Segment
- Description
- Required
- Numeric Y/N

2. Complete the following optional fields:
    - User Codes
    - Default Value
3. Access the fold area.



4. Complete the following optional fields:
    - Lower Value
    - Upper Value
    - Number of Spaces Before
    - Number of Spaces After
    - Print Segment Number
    - Print Segment Description
    - Print Value
    - Print Value Description
    - Return to New Line
    - Derived Calculation Rounding
    - Update Category Code

Field	Explanation
Branch/Plant	A number that identifies a branch, plant, work center, or business unit. . . . . . *Form-specific information* . . . . . . You can define a generic or blank branch/plant for configured item segments and then use the segments for all branch/plants.
Configured Item	A number that the system assigns to an item. It can be in short, long, or 3rd item number format. . . . . . *Form-specific information* . . . . . . The configured item number to which coded specifications apply. You must define this item in the Item Master with stocking type C (configured item).
Parent Segment Number	The segment number is user defined and establishes the sequence in which configurator feature/option questions are asked during sales order entry. Assembly inclusion rules reference this segment number to define prices, component parts, routing, and calculated values for configured items. When you define assembly inclusion rules, you compare the segment answers to values to assign parts, prices, calculated values or routing steps to create unique configurations. When you define cross segment editing rules, you compare the segment answers to values to determine invalid configurations.
Text String or Custom Format	This field will determine if the configured text string format or a user defined format will appear on the sales order (Pick Slip and Invoice Print) and work order (Print Parts List). The user defined format will be defined in the fold of each segment. The segment number, description, value, or value description can be printed in the user defined format. Y or 1 Configured Text String N or 0 User Defined Format
Display Item Number	This field will control the printing of the Configured Item Number before the segment value information prints in the text string format or the user defined format. Y or 1 Print Configured Item Number N or 0 Do not print Configured Item Number

Field	Explanation
Description	A brief description of an item, a remark, or an explanation. . . . . . *Form-specific information* . . . . . . On this screen, the description is of one of the segments for that product family. You can enter a description of the segment, or you can leave the field blank and the system will insert the default description from the user defined codes.
Required or Optional	Indicates whether a segment is required or optional in a configuration, or whether it must be calculated to specification when entering a sales order. Valid codes are: R Segment answer is required during sales order entry. O Segment answer is optional during sales order entry. C Segment is calculated during sales order entry. You define the calculation with assembly inclusion rules.
System Code	A user defined code (98/SY) that identifies a J.D. Edwards system. . . . . . *Form-specific information* . . . . . . The system code for configured items is 32.
User Defined Codes	Identifies the table which contains user defined codes. The table is also referred to as a code type. . . . . . *Form-specific information* . . . . . . The system code for this item corresponds to the system number defined for it on the UDC screen.
Numeric (Y/N)	Determines whether a segment answer is edit checked as a numeric or alphanumeric value during sales order entry. Valid values are: Y Indicates that the answer is numeric and therefore, should be right-justified. N Indicates that the answer is alphanumeric and, therefore, should be left-justified.

Field	Explanation
Value for Entry – Default	Used as the initial value on the data entry screen for the associated data item. The value entered must be the exact same length as the data item size. Place single quotes around the value if it contains any embedded blanks. The keywords *BLANKS and *ZEROS can be used as the default value. When entering a numeric data item with default values, the redisplay of the data item suppresses all leading zeros. CAUTION: If a blank entry is allowed, default values should not be used.
Allowed Value – Lower	The lower allowed value of this specific segment. If you enter a value here, then you must also enter an upper allowed value.
Allowed Value – Upper	The upper allowed value of this specific segment. If you enter a value here, then you must also enter an lower allowed value.
Spaces Before Segment Information	The number of spaces that should print before the segment information in the user defined format.
Print Segment Number	This field determines if the segment number should print on the sales order (Pick Slip and Invoice Print) and work order (Print Parts List). Valid values are: Y or 1 Print on both sales and work order N or 0 Do not print on sales and work order
Spaces After Segment Information	The number of spaces that should print after the segment information in the user defined format.
Print Segment Description	This field determines if the segment description should print on the sales order (Pick Slip and Invoice Print) and work order (Print Parts List). Valid values are: Y or 1 Print on both sales and work order N or 0 Do not print on sales and work order
Return and Start New Line	This field will control whether or not a new line should be started after the segment information is printed. The Configurator Segment Delimeter from the Branch/Plant Constants will print if a new line is not started. Y or 1 Start new line after segment information N or 0 Continue printing on same line

Field	Explanation
Print Segment Value	This field determines if the segment value should print on the sales order (Pick Slip and Invoice Print) and work order (Print Parts List). Valid values are: Y or 1 Print on both sales and work order N or 0 Do not print on sales and work order
Derived Calculation Round	This field will be used to indicate how many positions to the right of the decimal a derived calculation should be rounded. For example, • If the result of a derived calculation is 2190.123456789, enter 0 to round to the whole number 2190. • Enter 4 to round up to 2190.1235. • Leave the Derived Calculation Round field blank to avoid rounding. The system rounds up by one any digit followed by 5 through 9. The system does not round any digit followed by 0 through 4.
Print Segment Value Description	This field determines if the segment value description from an associated UDC table should print on the sales (Pick Slip and Invoice Print) and work order (Print Parts List). Valid values are: Y or 1 – Print on both sales and work order. N or 0 – Do not print on sales and work order.
Update Category Code	This field determines which work order category code will be populated with the segment value during sales order entry.

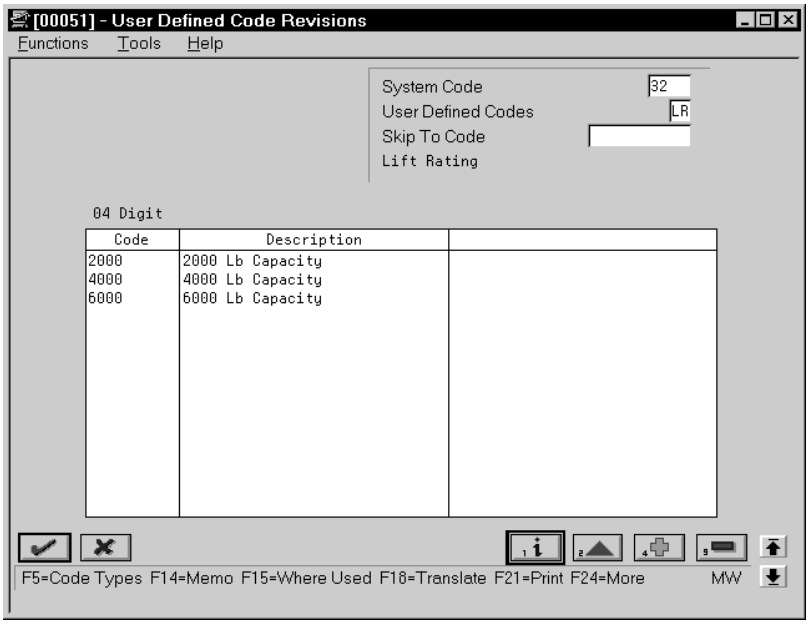
Setting Up User Defined Codes

You can create a user defined code table of segment values for a non-calculated segment. This task is optional. During sales order entry, if you have associated a required segment with a user defined code table, you must select a value from the table. If you have associated an optional segment with a user defined code table, you can enter either no value, or a value from the user defined code table.

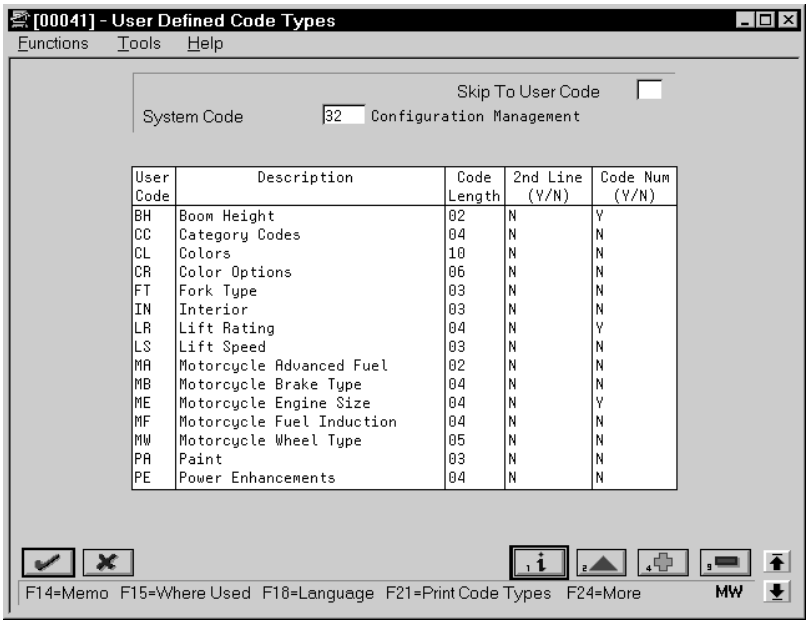
To set up segment values

On Configured Item Segments

1. Access User Defined Code Revisions.

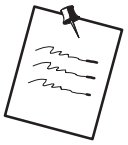


2. On User Defined Code Revisions, access User Defined Code Types.



3. On User Defined Code Types, complete the following fields:

- System Code
- User Code
- Description
- Code Length
- 2nd Line
- Code Numeric



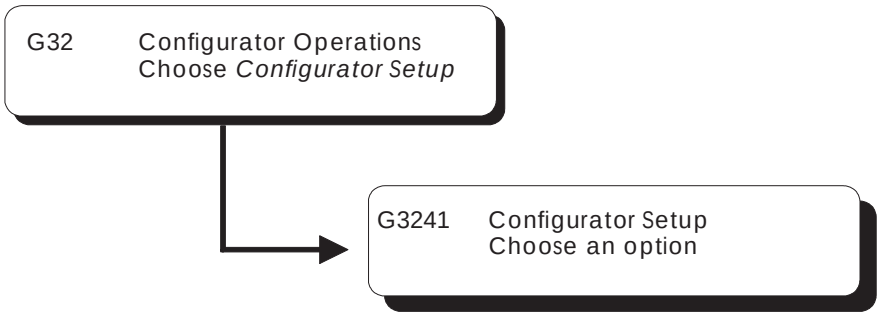
You can use codes 55 through 59 for Configuration Management user defined code types.

4. Access User Defined Code Revisions.
5. On User Defined Code Revisions, complete the following fields:
   - Code
   - Description

Field	Explanation
User Code	Identifies the table which contains user defined codes. The table is also referred to as a code type. . . . . . *Form-specific information* . . . . . . Identifies the table which contains values.
Description	A user defined name or remark that describes a field.
Code Length	The length of the user defined code. It cannot be greater than 10 characters. . . . . . *Form-specific information* . . . . . . The length of the user defined code. It cannot be greater than 10 characters. Do not change the code length without a program change.

Field	Explanation
2nd Line (Y/N)	A response of Y or M will allow the entry of two lines of User Defined Codes in the revisions screen. A Y will also enable the User Defined Codes window to display a second line of description. M is for maintenance only for second line display. This capability is seldom used, but has applicability in areas such as inventory product codes. The M value will not display the second line of description in the User Defined Codes window. . . . . . *Form-specific information* . . . . . . An entry of Y allows the display of a second line of description. M is for maintenance only for second line display. This capability is seldom used, but has applicability in areas such as inventory product codes. The M value will not display the second line of description in the User Defined Codes window.

Locating Segment Information



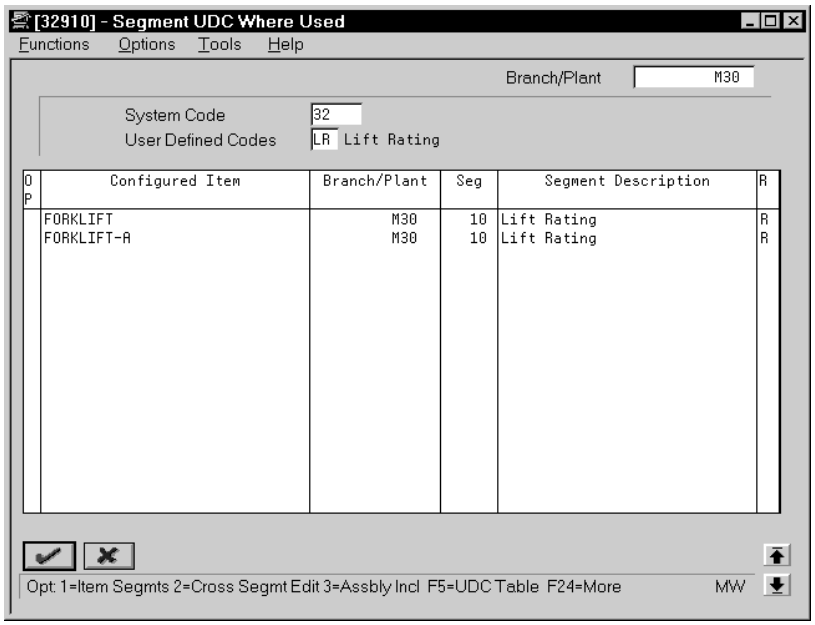
For the user defined code table that you specify, you can locate all configured items and segments that reference the table.

See Also

- *Printing Reports (P32910)*

To locate segments

On Segment UDC Where Used



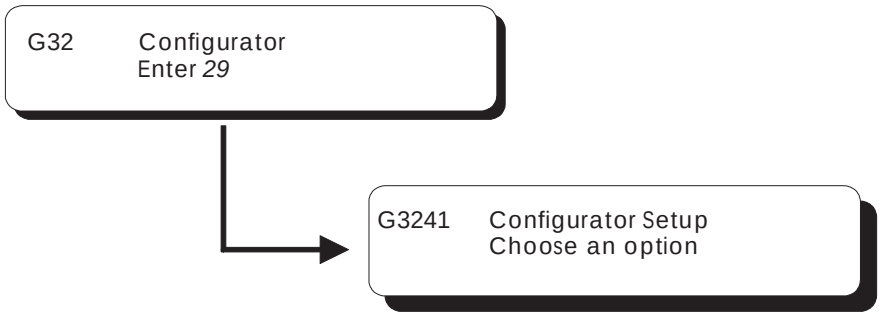
Complete the following fields:

- Branch/Plant
- System Code
- User Defined Code

Exercises

See the exercises for this chapter.

Set Up Cross-Segment Editing Rules



Setting Up Cross-Segment Editing Rules

To ensure feature and option compatibility during sales order entry, use cross-segment editing rules to establish the relationships between the configured item segments with logic statements. This enables you to avoid invalid combinations of segments and prevent invalid sales orders. The system uses the segments' answers from the sales order with the cross-segment editing rules to display error messages about invalid configurations.

Logic Statements

For each cross-segment editing rule, you can define an "if/then/else" logic statement for many conditions. For example, a forklift might require a different value for segment 30 (boom height), depending on the value of segment 10 (lift rating). The following cross-segment editing rule illustrates:

If segment 10 (lift rating) = 6000 pounds, *then* segment 30 (boom height) must = 12 (feet) *else* segment 30 must be <= 10 (feet).

Error Messages

As you enter a sales order, the system displays error message for invalid combinations defined by cross-segment editing rules. You can define custom messages or the system can generate an error message. You have two options for displaying messages:

Custom messages	Create error messages for your rules to display specific or custom information instead of the system-generated message. If a custom message exists for a rule, the system highlights the option column. For example: A 6000 LB capacity Forklift requires a gas or propane engine.
System messages	The message displays the cross-segment editing rule that has been violated. For example: IF Power Type {Seg. 020} is not equal to PROPANE THEN Propane Tank {Seg. 050} Should Be equal to *BLANK. Power Type {Seg. 020} is WARP. Propane Tank {Seg. 050} is 50LBTK.

The system displays hard or soft error messages:

Soft error message	For an invalid combination with an optional condition, the system displays a soft error message. You can either correct the segment value or override the error message, and continue configuring the item.
Hard error message	For an invalid combination with a required condition, the system displays a hard error message. You must correct the problem by changing segment answers to proceed.

Complete the following tasks:

- ❑ Setting up cross-segment logic
- ❑ Setting up custom error messages
- ❑ Reviewing cross-segment editing rule information

What You Should Know About

Calculated segment rules	The system displays calculated segment values in cross-segment editing rule error messages.
Separating rules	The system automatically separates rules with the line *Next Edit Group* after you have entered all the rules.
Multi-level configured items	You can reference upper level items in a cross-segment editing rule.
Setting up generic branch/plants	You can define segments, rules, and configured items that are specific to a branch/plant specific or generic across all branch/plants. A blank Branch/Plant field identifies a generic branch/plant. If you don't use the generic branch plants, then segment, rule, and item information should be the same across branch/plants. If you define generic branch/plants segments, you must also define generic cross-segment editing and assembly inclusion rules.

See Also

- *Working with Error Messages (P4211)*

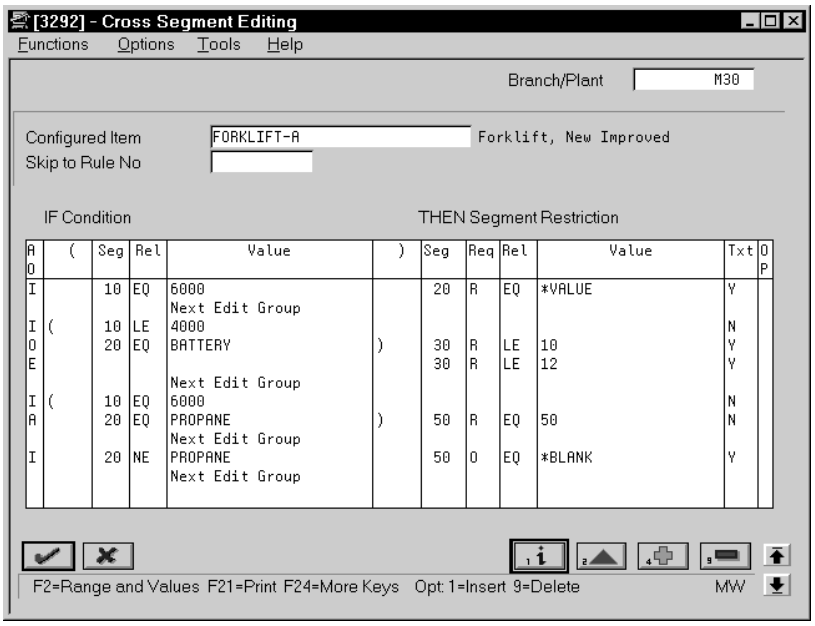
Setting Up Cross-Segment Logic

Setting up cross-segment logic consists of the following tasks:

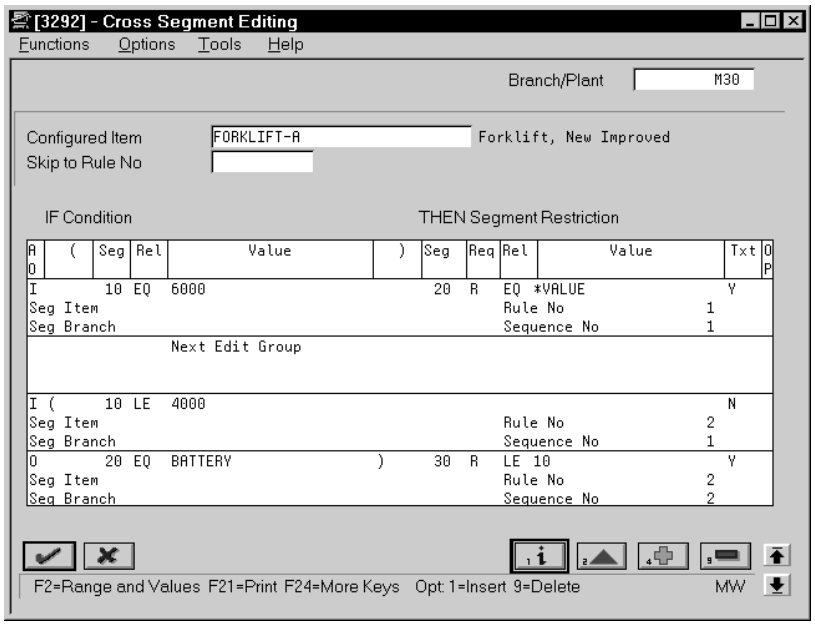
- Setting up logic statements
- Setting up values
- Setting up ranges
- Copying a rule

To set up logic statements

On Cross Segment Editing



1. Complete the following fields:
   - Branch/Plant
   - Configured Item
   - And/Or
   - Bracket Selection Beginning
   - Segment
   - Relationship
   - Value
   - Bracket Selection Ending
   - Segment
   - Required/Optional
   - Relationship
   - Value
   - Custom Text
2. Access the fold area.



3. Complete the following optional fields:
    - Segment Item
    - Segment Branch

Field	Explanation
Branch/Plant	A number that identifies a branch, plant, work center, or business unit. . . . . . *Form-specific information* . . . . . . You can define a generic or blank branch/plant for cross segment editing rules and then use the rules for all branch/plants.
Configured Item	A number that the system assigns to an item. It can be in short, long, or 3rd item number format. . . . . . *Form-specific information* . . . . . . Header: The configured item number for which cross segment editing rules are being defined. Detail: The configured item number of the segment in the cross segment editing rules. This is used to reference a previously selected segment.

Field	Explanation
Rule Number	The number associated with a set of Cross Segment Editing Rules or Assembly Inclusion Rules. . . . . . *Form-specific information* . . . . . . At the Skip To field, enter a specific rule number to display. Each set of numbered rules are organized in separate Edit Groups. Within the edit group, the system assigns numbers to each line of rules.
And/Or Selection	A code that determines whether compound data selection logic is based on an A = AND condition or an O = OR condition. . . . . . *Form-specific information* . . . . . . For configuration management, additional values include: I If E Else * Then
Bracket Selection Beginning	A collection of open and closed brackets to group conditional configurator rules. For example, to define the condition (Seg 1 = A OR Seg 2 = B) AND Seg 3 = C, use the following brackets: (Seg 1 = A O Seg 2 = B) A Seg 3 = C
Relationship	The relationship between the range of variances you display. Valid codes are: EQ Equal to LT Less than LE Less than or equal to GT Greater than GE Greater than or equal to NE Not equal to NL Not less than NG Not greater than

Field	Explanation
If Selection Value	Indicates an "if" logic relationship for configuration rules. You can enter a specific UDC or one of the following values: *VALUES Enter up to 45 values on a separate window. NOTE: When you specify *VALUES in different versions of the original screen, you are prompted for multiple values lists. *BLANKS Search on a blank value. *ZEROS Search for amounts equal to zero. *RANGE Enter a range of values (example: 1 to 50). NOTE: The first value MUST be LESS than the second value. *ALL Select all values. NOTE: If you leave this field blank, the default value is *ALL.
Bracket Selection Ending	A collection of open and closed brackets to group conditional configurator rules. For example, to define the condition (Seg 1 = A OR Seg 2 = B) AND Seg 3 = C, use the following brackets: (Seg 1 = A O Seg 2 = B) A Seg 3 = C
Child Segment Number	The segment number used by the configurator specification rules. When you define cross segment editing rules, you compare the segment answers to values to determine invalid configurations.

Field	Explanation
Required or Optional	Indicates whether a segment is required or optional in a configuration, or whether it must be calculated to specification when entering a sales order. Valid codes are: R Segment answer is required during sales order entry. O Segment answer is optional during sales order entry. C Segment is calculated during sales order entry. You define the calculation with assembly inclusion rules. . . . . . *Form-specific information* . . . . . . For cross segment editing rules, this value detemines whether the invalid configuration error message is hard or soft. Valid codes are: R Hard error message O Soft error message
Then Selection Value	Indicates a "then" logic relationship for configuration rules. You can enter a specific UDC or one of the following values: *VALUES Enter up to 45 values on a separate window. NOTE: When you specify *VALUES in different versions of the original screen, you are prompted for multiple values lists. *BLANKS Search on a blank value. *ZEROS Search for amounts equal to zero. *RANGE Enter a range of values (example: 1 to 50). NOTE: The first value MUST be LESS than the second value. *ALL Select all values. NOTE: If you leave this field blank, the default value is *ALL.
Custom Message	Indicates whether to display the custom message. Valid values are: Y Custom message will be displayed N Custom message will not be displayed If this value is Y with a segment and condition, it will only appear when that condition is false instead of the standard cross segment error message appearing.

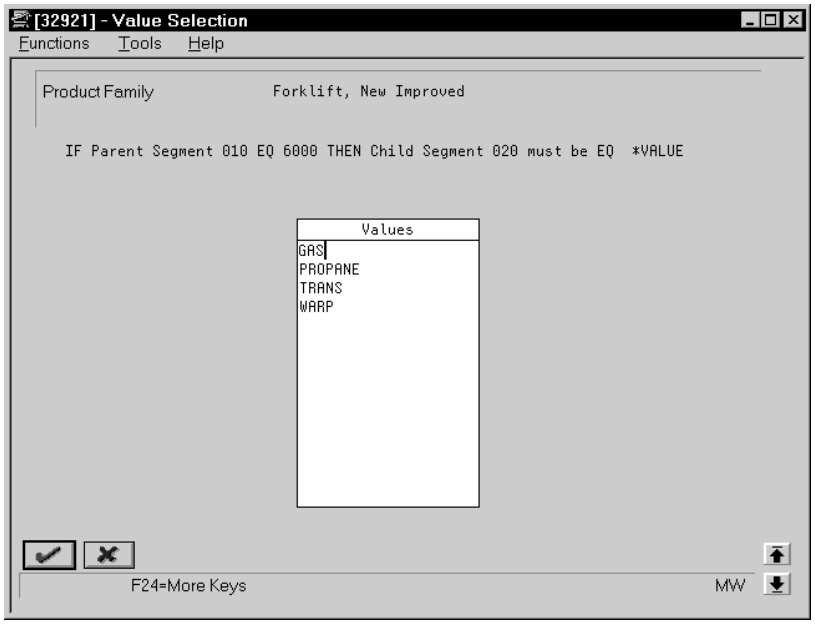
Field	Explanation
Segment Branch	This branch represents the branch of the segment's configured item number. Use this value to reference a previously selected segment from a different configuration level.
Sequence Number	The Sequence number is the rule number within an edit group of Cross Segment Editing or Assembly Inclusion rules. You can insert a line within a rule to assign a new sequence number.

▶ To set up values

On Cross Segment Editing

1. Complete the following field with *VALUE:
   - Value

   The system prompts you for all new and changed rules containing a *VALUE.



2. On Value Selection, complete the following field:
   - Value

Field	Explanation
Selection value	The data selection value. A special facility has been provided to allow selection of multiple specific values. By entering '*VALUES' in the selection field, a special display screen will be displayed allowing the entry of up to 45 specific values. If you specify '*VALUES' in multiple selections of the original display, you will be prompted for multiple values lists. Enter the value '*BLANKS' if you are searching on a blank value. You cannot leave the values field blank to search on blanks, it will default to '*ALL'. Enter the value '*ZEROS' when searching for amounts equal to zero. The '*RANGE' keyword will display a special display screen which will allow the entry of a range of values (i.e., from 1 to 50). The first value MUST be LESS than the second value. If it is equal or greater than, it will not work. If you want to select all values for a field, enter '*ALL'.

What You Should Know About

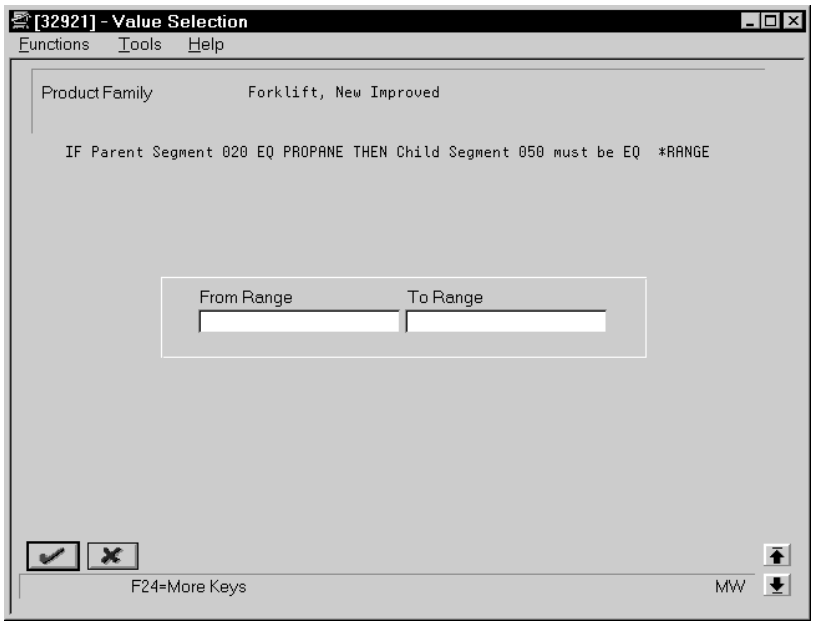
Revising *VALUE — To revise existing *VALUE entries, place the cursor on *VALUE and choose the Range and Values function.

▶ To set up ranges

On Cross Segment Editing Rules

1. Complete the following field with *RANGE:
   - Value

   The system prompts you for all new and changed rules containing a *RANGE.



2. On Value Selection, complete the following fields:
   - From Range
   - To Range

Field	Explanation
Selection Values 01	The list of selection values associated with a data selection item in the Dream Writer. This list is generated by the use of the *VALUES keyword in data selection setup. Elements 1 and 2 are also used to contain the upper and lower value for the keyword *RANGE used by the data selection in the Dream Writer.
Selection Values 02	The list of selection values associated with a selection item in the Dream Writer. This list is generated by the use of the '*VALUES' keyword in data selection set-up. Elements 1 and 2 of this array are also used to contain the upper and lower value for the keyword '*RANGE' utilized by the data selection processing in the Dream Writer.

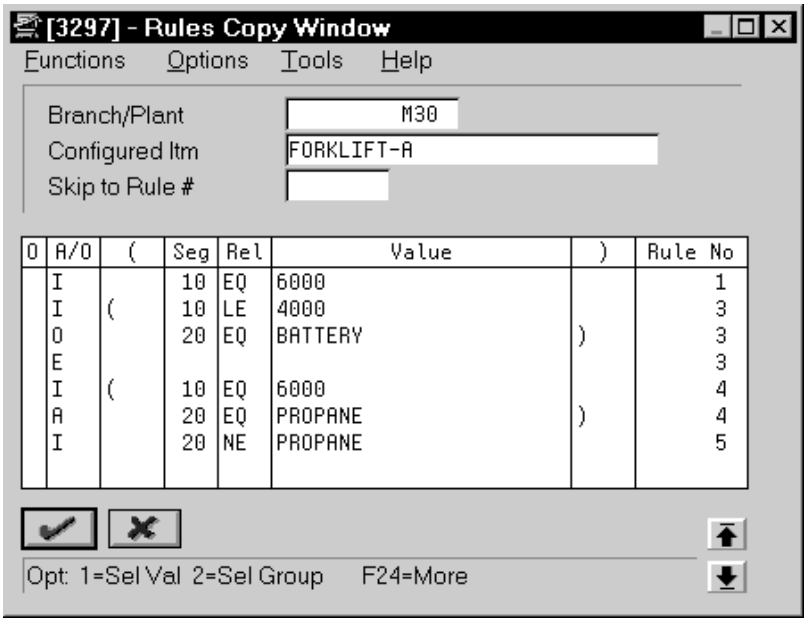
What You Should Know About

Revising *RANGE — To revise existing *RANGE entries, place the cursor on *RANGE and choose the Range and Values function.

▶ To copy a rule

On Cross Segment Editing

1. Access Rules Copy Window.



2. Locate the configured item from which you want to copy a rule.
3. Do one of the following:
   - To select the line, choose the Select Value option.
   - To select the complete rule, choose the Select Group option.

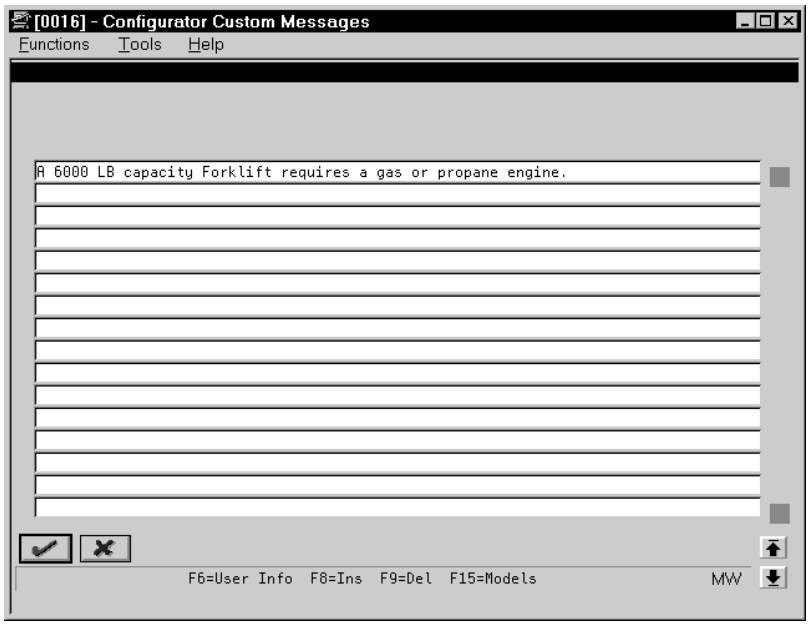
Setting Up Custom Error Messages

You can create custom messages that override the system messages for a cross-segment editing rule.

▶ To enter a custom error message

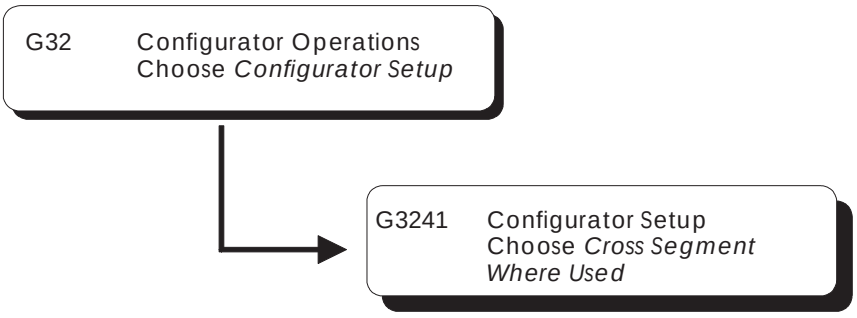
On Cross Segment Editing

1. Complete the following field with Y:
   - Text
2. Choose the Custom Text Message option.



3. On Configurator Custom Messages, type the text for the error message.

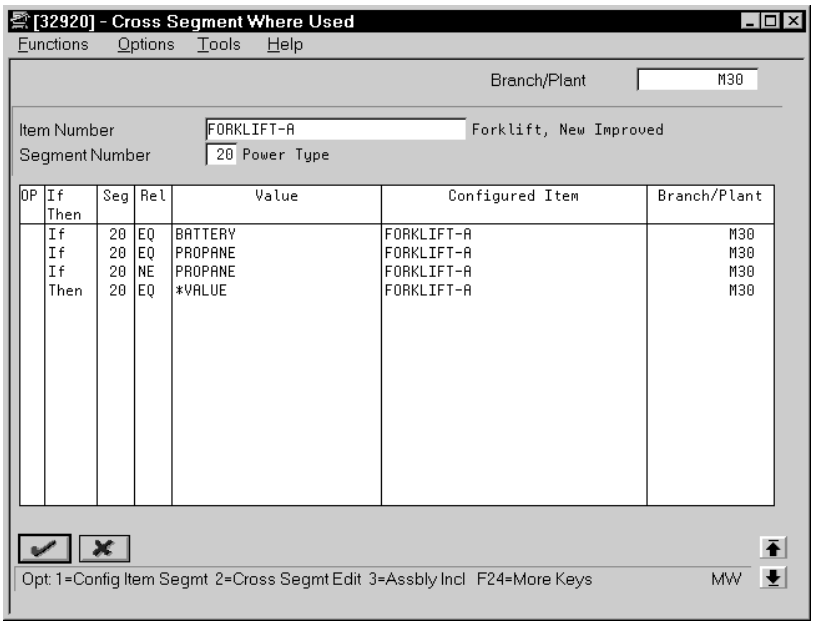
Reviewing Cross-Segment Editing Information



Review cross-segment editing information to help you maintain rules. For the item number and segment that you specify, review and work with all the cross-segment editing rules.

To review cross-segment editing information

On Cross Segment Where Used



Complete the following fields:

- Branch Plant
- Item Number
- Segment Number

See Also

- *Printing Reports (P32910)*

Exercises

See the exercises for this chapter.

Understand Derived Calculations

About Derived Calculations

For an assembly inclusion rule, you can define derived calculations to determine:

- Quantity of a part to include on the work order or sales order
- Value of a calculated segment
- Run or machine hour multiplier for a routing
- Price multiplier

You can use the following functions within a derived calculation

- Algebraic formulas
- Segment references
- Trigonometric functions
- Substrings
- Concatenations
- External field references
- External program references
- Smart part calculations

Algebraic Formulas

Use algebraic formulas to combine different operations with the following operators: +, –, *, and /. You can imbed calculations by enclosing them in parentheses. You can imbed segment numbers in the formula to include segment values as part of the calculation.

For example, the following formula calculates the counter weight necessary so that the forklift will not tip over when its boom is extended to its tallest height with a full load:

Derived Calculation	S10/(4*COS(2*S30*3.1416/360*2*3.1416))

Segment References

You can reference any segment within a formula. To reference a segment within the same configured item, enter S and the segment number. For example:

S3	Indicates segment three

To reference a segment from a different configured item, enter S, the segment number, and the configured item name. Enclose this reference within equal signs. For example:

=S3=Piston=	Indicates segment three of item Piston

When you reference another segment in a multi–level configured item, you can only reference prior levels.

Trigonometric and Logarithmic Functions

You can use trigonometric or logarithmic functions independently or as part of a complex formula.

The following trigonometric functions are available:

SIN(1.5)	Indicates the sine of 1.5
COS(S3)	Indicates the cosine of segment three
TAN(S3)	Indicates the tangent of segment three
ARC(S3)	Indicates the arctangent of segment three

All of these values are expressed in radians.

The following logarithmic functions are available:

LOG	Indicates log to base 10.
LN	Indicates natural log.
**	Indicates an exponent. For example, 2**5 represents 2 to the fifth power.

Substrings

You can use the SUBSTR (substring) function to include a portion of a larger string of characters in a formula.

To calculate a substring, you must reference the segment from which you want to take the substring, the starting position within the string where you want to begin referencing values, and the length of the string you want to reference. For example, if segment 10 is 400012 then:

SUBSTR(S10,1,4)	Indicates that the substring from segment 10 starts at the first position of the string and includes the first 4 positions. The substring value is 4000.
SUBSTR(S10,5,2)	Indicates that the substring from segment 10 starts at the fifth position of the string and includes the first 2 positions. The substring value is 12.

Concatenations

You can use the CONCAT (concatenate) function to combine the values of two different segments. For example:

CONCAT(S3,S4)	Combines the values of segments 3 and 4. If the segment value of segment 3 is 1001 and the value of segment 4 is WH (white), the concatenated value is 1001WH.

Referencing External Fields

You can select field values from the External Files Reference window to use in derived calculations. Choose a field from the following tables:

- F4101 – Item Master
- F4102 – Item Branch
- F41021 – Item Location
- F4105 – Cost Ledger
- F4106 – Base Price
- F0101 – Address Book Master
- F0301 – Customer Master
- F41002 – Unit of Measure Conversion
- F41092 – Supplemental Database
- F46011 – Item/Unit of Measure Profile

After you select a field, it is displayed in the Derived Calculation field preceded by an ampersand (&). You can use the field independently or within a complex expression.

For rule types P or R, the system uses the Component Item Number and Branch from the rule to retrieve the appropriate tables.

For rule types X or C, the system uses the Configured Item Number and Branch from the rule to retrieve the appropriate tables.

The system uses the Address Book number to retrieve data from the Address Book or Billing Instructions tables.

When you reference a Supplemental Database field, you must also specify the data type. Enter the data type after the field as follows:

&T2AMTU(WD)	Indicates an amount field on the item supplemental database table, and the WD data type.

When you reference the Unit of Measure in Unit of Measure Conversion tables, you must specify the unit of measure in the same manner.

Referencing External Programs

You can use an external program to define a calculation. Enter the name of the external program. You must also indicate EXTVAR in the Derived Calculations field. After the system runs the external program, it places the results in EXTVAR, a 30 character variable in the inclusion rule.

For P and R rules, the external program references the Component Number, Component Branch, and Sold To number.

For C or X rules, the external program references the configured item number, branch/plant, and sold to number.

The external program can also access and use the values of previously entered segments sorted in user indexes. The parameters passed to the external program are:

- Item number
- Branch/Plant
- DSKITP, a comprehensive data structure that contains many different values.
- EXTVAR

Calculating Smart Parts

For P and Q rules, you can build smart part numbers using the segment values entered during sales order entry. The system calculates smart parts in a similar manner to derived calculations, however the resulting smart part is an alphanumeric string. You must define smart part numbers in the Item Master (F4101) and Branch/Plant (F4102) tables.

You can build a part number by using following functions:

- Segment referencing
- Substring
- Concatenation
- Literal text, for example the letter P in part number P165

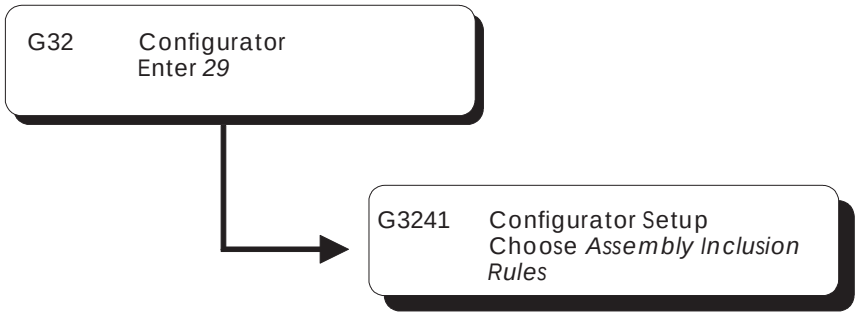
Smart part formulas can define short, 2nd or 3rd part numbers. Smart parts will use the part numbering symbol conventions defined in Branch/Plant Constants. For example, if the smart part formula uses the symbol to identify the 3rd part number along with the 3rd part number, the system would place the 2nd part number on the sales order and work order detail line.

When you define a smart part, you can also use a derived calculation to determine the quantity of the smart part to use.

For example:

“P”S4	Indicates a smart part number P2000, when the value of segment 4 is 2000.

Set Up Assembly Inclusion Rules



Setting Up Assembly Inclusion Rules

You must set up assembly inclusion rules that process requested options and features from sales order entry into the specific components, operations, and calculated values that are necessary to build and price the configured item.

There are five types of assembly inclusion rules:

Component Part (P) Rules

Define the component parts to include on the sales order and work order parts list. You also define multi-level configured items with these rules.

For example, if segment 10 equals 6000 and segment 30 is greater than or equal to 10, then use part F170, else use part F175.

Work Order Component Part (Q) Rules

Define the components to include on the work order parts list. The Process Work Orders program attaches the parts list.

For example, if segment 10 equals standard, then include part R100 and part R105.

Pricing (X) Rules	Define the price/cost adjustment. The system processes X rules independently based on the kit pricing method you have selected. You should not set up cost adjustments when using work order-generated line types. For example, if segment 40 equals CUS, then adjust the price by $650.00.
Routing (R) Rules	Define the work order routing and routing operations. The Process Work Orders program attaches work order routings. You must first define the routings on Enter/Change Routing before you define routing rules. For example, if segment 40 equals STD, then use the routing for standard paint, else use the routing for custom paint.
Calculation (C) Rules	Define the mathematical calculation for a configured item's calculated segments. You must first define the segment as calculated on Configured Item Segments.

Setting assembly inclusion rules consists of the following:

- ❑ Defining assembly inclusion rules
- ❑ Locating assembly inclusion rules

Logic Statements

For each assembly inclusion rule, you can define an "if/then/else" logic statement for many conditions. The following assembly inclusion rules illustrates:

If Segment 10 equals 6000, and segment 30 is greater than 10, then include part F170, else include part F175.

You can use the following conditions:

- If
- Then
- Else
- And
- Or

Advanced Assembly Inclusion Rules

For an assembly inclusion rule, you can define advanced assembly inclusion rules to:

- Expand the derived calculation formula
- Define smart parts
- Reference external fields
- Reference external programs
- Reference a table

Derived Calculations

For each rule type, you can define calculations for a specific segment to determine the following:

Calculation (C) Rules	The value for a calculated segment
Routing (R) Rules	Run or machine hours multiplier for a routing or routing step
Pricing (X) Rules	Price multiplier
Component (P and Q) Rules	Quantity multiplier (similar to quantity per assembly)

For each calculation, the following functions are available:

- Segment referencing
- Algebraic expressions
- Trigonometric functions
- Exponential/logarithmic functions
- A substring function to select a subset of values from a segment
- A concatenate function to combine values from two segments
- References to fields from other files
- Definition with a custom-written external program

To define a derived calculation, you can use up to 60 characters in the Assembly Inclusion Rules and up to 120 characters in the Advanced Rules Function window.

See Also

- *Understand Derived Calculations (P3293)*

Understanding Smart Parts

For quantity rules (P rules and Q rules), you can build "smart part" numbers from the segment values that you entered on the sales order. The simplest form of a smart part would be the answer to a segment question is a part number. The system calculates smart parts in a similar manner to derived calculation string-related operations.

Referencing External Fields

As you define a derived calculation, you can include field values from the External Files Reference window. For example, a pricing assembly inclusion rule for FORKLIFT–A uses a field reference to retrieve a base price from the Base Price table (F4106).

Referencing External Programs

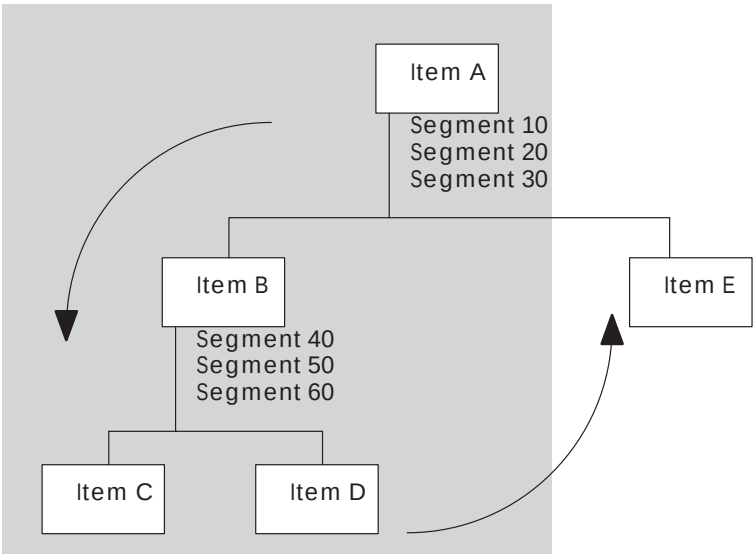
You can reference an external custom program for special calculations. This is useful if the calculations requires several steps or requires more characters than available.

Multi-Level Processing

If a configured item includes multiple levels, the system processes each component down the item hierarchy before processing across. This process determines the order in which segments are displayed during sales order entry.

For example, in the following configured item, the system displays windows during sales order entry in the order A, B, C, D, E:

Multi–Level Item Processing



Consider multi-level processing before you set up your rules, so that the system references segments for previously entered values.

Referencing Table Names

You can use advanced rules to reference a table that returns calculated segment values, prices, and parts to the assembly inclusion rules.

What You Should Know About

Defining unconditional rules

Before you define conditional rules, you can define unconditional rules to include parts, adjustments, calculated values, or routing steps regardless of the values in segment questions.

Assembly inclusion rule processing

During sales order entry, the system processes each assembly inclusion rule independently by rule type from top to bottom in the following order:

- C rules
- Cross Segment Editing rules
- P rules
- Q rules (if necessary)
- R rules (if necessary)
- X rules

See Also

- *Working with Tables (P3281)*

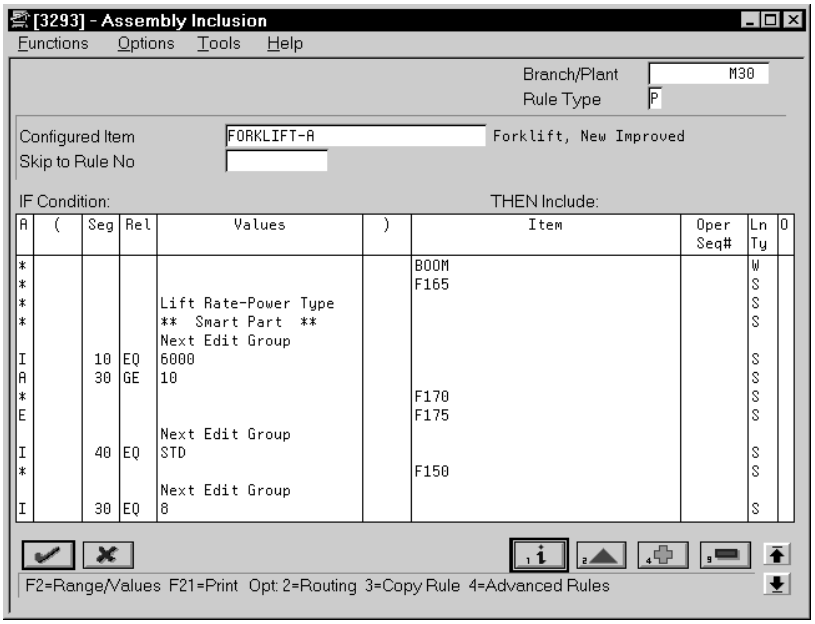
Defining Assembly Inclusion Rules

Defining assembly inclusion rules consists of the following:

- Define unconditional rules
- Define conditional rules
- Define values
- Define ranges
- Set up advanced rules (optional)
- Copy rules (optional)

▶ To define unconditional rules

On Assembly Inclusion



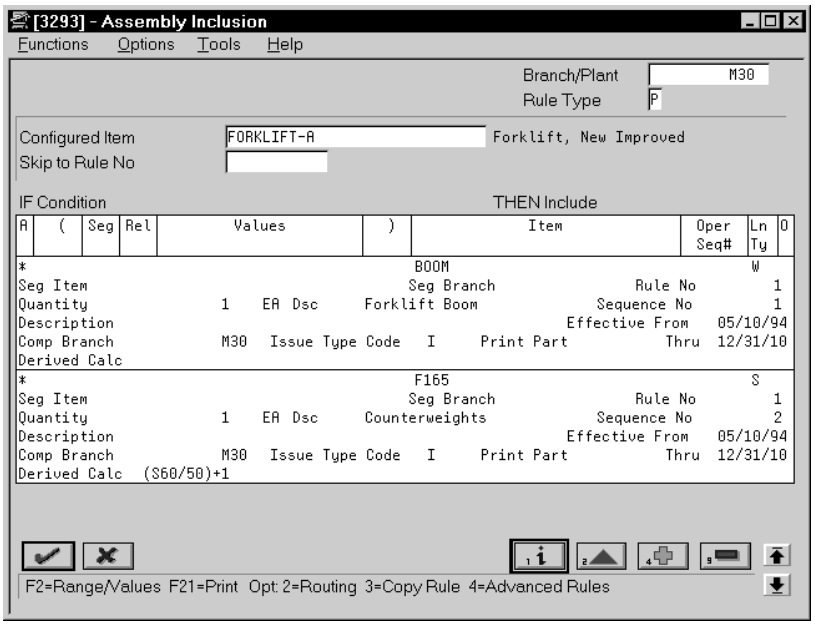
1. Complete the following fields:
    - Branch/Plant
    - Rule Type
    - Configured Item

2. Complete the following field with an asterisk:
    - And/Or
3. Complete the following fields:
    - Item
    - Line Type

▶ To define conditional rules

On Assembly Inclusion

1. Complete the following fields:
    - Branch/Plant
    - Rule Type
    - Configured Item
    - If
    - Bracket
    - Segment
    - Relationship
    - Values
    - Bracket
    - Then
    - Item
    - Operation Sequence
    - Line Type
2. Access the fold area.



3. Complete the following fields:
   - Quantity
   - Effective From
   - Component Branch
   - Effective Thru
4. Complete the following optional fields:
   - Segment Item
   - Segment Branch
   - Issue Type Code
   - Price Rollup
   - Derived Calculation

Field	Explanation
Branch/Plant	A number that identifies a branch, plant, work center, or business unit. . . . . . *Form-specific information* . . . . . . You can define a generic or blank branch/plant for assembly inclusion rules and then use the rules for all branch/plants.

Field	Explanation
Rule Type	Designates the type of included components: C Calculation P Part List Q Work Order Component R Route Sheet X Price/Cost Adjustment
Configured Item	A number that the system assigns to an item. It can be in short, long, or 3rd item number format. . . . . . *Form-specific information* . . . . . . Header: The configured item number for which assembly inclusion rules are being defined. Detail: For P rules, this item is included in the parts list. For R rules, the routing for this item is copied.
And/Or Selection	A code that determines whether compound data selection logic is based on an A = AND condition or an O = OR condition. . . . . . *Form-specific information* . . . . . . For configuration management, you can include parts, prices, costs, or routings with the configured item. Additional values include: I If E Else * Then For example: I Seg 1 = A * Part B E Part C E Part D If Seg 1 is A, include part B. If Seg 1 is not A, include part C and part D.
Unit Price – Entered	The price charged for the unit of measure in the adjoining field. Use these fields, for example, if your primary unit of measure is EA (each), but you typically use a list price per box.
Amount – Memo Cost 1	A user-defined cost the system uses based on information that you supply, which includes the name of the costing method and the method of calculation.

Field	Explanation
Operation Sequence Number	In routings, used to sequence the fabrication or assembly steps in the manufacture of an item. You can track costs and charge time by operation. In bills of material, 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. In engineering change orders, used to sequence the assembly steps for the engineering change. Skip To fields allow you to enter an operation sequence that you want to begin the display of information. You can use decimals to add steps between existing steps. For example, use 12.5 to add a step between steps 12 and 13. In the process, the sequence number that produces the intermediate product. . . . . . *Form-specific information* . . . . . . For R rules, this value defines which routing step should be added to the configured item's work order routing. For P and Q rules, this value controls the consumption of material during backflush or super backflush transactions.
Segment Item Number	The item number entered which can be in any of the three formats (short, long or 3rd item number). . . . . . *Form-specific information* . . . . . . The configured item number of the segment in the Assembly Inclusion Rule. Use this number to reference a previously selected segment.
Quantity – Standard Required Quantity	The number of units to which the system applied the transaction.
Price Roll Up	Determines whether the price/cost is rolled up into the parent item. The extended price/cost will be zero if the flag is set to roll up to the parent. Y or 1 – Roll up price or cost to parent. N or 0 – Separate price/cost add-on.

Field	Explanation
Effective – From Date	A date that indicates one of the following: • 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 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.
Component Branch	A secondary or higher level business unit. Sometimes used to reference a branch or plant with several departments or jobs subordinate to it. Branch/Plant – (MMCU) Dept A – (MCU) Dept B – (MCU) Job 123 – (MCU)
Issue Type Code	A code that defines how each component in the bill of material is issued from stock. In shop floor control, it indicates how a part is issued to a work order. Valid codes are: I Manual issue (default) F Floor stock (no issue) B Backflush (when part is reported as complete) P Preflush (when parts list is generated) U Super backflush (at pay-point operation) S Sub-contract item (send to supplier) Blank Shippable end item 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.
Configurator Print Flag	This field will determine if the Configurator part should print on the sales order and work order. The flag will be used in the Pick Slip, Invoice Print, Bill of Lading, and Print Parts List. Y Print on sales and work order N Do not print on sales and work order 2 Print on sales order only 3 Print on work order only You can also use 1 for Y and 0 for N.

Field	Explanation
Effective – Thru Date	A date that indicates one of the following: • 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 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.

Field	Explanation
Derived Calculation	Use this field to define an algebraic formula that calculates the quantity, price, hours or value associated with a rule. For example: Segment References • S3 indicates segment 3. • =S3=Piston= indicates segment 3 in item Piston. Trigonometric and Logarithmic Functions • SIN(20) indicates the sine of 20. • COS(S3) indicates the cosine of segment 3. • TAN(S4) indicates the tangent of segment 4. • ARC(S) indicates the arctangent of segment 3. • LOG indicates log to base 10. • LN indicates natural log. • 2**5 indicates an exponent, 2 to the fifth power. Substring • SUBSTR(S10,1,4) indicates that the substring from segment 10 starts at the first position of the string and includes the first 4 positions. Concatenations • CONCAT(S3,S4) combines the values of segments 3 and 4. External Fields • To specify external fields from external files. use & followed by the field name. For example, &T2AMTU(WD) indicates an amount field on the Item Supplemental Database table, and the WD data type. External Programs • To define an external program for the calculation, enter the name of the external program and EXTVAR in the Derived Calculations field. Smart Parts • "P"S4 indicates a smart part number P2000 when the value of segment 4 is 2000.

What You Should Know About

Price rollup

During sales order entry processing of pricing rules, the system compares the line type of the configured item on the sales order to "true" x rule line types. If the line types match, the price adjustment is reflected in the configured parent's unit price. If the line types are different, the price rollup field is used to determine if the price adjustment is reflected in the parent's unit price.

Revising lines

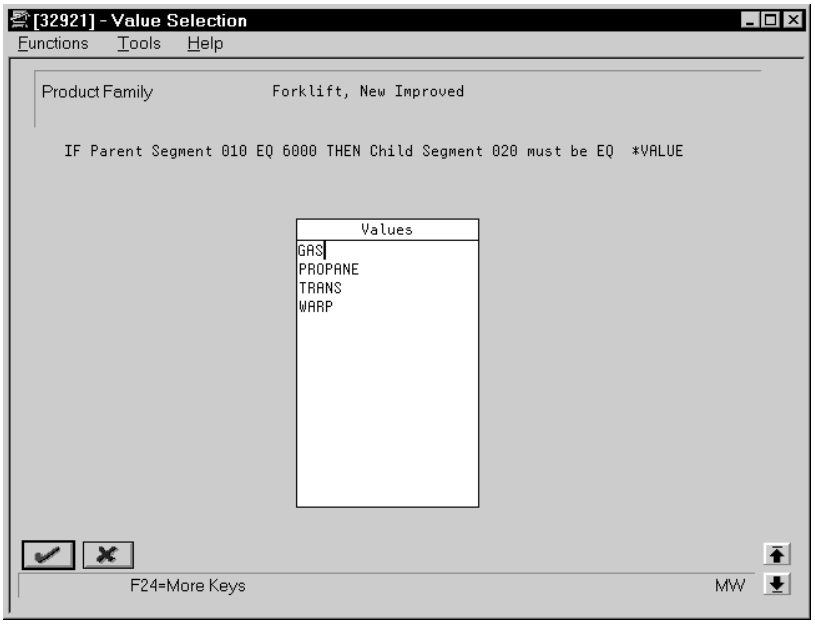
You can use the insert line option and the delete line option to revise the assembly inclusion rules. Use caution because deletes are performed immediately.

▶ To define values

On Cross Segment Editing

1. Complete the following field with *VALUE:
   - Value

   The system prompts you to work with *VALUE entries on Value Selection.



2. On Value Selection, complete the following field:
   - Value

What You Should Know About

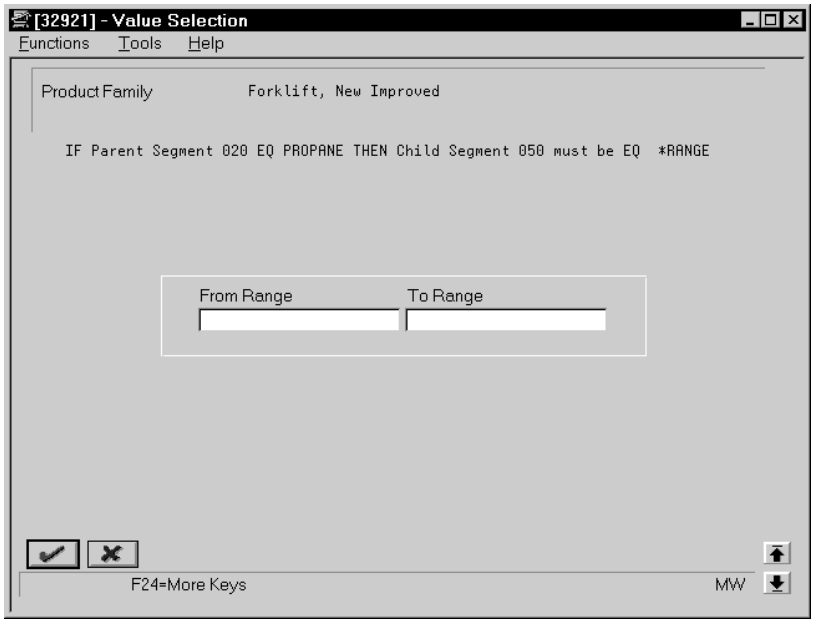
Revising *VALUE — To revise existing *VALUE entries, place the cursor on *VALUE and choose the Range/Values function.

▶ To define ranges

On Cross Segment Editing

1. Complete the following field with *RANGE:
   - Value

   The system prompts you for all new and changed rules containing a *RANGE.



2. On Value Selection, complete the following fields:
   - From Range
   - To Range

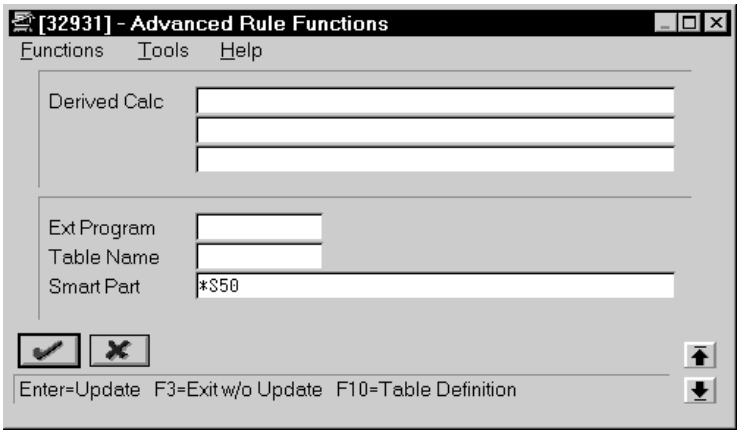
What You Should Know About

Revising *RANGE — To revise existing *RANGE entries, place the cursor on *RANGE and choose the Range/Values function.

▶ To set up an advanced rule:

On Assembly Inclusion Rules

1. Access Advanced Rule Functions.



2. On Advanced Rule Functions, complete one or more of the following fields:
   - Derived Calculation
   - External Program
   - Table Name
   - Smart Part

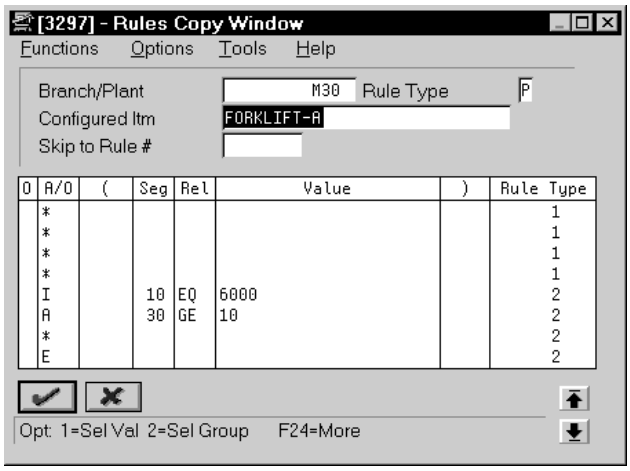
Field	Explanation
External Program ID	The name of the external program written by your MIS department, that will be providing values for external variables.

Field	Explanation
Rules Table Name	You must define table names in user defined code table 32/TN. A rule table is a collection of data that is set up to minimize the number of assembly inclusion rules you need for a configured item. A rule table can be accessed by 1 to 10 keys and can return up to 99 values. When you reference a rule table in an Assembly Inclusion Rule, the system uses the rule keys to read the rule table and retrieve the values associated with the table For example, if you defined segment 10 to be the color of an item, you could set the table to retrieve item Red Component if the customer enters Red for segment 10. In this example, the table would be: Item Color = Value Red = RED COMPONENT The table would read: If the color segment value = red, then use item number RED COMPONENT on the configured item sales order and work order parts list.
Smart Part Calculation	Define a formula that calculates the part number associated with a rule. For example, • The part number consists of the literal "P" and the value of segment 4. If the smart part calculation and the value of Segment 4 is 2000, then the smart part would be P2000. • To reference segments that have already been entered on a different level, specify the item number of that level with the segment number. For example, the notation for Segment 4 of Piston is: Derived Calculation = S4=Piston= • To remove a particular string within a larger string use the substring function. It removes a string when you define the the segment, beginning position, and length. For example, if Segment 4 equals 1234, the last three positions (234) can be used with the notation: SUBSTR(S4,2,3) where 2 is the beginning position and 3 is the length of the substring. • To combine two fields, use the concatenation function. For example, CONCAT(S3,S1) which will combine the values of Segment 3 and 1 into one field.

▶ To copy an assembly inclusion rule

On Assembly Inclusion

1. On a blank line, access Rules Copy Window.



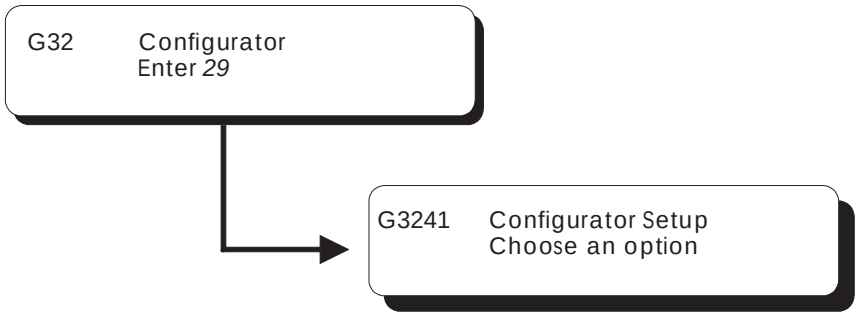
2. On Rules Copy Window, locate the configured item from which you want to copy a rule.
3. Do one of the following:
   - To select a line, choose the Select Value option.
   - To select the complete rule, choose the Select Group option.

Processing Options for Assembly Inclusion Rules

```
Defaults:
 1. Enter the default Rule Type.                    _____

Component Branch:
 2. Enter a '1' to change the Component             _____
    Branch (ADDITIONS ONLY) to that
    which is displayed at the top of
    the screen.
```

Locating Assembly Inclusion Rules



You review assembly inclusion rule information to help you maintain these rules. Locating assembly inclusion rules consists of the following tasks:

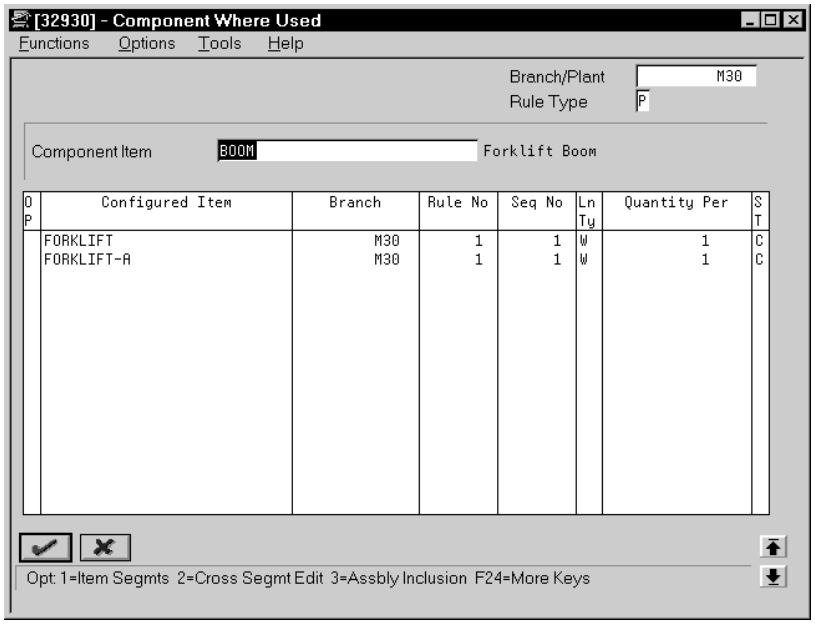
- Locate component information
- Locate segment information

See Also

- *Printing Reports (P32910)*

▶ To locate component information

On Component Where Used

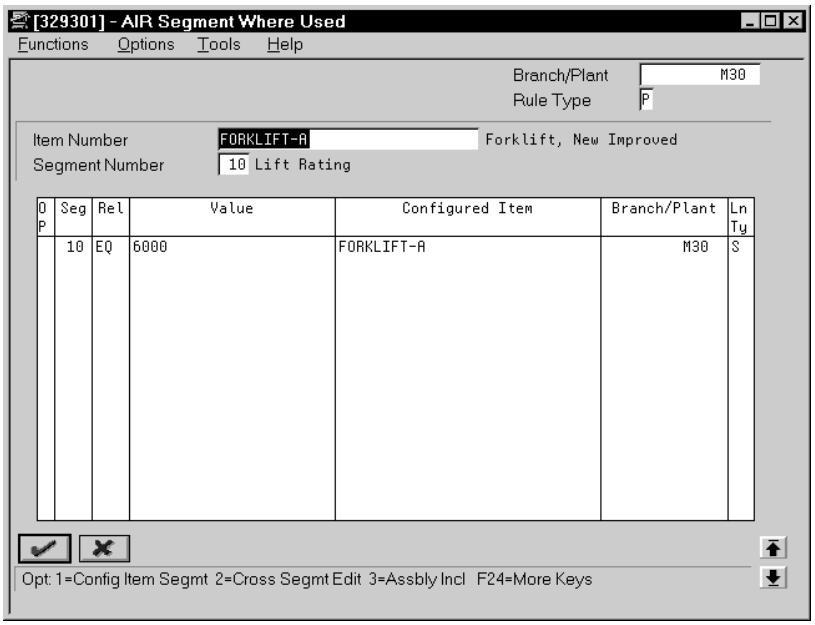


Complete the following fields:

- Branch Plant
- Rule Type
- Component Item

▶ To locate segment information

On AIR Segment Where Used



Complete the following fields:

- Branch Plant
- Rule Type
- Item Number
- Segment Number

Exercises

See the exercises for this chapter.

Understand Tables

About Tables

A table is a collection of data that you define for configured items. An assembly inclusion rule references a table. When the system processes rules during sales order entry and work order generation, it uses the table reference and table data to retrieve component parts and calculated values.

You can define the following tables that correspond to the matching assembly inclusion rule types:

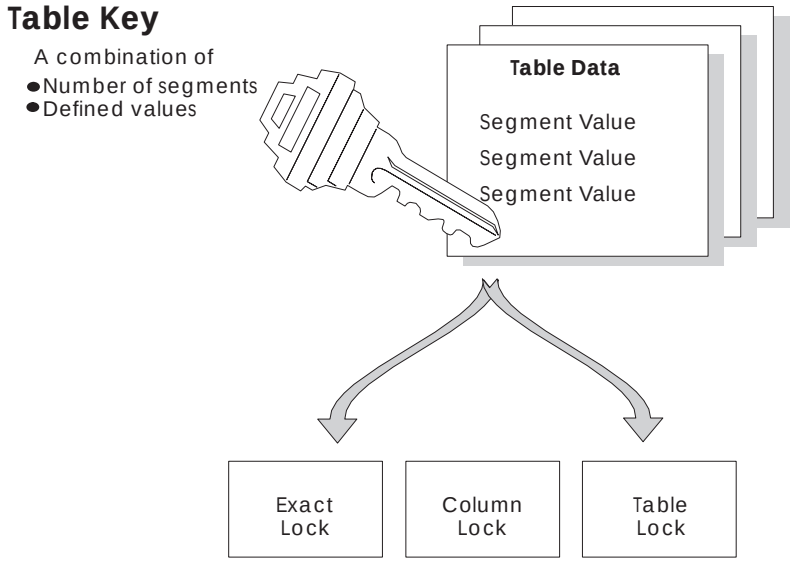
Pricing table (Type X)	Defines a price table that returns one numeric value.
Part tables (Types P and Q)	Define part tables that can return multiple alphanumeric values.
Calculated value table (Type C)	Defines a calculated segment table that can return numeric or alphanumeric values as defined on Configured Item Segments.

Setting up tables adds time to the setup process, but tables can dramatically reduce the number of assembly inclusion rules and their complexity. They can therefore improving processing time.

The tables used for matrix processing within the Configuration Management system are not User Defined Code tables.

Because a table might contain many segments and multiple return values, you must decide how to display the table information before you review table information. Use a table key to control which portion of the table to display. You define a key with enough segment values to display table values in a column and row format. The information defined on the Table Key form controls which table values are displayed on the Table Detail form.

The key is a combination of segment answers that the system uses to access the table and return the associated values. You can define up to ten keys to determine the dimensions of the table.



On Table Keys, you can specify segment values in the following ways:

- Entering the specific value
- Choosing from available values (if table is already defined)
- Entering an asterisk at every segment to select from available segment values in the sequence that you define.

On Table Keys, you can set up several types of locks that control how the system displays table values:

- Exact lock – you define all segment values
- Column lock – you define all segment values but the last
- Table lock – you define all segment values but the last two (this is only available for tables that return single values)

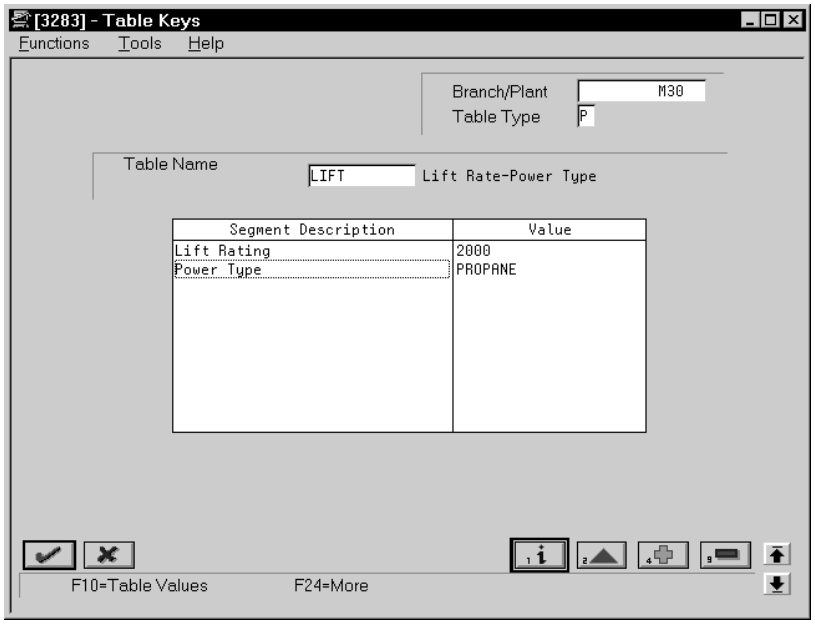
The amount of table information subsequently displayed on Table Detail depends on two factors:

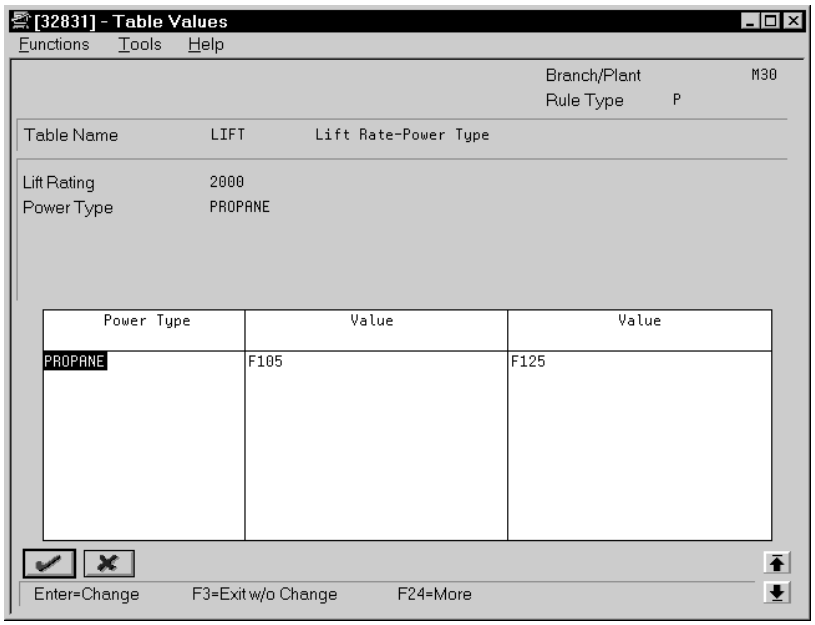
- The number of segments defined on Table Definition
- The number of return values you defined on Table Definition

The following examples illustrate the different methods for displaying table values.

Example: Multiple Segments, Exact Lock

On Table Keys, define the values for each segment. Table Value displays a single row that represents the locked value for the last segment. The columns represent the multiple values that you defined for the table.

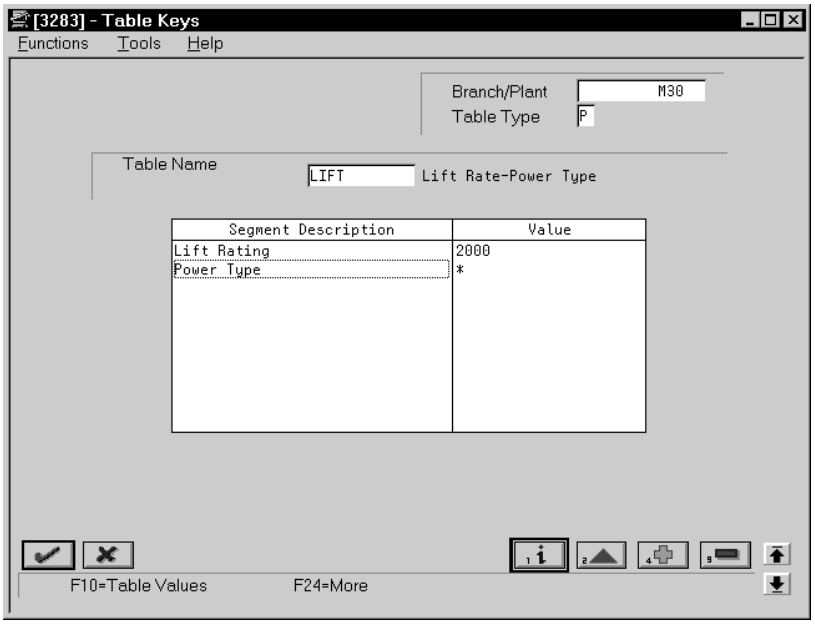


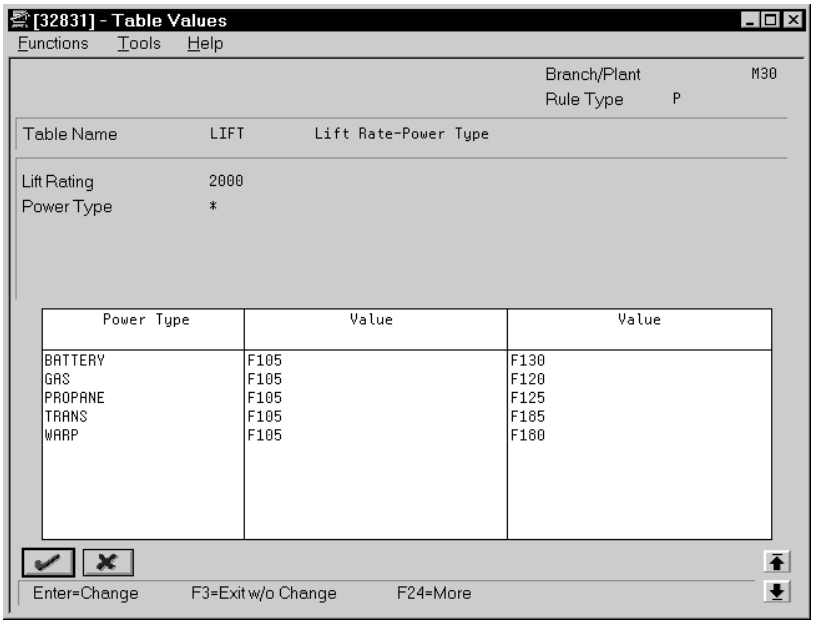


Example: Multiple Segments, Column Lock

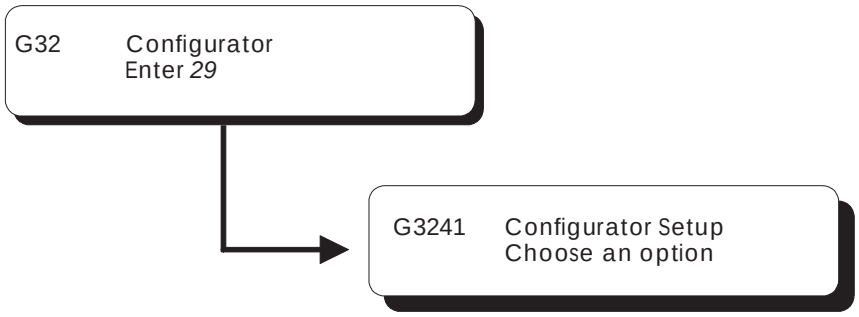
On Table Keys, define all segment values except for the last segment. Table Value displays rows which represent values for the last segment, and columns which represent multiple table values.

You can scroll to the left and right, and page up and down to display the table values.





Set Up Tables



Setting Up Tables

You can define tables that are referenced from assembly inclusion rules and that return calculated segment values, prices and component parts. The table type should be the same as the assembly inclusion rule type that accesses it. You can define the number of segments that make up the key and the number of values that the system returns. The keys represent table dimensions. You can define up to ten dimensions.

Setting up tables consists of the following tasks:

- ❑ Setting up table dimensions
- ❑ Setting up configured item cross-reference
- ❑ Setting up table values
- ❑ Linking a table to an assembly inclusion rule
- ❑ Printing table information

What You Should Know About

Deleting a table value You can delete a value at the intersection of the row and column.

Setting Up Table Dimensions

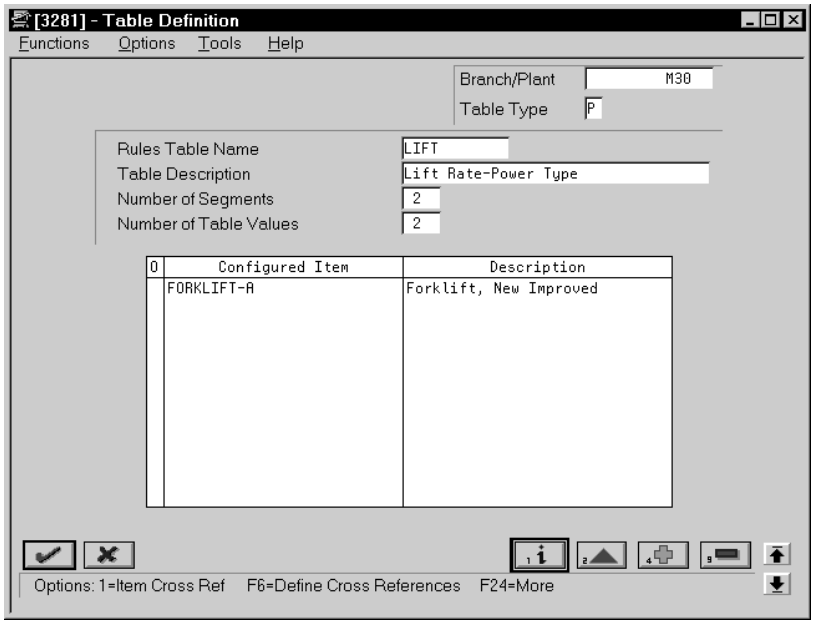
For each table, you must define the:

- Table name
- Table dimensions, including:
  - Table type
  - Number of segments that specify the key to the table
  - Number of values it will return

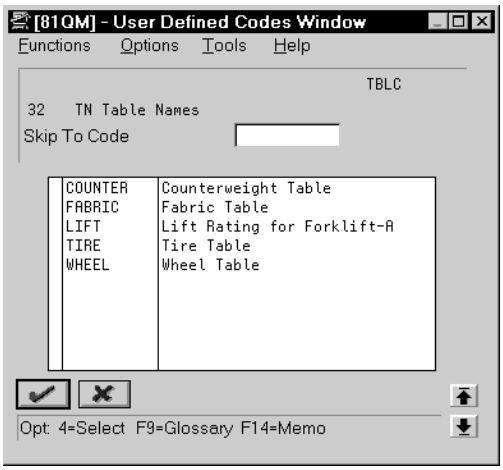
You define table names on a user defined code table. However, the Configuration Management data table is not a user defined code table.

▶ To set up table dimensions

On Table Definition



1. Access User Defined Code Revisions.



2. On User Defined Code Revisions, complete the following fields:
    - Character Code
    - Description
3. Access Table Definition.
4. On Table Definition, complete the following fields:
    - Branch/Plant
    - Table Type
    - Rules Table Name
    - Table Description
    - Number of Segments
    - Number of Table Values

Field	Explanation
Branch/Plant	A number that identifies a branch, plant, work center, or business unit. . . . . . *Form-specific information* . . . . . . You can define a generic branch/plant for a table definition and then use the table for all branch/plants.
Rule Table Type	Designates the type of rule table. Valid values are: C Calculated values P Part list (on sales order and work order) Q Work order component (on work order only) X Price/Cost adjustment

Field	Explanation
Rules Table Name	You must define table names in user defined code table 32/TN. A rule table is a collection of data that is set up to minimize the number of assembly inclusion rules you need for a configured item. A rule table can be accessed by 1 to 10 keys and can return up to 99 values. When you reference a rule table in an Assembly Inclusion Rule, the system uses the rule keys to read the rule table and retrieve the values associated with the table For example, if you defined segment 10 to be the color of an item, you could set the table to retrieve item Red Component if the customer enters Red for segment 10. In this example, the table would be: Item Color = Value Red = RED COMPONENT The table would read: If the color segment value = red, then use item number RED COMPONENT on the configured item sales order and work order parts list.
Number of Segments	Indicates how many keys are used to access the table. Key values must be on the current level or a previous level of the configured item.
Number of Table Values	The Number of Values tells the system how many values should be returned from the rule table when a match is found on the table keys. If you enter more than one return value for a C (calculated) rule, you must indicate the segment numbers to return the values to.

Processing Options for Table Definition

```
Rule Table Default Values:

   1. Rule Table Type          (Optional)          _____________
```

Setting Up Configured Item Cross-Reference

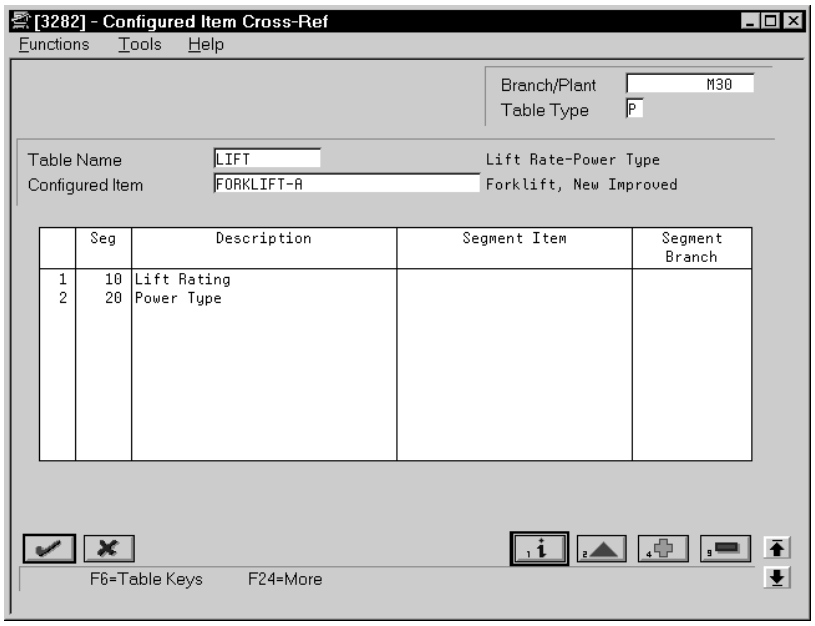
After you define a table, you must associate it with a configured item and define the specific segments that access it. To create a cross-reference, the number of segments that you specify must equal the number of segments that you defined for the table.

You can also specify a segment that accesses a different configuration level.

Multiple configured items can reference a single table, and a single configured item can reference multiple tables.

To set up configured item cross-reference

On Configured Item Cross Reference



Complete the following fields:

- Branch/Plant
- Table Type
- Table Name
- Configured Item
- Segment
- Segment Item
- Segment Branch

What You Should Know About

Generic cross-references

You can enter an item *ALL to define a generic cross-reference for all configured items. You must use the same segment numbers across all configured items. This defines keys for all configured items that access this table.

Using multiple return values with a calculation table

When a calculation table is defined with multiple return values, you must specify on Value Definition the segment numbers that will be populated with table values.

Processing Options for Configured Item Cross Reference

```
Rule Table Default Values:

   1. Rule Table Type          (Optional)          _____________
```

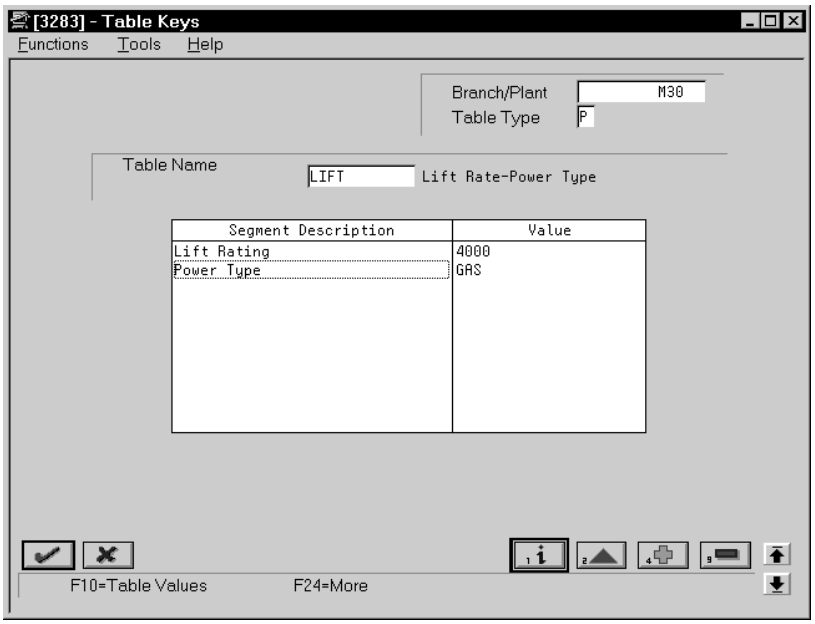
Setting Up Table Values

Because a table might contain many keys and multiple return values, you must first decide how to display the table information. Use a table key to control what portion of table values to display.

The following task uses the multiple value exact lock method.

▶ To set up table values

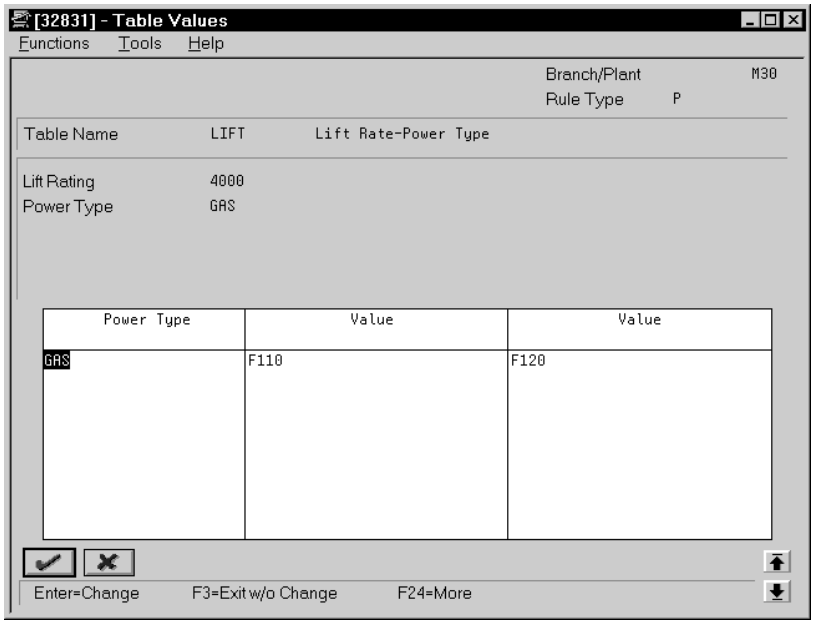
On Table Keys



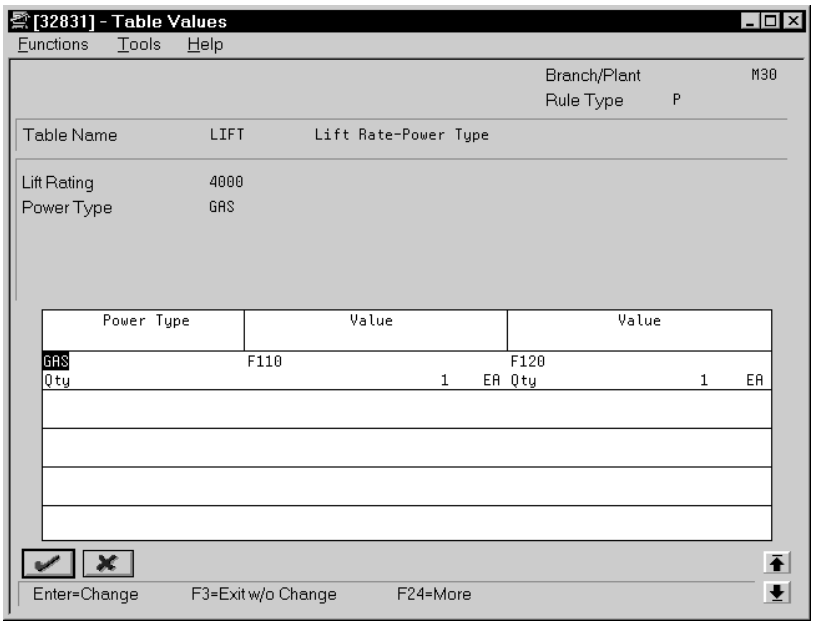
1. Complete the following fields:
   - Branch/Plant
   - Table Type

- Table Name

2. Complete the following field for the first segment:
   - Value
3. Complete the following field for the last segment:
   - Value
4. Access Table Values.



5. On Table Values, complete the following field for each segment:
   - Value
6. Access the fold area.



7. Complete the following fields:
   - Quantity
   - Unit of Measure

Field	Explanation
Branch/Plant	A number that identifies a branch, plant, work center, or business unit. . . . . . *Form-specific information* . . . . . . You can define a generic branch/plant for a table definition and then use the table for all branch/plants.
Table Segment Value 1	The Table Segment Value is a value used as a key to a table.
Rules Table Value	The Rules Table Value is the value that is returned from a rules table.
Item Number – Unknown Format Entered	The item number entered which can be in any of the three formats (short, long or 3rd item number).
Amount	The actual amount. Debits are always entered as plus (+), and credits are entered as minus (-). You may enter decimals, dollar signs, and commas. The amount field will be examined and any non-significant symbols will be removed. Minus signs must be entered as a trailing figure. For example, the amount 5,000.01- would be interpreted as a credit of 5000.01.

See Also

- *Understand Tables*

Processing Options for Table Keys

Rule Table Default Values:

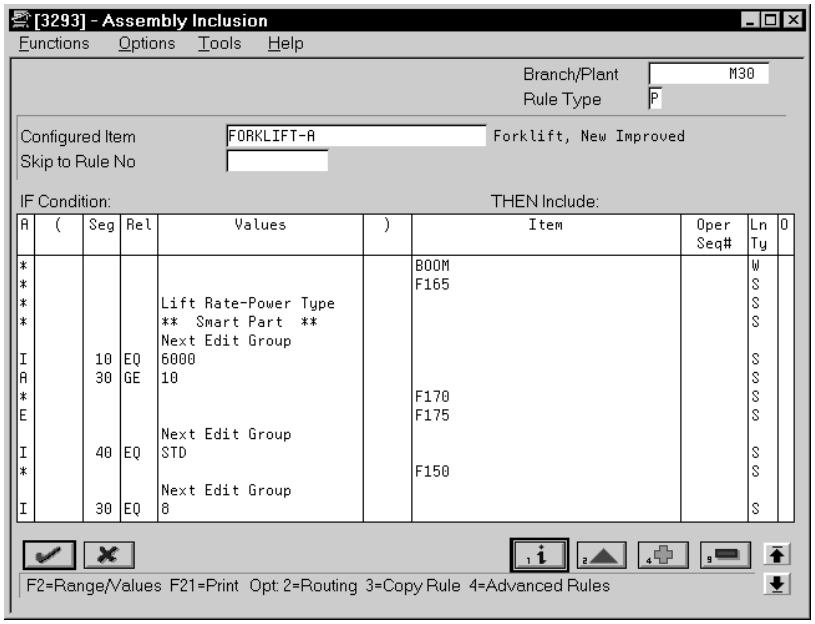
1. Rule Table Type (Optional) _____

Linking a Table to an Assembly Inclusion Rule

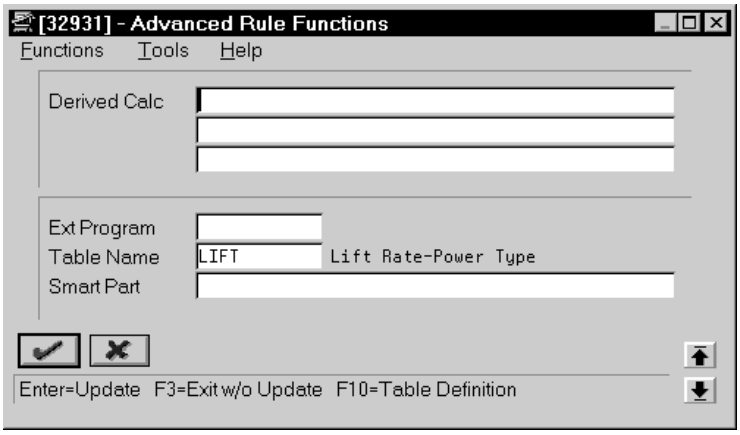
After you have defined the table and the segment that accesses its values, you must link the table to the assembly inclusion rule for that segment.

▶ To link a table to an assembly inclusion rule

On Assembly Inclusion



1. Access Advanced Rule Functions for the segment that you want to link to a table.



2. On Advanced Rule Functions, complete the following field:
    - Table Name

Field	Explanation
Branch/Plant	A number that identifies a branch, plant, work center, or business unit. . . . . . *Form-specific information* . . . . . . You can define a generic or blank branch/plant for assembly inclusion rules and then use the rules for all branch/plants.
Configured Item	A number that the system assigns to an item. It can be in short, long, or 3rd item number format. . . . . . *Form-specific information* . . . . . . Header: The configured item number for which assembly inclusion rules are being defined. Detail: For P rules, this item is included in the parts list. For R rules, the routing for this item is copied.

Field	Explanation
And/Or Selection	A code that determines whether compound data selection logic is based on an A = AND condition or an O = OR condition. . . . . . *Form-specific information* . . . . . . For configuration management, you can include parts, prices, costs, or routings with the configured item. Additional values include: I If E Else * Then For example: I Seg 1 = A * Part B E Part C E Part D If Seg 1 is A, include part B. If Seg 1 is not A, include part C and part D.
Bracket Selection Ending	A collection of open and closed brackets to group conditional configurator rules. For example, to define the condition (Seg 1 = A OR Seg 2 = B) AND Seg 3 = C, use the following brackets: (Seg 1 = A O Seg 2 = B) A Seg 3 = C
Unit Price – Entered	The price charged for the unit of measure in the adjoining field. Use these fields, for example, if your primary unit of measure is EA (each), but you typically use a list price per box.
Amount – Memo Cost 1	A user-defined cost the system uses based on information that you supply, which includes the name of the costing method and the method of calculation.

Field	Explanation
Operation Sequence Number	In routings, used to sequence the fabrication or assembly steps in the manufacture of an item. You can track costs and charge time by operation. In bills of material, 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. In engineering change orders, used to sequence the assembly steps for the engineering change. Skip To fields allow you to enter an operation sequence that you want to begin the display of information. You can use decimals to add steps between existing steps. For example, use 12.5 to add a step between steps 12 and 13. In the process, the sequence number that produces the intermediate product. . . . . . *Form-specific information* . . . . . . For R rules, this value defines which routing step should be added to the configured item's work order routing. For P and Q rules, this value controls the consumption of material during backflush or super backflush transactions.
Segment Item Number	The item number entered which can be in any of the three formats (short, long or 3rd item number). . . . . . *Form-specific information* . . . . . . The configured item number of the segment in the Assembly Inclusion Rule. Use this number to reference a previously selected segment.

Printing Table Information

Print the Table Report to review the table segments and values for the table name and table type that you specify.

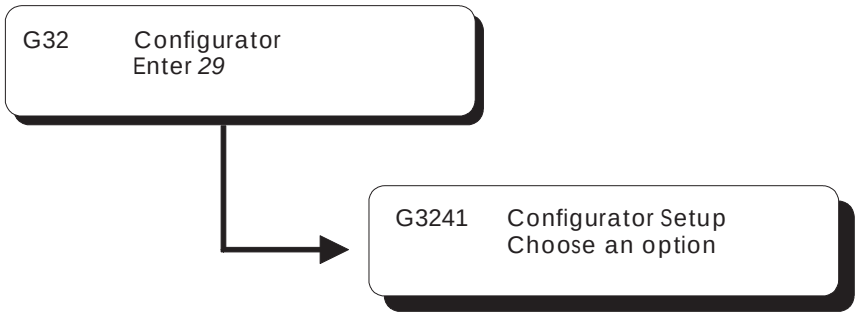
```
 3283P                                          J.D. Edwards & Company

Rules Table Name . . LIFT        Lift Rate-Power Type                    Page      -          2
Rules Table Type . . P                                                   Date      -   2/20/96
  Lift Rating          2000                                              Branch .          M30
  Power Type           *
                              Value                      Value
Power Type
--------------------  -------------------------- --------------------------
BATTERY               F105                          F130
                      Qty. .               1  EA Qty. .               1  EA
GAS                   F105                          F120
                      Qty. .               1  EA Qty. .               1  EA
PROPANE               F105                          F125
                      Qty. .               1  EA Qty. .               1  EA
TRANS                 F105                          F185
                      Qty. .               1  EA Qty. .               1  EA
WARP                  F105                          F180
                      Qty. .               1  EA Qty. .               1  EA
```

Exercises

See the exercises for this chapter.

Print Reports



Printing Reports

You can review the following information about a configured item with available Configuration Management reports:

- Where segments are used in configured items
- Assembly inclusion rules
- Cross segment editing rules

Use these reports to analyze demand for options and features and to maintain rules.

Complete the following tasks:

- ❑ Printing segment information
- ❑ Printing cross-segment editing rules
- ❑ Printing assembly inclusion rules

Printing Segment Information

Print this report to review the segments for the configured item that you specify.

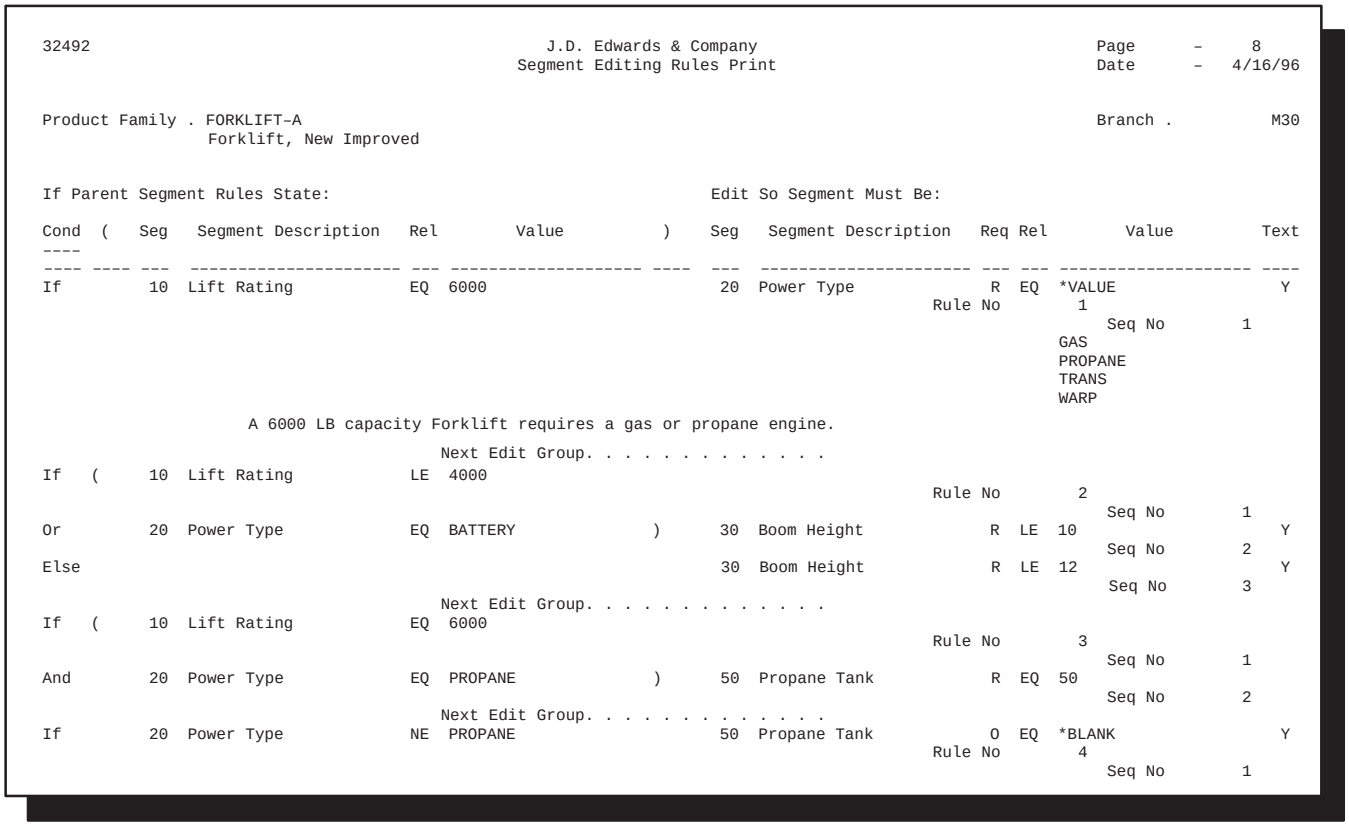
32491 J.D. Edwards & Company Page – 9
Print Segment Rules Date –
4/16/96

Product Family . FORKLIFT–A Branch .
M30
Forklift, New Improved

Seg	Description	Req	Num Y/N	Default Value	Syst Code	Us Cd	User Def Code	Description
10	Lift Rating	R	Y	4000	32	LR	2000	2000 Lb Capacity
							4000	4000 Lb Capacity
							6000	6000 Lb Capacity
20	Power Type	R	N	GAS	32	PT	BATTERY	Battery Powered
							DIESEL	Diesel Engine
							GAS	Gas Engine
							PROPANE	Propane Engine
							TRANS	Transwarp Drive
							WARP	Warp Drive
30	Boom Height	R	Y	10	32	BH	08	8 Foot Boom
							10	10 Foot Boom
							12	12 Foot Boom
40	Paint	O	N	STD	32	PA	CUS	Custom Paint
							STD	Standard Paint
50	Propane Tank	O	N		32	TK	25LBTK	25 Pound Tank
							50LBTK	50 Pound Tank
60	Calculated Counterweight	C	Y					

Printing Cross-Segment Editing Rules

Print this report to review all cross-segment editing rules for the configured item that you specify.



```
32492                                    J.D. Edwards & Company                          Page      –     8
                                      Segment Editing Rules Print                        Date      –   4/16/96


Product Family . FORKLIFT–A                                                             Branch .          M30
                 Forklift, New Improved


If Parent Segment Rules State:                                  Edit So Segment Must Be:

Cond  (   Seg   Segment Description   Rel       Value          )   Seg   Segment Description   Req Rel       Value          Text
----
---- ---- ---  ---------------------- --- -------------------- ----  ---  ---------------------- --- --- -------------------- ----
If         10  Lift Rating            EQ  6000                      20  Power Type              R  EQ  *VALUE                  Y
                                                                                          Rule No        1
                                                                                               Seq No        1
                                                                                          GAS
                                                                                          PROPANE
                                                                                          TRANS
                                                                                          WARP

                    A 6000 LB capacity Forklift requires a gas or propane engine.

                                      Next Edit Group. . . . . . . . . . . . .
If   (     10  Lift Rating            LE  4000
                                                                                          Rule No        2
                                                                                               Seq No        1
Or         20  Power Type             EQ  BATTERY              )      30  Boom Height             R  LE  10                   Y
                                                                                               Seq No        2
Else                                                                   30  Boom Height             R  LE  12                   Y
                                                                                                    Seq No        3
                                      Next Edit Group. . . . . . . . . . . . .
If   (     10  Lift Rating            EQ  6000
                                                                                          Rule No        3
                                                                                               Seq No        1
And        20  Power Type             EQ  PROPANE              )      50  Propane Tank            R  EQ  50
                                                                                                    Seq No        2
                                      Next Edit Group. . . . . . . . . . . . .
If         20  Power Type             NE  PROPANE                     50  Propane Tank            O  EQ  *BLANK                Y
                                                                                          Rule No        4
                                                                                               Seq No        1
```

Printing Assembly Inclusion Rules

Print this report to review all the assembly inclusion rules for the configured item that you specify.

```
32493                                    J.D. Edwards & Company                                  Page      -    12
                                         Assembly Inclusion Rules                                Date      -  4/16/96
                                               Parts List

Product Family . FORKLIFT-A                                                                      Branch.           M30
                 Forklift, New Improved                                                          Configurator Rul    P


IF Condition:                                                          THEN Include:

Cond  (   Seg   Segment Description     Rel        Value          )   Component Item Number        Description                  Ln
---- ---- --- ------------------------ --- -------------------- ---- -------------------------- ---------------------------- --
Use                                                                  BOOM                       Forklift Boom                W
                                                                     Rule No       1            Seq No       1
                                      Qty               1  EA
Use                                                                  F165                       Counterweights               S
                                                                     Rule No       1            Seq No       2
                                      Qty               1  EA
     DC (S60/50)+1
Use                                                                                                                          S
                                                                     Rule No       1            Seq No       3
Use                                                                                                                          S
                                                                     Rule No       1            Seq No       4
                                       Next Edit Group. . . . . . . . . . . . .
If         10 Lift Rating              EQ 6000                                                                           S
                                                                     Rule No       2            Seq No       1
And        30 Boom Height              GE 10                                                                             S
                                                                     Rule No       2            Seq No       2
Use                                                                  F170                       Pneumatic Tire               S
                                                                     Rule No       2            Seq No       3
                                      Qty               4  EA
Else                                                                 F175                       Hard Rubber Tire             S
                                                                     Rule No       2            Seq No       4
                                      Qty               4  EA
                                       Next Edit Group. . . . . . . . . . . . .
If         40 Paint                    EQ STD                                                                            S
                                                                     Rule No       3            Seq No       1
Use                                                                  F150                       Yellow Paint                 S
                                                                     Rule No       3            Seq No       2
                                      Qty               1  EA
                                       Next Edit Group. . . . . . . . . . . . .
If         30 Boom Height              EQ 8                                                                              S
                                                                     Rule No       6            Seq No       1
Use                                                                  F135                       8 Ft Boom                    S
                                                                     Rule No       6            Seq No       2
                                      Qty               1  EA
                                       Next Edit Group. . . . . . . . . . . . .
If         30 Boom Height              EQ 10                                                                             S
                                                                     Rule No       7            Seq No       1
Use                                                                  F140                       10 Ft Boom                   S
                                                                     Rule No       7            Seq No       2
                                      Qty               1  EA
                                       Next Edit Group. . . . . . . . . . . . .
If         30 Boom Height              EQ 12                                                                             S
                                                                     Rule No       8            Seq No       1
Use                                                                  F145                       12 Ft Boom                   S
                                                                     Rule No       8            Seq No       2
                                      Qty               1  EA
```

Sales Orders

Configured Item Sales Orders

Objectives

- To enter a sales order for a configured item

About Sales Orders

After you have set up the segments, cross segment editing rules, and assembly inclusion rules for a configured item, you can enter a sales order for the configured item.

When you enter a sales order for a configured item, the Configuration Management system automatically prompts you to enter values for the segments of that configured item. You set a processing option to select from the following sales order entry modes:

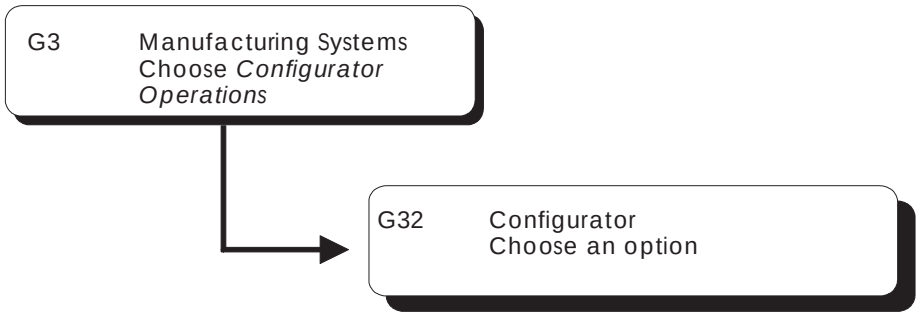
- Assisted mode
- Assisted prompt mode
- Text mode

The system edits each segment value against user defined code tables, ranges and numeric specifications. Cross-segment editing rules are also processed to validate feature and option compatibility. If there are no errors, the system processes the segment values according to the assembly inclusion rules.

See Also

- *Working with Header Information (P4211)* in the *Sales Order Management Guide*
- *Working with Detail Information (P4211)* in the *Sales Order Management Guide*

Work with Configured Item Sales Orders



Working with Configured Item Sales Orders

You can enter a sales order for a configured item using one of the following methods:

Assisted prompt mode	One window displays the segments and another window displays the choices for each segment. After you select values for all the segments, the first window displays your choices. If you enter a multi-level configured item, the windows are displayed for each lower level item.
Assisted mode	A window displays all of the segments with default values for each. You can select other values or accept the defaults.
Text mode	You can enter the segments as a string of characters separated by the segment delimiter. While using text mode, you can access both assisted prompt mode and assisted mode.

Working with configured item sales orders consists of the following tasks:

- ❑ Entering a sales order in text mode
- ❑ Entering a sales order in assisted mode
- ❑ Entering a sales order in assisted prompt mode

- ❑ Working with error messages
- ❑ Working with associated text
- ❑ Revising a sales order
- ❑ Converting sales quotes

Before You Begin

- ❑ Set the processing option for the work order line type to create work orders or define the W line type in each configured item's branch/plant record. If the processing option is blank, the line type will default from the branch/plant.
- ❑ Verify that you have set the processing option to the appropriate sales order entry mode.

What You Should Know About

Interbranch sales

You can enter a configured item sales order to fill demand from a warehouse other than from one where the order is placed. Interbranch sales orders with transfer pricing are supported for configured items. However pricing (X) rules are not supported for interbranch sales.

See *Working With Detail Information* in the *Sales Order Management Guide.*

Preference profiles

Configuration Management supports most preference profiles. Preference profiles help you automate the sales order entry process. Use a preference profile to define for customer, a configured item, or any combination of customer, customer group, configured item, or configured item group. Preference profiles are not supported for multi-branch commitments.

See *Working With Preferences* in the *Sales Order Management Guide.*

Multi–currency

Pricing (X) rules are not applied to foreign currency sales orders. They are applied to domestic currency sales orders when both customer and branch/plant use the same currency.

Commitments	Soft commitments are added for a configured parent item with associated work orders. Component parts related to the configured parent are committed by the Process Work Orders program.
Trade discounts	The Sales Order Management system does not support trade discounts for configured items.
Additional order processing	For configured items, the Sales Order Management system does not support the following additional order processing: • Credit orders • Blanket orders • Transfer orders • Drop ship orders

Entering a Sales Order in Text Mode

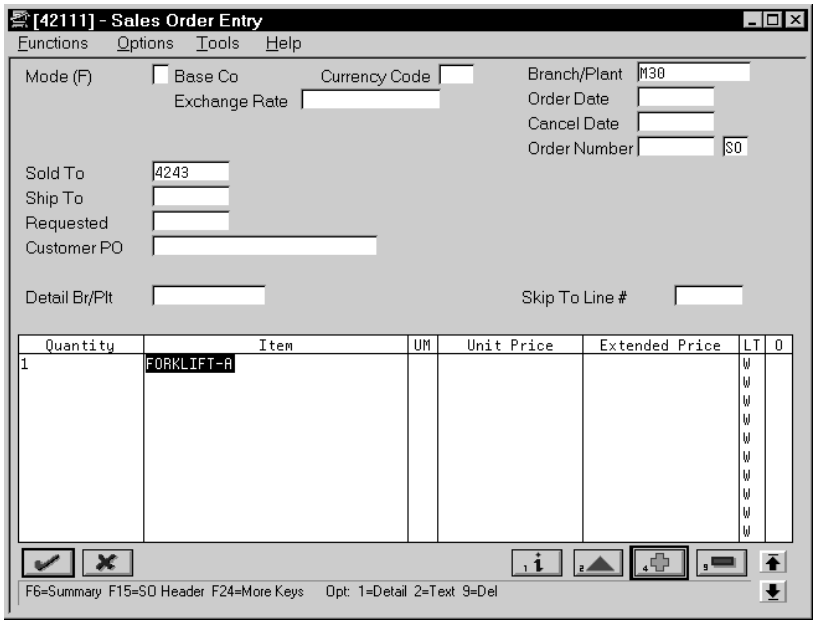
After you have defined the sales order header with customer information, enter the configured item sales order in the sales order detail.

Complete the following tasks:

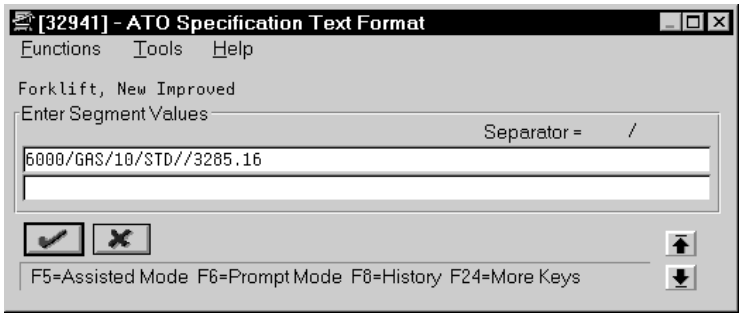
- Enter item and customer information
- Enter a previously ordered configured item (optional)

▶ To enter item and customer information

On Sales Order Entry



1. Complete the following required fields:
   - Sold To
   - Branch/Plant
   - Quantity
   - Item
2. Access ATO Specification Text Format.

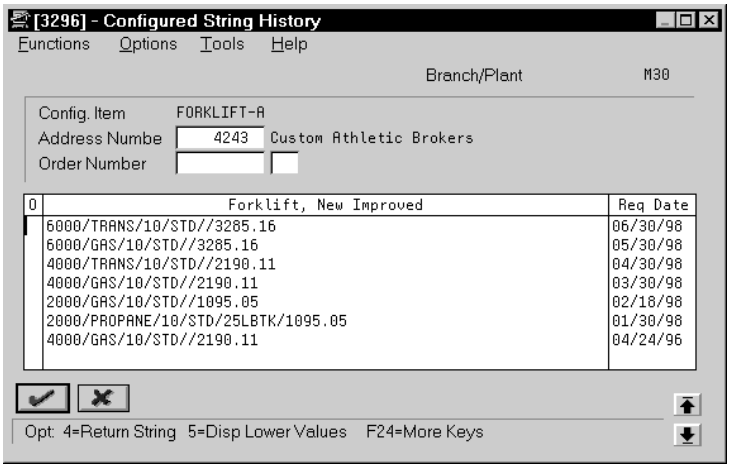


3. On ATO Specification Format, complete the following field:
   - Enter Segment Values

Field	Explanation
Sold To	A number that identifies an entry in the Address Book system. Use this number to identify employees, applicants, participants, customers, suppliers, tenants, special mailing addresses, and so on.

▶ To enter a previously ordered configured item

1. Access Configured String History.



2. On Configured String History, choose configured string.
3. Revise the string as necessary and press Enter.

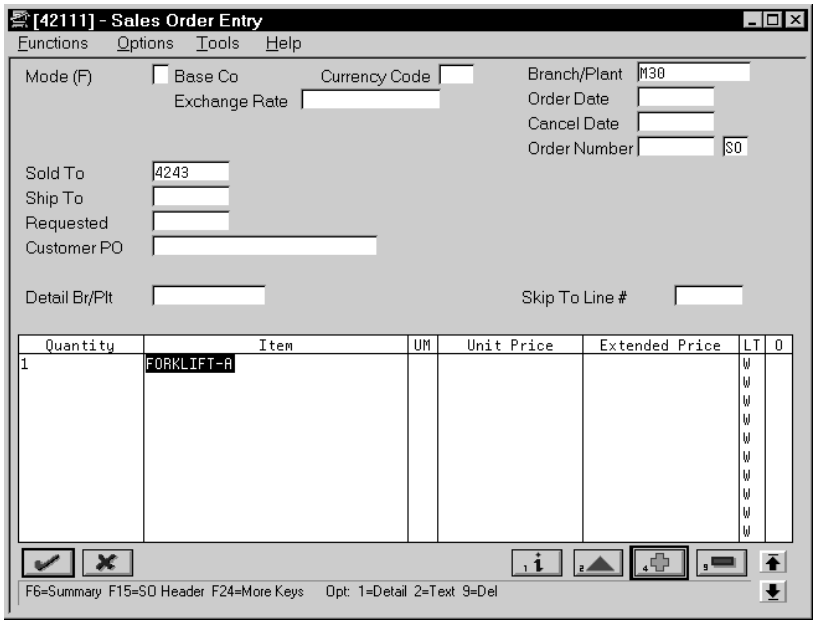
Entering a Sales Order in Assisted Mode

Complete the following tasks:

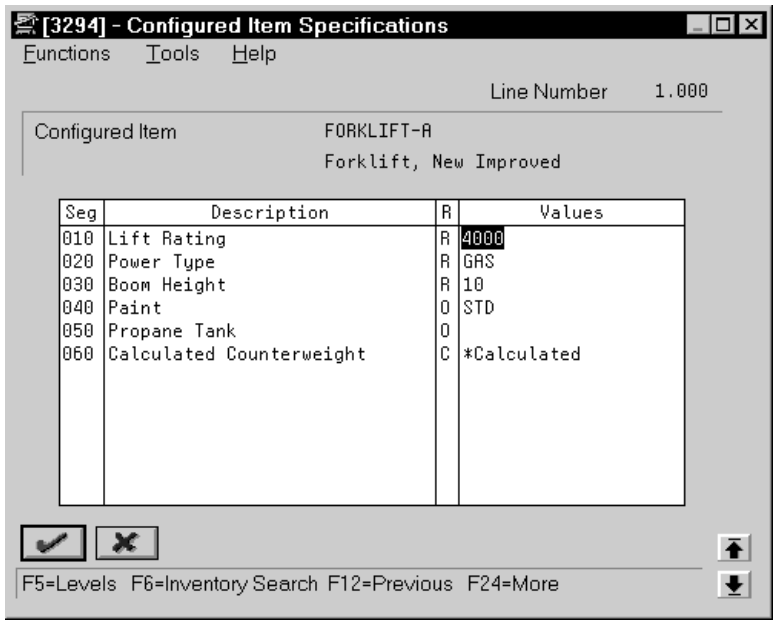
- Enter item and customer information
- Enter a previously ordered configured item (optional)

▶ To enter item and customer information

On Sales Order Entry

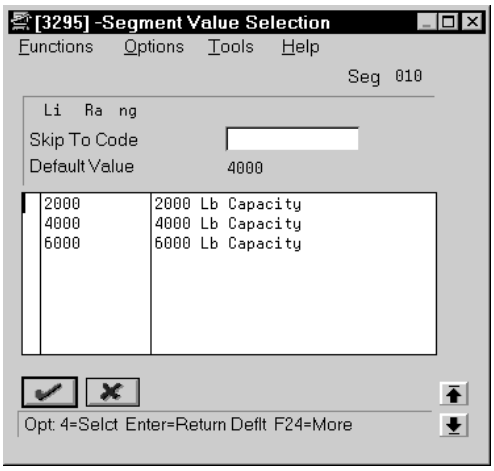


1. Complete the following required fields:
   - Sold To
   - Branch/Plant
   - Quantity
   - Item
2. Access Configured Item Specifications.



3. Do one of the following:

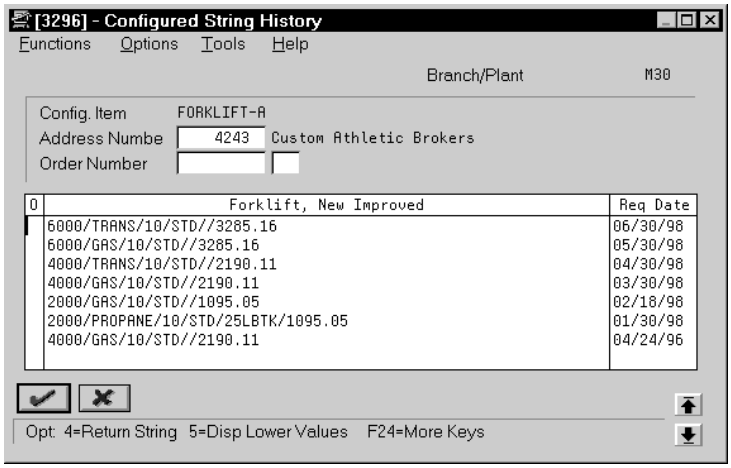
- To accept the default values, press Enter.
- To select a segment value, access Segment Values Selection for a specific segment and select a value.



4. Repeat step 3 for the remaining lower level configured items.

▶ To enter a previously ordered configured item

1. Access Configured String History.



2. On Configured String History, choose configured string.
3. Revise the string as necessary and press Enter.

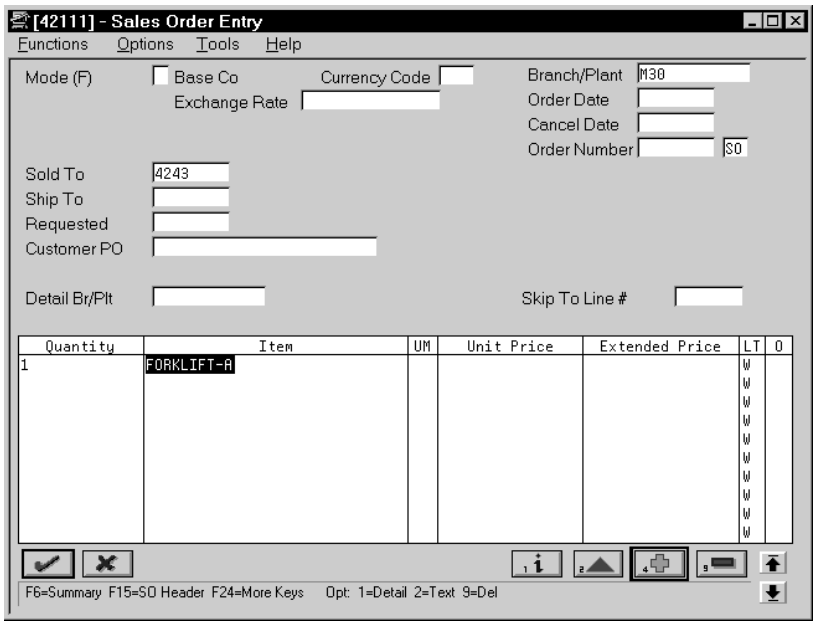
Entering a Sales Order in Assisted Prompt Mode

Complete the following tasks:

- Enter item and customer information
- Enter a previously ordered configured item (optional)

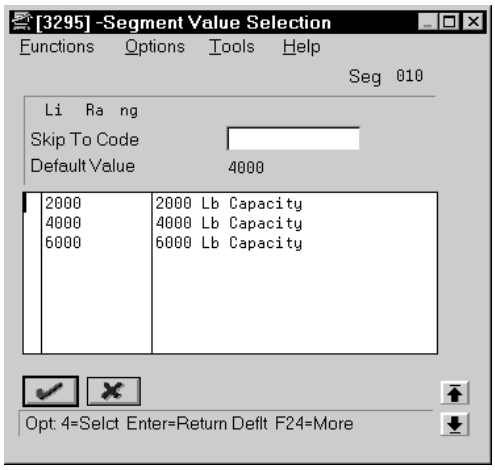
▶ To enter item and customer information

On Enter/Change Sales Order

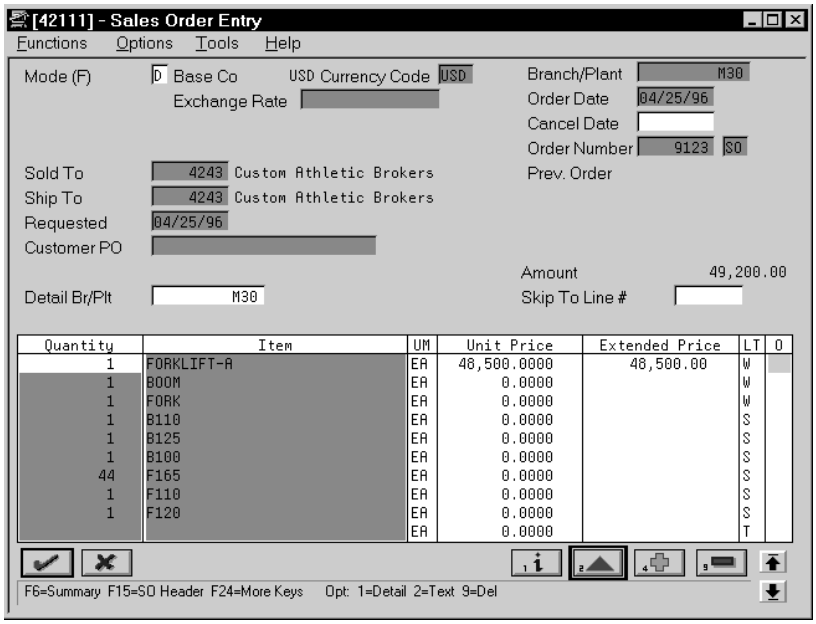


1. Complete the following required fields:
   - Sold To
   - Branch/Plant
   - Quantity
   - Item

   The system prompts you to enter segment values.



2. On Segment Value Selection, do one of the following:
   - Select a value from the list
   - Press Enter to accept the default value
3. Repeat step 2 for the remaining segments and lower level items.
4. To process the sales order, press Enter.
5. On Sales Order Entry, locate the sales order to display the individual line items.



Working with Error Messages

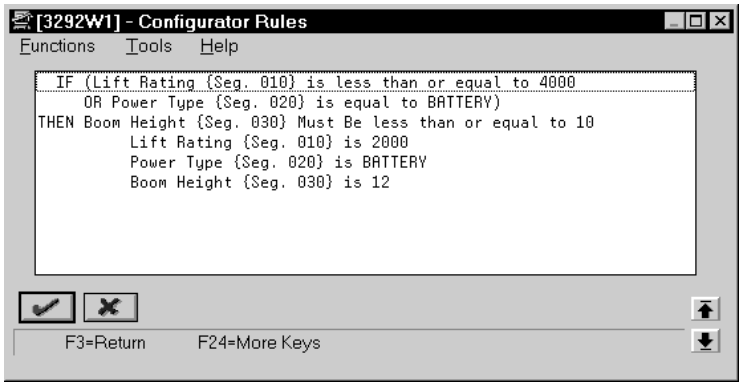
During sales order entry, the system checks the values that you enter against the cross-segment editing rules and configured item segments. The system verifies that you have not entered any values that violate the editing rules. If a segment value violates an editing rule, the system displays either a hard or a soft error message.

Working with error messages consists of the following tasks:

- Work with hard error messages
- Work with soft error messages

▶ To work with hard error messages

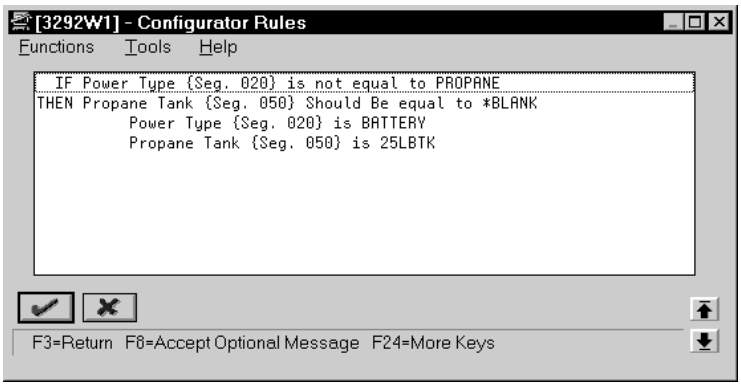
On Configurator Rules



1. Press F3 to return to Configured Item Specifications.
2. Select a different segment value.

▶ To work with soft error messages

On Configurator Rules



1. Do one of the following:
    - To change the segment value, return to Configured Item Specifications and select a different segment value.
    - To override the error message, choose the Accept Optional Message function.

See Also

- *Cross Segment Editing Rules (P3292)*

Working with Associated Text

You can use the Associated Text window to display the configured text. The configured text is defined on Configured Item Segments. Configured text can include:

- Configured parent item's part number
- Segment number
- Segment description
- Segment value
- Associated user defined code table value description

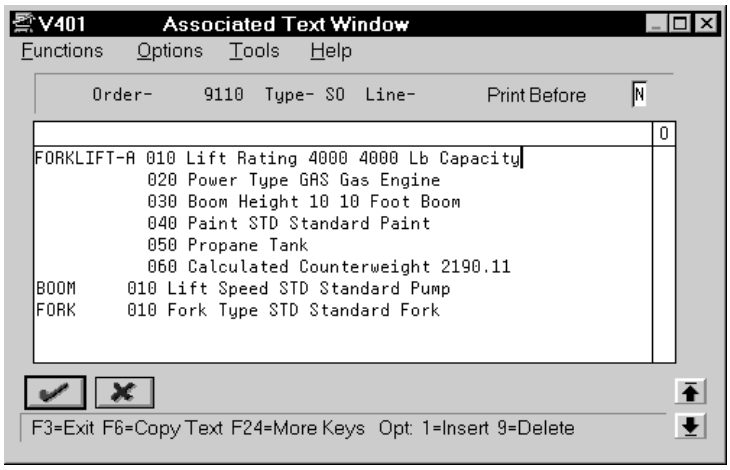
See Also

- For more information about working with associated text, see *Working With Associated Text (V401)* in the *Sales Order Management Guide.*

To work with associated text

On Sales Order Entry

1. Locate the sales order for the configured item.
2. Access Associated Text Window.



Revising a Sales Order for a Configured Item

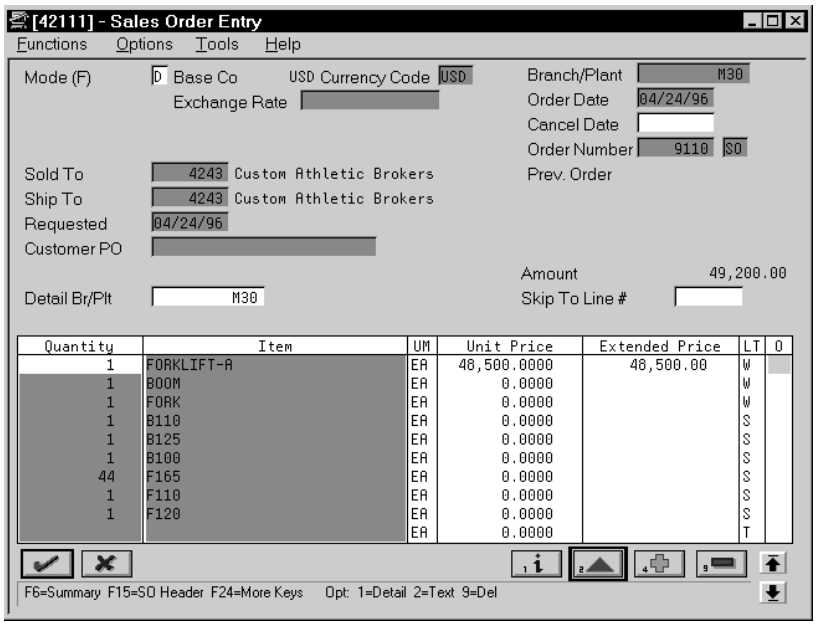
After you have entered a sales order, you can change the following information:

Quantity	Changes are reflected in the sales order and work order.
Segment value	Changes are reflected in the sales order and the work order.
Pick date	The system recalculates work order start dates based on leadtimes.

If you change the sales order after work has been started on the associated work order, the work order status will change, but the parts list and routing will not be affected. You can use constants to define the status beyond which changes will no longer affect the related work order. If the work order status is greater than or equal to the value set in Configurator Constants, the system will not reflect the changes on the work order.

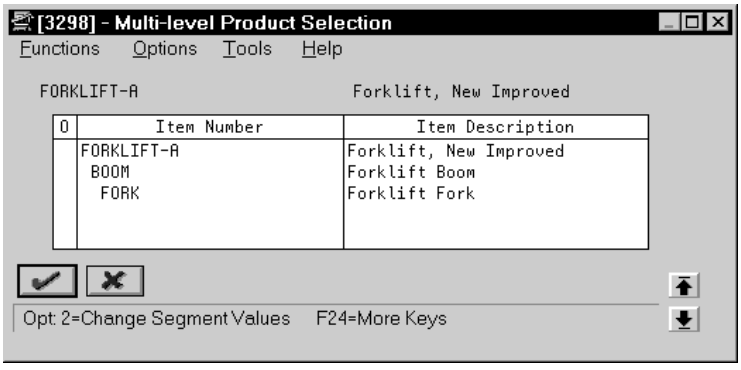
To revise the sales order

On Sales Order Entry

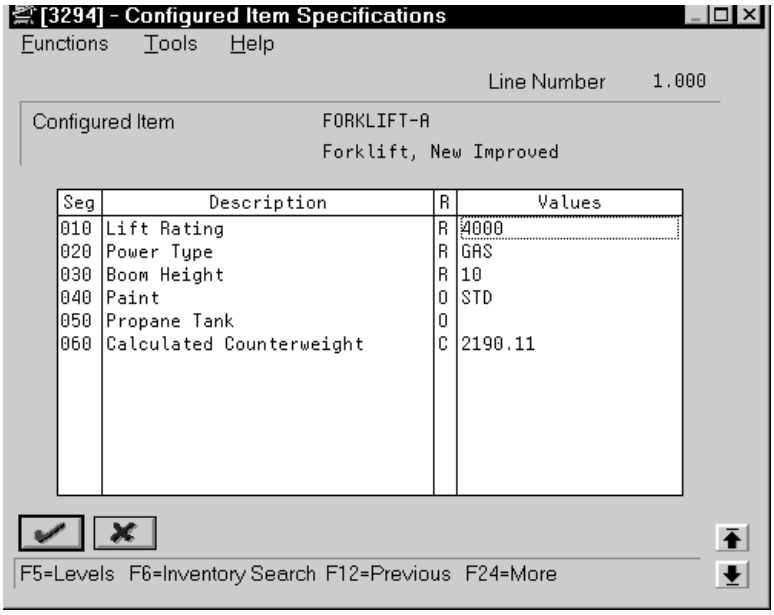


1. Locate the sales order for the configured item.
2. Choose the Configured Item Change Processing option.

On Multi-Level Product Selection



3. Choose the item that you need to revise.
4. Access Configured Item Specifications.



5. On Configured Item Specifications, change the segment value and press Enter.

   The Sales Order Entry form displays the changes.

What You Should Know About

Revising a sales order You can also revise a sales order by entering an asterisk in the Quantity field.

See Also

- *Setting up Constants (P3209)*

Converting Sales Quotes for Configured Items

You can enter a sales quote for a configured item and later convert the sales quote into a sales order.

Sales quotes are controlled by two Configuration Management constants. You must:

- Specify the type of sales quote to use to prevent work orders from being generated for quotes
- Set up quote costing based on manufacturing net added costing.

You enter a sales quote the same way as you enter a sales order, except that the document type is automatically set for sales quotes.

Before You Begin

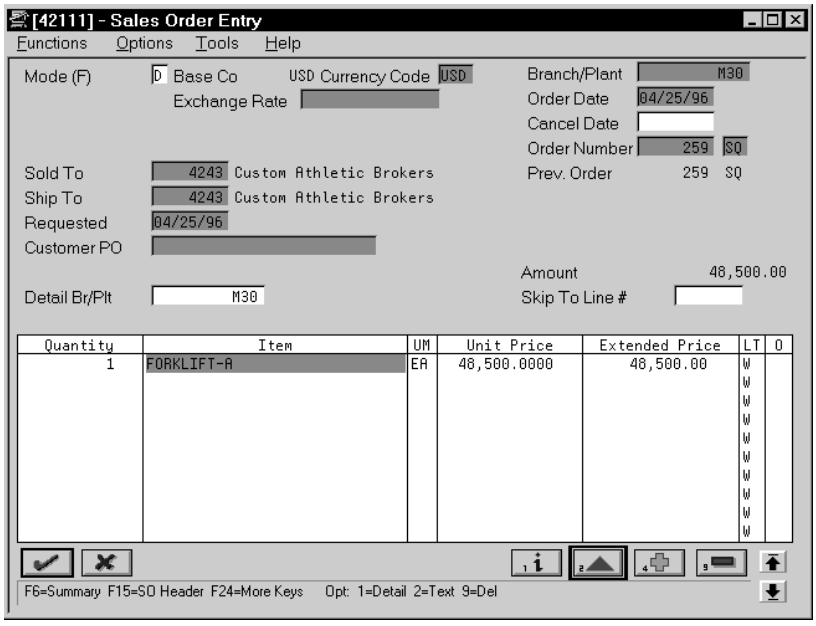
❑ Set the Configurator Constants for sales quotes

See Also

- *Setting up Constants (P3209)*

▶ To convert a sales quote into a sales order

On Enter/Change Sales Quote



1. Locate the sales quote.
2. Choose the Create/Duplicate a Sales order function.
3. Process the sales order.

Processing Options for Sales Order Entry – Detail

```
Sales Order Default Values:
  1. Document Type            (Required)   _____________
  2. Line Type                (Optional)   _____________
  3. Beginning Status         (Optional)   _____________
  4. Override Next Status     (Optional)   _____________
  5. Unit of Measure          (Optional)   _____________
  6. Line Number Increment    (Optional)   _____________
```

7. Reason Code (Optional) _____

Unit Of Measure Default Values:

8. Enter '1' to use the Pricing UOM as the default Transaction UOM. If left blank, the Primary UOM will be used instead. _____

Work Order Default Values:

9. Document Type (default is 'WO') _____
10. Beginning Status _____
11. Held Status _____
12. Cost Center _____
13. Change Status _____

Order Duplication Default Values:

14. Document Type _____
15. Beginning Status _____
16. Enter text duplication selection _____
    '1' to copy line text
    '2' to copy line and order text
    '3' to copy order text

Address Book Default Values:

17. Enter a '1' to default the branch from the Address Book. If left Blank, it will default from the user default location. _____
18. Enter a '1' to default the address lines when the address number is changed. If left blank, the current address will remain. _____

Download Header Information:

19. Enter '1' to automatically load header values to the detail lines after a change. If left blank, it must be done manually. _____

Prompting Control:

20. Enter the Screen Format: _____
    1 = Quantity, Item, Price
    2 = Quantity, Item, Description
    3 = Item, Quantity, Price
    (If left blank, format 1 is used.)

Enter a '1' to:

21. Display Headings first. _____
22. Be prompted to accept the order. _____

Note: Two-Cycle Order Entry Is Not recommended for configured items.

23. Allow the addition of a Customer Master record, if not set up. _____
24. Load Online Invoice information before the order is accepted. _____
25. Enter which Item Search screen is to be used to return items: _____

    1 = Item Search window allowing the return of multiple items
    2 = Full Item Search screen with Query capabilities

    (If left blank, the Item Search window allowing the return of a single item will be used.)

Order Hold Codes:

26. Customer Credit Checking _____
27. Order Margin Checking _____
28. Order Line Margin Checking _____
29. Order Minimum Value Checking _____
30. Order Maximum Value Checking _____
31. Partial Order Hold _____
32. Product Allocation Hold _____

Line Control Status:

33. Enter the next status code beyond which a detail line cannot be changed. If left blank, no restriction will be put on the changing of a line. _____

Field Display Control:

Enter '1' to protect or '2' to supress:

34. Cost Fields _____
35. Price Fields _____

Enter '1' to protect the following:

36. Status Codes _____
37. Price adjustment driver fields _____

Enter a '1' to suppress the following:

38. Closed Detail Lines _____
39. Credit Card Information _____
40. Freight and Carrier Information _____
41. Commission Information _____

Credit Order Processing:

42. Enter the status code to select when retrieving credit orders. _____
43. Enter '1' if the previous status is the last status. If left blank it will be the Next Status. _____

Cross Reference Information:

44. Enter the Cross Reference Type for:
    - Substitute Items _____
    - Associated Items _____
    - Replacement Items _____
45. Enter '1' to use the substitute item's Unit Price. If left blank, the original item's price will be used to order the substitutes. _____

Kit Processing:

46. Enter '1' to prevent Kit Components from being written. If left blank, they will be added to the sales detail file. _____
47. Enter '1' to suppress Kit Component lines. _____
48. Enter the version of Kit Inquiry to call. If left blank, version ZJDE0001 will be called. _____
49. Enter '1' to suppress availability information in the Kit Window. _____

Availabilty Checking:

50. Enter '1' to be notified of an automatic backorder or cancel. _____

Enter ’2’ to be notified but not create the backorder or cancel.
Enter ’3’ to create the backorder or cancel automatically and update the order without issuing the warning.

If left blank, no availability checking will be done.

Commitment Control

51. Enter ’1’ for commitment to Other Quantity 1 or ’2’ for commitment to Other Quantity 2. This option is typically used in conjunction with a Blanket or Quote Order. If this option is used, the commitment preference will be ignored. _____

Automatic Processing:

52. Enter ’1’ to automatically display the Supply and Demand screen when a new sales detail line is backordered. _____

53. Enter ’1’ to print pick slips or a ’2’ to print invoices through the subsystem. Enter ’3’ for on-line commitment or a ’4’ for subsystem commitment. _____

54. Enter ’1’ for auto order repricing _____

Dream Writer Versions:

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

55. Pick Slip Print (P42520) _____
56. Supply and Demand (P4021) _____
57. Std Order/Basket Reprice (P421301) _____
or Adv Order/Basket Reprice (P42750)
58. Customer Service (P42045) _____
59. Online Invoice (P42230) _____
60. Preference Profile (P40400) _____
61. Check Price (Advanced) (P40721) _____
62. Customer Master (P01053) _____
63. SMS Rate & Route server PSMR9100 _____

Configurator Processing:

64. Enter one of the following for the mode of Specification Entry. If left blank, ’2’ will be used:
’1’ = Text Mode
’2’ = Assisted Mode
’3’ = Assisted Prompt Mode _____

Transfer Price Update:

65. Enter the order type(s) that the system will use to invoke inter-branch updates. To specify more than one order type, type them one after the other along this field. _____

66. Enter the transfer pricing method _____

to be used. Default method is 1.
1 = Branch cost mark-up
2 = Transfer pricing

67. Enter '1' to allow inter-branch invoicing. If left blank, no inter-branch invoice can be run. _____

Warehouse Processing:

68. Enter the request processing mode: _____
' ' = No pick requests
'1' = Generate requests only
'2' = Generate requests and process using the subsystem

69. If processing pick requests using the subsystem, enter the DREAM Writer version to use. If blank, XJDE0002 is used. (See Form ID P46171.) _____

70. Enter an override next status for sales order lines for which requests have been generated. _____

Order Template Processing:

71. Enter a '1' to use the Sold-to address number for order templates, or a '2' to use the Ship-to address number. If left blank, no automatic order template processing will be performed. _____

Blanket/Quote Processing:

72. Enter a '1' for automatic access to the blanket/quote release processing. If left blank, no automatic blanket/quote release processing will be performed. _____

Preference Profile Processing:

73. Enter a '1' to use preference profile defaults. If left blank, no preference profile information will be defaulted. _____

74. Enter a '1' to use the Inventory Commitment Preference to source from multiple branches or to view grade or potent items in the commitment window. _____

Currency Processing:

75. Enter the tolerance limit percentage to warn you of currency rate changes. A 15.0 indicates a warning if the rate is 15 percent greater or less than the current rate. _____

Exercises

See the exercises for this chapter.

Configured Items

Configured Items

Objectives

- To create a work order for a configured item
- To process a configured item's work order

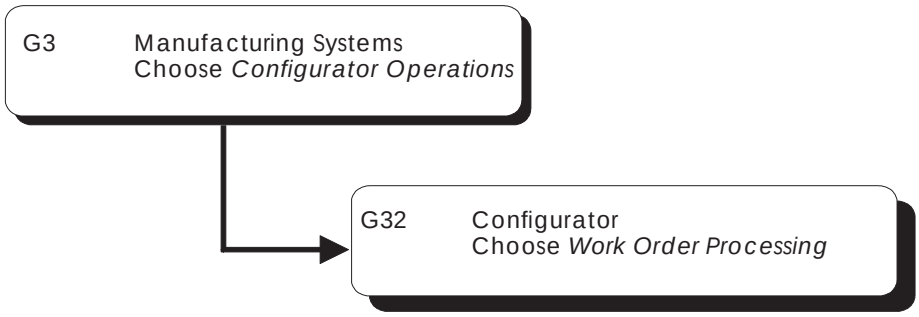
About Configured Items

After you enter configured item information during sales order entry, you can work with configured items in other programs within J.D. Edwards Manufacturing and Distribution systems.

Configured items consists of the following:

- ❑ Processing work orders (required)
- ❑ Working with configured string history
- ❑ Understanding configured items in Manufacturing systems
- ❑ Understanding configured items in Distribution systems

Process Work Orders



Processing Work Orders

After you have entered configured item sales orders and have created work order headers, you must run the Work Order Generation program to perform the following:

- Generate the work order parts list from the sales order and P type assembly inclusion rules
- Include additional parts on the work order from Q type assembly inclusion rules
- Calculate standard cost
- Create the work order routing instructions from the R type assembly inclusion rules.
- Commit inventory
- Back-schedule configured routings

You can use either subsystem or batch processing of the Work Order Generation program. Batch processing occurs when you run the program. Subsystem processing occurs in near real time at sales order entry. However subsystem processing does not produce shop floor paperwork. Subsystem processing is appropriate for new sales orders, not for sales order changes.

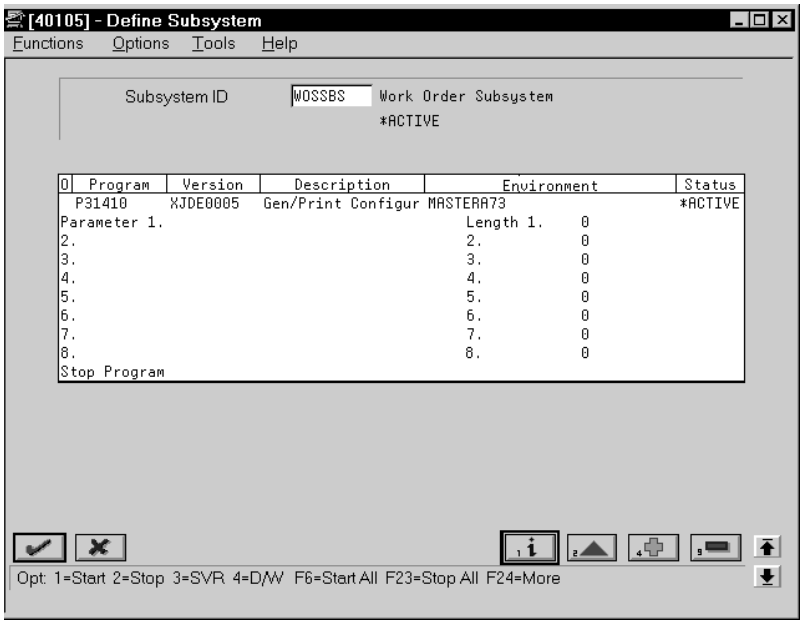
For both batch and subsystem processing of Work Order Generation, the DREAM Writer sort sequence must be descending by work order number.

Before You Begin

- ❑ Set Configurator Constants for branch or subsystem processing
- ❑ Set processing options for the Work Order Generation program for configured item processing

▶ To process work orders with the subsystem

On Define Subsystem



Complete the following field:

- Option

What You Should Know About

Reprocessing a work order	You can run the Work Order Generation program again to reattach the parts list and routing to a configured item.
Recosting a work order	You can change a work order's parts list and routing and run Work Order Generation again to recost the work order. However, this process eliminates the planned variance for the work order.

Revising the sales order If you change the sales order after work has been started on the work order, the work order status will change, but the parts list and routing are not affected. Use Configurator Constants to define the status beyond which changes will no longer affect the related work order other than a change in status.

Calculating leadtimes Work Order Generation calculates each operation's start and end dates and the work order's start date. Work Order Generation back scheduling uses fixed or variable leadtimes that you have define on Item Location for the work order start date. Because variable leadtimes depend on how the item is configured, you must enter leadtimes manually on Item Location.

Updating standard costs Work Order Generation determines a configured item's standard cost from the configured parts list and routing and stores the costs in the Work Order Variance table. This standard cost is also updated to the associated sales order detail line.

Updating sales orders Use a processing option to control updating the related sales order detail line status.

Starting the subsystem You can also choose the Start Subsystem menu option.

Stopping the subsystem You can also choose the Stop Subsystem menu option.

See Also

- *Working with the Subsystem (P40105)* in the *Sales Order Management Guide*
- *Processing Work Orders (P31410)* in the *Shop Floor Control Guide*

Processing Options for Work Order Generation

```
Generation Information:
 1. Enter one of the following:                          _____
      1 – Parts List only
      2 – Routing only
      3 – Both Parts List and Routing
    If left blank, neither Parts List
    nor Routing will be generated.
 2. Enter a '1' to use the W.O. Date                     _____
    for Effectivity checking.  (Default
    is the W.O. Start Date.)

Update Information:
 3. Enter the new Status Code for the                    _____
```

Work Order Header. If left blank, status will not be changed.

Work Order Print Information:

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

Parts List Print Information:

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

Routing Instructions Print Info:

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

Backscheduling Information:

13. Enter the Unit of Measure for backscheduling. _____

Shop Packet Summary Information:

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

Shortage Report Information:

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

Bar Code Information:

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

Inventory Issue Information:

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

Purchase Order Information:

(Used for Sub-Contract Routings)

18. Enter the Document Type _____
19. Enter the Line Type _____
20. Enter the Beginning Status _____
21. Enter a '1' to default the tax area from the 'Ship-To' address book _____

number. If left blank, the tax area will default from the Supplier address book number.

Sales Order Information:

22. Enter the new Line Type for kit and configured components. This is used to avoid issuing inventory from Sales Order processing. The Line Type used should be inventory interface 'N'. If left blank, Line Type will not be changed. _____

23. Enter the Next Status for Sales Order kit and configured component lines. (This is used to bypass the normal flow of the order, i.e., Pick Slip.) If left blank, status will not be changed. _____

24. Enter a '1' to print Sales Order Text lines. _____

Configured Item Costs:

25. Enter one of the following options for calculating the standard cost for configured items in the WO Variance file (F3102). _____
    - 1 – Always calculate the standard cost.
    - 2 – Only calculate the standard cost if it has not already been done (no variance records exist.)

    If left blank, standard cost will not be calculated.

Bom Substitutes:

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

Purchasing Journal Entries:

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

Blanket/Quote Processing:

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

Build Against Prior Revisions:

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

Warehouse Processing:

30. Enter the request processing mode: _____
    - 1 – Generate requests only
    - 2 – Generate requests and process using the subsystem.

If left blank, requests will not be generated.

31. If processing pick requests using the subsystem, enter the DREAM Writer version to use. If left blank, XJDE0002 will be used. (see Form ID P46171) _____

32. Enter the default staging location for moving goods out of the warehouse. The parts picked from the warehouse are staged at this location prior to use within manufacturing. (F1=Location Window) _____

33. Enter a '1' if the default staging location should be checked for availability. If the part is available at the staging location a request will NOT be generated. This option only applies to parts without work center locations. _____

Quality Management Options:

34. Enter a '1' to attach the Work Order/Routing tests. _____

Generic Text Print Options:

35. Enter a '1' to print component generic text on the Parts List. _____

36. Enter a '1' to print operation generic text on the Routing. _____

Processing Options for Subsystem Maintenance

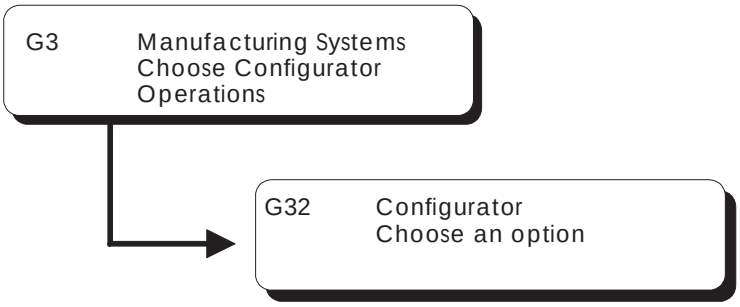
Default Information:

1. Enter the default subsystem name: _____

Exercises

See the exercises for this chapter.

Working with Configured String History



Working with Configured String History

You can generate an additional history of all configured strings that customers order. Review this history by customer and item to analyze sales.

Working with configured string history consists of the following tasks:

- ❑ Generating the history
- ❑ Reviewing the history

Generating the Configured String History

For the sales orders you select, the Create Segment Value History program:

- Retrieves the configured string from the Configured String History table (F3294)
- Separates the string
- Generates a record for each segment value
- Stores the information in the Configured String Segments table (F32942)

You can use this history information to generate custom reports and inquiries.

The system does not generate the Configured String History table (F3295) automatically. You should run the Create Segment Value History program before you can review the history.

Reviewing the Configured String History

You can review the configured string history to locate previously ordered configurations at any level of a configured item. The history includes information about customers, orders, price, and cost. You don't have to generate the string history for this review.

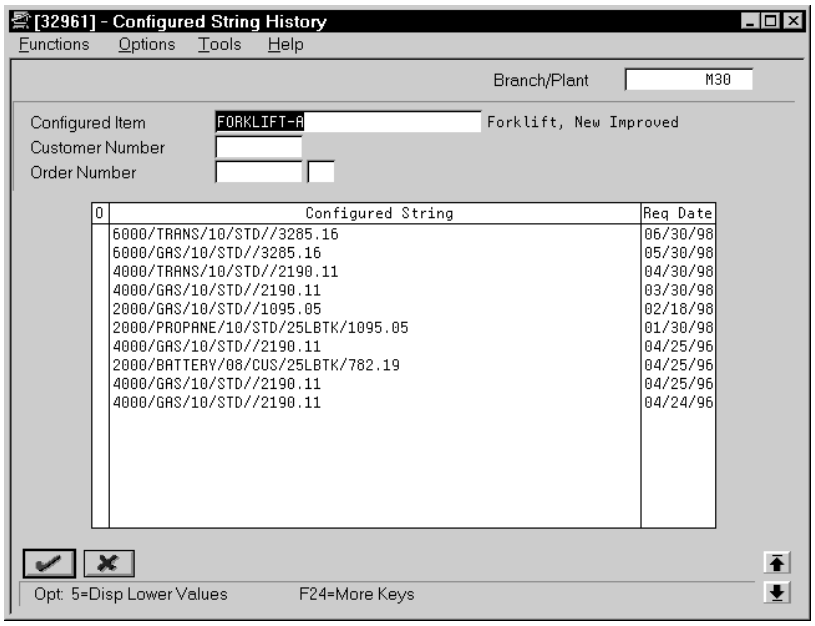
You can also view this information during sales order entry, where you can select from previously ordered configured items to enter on the current sales order.

See Also

- *Working with Configured Item Sales Orders (P4211)*

▶ To review configured string history

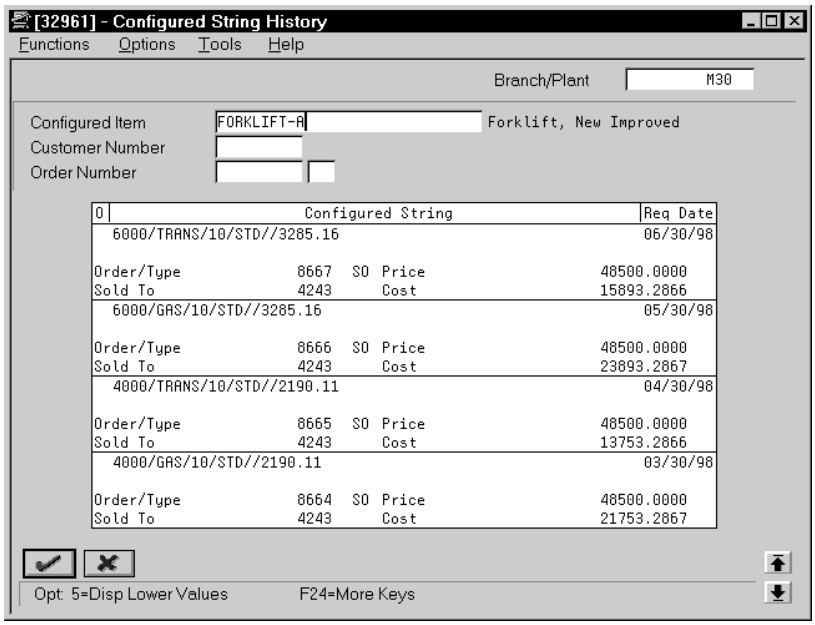
On Configured String History



1. Complete the following fields:
   - Branch Plant
   - Configured Item
   - Order Type
2. Complete the following optional fields:
   - Customer Number

- Order Number

3. Access the fold area to display price and cost information in the following fields:
   - Order
   - Type
   - Price
   - Sold To
   - Cost



Field	Explanation
Address Number	A number that identifies an entry in the Address Book system. Use this number to identify employees, applicants, participants, customers, suppliers, tenants, special mailing addresses, and so on.
Document (Order No., Invoice, and so on)	The number that identifies an original document. This can be a voucher, an invoice, unapplied cash, a journal entry number, and so on.

Field	Explanation
Order Type	A user defined code (system 00/type DT) that identifies the type of document. This code also indicates the origin of the transaction. J.D. Edwards has reserved document type codes for vouchers, invoices, receipts, and time sheets, which create automatic offset entries during the post program. (These entries are not self-balancing when you originally enter them.) The following document types are defined by J.D. Edwards and should not be changed: P Accounts Payable Documents R Accounts Receivable Documents T Payroll Documents I Inventory Documents O Order Processing Documents J General Accounting/Joint Interest Billing Documents
Configured String	This field stores the configured string as it was input on the related sales order.
Date – Requested	The date that an item is to arrive or that an action is to be complete.

Understand Configured Items and Manufacturing

About Configured Items and Manufacturing

After you have entered a configured item sales order, use programs in the Manufacturing system to monitor production of the configured item within the Shop Floor Control and Manufacturing and Distribution Planning systems.

This includes the following:

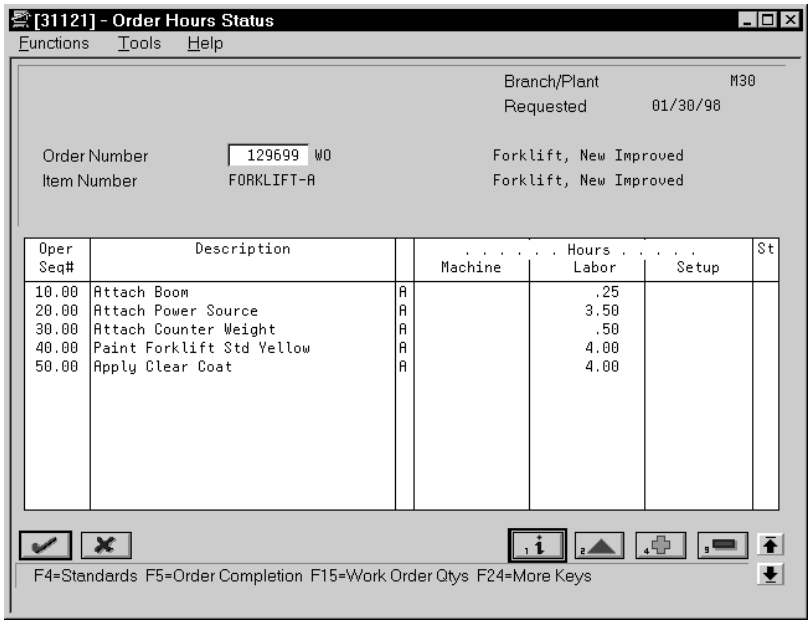
- Reviewing hours
- Reviewing quantities
- Working with Manufacturing Accounting
- Working with Product Costing
- Working with work order completions

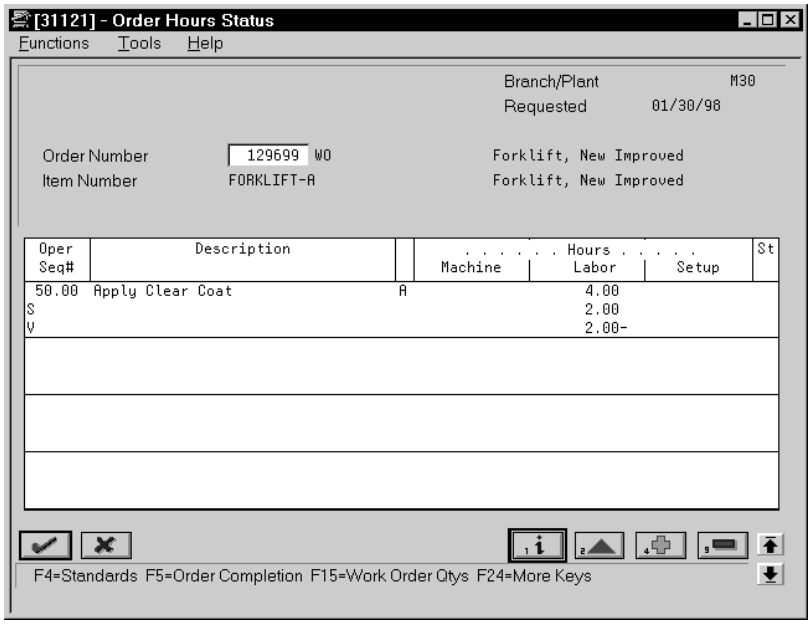
Reviewing Hours

As production continues on a configured item's work order, you must record the hours spent on production and the number of items completed in that time. This allows you to monitor progress and costs and compare them against the standard hours and quantities that you estimated for the job.

After you enter hours and quantities, either manually or through payroll time entry, you can review and revise them before you post them to the Manufacturing system for further tracking and cost accounting.

Example: Reviewing Hours





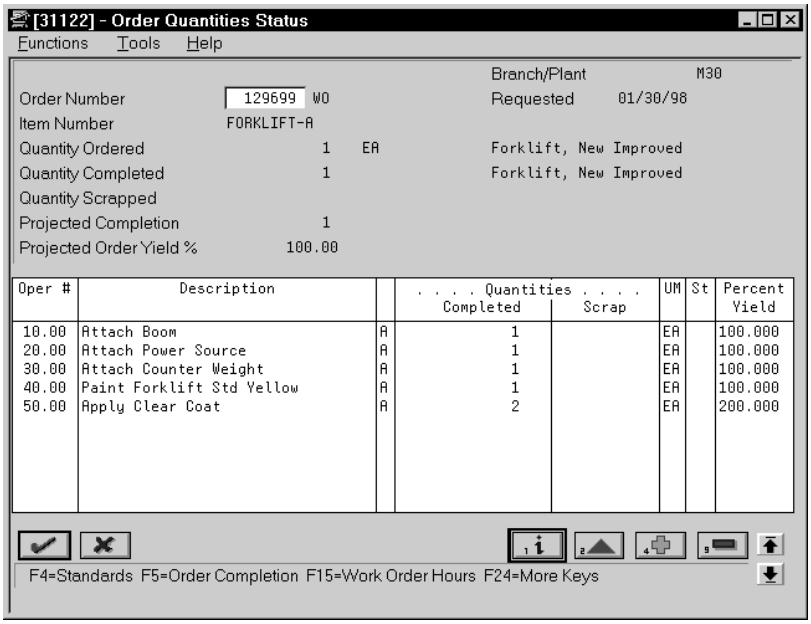
See Also

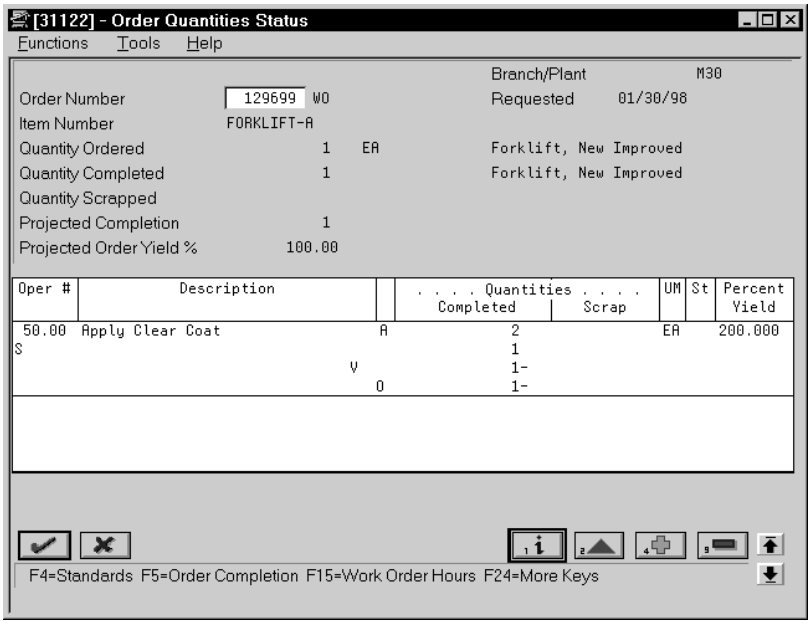
- *Reviewing the Status of Hours (P31121)* in the *Shop Floor Control Guide*

Reviewing Quantities

You can display the quantities entered against the operations scheduled for a configured item's work order, including the actual quantity ordered, completed, and scrapped for each operation. You can also view the standard and variance values, along with the status code, which can be updated for the operation.

Example: Reviewing Quantities





See Also

- *Reviewing the Status of Quantities (P31122)* in the *Shop Floor Control Guide*

Working With Manufacturing Accounting

As you manufacture configured items, no engineering variance exists because there is no standard bill of material or routing for the configured item. The Work Order Processing program calculates the configuration-specific costs. These costs are the accumulation of the components' standard costs, the labor and overhead values defined with manufacturing constants, and the attached routing, work center information, and work order values.

The system stores the configuration-specific costs in the Work Order Variance table (F3104) and uses these costs for related Manufacturing Accounting transactions.

See Also

- *Understand Configured Items* in the *Product Costing and Manufacturing Accounting Guide*

Working with Product Costing

Costing for configured items is different from costing for non-configured items, because configured items do not have a standard bill of material or routing. Configured item costing is based on the features and options selected during sales order entry. The costs are unique to the configuration.

The Process Work Orders program performs a cost rollup when it attaches a parts list and routing to a work order for a configured item. A processing option instructs the program to calculate the costs. The system stores the costs in the Work Order Variance table.

The Work Order Processing program calculates frozen standard costs for the configured item. This program also updates the unit and extended costs for the associated sales order.

The Product Costing system does not support transfer orders for configured items.

See Also

- *Understanding Configured Items* in the *Product Costing and Manufacturing Accounting Guide*

Working with Work Order Completions

The Work Order Completions program uses the information entered in the Shop Floor Control system to create general ledger journal entries. Shop Floor Control creates no interactive journal entries, all journal entries are processed in batch.

For configured items, the system populates new locations with standard costs from the Work Order Variance table so transactions in the Distribution system use the correct costs. The Work Order Completions program will hard commit the associated sales order and update the sales order's lot and location information.

See Also

- *Creating Journal Entries (P1802)* in the *Shop Floor Control Guide*

Exercises

See the exercises for this chapter.

Understand Configured Items and Distribution

About Configured Items and Distribution

After you have entered a sales order and generated work orders for a configured item, use the following programs in the Distribution system to complete the sales order processing cycle:

- Enter Sales Orders
- Print Pick Slips
- Shipment Confirmation
- Print Invoices
- Print Invoice Journal
- Print G/L Sales Recap
- Update A/R and G/L

Working with Configured Item Inventory

The Configuration Management system enables you to stock configured items. For stocked configured items, you can use programs within the Distribution system to:

- Review configured strings.
- Review configuration-specific costing information.
- Check availability for configured end items. You can search for segments or for an exact configured string match.
- Select a stocked configured item during sales order entry. The system hard commits the item, does not generate a work order, and uses costs in the Branch/Plant Costs table.
- Perform inventory transactions, such as:
    - Simple issues
    - Transfers
    - Adjustments

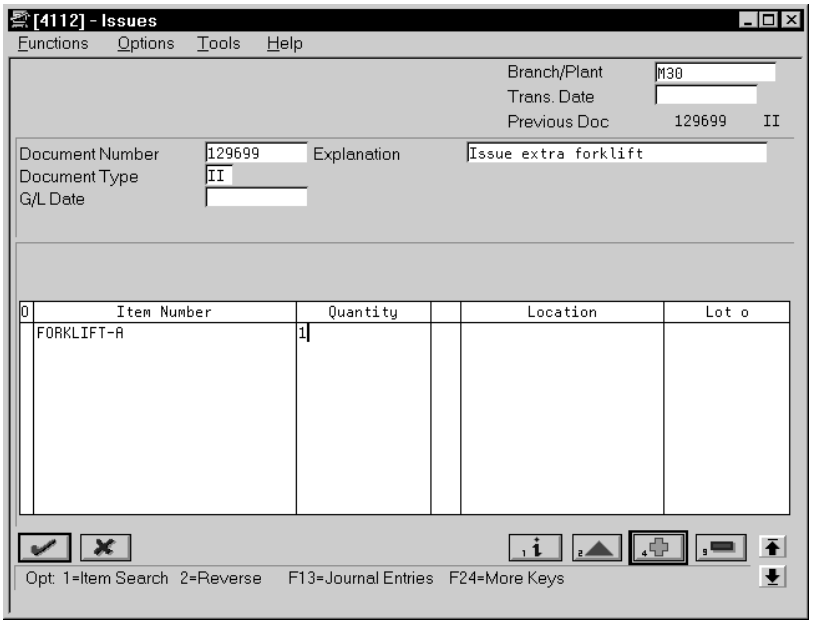
The Inventory Management system does not support reclassifications of configured items

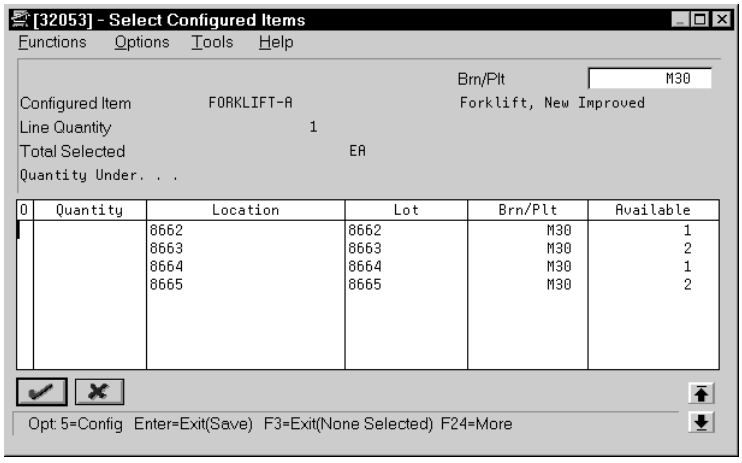
See Also

- *Issuing Inventory (P4112)* in the *Inventory Management Guide*
- *Transferring Inventory (P4113)* in the *Inventory Management Guide*
- *Adjusting Inventory (P4114)* in the *Inventory Management Guide*

Example: Issues

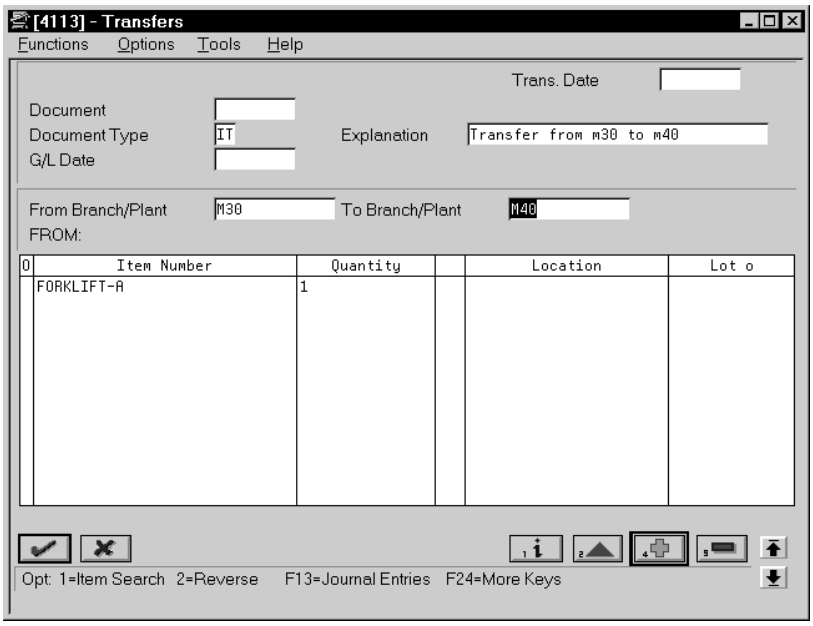
You can perform simple issues on quantities of configured items from locations.

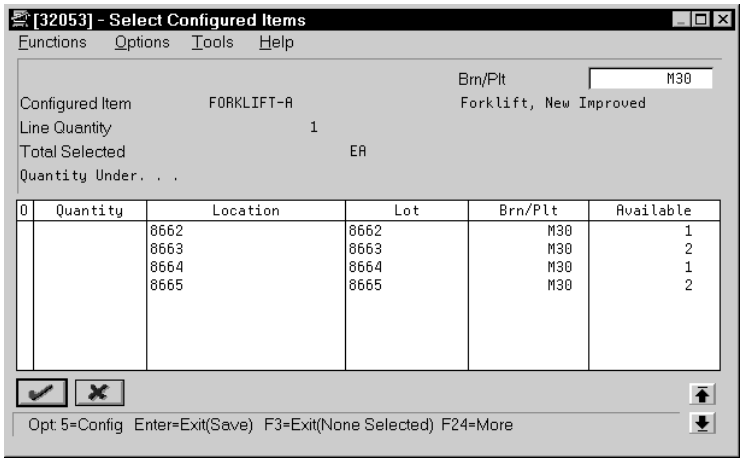




Example: Transfers

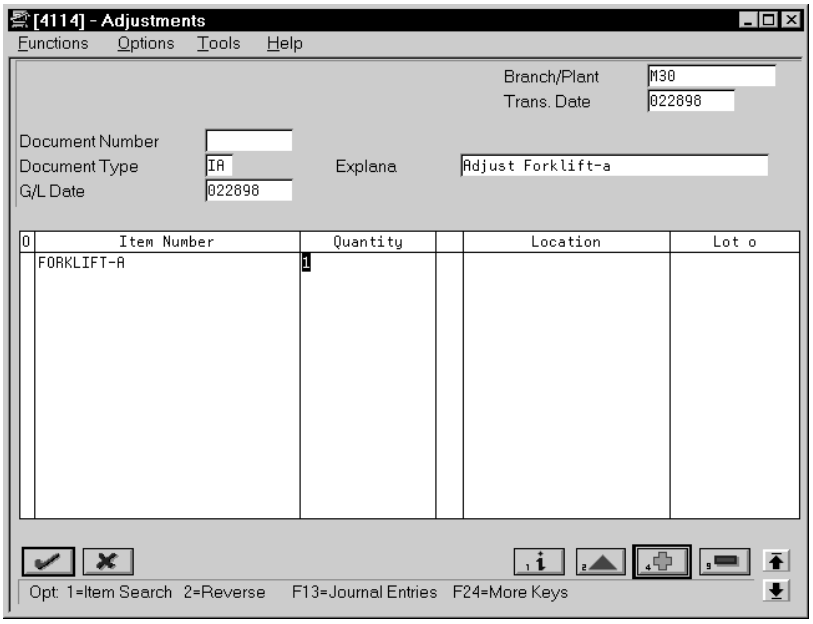
You can transfer configured items form one location to another.

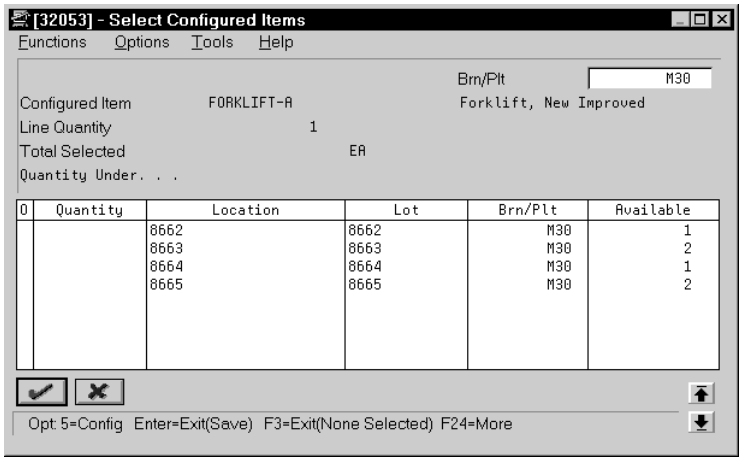




Example: Adjustments

You can adjust quantities for configured items in a specific location. Configuration Management supports adjustments for locations with existing inventory and adjustments from zero quantity. Adjustments from zero quantity must be for a configured item that has been previously ordered.





Checking Availability

Use new function keys and options from the Summary and Detailed Availability forms to display the configured item segments.

Checking Availability During Sales Order Entry

To check availability during sales order entry, you must set the Check Availability field to Y in Configurator Constants. During sales order entry, if the system finds the exact item and string match, a window displays all locations containing the specific configuration. You can display segment values for all levels of the configured item and select an item used on the sales order. However, no component availablility checking is performed.

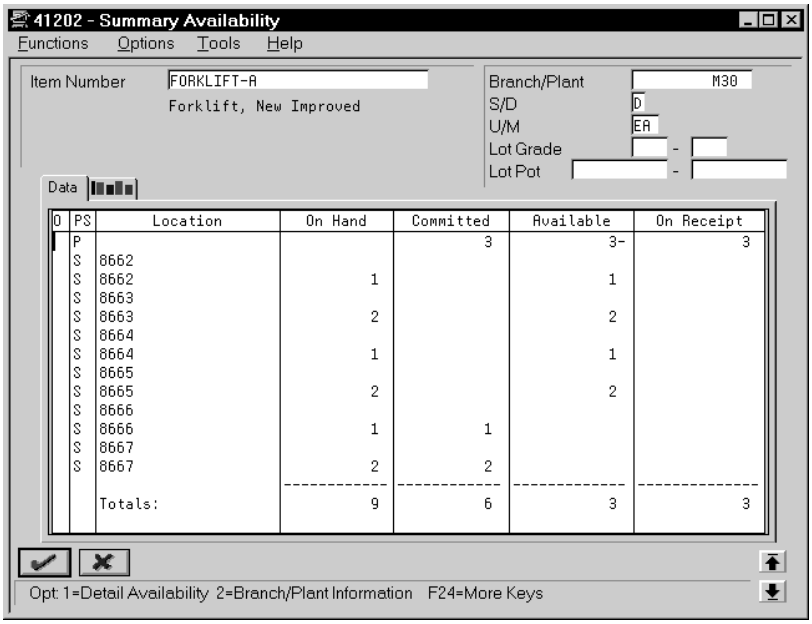
The system does not allow line splitting if the quantity ordered and the quantity selected is different.

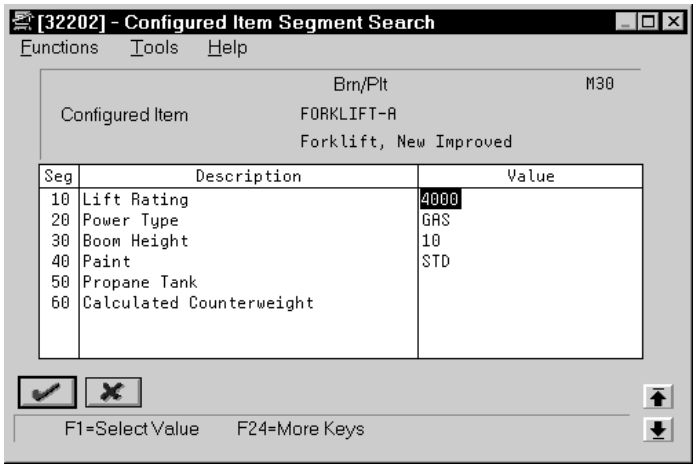
See Also

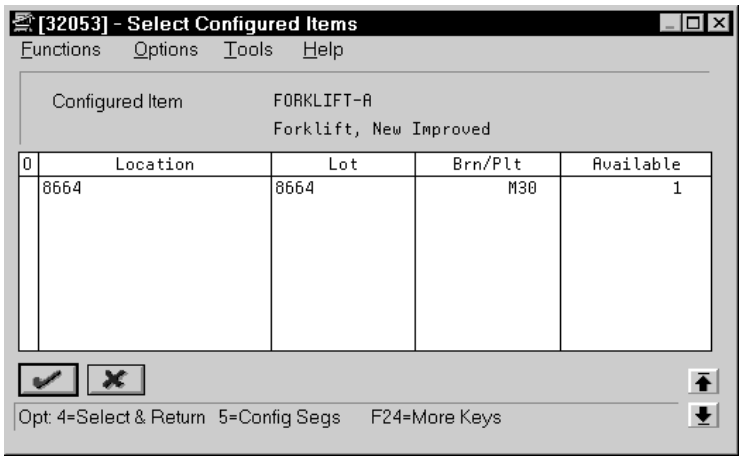
- *Working with Configured Item Sales Orders (P4211)*
- *Locating Summary Quantity Information (P41202)* in the *Sales Order Management Guide*
- *Locating Detailed Quantity Information (P41023)* in the *Sales Order Management Guide*
- *Reviewing Sales Orders (P42045)* in the *Sales Order Management Guide*

Example: Summary Availability

You can use Summary Availability to display inventory locations containing stock for a configured item. Review information such as on-hand, committed, and available quantities for each location.

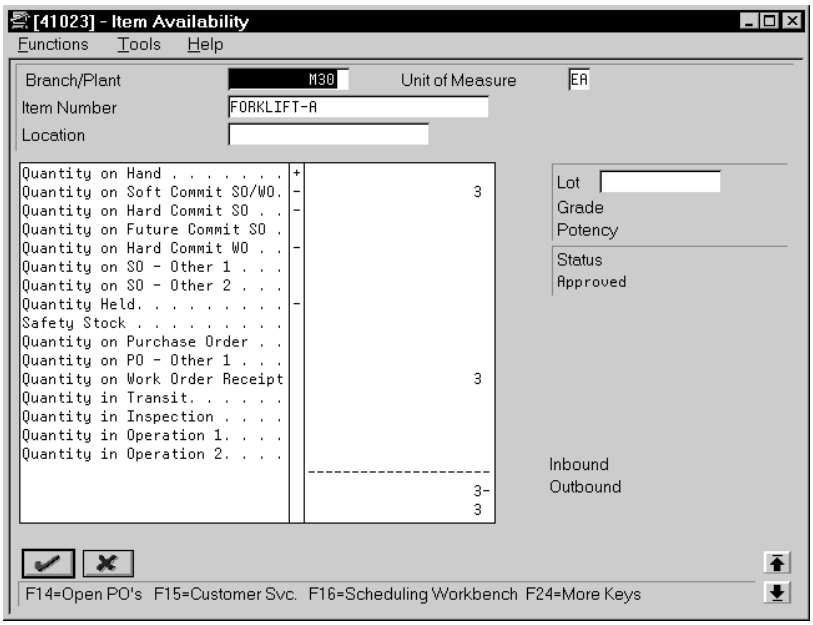






Example: Detailed Availability

You can use Detailed Availability to review the status of configured items in a specific location. Review information such as on-hand quantity of a configured item and related commitments against that quantity.

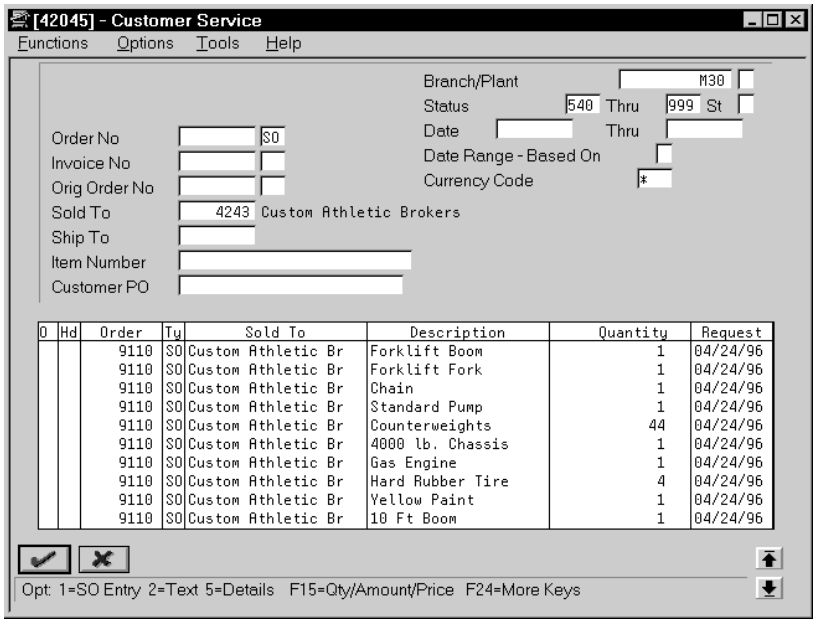


Example: Reviewing Customer Service Information

Review customer service information to:

- Locate current sales order information from the Sales Detail and the Sales Detail History File tables
- Provide information at the sales order, customer, and item levels
- Change associated text for the sales order line

- Display configuration-specific information



Working with Pick Lists

After you have generated sales and work orders for configured items, use the Print Pick Slip program to print pick lists. Pick lists include the following information:

- Order quantities picked and moved to the staging or shipping area of the warehouse
- Price by line item basis and for the order as a whole, useful for COD (cash on delivery) deliveries
- Driver's signature line
- Customer signature line, useful for verifying delivery

Example: Pick Lists

J.D. Edwards & Company — Page – 1

Pick Slip #. . 12277 — P I C K S L I P — Date – 4/16/96

Customer No – 4243
Ship To No – 4243
Order Number – 5290–000 SO
Related P.O. –
Brn/Plt – M30

Sold To: Custom Athletic Brokers
53104 Peachtree Lane
Atlanta GA 30439

Ship To: Custom Athletic Brokers
53104 Peachtree Lane
Atlanta GA 30439

Ord Date	Promised	Customer P.O.	F.O.B.	Ship
03/01/98	03/15/98		.	Inst

Description	Item Number/Location, Lot	Line	Shipped	Backorder	UM	Price	Extended Amount
Forklift	FORKLIFT	1.000	1		EA	48,500.0000	48,500.00
			Related Order .	13913	Per EA		
*Forklift Boom	BOOM	1.010	1		EA	0.0000	
			Related Order .	13911	Per EA		
*Forklift Fork	FORK	1.020	1		EA	0.0000	
			Related Order .	13912	Per EA		
Cross Member	R115	1.030	1		EA	0.0000	
					Per EA		
Standard Blade	R100	1.040	2		EA	0.0000	
					Per EA		
Chain	B125	1.060	1		EA	0.0000	
					Per EA		
Standard Pump	B100	1.070	1		EA	0.0000	
					Per EA		
Counterweights	F165	1.080	17		EA	0.0000	
					Per EA		
2000 lb. Chassis	F105	1.090	1		EA	0.0000	
					Per EA		
Battery Drive Unit	F130	1.100	1		EA	0.0000	
					Per EA		
Hard Rubber Tire	F175	1.110	4		EA	0.0000	
					Per EA		
Yellow Paint	F150	1.120	1		EA	0.0000	
					Per EA		
8 Ft Boom	F135	1.130	1		EA	0.0000	
					Per EA		
Freight Charge		1.140	1		EA	500.0000	500.00
					Per EA		
Dealer Prep		1.150	1		EA	200.0000	200.00
					Per EA		

Driver Signature	Customer Signature	Shippable Weight	**Final**	Sales Tax	Total Order
			Tax Rt		49,200.00

See Also

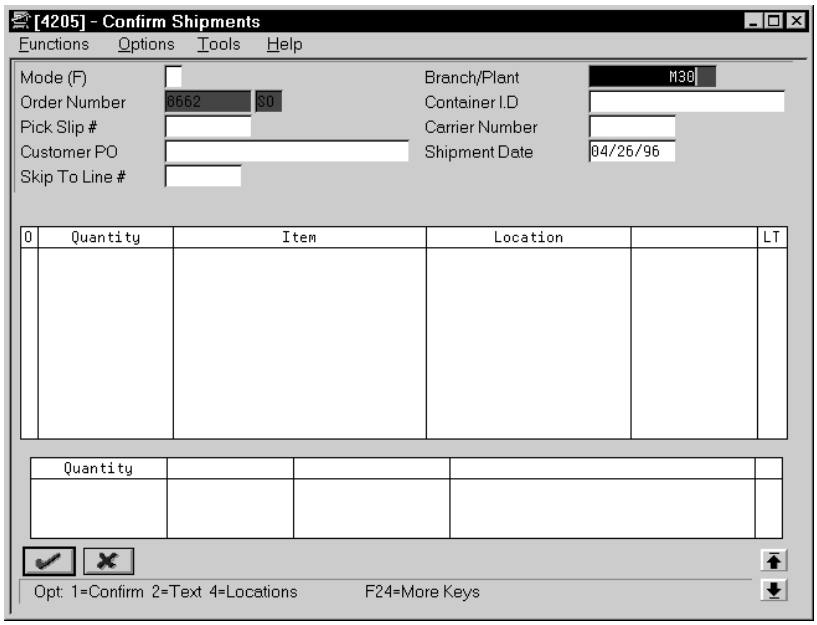
- *Working With Picking Documents (P42520)* in the *Sales Order Management Guide*

Working with Shipments

The Configuration Management system supports partial shipments of configured items through line splitting. However the system does not allow you to backorder a configured item.

Using the Ship Confirm program to:

- Locate existing order information
- Add additional line items (non–inventory items only)
- Change the shipped, backorder, and cancel quantities
- Specify a container ID, carrier code, and/or shipment date for each line item
- Override the Ship To Address
- Ship from other or multiple locations
- Adjust inventory (on-hand or hard commits)
- Confirm shipment
- Record serial numbers for shipped items
- Display the Freight/Additional Charges Revisions program



See Also

- *Working With Shipments (P4205)* in the *Sales Order Management Guide*

Working with Invoices

Use the Print Invoices program to print sales order invoices. You can print invoices in proof mode, review them, and then print the invoices and update the files. You can also print invoices in draft mode to review the invoice before updating it. In addition, you can print an invoice from history.

Example: Invoice

```
                                        J.D. Edwards & Company                    Page Number–            1

                                                                                  Date       –     04/16/96
                                                                                  Customer   –         4242
                                                                                  Brn/Plt    –           30
                                                                                  Related PO –
                                                                                  Order Nbr  –      2060 SO
                                                                                  Invoice    –

        Sold To:  Corporate Office Systems Company              Ship To:  Corporate Office Systems Company
                  1156 Inverness                                          1156 Inverness
                  Denver CO 80239                                         Denver CO 80239



        Tax ID:
        Tax Cert:
 ---------------------------------------------------------------------------------------------------------------------
  Request Date          Customer P.O.                  F.O.B.              Ship :
    01/23/98                                                           .  Inst :
 ---------------------------------------------------------------------------------------------------------------------
Ln/Rq Dt     Description                       Item Number        UM Ship/Back/Cance      Price      Extended Price  Tax
       Extended Cost    Pct
-------- ------------------------------ ------------------------ -- --------------- --------------- --------------- ---
      ---------------- ------
  1.000
         Napa Valley Soft Side CD Case  DRP4                     EA S          150         20.0000        3,000.00   Y
            1,500.00     50
01/23/98
                                                                                      Per   EA

                                                                                                Sales Tax      Total Order
 ---------------------------------------------------------------------------------------------------------------------
Terms  Net 30 Days                Net Due Date 05/16/96            Tax Rt  3.800          114.00         3,114.00
```

See Also

- *Working With Invoices (P42565)* in the *Sales Order Management Guide*

Exercises

See the exercises for this chapter.

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Appendix B — Functional Servers

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

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

The advantages of a functional server are:

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

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

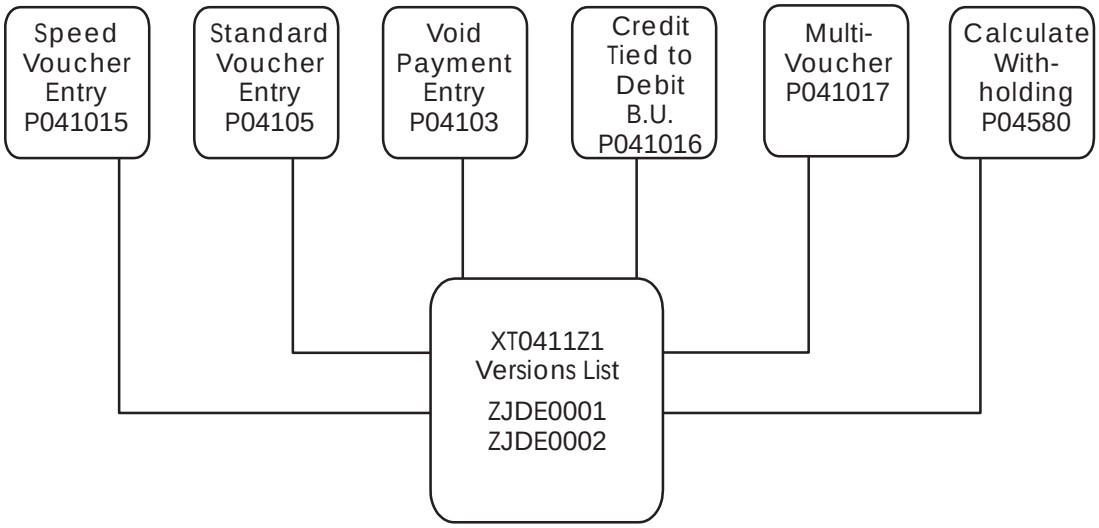
1. Create a DREAM Writer version for a specific functional server program (for example, XT0411Z1 for voucher entry).
2. Set the processing options within the version according to your company requirements.
3. Specify the version you want the entry program to use in the processing options for that entry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

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

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

Example: Voucher Processing Functional Server

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



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Glossary

Glossary

This glossary defines terms in the context of your use of JDE systems and the accompanying user guide.

access. To get to the information or functions provided by the system through menus, screens, and reports.

allocated material. Material on hand or on order that is assigned to specific future production or customer orders. Synonymous with *reserved material.*

alphabetic character. Represents data by using letters and other symbols from the keyboard (such as *&#). Contrast with *numeric character*.

alphanumeric character. Represents data in a combination of letters, numbers, and other symbols (such as *&#).

alternate operation. Replacement for a normal step in the manufacturing process or routing for an item.

alternate routing. A routing, usually less preferred than the primary routing, but resulting in an identical item.

assemble-to-order. A make-to-order product for which key components (bulk, semi-finished, intermediate, subassembly, fabricated, purchased, packaging, etc.) used in the assembly or finishing process are planned and stocked in anticipation of a customer order. Receipt of an order initiates assembly of the finished product. This is useful when a large number of finished products can be assembled from common components.

assembly. A group of subassemblies and/or parts that are put together and constitute a major subdivision for the final product. An assembly may be an end item or a component of a higher level assembly.

audit trail. The detailed, verifiable history of a processed transaction. The history consists of the original documents, transaction entries, and posting of records, and usually concludes with a report.

automatic accounting instruction (AAI). A code that points to an account in the chart of accounts. AAIs define rules for programs that automatically generate journal entries. This includes interfaces between Accounts Payable, Accounts Receivable, and Financial Reporting and the General Accounting system. Each system that interfaces with the General Accounting system has AAIs. For example, AAIs can direct the Post to General Ledger program to post a debit to a certain expense account and an automatic credit to a certain accounts payable account.

backflush. The deduction from inventory records of the component parts used in an assembly or subassembly by exploding the bill of material by the production count of assemblies produced.

back scheduling. A technique for calculating operation start dates and due dates. The schedule is computed starting with the due date for the order and working backward to determine the required start date and/or due dates for each operation.

backup copy. A copy of original data preserved on a magnetic tape or diskette as protection against destruction or loss.

batch. A group of like records or transactions that the computer treats as a single unit during processing. For identification purposes, the system usually assigns each batch a unique identifier, known as a “batch number.”

batch bill of material. A bill of material in which the statement of quantity per is based on the standard batch quantity of the parent.

batch header. Information the computer uses as identification and control for a group of transactions or records in a batch.

batch job. A task or group of tasks you submit for processing that the system treats as a single unit during processing, for example, printing reports and purging files. The computer performs these tasks with little or no user interaction.

batch processing. A method by which the computer selects jobs from the job queue, processes them, and writes output to the outqueue. Contrast with *interactive processing.*

batch type. A code that designates which JDE system the associated transactions pertain to, thus controlling what records are selected for processing. For example, in the Post General Journal process, only unposted transaction batches with a batch type of G for General Accounting are selected for posting.

bill of material (BOM). A listing of all the subassemblies, parts, and raw materials that go into a parent assembly showing the quantity of each required to make the assembly. It is used in conjunction with the master production schedule to determine the items for which purchase requisitions and production orders must be released. There is a variety of display formats for bills of material, including: single level, multi level, indented, planning, and costed. Synonymous with *formula, recipe*, and *ingredients list.*

Boolean logic operand. In JDE's DREAM Writer, the parameter of the Relationship field. The Boolean logic operand tells the system to perform a comparison between certain records or parameters. Available operands are:

EQ = Equal To
LT = Less Than
LE = Less Than or Equal To
GT = Greater Than
GE = Greater Than or Equal To
NE = Not Equal To
NL = Not Less Than
NG = Not Greater Than

bubble chart. A diagram that attempts to display the interrelationships of systems, functions, or data in sequential flow. It derives its name from the circular symbols used to enclose the statements on the chart.

bucketed system. An MRP, DRP, or other time-phased system in which all time-phased data are accumulated into time periods or "buckets." If the period of accumulation is one week, then the system is said to have weekly buckets.

bucketless system. An MRP, DRP, or other time-phased system in which all time-phased data are processed, stored, and usually displayed using dated records rather than defined time periods or "buckets."

bulk issue. Parts issued from stores to work-in-process inventory, but not based on a job order. They are issued in quantities estimated to cover requirements of individual work centers and production lines. The issue may be used to cover a period of time or to fill a fixed-size container.

by-product. A material of value produced as residual of or incidental to the production process. The ratio of by-product to primary product is usually predictable. By-products may be recycled, sold as is, or used for other purposes.

CAD/CAP. Computer Assisted Design/ Computer Assisted Programming. A set of automated programming tools for designing and developing systems. These tools automate system design, generate source code and documentation, enforce design standards, and help to ensure consistency throughout all JDE systems.

capacity requirements planning (CRP). The function of establishing, measuring, and adjusting limits or levels of capacity. It is the process of determining in detail how much labor and machine resources are required to accomplish the tasks of production. Open shop orders and planned orders in the MRP system are input to CRP, which "translates" these orders into hours of work by work center and by time period.

category code. In user defined codes, a temporary title for an undefined category. For example, if you are adding a code that designates different sales regions, you could change *category code 4* to *Sales Region*, and define E (East), W (West), N (North), and S (South) as the valid codes. Category codes were formerly known as *reporting codes*.

character. Any letter, number, or other symbol that a computer can read, write, and store.

closed-loop MRP. A system built around material planning that includes the additional planning functions of sales and operations (production planning, master production scheduling, and capacity requirements planning). Once this planning phase is complete and the plans have been accepted as realistic and attainable, the execution functions come into play. These include the manufacturing control functions of input-output (capacity) measurement, detailed scheduling and dispatching, as well as anticipated delay reports from both the plant and supplier. The term "closed loop" implies that not only is each of these elements included in the overall system, but also that feedback is provided by the execution functions so that the planning can be kept valid at all times.

command. A character, word, phrase, or combination of keys you use to tell the computer to perform a defined activity.

component. Raw material, ingredient, part, or subassembly that goes into a higher level assembly, compound, or other item. This term may also include packaging materials for finished items.

component availability. The availability of component inventory for the manufacture of a specific parent order or group of orders or schedules.

constants. Parameters or codes that rarely change. The computer uses constants to standardize information processing by an associated system. Some examples of constants are allowing or disallowing out-of-balance postings and having the system perform currency conversions on all amounts. Once you set constants such as these, the system follows these rules until you change the constants.

Core. The central and foundational systems of JDE software, including General Accounting, Accounts Payable, Accounts Receivable, Address Book, Financial Reporting, Financial Modeling and Allocations, and Back Office.

costed bill of material. A form of bill of material that extends the quantity per of every component in the bill by the cost of the components.

crew size. The number of people required to perform an operation. The associated standard time should represent the total time for all crew members to perform the operation, not the net start to finish time for the crew.

cumulative leadtime. The longest planned length of time involved to accomplish the activity in question. For any item planned through MRP, it is found by reviewing the leadtime for each bill of material path below the item. Whichever path adds up to the greatest number defines cumulative leadtime. Synonymous with *aggregate leadtime, composite leadtime,* and *critical path leadtime.*

cumulative manufacturing leadtime. The cumulative planned leadtime when all purchased items are assumed to be in stock.

cumulative MRP. The planning of parts and subassemblies by exploding a master schedule, as in MRP, except that the master scheduled items and therefore the exploded requirements are time phased in cumulative form. Usually these cumulative figures cover a planning year.

current cost. The current or replacement cost of labor, material, or overhead. Its computation is based on current performance or measurements, and it is used to address "today's" costs before production as a revision of annual standard costs.

cursor. The blinking underscore or rectangle on your screen that indicates where the next keystroke will appear.

cursor sensitive help. JDE's online help function, which allows you to view a description of a field, an explanation of its purpose, and, when applicable, a list of the valid codes you can enter. To access this information, move the cursor to the field and press F1.

data. Numbers, letters, or symbols that represent facts, definitions, conditions, and situations, that a computer can read, write, and store.

database. A continuously updated collection of all information a system uses and stores. Databases make it possible to create, store, index, and cross-reference information online.

data dictionary. A database file consisting of the definitions, structures, and guidelines for the usage of fields, messages, and help text. The data dictionary file does not contain the actual data itself.

default. A code, number, or parameter the system supplies when you do not enter one. For example, if an input field's default is N and the you do not enter something in that field, the system supplies an N.

demand. A need for a particular product or component. The demand could come from any number of sources, such as a customer order or forecast, or an interplant requirement or a request from a branch warehouse for a service part or for manufacturing another product.

dependent demand. Demand that is directly related to or derived from the bill of material structure for other items or end products. Such demands are calculated and need not and should not be forecast. A given inventory item may have both dependent and independent demand at any given time. For example, a part may simultaneously be the component of an assembly and also sold as a service part.

descriptive title. See *user defined code*.

detail. The individual pieces of information and data that make up a record or transaction. Contrast with *summary*.

detail file. A file which contains manufacturing, routing, or specification details. Contrast with *master file.*

direct labor. Labor that is specifically applied to the product being manufactured or utilized in the performance of the service.

direct material. Material that becomes a part of the final product in measurable quantities.

discrete manufacturing. Production of distinct items such as automobiles, appliances, or computers.

display. (1) To cause the computer to show information on a terminal's screen. (2) A specific set of fields and information that a JDE system might show on a screen. Some screens can show more than one display when you press a specified function key.

display field. A field of information on a screen that contains a system-provided code or parameter that you cannot change. Contrast with *input field.*

downstream operation. A task subsequent to the task currently being planned or executed.

DREAM Writer. Data Record Extraction And Management Writer. A flexible data manipulator and cataloging tool. You use this tool to select and sequence the data that is to appear on a programmed report.

edit. (1) To make changes to a file by adding, changing, or removing information. (2) The program function of highlighting fields into which you have entered inadequate or incorrect data.

effectivity date. The date on which a component or an operation is to be added or removed from a bill of material or an assembly process. The effective dates are used in the explosion process to create demands for the correct items. Normally, bill of material and routing systems provide for an effectivity "start date" (from) and "stop date" (thru), signifying the beginning and end of a particular relationship. Synonymous with *effective date.*

efficiency. A measure (as a percentage) of the actual output to the standard output expected. Efficiency measures how well something is performing relative to expectations; it does not measure output relative to any input. For example, if there is a standard of 100 pieces per hour and 780 units are produced in one eight-hour shift, the efficiency is 780 divided by 800, then multiplied by 100% or 97.5%.

electronic data interchange (EDI). The paperless (electronic) exchange of trading documents, such as purchase orders, shipment authorizations, advanced shipment notices, and invoices, using standardized document formats.

end item. A product sold as a completed item or repair part. Any item subject to a customer order or sales forecast. Synonymous with *end product, finished good,* and *finished product.*

engineering change order (ECO). A work order used to implement a change in a manufactured product. This can be a change in design, quantity or parts required, assembly or production process, and so forth.

engineer-to-order. Products whose customer specifications require unique engineering design or significant customization. Each customer order results in a unique set of part numbers, bills of material, and routings.

execute. See *run*.

exit. (1) To interrupt or leave a computer program by pressing a specific key or a sequence of keys.
(2) An option or function key displayed on a screen that allows you to access another screen.

expedite. To "rush" or "chase" production or purchase orders that are needed in less than the normal leadtime. To take extraordinary action because of an increase in relative priority.

facility. A collection of computer language statements or programs that provides a specialized function throughout a system or throughout all integrated systems. Some examples DREAM Writer and FASTR.

FASTR. Financial Analysis Spreadsheet Tool and Report Writer. A report writer that allows you to design your own report specifications using the general ledger database.

feature. An accessory or attachment to an item.

field. (1) An area on a screen that represents a particular type of information, such as name, document type, or amount. Fields that you can enter data into are designated with underscores. See *input field* and *display field.* (2) A defined area within a record that contains a specific piece of information. For example, a vendor record

consists of the fields Vendor Name, Address, and Telephone Number. The Vendor Name field contains just the name of the vendor.

file. A collection of related data records organized for a specific use and electronically stored by the computer.

fixed cost. An expenditure that does not vary with the production volume, for example, rent, property tax, and salaries of certain personnel.

fixed order quantity. A lot-sizing technique in MRP or inventory management that will always cause planned or actual orders to be generated for a predetermined fixed quantity, or multiples thereof, if net requirements for the period exceed the fixed order quantity.

fixed overhead. Traditionally all manufacturing costs, other than direct labor and direct materials, that continue even if products are not produced. Although fixed overhead is necessary to produce the product, it cannot be directly traced to the final product.

fold area. An area of a screen, accessed by pressing F4, that displays additional information associated with the records or data items displayed on the screen.

forecast. An estimate of future demand. A forecast can be determined by mathematical means using historical data, created subjectively by using estimates from informal sources, or a combination of both techniques.

function. A separate feature within a facility that allows you to perform a specific task, for example, the field help function.

function key. A key you press to perform a system operation or action. For example, you press F4 to have the system display the fold area of a screen.

Gantt chart. A control chart designed to show graphically the relationship between planned performance and actual performance.

hard copy. A presentation of computer information printed on paper. Synonymous with *printout*.

header. Information at the beginning of a file. This information is used to identify or provide control information for the group of records that follows.

help instructions. Online documentation or explanations of fields that you access by pressing the Help key or by pressing F1 with your cursor in a particular field.

helps. See *help instructions*.

hidden selections. Menu selections you cannot see until you enter HS in a menu's Selection field. Although you cannot see these selections, they are available from any menu. They include such items as Display Submitted Jobs (33), Display User Job Queue (42), and Display User Print Queue (43). The Hidden Selections window displays three categories of selections: user tools, operator tools, and programmer tools.

implode. 1) Compression of detailed data in a summary-level record or report. 2) Tracing a usage and/or cost impact from the bottom to the top (end product) of a bill of material using where-used logic.

implosion. The process of determining the where-used relationship for a given component. Implosion can be single-level (showing only the parents on the next higher level) or multilevel (showing the ultimate top-level parent). Synonymous with *where used.* Contrast with *explosion.*

indented bill of material. A form of multilevel bill of material that lists the highest level parent items at the left margin and all the components going into these parents indented to the right of the margin. All subsequent levels of components are indented farther to the right. If a component is used in more than one parent within a given product structure, it will appear more than once, under every subassembly in which it is used.

indented where-used. A listing of every parent item, and the respective quantities required, as well as each of their respective parent items, continuing until the ultimate end item, or level-0 item, is listed. Each of these parent items is one that calls for a given component item in a bill of material file. The component item is shown closest to the left margin of the listing, with each parent indented to the right, and each of their respective parents indented even further to the right.

indirect costs. Costs that are not directly incurred by a particular job or operation. Certain utility costs, such as plant heating, are often indirect. An indirect cost is typically distributed to the product through the overhead rates.

indirect labor. Work required to support production in general without being related to a specific product, for example, sweeping the floor.

indirect materials. Items that become part of the final product or substances that are consumed in the manufacture of a product that have a negligible value relative to the value of the final product or the usage of which cannot be effectively determined. These components may or may not be included in the bill of material. Synonymous with *supplies*.

input. Information you enter in the input fields on a screen or that the computer enters from other programs, then edits and stores in files.

input field. An area on a screen, distinguished by underscores (_ _), where you type data, values, or characters. A field represents a specific type of information such as name, document type, or amount. Contrast with *display field*.

install system code. The code that identifies a JDE system. Examples are 01 for the Address Book system, 04 for the Accounts Payable system, and 09 for the General Accounting system.

interactive processing. A job the computer performs in response to commands you enter from a terminal. During interactive processing, you are in direct communication with the computer, and it might prompt you for additional information during the processing of your request. See *online*. Contrast with *batch processing.*

interface. A link between two or more JDE systems that allows these systems to send information to and receive information from one another.

issue. The physical movement of items from a stocking location and, often, the transaction reporting of this activity.

issue cycle. The time required to generate a requisition for material, pull the material from an inventory location, and move it to its destination.

item. Any unique manufactured or purchased part, material, intermediate, subassembly, or product.

item master record. The master record for an item. Typically, it contains identifying and descriptive data and control values (leadtimes, lot sizes, etc.) and may contain data on inventory status, requirements, planned orders, and costs. Item records are linked together by product structure records which define the bill of material for an item.

item number. A number that serves to uniquely identify an item. Synonymous with *part number.*

jargon. A JDE term for system specific help text. You base your help text on a specific reporting code you designate in the Data Dictionary Glossary. You can display this text as part of online help.

job. A single identifiable set of processing actions you tell the computer to perform. You start jobs by choosing menu selections, entering commands, or pressing designated function keys. An example of a computer job is check printing in the Accounts Payable system.

job queue. A screen that lists the batch jobs you and others have told the computer to process. When the computer completes a job, the system removes the job's identifier from the list.

justify. To shift information you enter in an input field to the right or left side of the field. Many of the facilities within JDE systems justify information. The system does this only after you press Enter.

Just-in-Time (JIT). A philosophy of manufacturing based on planned elimination of all waste and continuous improvement of productivity. The primary elements of zero inventories are to have only the required inventory when needed; to improve quality to zero defects; to reduce leadtimes by reducing setup times, queue lengths, and lot sizes; to incrementally revise the operations themselves; and to accomplish these things at minimum cost.

key field. A field common to each record in a file. The system uses the key field designated by the program to organize and retrieve information from the file.

Key General Ledger Account (Key G/L). See *automatic accounting instructions.*

labor cost. The dollar amount of added value due to labor performed during manufacturing.

leading zeros. A series of zeros that certain facilities in JDE systems place in front of a value you enter. This normally occurs when you enter a value that is smaller than the specified length of the field. For example, if you enter 4567 in a field that accommodates eight numbers, the facility places four zeros in front of the four numbers you enter. The result would look like this: 00004567.

leadtime. 1) A span of time required to perform a process (or series of operations). 2) In a logistics context, the time between recognition of the need for an order and the receipt of goods. Individual components of leadtime can include order preparation time, queue time, move or transportation time, and receiving and inspection time.

leadtime offset. A technique used in MRP where a planned order receipt in one time period will require the release of that order in an earlier time period based on the leadtime for the item.

level. Every part or assembly in a product structure is assigned a level code signifying the relative level in which that part or assembly is used within the product structure. Normally the end items are assigned to level 0 with the components and subassemblies going into it assigned to level 1 and so forth. The MRP explosion process starts from level 0 and proceeds downward one level at a time.

level of detail. (1) The degree of difficulty of a menu in JDE software. The levels of detail for menus are as follows:

A=Major Product Directories
B=Product Groups
1=Basic Operations
2=Intermediate Operations
3=Advanced Operations
4=Computer Operations
5=Programmers
6=Advanced Programmers

Also known as *menu levels.*
(2) The degree to which account information in the General Accounting system is summarized. The highest level of detail is 1 (least detailed) and the lowest level of detail is 9 (most detailed).

master file. A computer file that a system uses to store data and information which is permanent and necessary to the system's operation. Master files might contain data or information such as paid tax amounts and vendor names and addresses.

load. The amount of planned work scheduled and actual work released for a facility, work center, or operation for a

specific span of time. It is usually expressed in terms of standard hours of work or, when items consume similar resources at the same rate, units of production.

lot. A quantity produced together and sharing the same production costs and resultant specifications.

lot number. A number that identifies a designated group of related items manufactured in a single run or received from a vendor in a single shipment.

lot number control. Assignment of unique numbers to each instance of receipt and carrying forth that number into subsequent manufacturing processes so that, in review of an end item, each lot consumed from raw materials through end item can be identified as having been used for the manufacture of this specific end item lot.

lot number traceability. Tracking parts by lot numbers to a group of items. This tracking can assist in the tracing of quality problems to their source.

lot traceability. The ability to identify the lot or batch numbers of consumption and/or composition for manufactured, purchased, and shipped items. This is a federal requirement in certain regulated industries.

low-level code. A number that identifies the lowest level in any bill of material at which a particular component may appear. Net requirements for a given component are not calculated until all the gross requirements have been calculated down to that level. Low-level codes are normally calculated and maintained automatically by the computer software. Synonymous with *explosion level.*

machine hours. The amount of time, in hours, that a machine is actually running. Machine hours, rather than labor hours, may be used for planning capacity and scheduling and for allocating costs.

make-to-order product. A product that is finished after receipt of a customer's order. The final product is usually a combination of standard items and items custom designed to meet the special needs of the customer. Frequently long leadtime components are planned prior to the order arriving in order to reduce the delivery time to the customer. Where options or other subassemblies are stocked prior to customer orders arriving, the term "assemble-to-order" is frequently used.

make-to-stock product. A product that is shipped from finished goods, "off-the-shelf," and therefore is finished prior to a customer order arriving. The master scheduling and final assembly scheduling are conducted at the finished goods level.

manufacturing leadtime. The total time required to manufacture an item, exclusive of lower level purchasing leadtime. It includes the time for order preparation, queue, setup, run, move, inspection, and put-away.

manufacturing resource planning (MRP II) A method for the effective planning of all resources of a manufacturing company. Ideally, it addresses operational planning in units, financial planning in dollars, and has a simulation capability to answer "what if" questions. It is made up of a variety of functions, each linked together: business planning, sales and operations (production planning), master production scheduling, material requirements planning, capacity requirements planning, and the execution support systems for capacity and material. Output from these systems is integrated with financial reports such as the business plan, purchase commitment report, shipping budget, inventory projections in dollars, etc. Manufacturing resource planning is a direct outgrowth and extension of closed-loop MRP.

master file. A computer file that a system uses to store data and information which is permanent and necessary to the system's

operation. Master files might contain data or information such as paid tax amounts and vendor names and addresses.

master planning. A classification scheme that includes the following activities: forecasting and order servicing (which together constitute demand management); production and resource planning; and master scheduling (which includes the final assembly schedule, the master schedule, and the rough cut capacity plan).

master production schedule (MPS). A detailed statement of how many items are planned to be produced and when. The MPS focuses on products to be made and, through the detailed planning system, identifies the resources (materials, work force, plant equipment and capital) needed and the timing of the need.

menu. A screen that displays numbered selections. Each of these selections represents a program. To access a selection from a menu, type the selection number and then press Enter.

menu levels. See *level of detail.*

menu masking. A security feature of JDE systems that lets you prevent individual users from accessing specified menus or menu selections. The system does not display the menus or menu selections to unauthorized users.

menu message. Text that appears on a screen after you make a menu selection. It displays a warning, caution, or information about the requested selection.

need date. The date when an item is required for its intended use. In an MRP system, this date is calculated by a bill of material explosion of a schedule and the netting of available inventory against that requirement.

next number facility. A JDE software facility you use to control the automatic numbering of such items as new G/L accounts, vouchers, and addresses. It lets you specify your desired numbering system and provides a method to increment numbers to reduce transposition and typing errors.

nonsignificant part numbers. Part numbers that are assigned to each part but do not convey any information about the part. They are identifiers, not descriptors. Contrast with *significant part numbers.*

numeric character. Represents data using the numbers 0 through 9. Contrast with *alphabetic character* and *alphanumeric character*.

offline. Computer functions that are not under the continuous control of the system. For example, if you were to run a certain job on a personal computer and then transfer the results to a host computer, that job would be considered an offline function. Contrast with *online*.

online. Computer functions over which the system has continuous control. Each time you work with a JDE system-provided screen, you are online with the system. Contrast with *offline*. See *interactive processing*.

online information. Information the system retrieves, usually at your request, and immediately displays on the screen. This information includes items such as database information, documentation, and messages.

operand. See *Boolean logic operand.*

operation number. A sequential number, usually two, three, or four digits long, such as 010, 020, 030, and so forth, that indicates the sequence in which operations are to be performed within an item's routing.

operations sequence. The sequential steps for an item to follow in its flow through the plant. For instance, operation 1: cut bar stock; operation 2: grind bar stock; operation 3: shape; operation 4: polish; operation 5: inspect and send to stock. This information is normally maintained in the routing file.

option. A numbered selection from a JDE screen that performs a particular function or task. To select an option, you enter its number in the Option field next to the item you want the function performed on. When available, for example, option 4 allows you to return to a prior screen with a value from the current screen.

output. Information the computer transfers from internal storage to an external device, such as a printer or a computer screen.

output queue. A screen that lists the spooled files (reports) you have told the computer to write to an output device, such as a printer. After the computer writes a file, the system removes that file's identifier from the online list.

overhead. Costs incurred in the operation of a business that cannot be directly related to the individual products or services produced. These costs, such as light, heat, supervision, and maintenance, are grouped in several pools (department overhead, factory overhead, general overhead) and distributed to units of product or service by some standard allocation method.

overlap. The percentage that an operation overlaps the previous operation in the sequence. For example, a 20% overlap means that the step can begin when the previous step is 80% complete.

override. The process of entering a code or parameter other than the one provided by the system. Many JDE systems offer screens that provide default field values when they appear. By typing a new value over the default code, you can *override* the default. See *default*.

parameter. A number, code, or character string you specify in association with a command or program. The computer uses parameters as additional input or to control the actions of the command or program.

part. Generally, a material item that is used as a component and is not an assembly, subassembly blend, intermediate, and so forth.

password. A unique group of characters that you enter when you sign on to the system that the computer uses to identify you as a valid user.

pegging. In MRP, the capability to identify for a given item the sources of its gross requirements and/or allocations. Pegging can be thought of as "live where-used" information.

picking. The process of withdrawing from stock the components to make the products or the finished goods to be shipped to a customer.

pick list. A document that lists the material to be picked for manufacturing or shipping orders.

planned order. A suggested order quantity, release date, and due date created by MRP processing when it encounters net requirements. Planned orders are created by the computer, exist only within the computer, and may be changed or deleted by the computer during subsequent MRP processing if conditions change. Planned orders at one level will be exploded into gross requirements for components at the next lower level. Planned orders, along with released orders, serve as input to capacity requirements planning to show the total capacity requirements by work center in future time periods.

planning bill of material. An artificial grouping of items and/or events in bill of material format, used to facilitate master scheduling and/or material planning. Sometimes called a pseudo bill of material.

planning family. A group of end items whose similarity of design and manufacture facilitates being planned in aggregate.

planning horizon. The amount of time the master schedule extends into the future. This is normally set to cover a minimum of

cumulative leadtime plus time for lot sizing low-level components and for capacity changes of primary work centers.

primary location. The designation of a certain storage location as the standard, preferred location for an item.

printout. A presentation of computer information printed on paper. Synonymous with *hard copy*.

print queue. An online list (screen) of written files that you have told the computer to print. Once the computer prints the file, the system removes the file's identifier from the online list. See *output queue*.

priority. The relative importance of jobs. The sequence in which jobs should be worked on.

process manufacturing. Production that adds value by mixing, separating, forming, and/or performing chemical reactions. It may be done in either batch or continuous mode.

processing options. A feature of the JDE DREAM Writer that allows you to supply parameters to direct the functions of a program. For example, processing options allow you to specify defaults for certain screen displays, control the format in which information gets printed on reports, change the way a screen displays information, and enter "as of" dates.

program. A collection of computer statements that tells the computer to perform a specific task or group of tasks.

program specific help text. Glossary text that describes the function of a field within the context of the program.

prompt. (1) A reminder or request for information displayed by the system. When a prompt appears, you must respond in order to proceed. (2) A list of codes or parameters or a request for information provided by the system as a reminder of the type of information you should enter or action you should take.

PTF. Program Temporary Fix. A representation of changes to JDE software, which your organization receives on magnetic tapes or diskettes.

purchased part. An item sourced from a supplier.

purge. The process of removing records or data from a system file.

record. A collection of related, consecutive fields of data the system treats as a single unit of information. For example, a vendor record consists of information such as the vendor's name, address, and telephone number.

reporting code. See *category code.*

reverse image. Screen text that displays in the opposite color combination of characters and background from what the screen typically displays (for example, black on green instead of green on black).

quantity per. The quantity of a component to be used in the production of its parent. This value is stored in the bill of material and is used to calculate the gross requirements for components during the explosion process of MRP.

queue. 1) In computers: See job queue, output queue, and print queue.
2) In manufacturing: A waiting line. The jobs at a given work center waiting to be processed. As queues increase, so do average queue time and work-in-process inventory.

rated capacity. The demonstrated capability of a system. Traditionally, capacity is calculated from such data as planned hours, efficiency, and utilization. The rated capacity is equal to hours available x efficiency x utilization.

rate-based scheduling. A method for scheduling and producing based on a periodic rate, for example, daily, weekly or monthly. Traditionally, this method has been applied to high-volume and process industries. The concept can be applied within job shops using cellular layouts and

mixed-model level schedules where the production rate is matched to the selling rate.

raw material. Purchased items or extracted materials that are converted via the manufacturing process into components and/or products.receipt. 1) The physical acceptance of an item into a stocking location. 2) The transaction reporting of this activity.

record. A collection of related, consecutive fields of data the system treats as a single unit of information. For example, a vendor record consists of information such as the vendor's name, address, and telephone number.

release. The authorization to produce or ship material that has already been ordered.

repetitive manufacturing. A form of manufacturing where various items with similar routings are made across the same process whenever production occurs. Products may be made in separate batches or continuously. Production in a repetitive environment is not a function of speed or volume.

replacement parts. Parts that can be used as substitutes that differ from completely interchangeable service parts in that they require some physical modification, such as cutting, drilling, and so forth, before they can replace the original part.

revision level. A number or letter representing the number of times a document has been changed.

rework order. A manufacturing order to rework and salvage defective parts or products.

resource requirements planning (RRP). The process of converting the production plan and/or the master production schedule into capacity needs for key resources: work force, machinery, warehouse space, suppliers' capabilities, and in some cases, money. Comparison of capacity required of items in the MPS to available capacity is usually done for each key resource. Synonymous with *rough cut capacity planning.*

routing. A set of information detailing the method of manufacture of a particular item. It includes the operations to be performed, their sequence, the various work centers to be involved, and the standards for setup and run. In some companies, the routing also includes information on tooling, operator skill levels, inspection operations, testing requirements, and so forth.

run. To cause the computer to perform a routine, process a batch of transactions, or carry out computer program instructions.

run size. See standard batch quantity.

safety stock. 1) In general, a quantity of stock planned to be in inventory to protect against fluctuations in demand and/or supply. 2) In the context of master production scheduling, the additional inventory and/or capacity planned as protection against forecast errors and/or short-term changes in the backlog. Overplanning can be used to create safety stock.

scrap. Unusable material that results from the production process. It is material outside of specifications and of such characteristics that rework is impractical.

scrap factor. A percentage factor in the product structure used to increase gross requirements to account for anticipated loss within the manufacture of a particular product. Synonymous with *scrap rate.*

scroll. To use the roll keys to move screen information up or down a screen at a time. When you press the Rollup key, for instance, the system replaces the currently displayed text with the next screen of text if more text is available.

selection. Found on JDE menus, selections represent functions that you can access from a given menu. To make a selection, you type its associated number in the Selection field and press Enter.

setup. 1) The work required to change a specific machine, resource, work center, or line from making the last good piece of unit A to the first good piece of unit B; 2) Teardown of the just completed production and preparation of the equipment for production of the next scheduled item.

setup cost. The costs such as scrap costs, calibration costs, downtime costs, and lost sales associated with preparing the resource for the next product.

setup leadtime. The time needed to prepare a manufacturing process to start. Setup leadtime may include run and inspection time for the first piece.

shelf life. The amount of time an item may be held in inventory before it becomes unusable.

shop calendar. See work day calendar.

shop floor control (SFC). A system for utilizing data from the shop floor to maintain and communicate status information on shop orders (manufacturing orders) and on work centers. The major subfunctions of shop floor control are: 1) assigning priority of each shop order, 2) maintaining work-in-process quantity information, 3) conveying shop order status information to the office, 4) providing actual output data for capacity control purposes, 5) providing quantity by location by shop order for work-in-process inventory and accounting purposes, and 6) providing measurement of efficiency, utilization, and productivity of the work force and machines.

shrinkage. Reductions of actual quantities of items in stock, in process, or in transit. The loss may be caused by scrap, theft, deterioration, evaporation, and so forth.

shrinkage factor. A percentage factor in the item master record that compensates for expected loss during the manufacturing cycle either by increasing the gross requirements or by reducing the expected completion quantity of planned and open orders. The shrinkage factor differs from the scrap factor in that the former affects all uses of the part and its components and the scrap factor relates to only one usage. Synonymous with *shrinkage rate.*

significant part numbers. Part numbers that are intended to convey certain information, such as the source of the part, the material in the part, the shape of the part, and so forth. These usually make part numbers longer. Contrast with *nonsignificant part numbers.*

simulation. 1) The technique of using representative or artificial data to reproduce in a model various conditions that are likely to occur in the actual performance of a system. It is frequently used to test the behavior of a system under different operating policies. 2) Within MRP II, using the operational data to perform "what if" evaluations of alternative plans to answer the question, "Can we do it?" If yes, the simulation can then be run in the financial mode to help answer the question, "Do we really want to?" Synonymous with *what-if analysis.*

single level bill of material. A display of those components that are directly used in a parent item. It shows only the relationships one level down.

single-level where-used. A list of each parent in which a specific component is directly used and in what quantity. Done by imploding the bill of material.

softcoding. A JDE term that describes an entire family of features that allows you to customize and adapt JDE software to your business environment. These features lessen

the need for you to use computer programmers when your data processing needs change.

software. The operating system and application programs that tell the computer how and what tasks to perform.

special character. Representation of data in symbols that are neither letters nor numbers. Some examples are * & # /.

spool. The function by which the system puts generated output into a storage area to await printing and processing.

spooled file. A holding file for output data waiting to be printed or input data waiting to be processed.

standard batch quantity. The quantity of a parent that is used as the basis for specifying the material requirements for production. The "quantity per" is expressed as the quantity to make the standard batch quantity, not to make only one of the parent. It is often used by manufacturers that use some components in very small quantities or by process-related manufacturers. Synonymous with *run size.*

standard costs. The target costs of an operation, process, or product including direct material, direct labor, and overhead charges.

standard cost system. A cost system that uses cost units determined before production. For management control purposes, the standards are compared to actual costs and variances are computed.

standard hours. The length of time that should be required to 1) set up a given machine or operation and 2) run one part/assembly/batch/end product through that operation. This time is used in determining machine and labor requirements. It is also frequently used as a basis for incentive pay systems and as a basis of allocating overhead in cost accounting systems.

subassembly. An assembly that is used at a higher level to make up another assembly.

subfile. An area on the screen where the system displays detailed information related to the header information at the top of the screen. Subfiles might contain more information than the screen can display in the subfile area. If so, use the roll keys to display the next screen of information. See *scroll*.

submit. See *run*.

summary. The presentation of data or information in a cumulative or totaled manner in which most of the details have been removed. Many of the JDE systems offer screens and reports that are summaries of the information stored in certain files.

superflush. A technique to relieve all components down to the lowest level using the complete bill of material, based on the count of finished units produced and/or transferred to finished good inventory.

system. A collection of computer programs that allows you to perform specific business tasks. Some examples of applications are Accounts Payable, Inventory, and Order Processing. Synonymous with *application.*

throughput. 1) The total volume of production through a facility (machine, work center, department, plant, or network of plants). 2) In theory of constraints, the rate at which the system (firm) generates money through sales.

time series. A set of data that is distributed over time, such as demand data in monthly time period occurrences.

unit cost. Total labor, material, and overhead cost for one unit of production, for example, one part, one gallon, or one pound.

unit of measure. The unit in which the quantity of an item is managed, such as by weight, each, box, package, case, and so forth.

use as is. A classification for material that has been dispositioned as unacceptable per the specification, yet can be used.

user defined code. The individual codes you create and define within a user defined code type. Code types are used by programs to edit data and allow only defined codes. These codes might consist of a single character or a set of characters that represents a word, phrase, or definition. These characters can be alphabetic, alphanumeric, or numeric. For example, in the user defined code type table ST (Search Type), a few codes are C for Customers, E for Employees, and V for Vendors.

user defined code (type). The identifier for a table of codes with a meaning you define for the system (for example, ST for the Search Type codes table in Address Book). JDE systems provide a number of these tables and allow you to create and define tables of your own. User defined codes were formerly known as *descriptive titles.*

user identification (user ID). The unique name you enter when you sign on to a JDE system to identify yourself to the system. This ID can be up to 10 characters long and can consist of alphabetic, alphanumeric, and numeric characters.

valid codes. The allowed codes, amounts, or types of data that you can enter in a specific input field. The system checks, or edits, user defined code fields for accuracy against the list of valid codes.

variable. Changing, not constant or fixed. For example, variable costs are costs that change according to varying conditions.

variable overhead. All manufacturing costs that vary directly with production volume, other than direct labor and direct materials. Variable overhead is necessary to produce the product, but cannot be directly assigned to a specific product.

variance. The difference between the expected (budgeted or planned) value and the actual value.

video. The display of information on your monitor screen. Normally referred to as the *screen*.

vocabulary overrides. A JDE facility that allows you to override field, row, or column title text on a screen-by-screen or report-by-report basis.

where used list. A listing of every parent item that calls for a given component, and the respective quantity required, from a bill of material file. Synonymous with *implosion.*

window. A software feature that allows a part of your screen to function as if it were a screen in itself. Windows serve a dedicated purpose within a facility, such as searching for a specific valid code for a field.

work center. A specific production facility, consisting of one or more people and/or machines with identical capabilities, that can be considered as one unit for purposes of capacity requirements planning and detailed scheduling. Synonymous with *load center.*

work day calendar. A calendar used in inventory and production planning functions that consecutively numbers only the working days so that the component and work order scheduling may be done based on the actual number of work days available. Synonymous with *planning calendar, manufacturing calendar,* and *shop calendar.*

work in process (WIP). A product or products in various stages of completion throughout the plant, including all material from raw material that has been released for initial processing up to completely processed material awaiting final inspection and acceptance as finished product. Many accounting systems also include the value

of semi-finished stock and components in this category. Synonymous with *in-process inventory.*

Exercises