PeopleSoft®

EnterpriseOne B73.3.1 Sales Configurator PeopleBook

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Overview

Sales Configurator Overview

Many manufacturers sell configured items, which are arrangements of components ordered by customers. These manufacturers assemble a large variety of end products from relatively few components. When customers place orders, they specify features and options about the product such as color, size, and engine type.

Examples of configured goods include:

- Furniture and fixtures
- Paper products
- Building products
- Commercial printing
- Control and measurement equipment
- Transportation equipment
- Windows, doors, and other dimensional products

J.D. Edwards' Sales Configurator system provides the function to set up and sell configured goods. When you enter a sales order for a configured item, you answer questions about the configured item's segments (features and options). The system verifies each segment value against setup information you define, such as rules and user defined code tables. If the configuration is valid, the system processes the order.

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

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

Using Sales Configurator, you can:

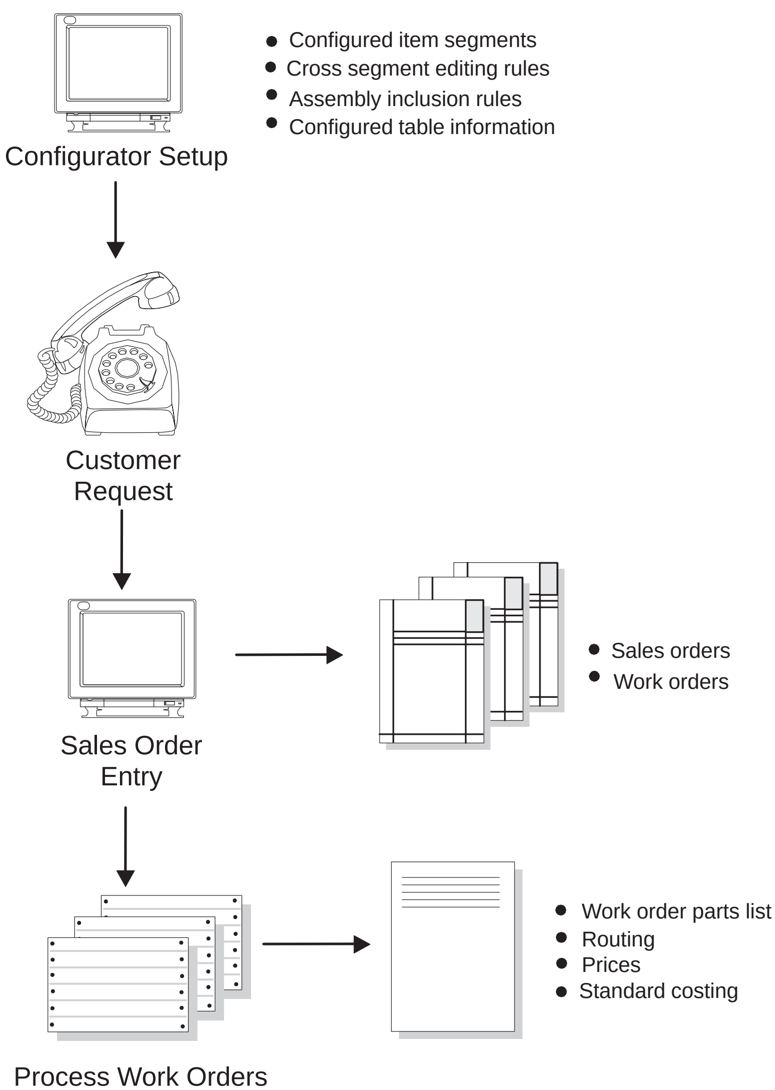
- Use fewer end part numbers
- Create dynamic work order parts lists and routings
- Create order history and configuration audit trails
- Improve order accuracy
- Shorten leadtimes
- Provide better margin information

- Improve customer service

System Integration

The Sales Configurator system works with other J.D. Edwards systems to generate the following:

- 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. The Sales Configurator system is appropriate for items that:

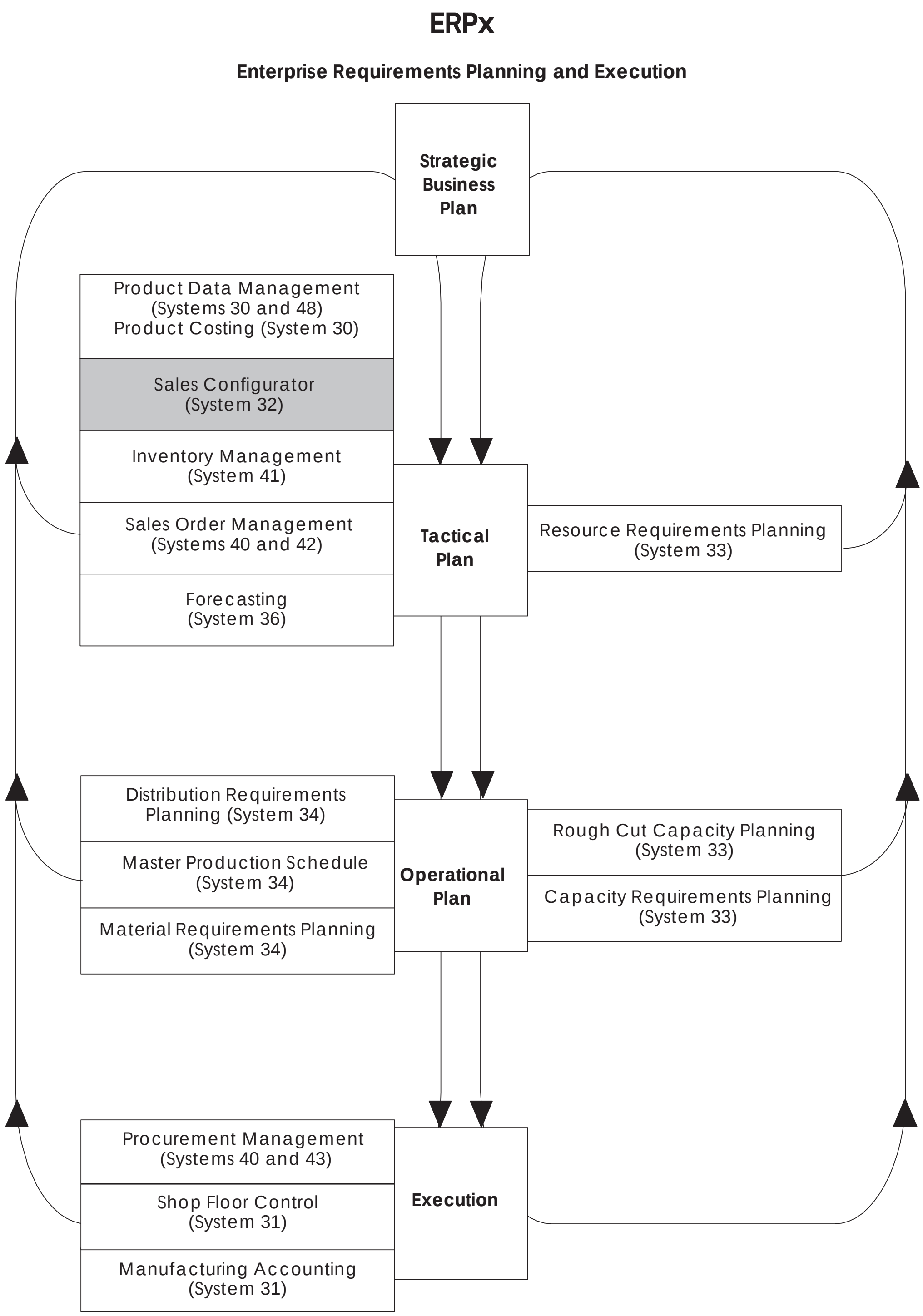
- Are complex
- Require routings that change based on features or options
- Include features that are not compatible with other features
- Require multiple work orders to define an assembly

Enterprise Requirements Planning and Execution Review

Sales Configurator 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:



Terms and Concepts

Configured item

A configured item is comprised of different features requested by a customer. You associate segments with the configured item. For example, the configured item 6000 (forklift) contains the following segments:

Item 6000 (forklift)

- Segment 10 (forklift rating)
- Segment 20 (power type)
- Segment 30 (boom height)
- Segment 40 (paint)

Segment

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

Segment 10 (forklift rating)

- 2000 pounds
- 4000 pounds
- 6000 pounds

Segment 40 (paint)

- Standard
- Custom

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, the configured string for item 6000 (forklift) might be:

2000/PROPANE/08/STD/50/3587.4659217

Multi-level configured item

You can set up a configured subassembly within a configured item. For example, the configured item 6000 (forklift) contains a configured subassembly for item 6100 (forklift boom).

Cross-segment editing rules

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

If segment 10 (forklift 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 Items

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

- How do customers order the configured item?
- How will you price the configured item?
- 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 segments. This is important because you can define levels of segments within multi-level configured items. Knowing this information before you set up this system will save time during setup.

Features

The Sales Configurator 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 to use 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 Sales Configurator 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 (F32943)	Stores the history for the configured items of all the configurations ordered

Configured String Master (F32944)	Contains the configured string identifier for each multi–level configuration
Configured String Segments (F32942)	Stores the configured string for each multi-level 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 will be used as keys to refer to tables for each configured item
Rules Table Value Definition (F32821)	Defines calculated segments which will be be populated with the returned values
Table Detail (F3283)	Stores the actual table values (parts, prices, and so on) for each combination of segment key 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
Configurator Store and Forward Segments (F3294Z)	Defines the answers to each segment question recorded during store and forward order entry.
Configurator Level Sequence (F3296)	Defines relationships between sales order components and the configuration hierarchy.

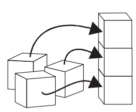
Configured Level Sequence Tag (F3296T)	Defines sales order components that were added by the user and not from the rules-based processing. (OneWorld usage only)
Configured Price/Cost Adjustment (F32961)	Defines the relationships between (x) rules based price/cost adjustments and detail sales order line items. This is a summarized file by line type.
Configurator Detail Price/Cost Adjustment (F329611)	Defines the relationships between rules based detailed price/cost adjustments, summarized adjustments, and detail sales order line items. The file also indicates price/cost adjustments added by the user and not from rules–based processing. (OneWorld usage only)

Menu Overview

The J.D. Edwards Sales Configurator system uses the following menus.

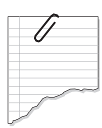
Menu Overview – Sales Configurator

Configurator G320



System Setup

- Configurator Setup G3241

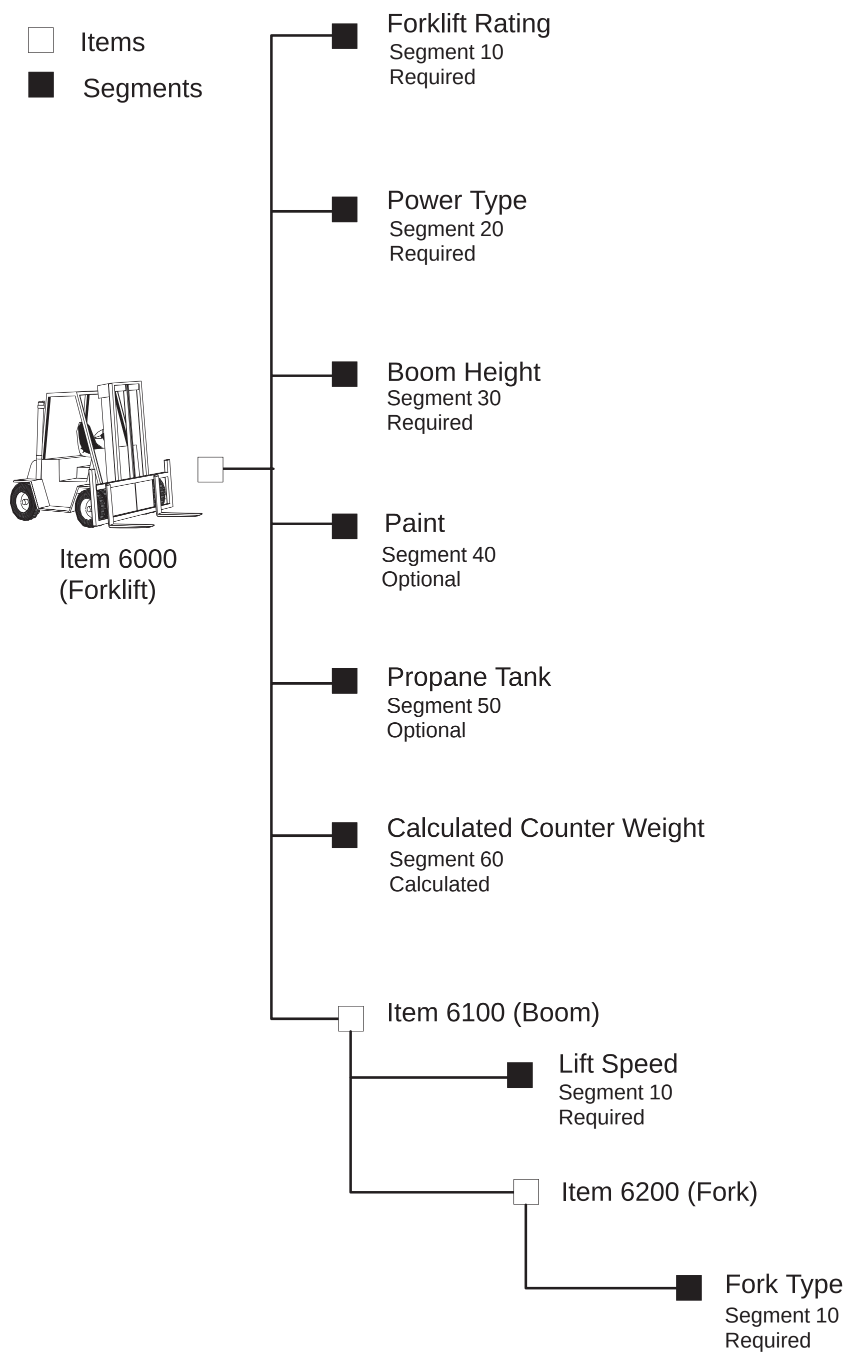


Daily Processing

- Configurator G32

Example: Multi–Level Configured Item

The graphic below is an example of a multi-level configured item, a forklift (item 6000). Its subassemblies include the boom (item 6100) and fork (item 6200). For the forklift item and its subassemblies, segments represent features and options.



Setup

Sales Configurator Setup

You must set up the Sales Configurator system before you can enter sales orders for configured items.

Setting up Sales Configurator consists of the following tasks:

- ❑ Understanding setup prerequisites
- ❑ Setting up constants
- ❑ Setting up segments
- ❑ Setting up cross-segment editing rules
- ❑ Understanding assembly inclusion rules
- ❑ Setting up assembly inclusion rules
- ❑ Setting up tables

You set up the following information for the Sales Configurator system:

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

Sales Configurator constants control processing for your business. For example, you use constants to control:

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

Segments are the features and options of a configured item. Segments represent product characteristics such as color, material, or size. You assign numbers to each segment of the configured item for clarification purposes. Information from another field 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
- Hot spot values

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

Understanding Setup Prerequisites

Sales Configurator works with other J.D. Edwards systems. Before you set up Sales Configurator, you should be familiar with the following systems:

- Inventory Management
- Sales Order Management
- Product Data Management

The following information is specific to setting up Sales Configurator. For more information regarding set up of these systems, please refer to the respective guides.

Inventory Management

The Inventory Management system stores item information, sales and purchasing costs, and quantities available by location. Within Sales Configurator, you use Inventory Management to set up item information for configured items and their components and configured subassemblies. Programs in the Inventory Management system define your configured item information such as how the item is identified and stocked.

You enter Item Master information that is unique to the item across all branch/plants such as stocking and pricing information. You also enter branch/plant information that is unique to an item for a specific branch/plant, such as lot and leadtime information.

When processing Item Master Revisions, select C for configured item in the Stocking Type field.

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

- Total the list prices of components to determine the configured item price
- Use the list price of the configured item
- Use assembly inclusion pricing rules to determine the price
- Total the discounted price of components

Price adjustment, or X assembly inclusion rules, can be used to affect the price for the configured item regardless of the price method selected.

See Also

For more information on entering item or branch/plant information, see the following chapters in the *Inventory Management Guide*.

- *Entering Basic Item Information*
- *Entering Branch/Plant Information*

Sales Order Management

The Sales Order Management system controls all aspects of processing sales orders. Sales Configurator works with the Sales Order Management system to customize the way you enter and process sales orders.

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

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

You also set up order activity rules 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.

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 parent items. 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.

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

See Also

For more information on setting up sales orders, see the following chapters in the *Sales Order Management Guide:*

- *Setting Up Order Line Types*
- *Setting Up Order Activity Rules*
- *Setting Up a Base Pricing Structure*
- *Setting Up Customer Price Groups*
- *Working with Standard Price Adjustments*

Product Data Management

The Product Data Management (PDM) system enables you to organize and maintain information about each item you manufacture. The Sales Configurator system further defines the relationship between items and how they can be manufactured.

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. Use assembly inclusion rules to 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 option. 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 of material are not required for Sales Configurator, you can use them to help manage demand for specific features and options.

You can define all possible routings for the configured item and define assembly inclusion rules to choose which routing to attach to the work order. The routing assembly inclusion rule allows you to specify a 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 unless you also enter a routing inclusion rule.

See Also

- *Entering Routings* in the *Product Data Management Guide*
- *Working With Bills of Material* in the *Product Data Management Guide*

Setting Up Constants

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

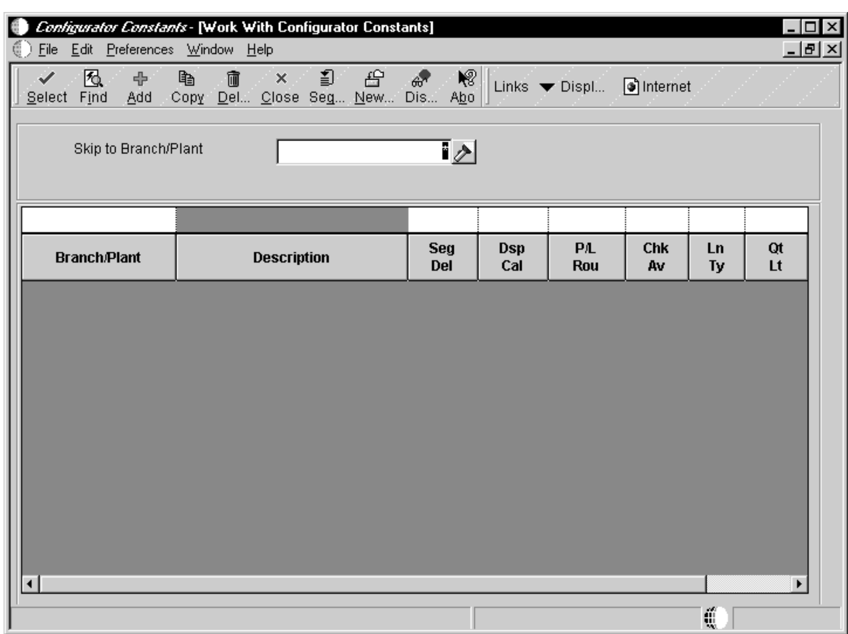
- Define the configured string delimiter
- Define whether the calculated segments appear during sales order entry
- Perform parent availability checking during sales order entry
- Cost sales quotes with manufacturing labor and overhead
- Define which stocked line type to use if the system finds a matching configuration in stock during sales order entry
- Indicate sales quote document types

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

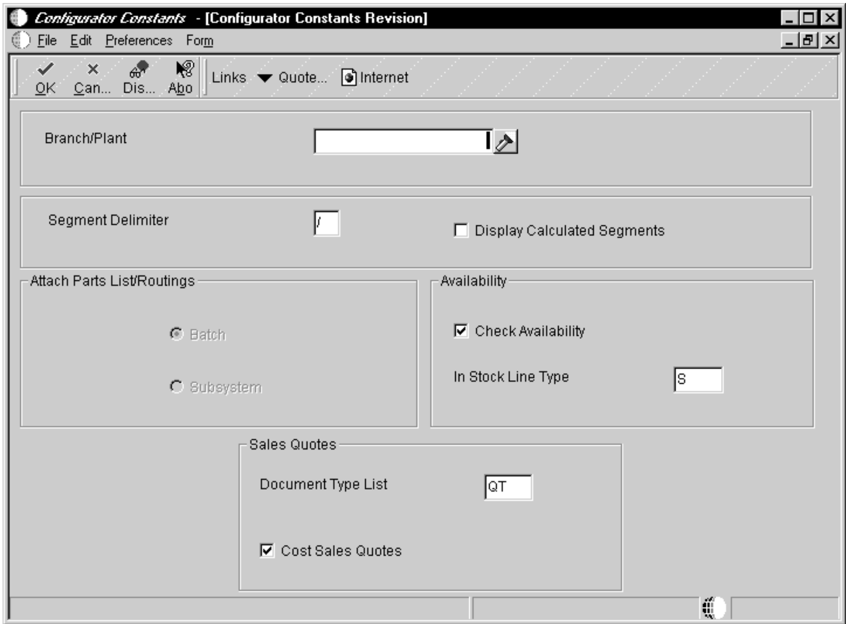
▶ To set up constants

From the Configurator Setup menu (G3241), choose Configurator Constants.

On Work With Configurator Constants



1. Click Add.



2. On Configurator Constants Revision, complete the following fields:
   - Branch/Plant
   - Segment Delimiter
3. Click the following options:
   - Display Calculated Segments
   - Check Availability
   - Cost Sales Quotes
4. Complete the following fields:
   - Document Type List
   - In Stock Line Type

Field	Explanation
Segment Delimiter	A character separator for configured item sales order entry. The default character is a forward slash (/). This character must 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.

Field	Explanation
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.
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.
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.
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.
Line Type	A code that controls how the system processes lines on a transaction. It controls the systems with which the transaction interfaces, such as General Ledger, Job Cost, Accounts Payable, Accounts Receivable, and Inventory Management. It also specifies the conditions under which a line prints on reports and is included in calculations. Codes include the following: S Stock item J Job cost N Nonstock item F Freight T Text information M Miscellaneous charges and credits W Work order . . . . *Form-specific information* . . . . Defines which stocked line type to use if the system finds a matching configuration in stock during sales order entry.

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, item 6000 (forklift) contains the following segments:

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

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.

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

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

Setting up segments consists of the following tasks:

- ❑ Defining a segment
- ❑ Setting up user defined codes
- ❑ Copying a configured item
- ❑ Locating segment information

You can define three types of segments:

Required During sales order entry, you must provide this required information. The system performs edit checking against a user defined code table of values, a range of values, or numeric validation.

Optional During sales order entry, this information is optional. The system performs edit checking against a user defined code table of values, a range of values, or numeric validation.

Calculated During sales order entry, the system calculates the value for this segment. You define the calculation with assembly inclusion rules. Calculated segments can be numeric or alpha numeric.

During sales order entry you can enter a value for each segment. You can set up the system to restrict this value by:

- Numeric or alphabetic checking
- Range checking
- User defined code table that contains all valid values

The segment information for a configured item should be the same across branch/plants to allow transfers to other branches.

Defining Objects for Display Within Sales Order Entry

Within sales order entry, you can attach media objects to all levels of a configured item. This feature of Sales Configurator allows you to include within sales order entry a visual cue of configured items and segments, including information that might initially exist as a paper-based document. Media objects can be either photos, graphics or text documents.

User defined code values, which can be used for segment answers, support media objects. Configured segments can also have media object attachments.

The media objects you define will be displayed on Configured Item Specifications. Within the tree structure displayed on Configured Item Specifications, you can click on a level and the media object will display the image from the item master for the related configured item number. The segment or segment answered user defined code will display the media object when a row is selected.

Configurator processing options control whether the media objects are changed real time based on events. Other processing options define which class of media objects to display in the window during sales order entry (text, image, OLE).

Media objects are set up on the Segment Values form. You may also retrieve media objects by using either a form exit (for item master media objects, when the tree control is selected), or a row exit (for segment or user defined code related media objects, when the row is selected).

See Also

- *Working With Media Objects* in the *OneWorld Foundation Guide* for more information on setting up media objects
- *Working With Configured Item Sales Orders* for more information on media object display

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 *Entering 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 Routing Instructions* 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.*

Defining a Segment

To begin using the Sales Configurator system, you must define the segments of each configured item. Both cross-segment editing rules and assembly inclusion rules use segments within logic statements.

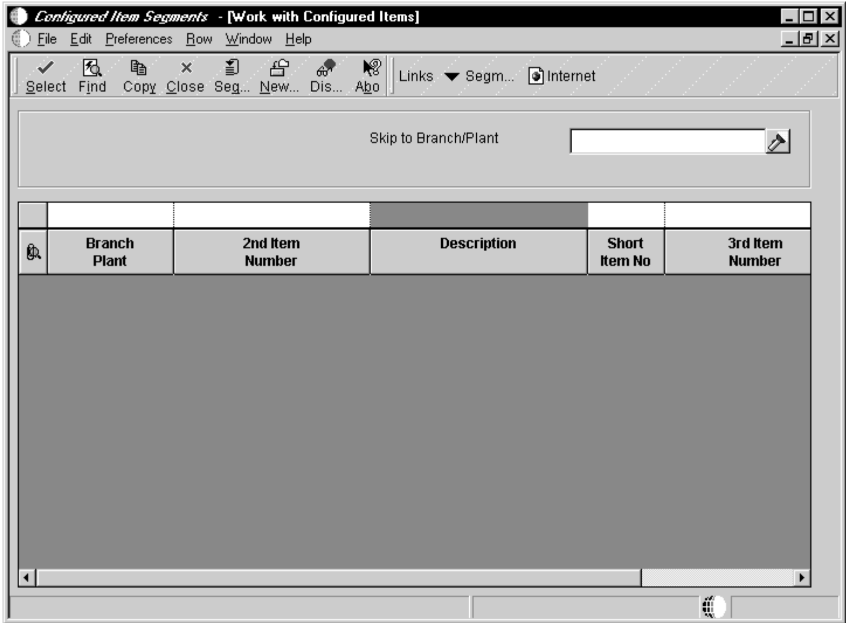
When adding new segments to a configured item, enter them at the end of the list of existing segments.

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

▶ To define a segment

From the Configurator Setup menu (G3241), choose Configured Item Segments.

On Work with Configured Items

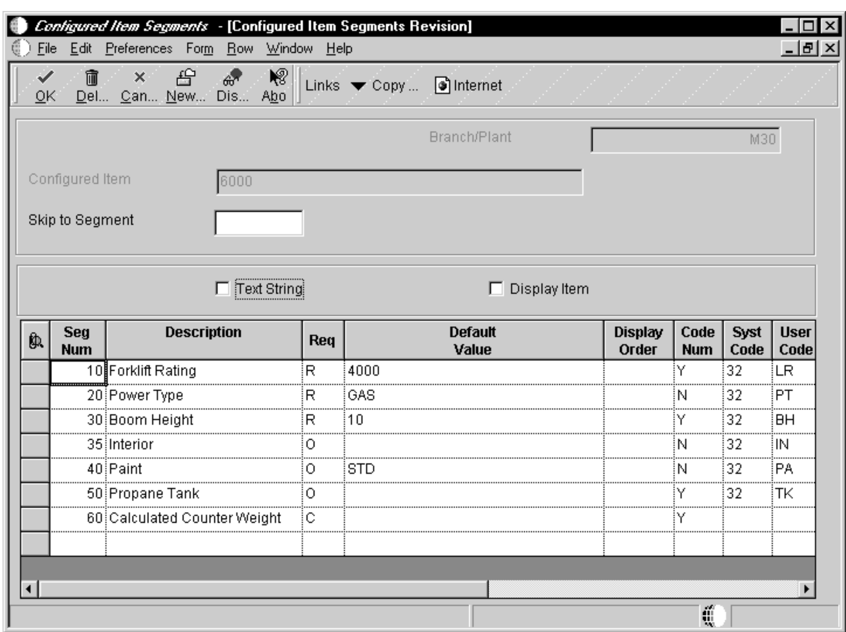


1. Complete the following field and click Find:

   - Skip to Branch/Plant

     A blank Branch/Plant field identifies a generic branch/plant. If you define generic branch/plant segments, you must also define generic cross-segment editing and assembly inclusion rules.

2. Choose a configured item and click Select.



3. On Configured Item Segments Revision, click the following options to print segment information on the sales order:
   - Display Item
   - Text String

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

4. To identify the segment, complete the following fields:
   - Number – Parent Segment Number
   - Save Seg
   - Code Num
   - Default Value
   - Req
   - Description
   - Display Order
5. Complete the following optional fields for segment user defined code table values:
   - User Code

     If you define a calculated segment, you do not need to enter a user defined code.

   - Product Code
6. To specify a range of acceptable values, complete the following fields:
   - Upper Limit of Value
   - Lower Limit of Value

     If you define a calculated segment, you do not need to define range checking.

7. To control printing configured item information on sales orders and work orders, complete the following fields:
   - Spaces Before Segment Information
   - Spaces After Segment Information
   - Print Segment Value Description
   - Print Segment Value
   - Print Segment Description

- Print Segment Number

8. Complete the following optional fields and click OK:

   - Update Category Code

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

   - Derived Calculation Round

Field	Explanation
Skip to Branch/Plant	A number that identifies a branch, plant, work center, or business unit.
Text String	Determines if the configured text string format or a user defined format appears on the sales order (Pick Slip and Invoice Print) and work order (Print Parts List). You can define the format in the detail area of each segment. The segment number, description, value, or value description can be printed in the user defined format. Valid values are: Y or 1 indicates the configured text string N or 0 indicates the user defined format
Display Item	Controls the printing of the Configured Item Number before the segment value information prints in the text string format or the user defined format. Valid values are: Y or 1 indicates print configured item number N or 0 indicates do not print configured item number
Number – Parent Segment Number	The segment number is user defined and establishes the sequence in which the system asks questions about configurator features and options during sales order entry. Assembly inclusion rules reference this segment number to define prices, component parts, routing, and calculated values for configured items. The system uses the assembly inclusion rules to compare the segment answers to values. To create unique configurations, the system uses these values to assign parts and prices, calculate values, and determine routing. The system uses cross-segment editing rules to compare the segment answers to values and determine invalid configurations.
Description	A brief description of an item, a brief description of a remark, or a brief description of an explanation.

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.
Default Value	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.
Product Code	A user defined code (98/SY) that identifies a J.D. Edwards system.
User Code	A code that identifies the table that contains user defined codes. The table is also referred to as a code type.
Upper Limit of Value	The upper allowed value of this specific segment. If you enter a value here, then you must also enter an lower allowed value.
Lower Limit of Value	Indicates the lowest value a you can enter for a specific segment. If you enter a lower allowed value, then you must enter an upper allowed value.
Spaces Before Segment Information	The number of character spaces that should print before the segment information in the user defined format.
Spaces After Segment Information	The number of spaces that should print after the segment information in the user defined format.
Print Segment Number	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 indicates print on both sales and work order N or 0 indicates do not print on sales and work order
Print Segment Description	Determines if the segment description prints on the sales order (Pick Slip and Invoice Print) and work order (Print Parts List). Valid values are: Y or 1 indicates print on both sales and work order N or 0 indicates do not print on sales and work order

Field	Explanation
Print Segment Value	Determines if the segment value prints on the sales order (Pick Slip and Invoice Print) and work order (Print Parts List). Valid values are: Y or 1 indicates print on both sales and work order N or 0 indicates do not print on sales and work order
Print Segment Value Description	Determines if the segment value description from an associated UDC table prints 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.
Update Category Code	Determines which work order category code the system populates with the segment value during sales order entry.
Derived Calculation Round	Indicates 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.

See Also

- *Setting up Assembly Inclusion Rules*

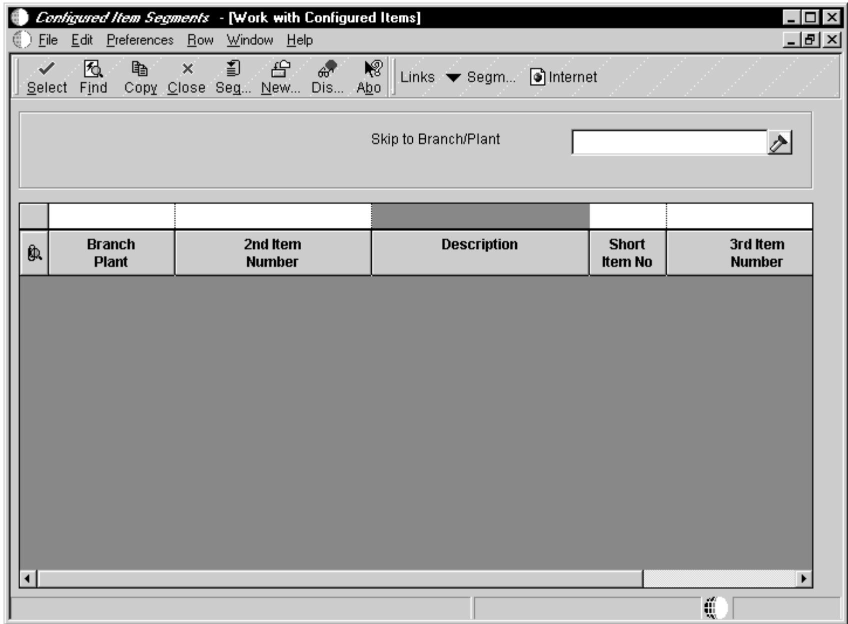
Setting Up User Defined Codes

You can create a user defined code table of segment values for a noncalculated 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.

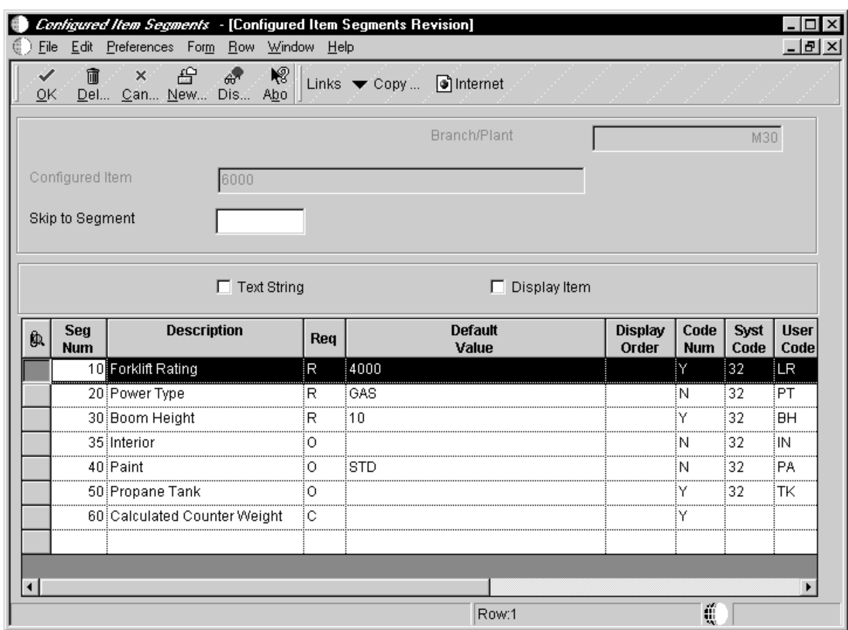
▶ To set up user defined codes

From the Configurator Setup menu (G3241), choose Configured Item Segments.

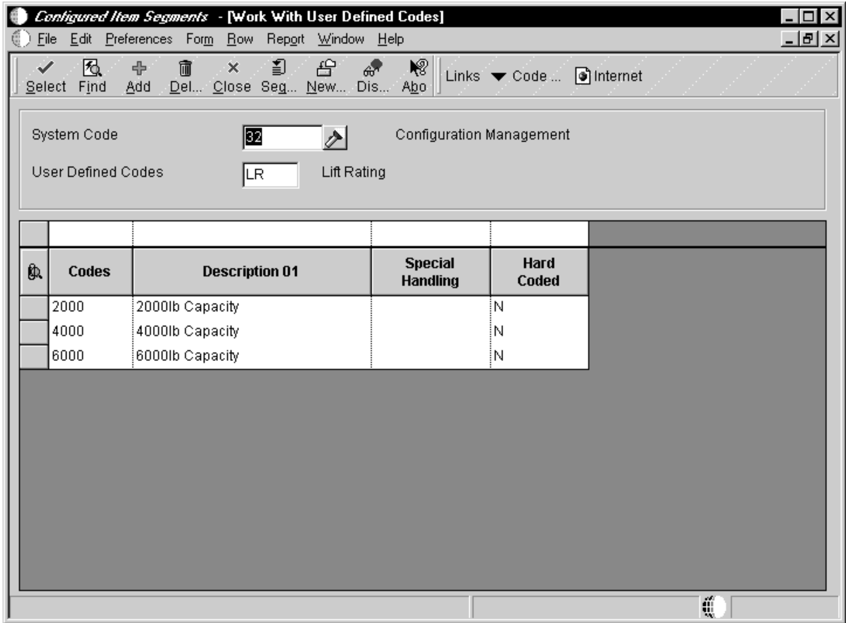
On Work with Configured Items



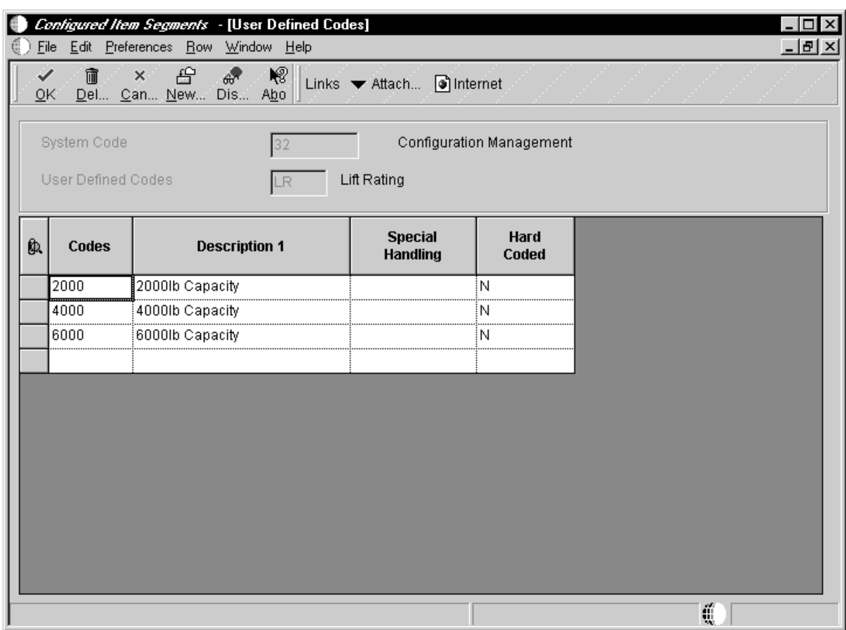
1. To locate a configured item, complete the following field and click Find:
   - Skip to Branch/Plant
2. Choose a configured item and click Select.



3. On Configured Item Segments Revision, select a row and choose User Defined Codes from the Row menu.



4. On Work With User Defined Codes, complete the following fields and click Add:
   - Product Code
   - User Defined Codes



5. On User Defined Codes, complete the following fields:
   - Codes
   - Description 1

- Special Handling
- Hard Coded

You can use codes 55 through 59 for the Sales Configurator system's user defined code types.

Field	**Explanation**
Codes	A list of valid codes for a specific user defined code list.
Description 1	This window will allow you to enter specific values for the segments making up a configured item. Segment values are separated by a special character, called the segment delimiter.
Special Handling	A code that indicates special processing requirements for certain user defined code values. The value that you enter in this field is unique for each user defined code record type. The system uses the special handling code in many ways. For example, special handling codes defined for Language Preference specify whether the language is double-byte or does not have uppercase characters. Programming is required to activate this field.
Hard Coded	A code that indicates whether a user defined code is hard coded. Valid values are: Y The user defined code is hard-coded N The user defined code is not hard-coded For OneWorld, a check indicates that the user defined code is hard-coded.

Copying a Configured Item

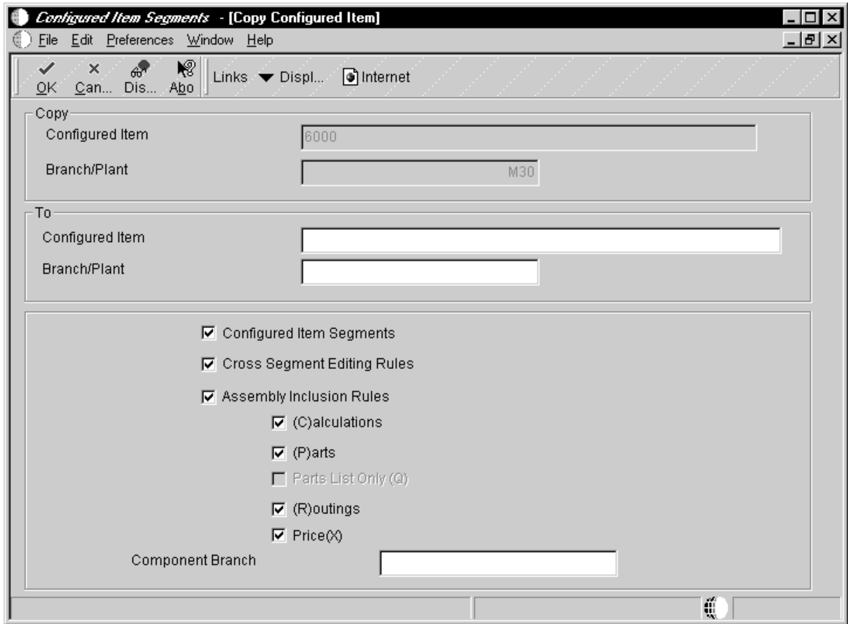
After you set up a configured item, you can copy its segments, cross-segment editing rules, and assembly inclusion rules to a new or existing configured item. Consider copying configured items to simplify your setup.

▶ To copy a configured item

From the Configurator Setup menu (G3241), choose Configured Item Segments.

On Work with Configured Items

1. Complete the following field and click Find:
   - Skip to Branch/Plant
2. Choose a configured item and click Copy.



3. On Copy Configured Item, complete the following fields under the To heading:
   - Branch/Plant
   - Configured Item
4. To select what to copy from a configured item, click any of the following options:
   - Configured Item Segments
   - Cross Segment Editing Rules
   - Assembly Inclusion Rules
   - (P)arts
   - Parts List Only (Q)
   - (C)alculations
   - (R)outings
   - Price(X)
5. Complete the following field and click OK:
   - Component Branch

When you copy a configured item, you can copy any attribute that exists within the original item. You will not be able to copy, for example, a Q assembly inclusion rule if your original item was set up with a P rule.

Field	Explanation
Configured Item	A number that identifies the item number. It can be in any of the three formats (short, long or 3rd item number).
Branch/Plant	A number that identifies a branch, plant, work center, or business unit.
Component Branch	A secondary or lower level business unit. Sometimes used to indicate a branch or plant with several departments or jobs subordinate to it. Branch/Plant – (MMCU) Dept A – (MCU) Dept B – (MCU) Job 123 – (MCU)

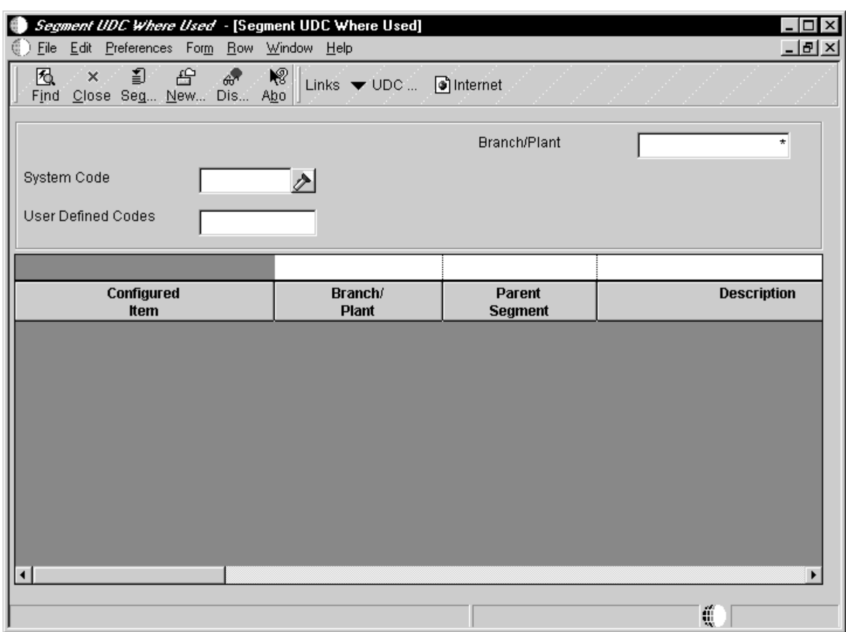
Locating Segment Information

For the user defined code table that you specify, you can locate all configured items and segments that reference the table. This is useful for reviewing the effect of table changes on configured items.

▶ To locate segment information

From the Configurator Setup menu (G3241), choose Segment UDC Where Used.

On Segment UDC Where Used



1. Complete the following fields and click Find:
   - Branch/Plant
   - System Code
   - User Defined Codes
2. Review the following fields:
   - Configured Item
   - Branch/ Plant
   - Parent Segment
   - Description
   - Required or Optional
   - System Code
   - Us Cd
   - Lower Limit of Value
   - Upper Limit of Value
   - Default Value
   - Parent Item No
   - Second Item

Setting Up Cross-Segment Editing Rules

To ensure feature and option compatibility during sales order entry, use cross-segment editing rules. These rules 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. Error messages about invalid configurations appear, based on segment information from the sales order and cross-segment editing rules.

Setting up cross-segment editing rules consists of the following tasks:

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

Setting Up Cross-Segment Logic

From the Configurator Setup menu (G3241), choose Cross-Segment Editing Rules.

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).

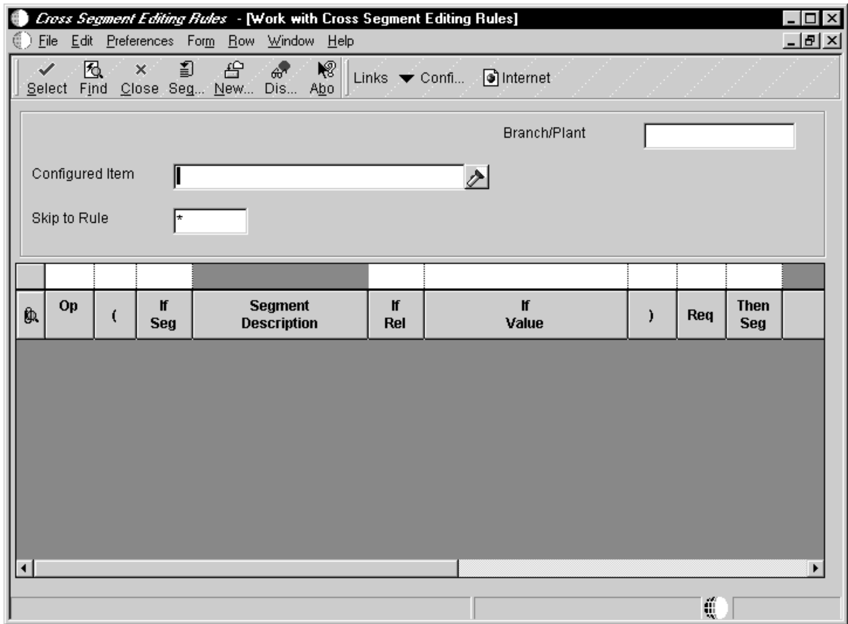
The system automatically separates rules by highlighting them with different colors.

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 Work With Cross-Segment Editing Rules

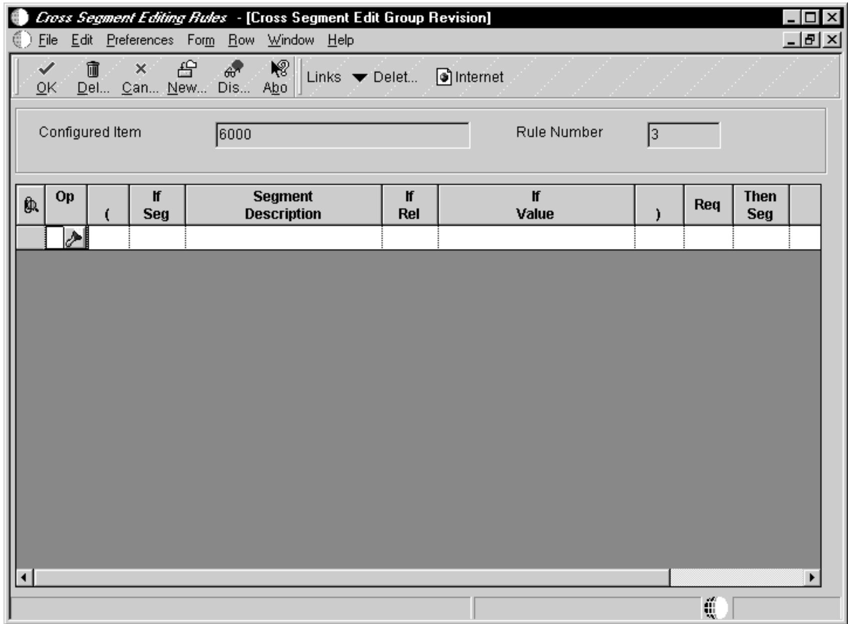


1. To locate a configured item, complete the following fields and click Find:
   - Configured Item
   - Branch/Plant

     A blank Branch/Plant field identifies a generic branch plant. If you define segments for a generic branch/plant, you must also define cross-segment editing and assembly inclusion rules for a generic branch.

2. To add the first rule, select revisions from the Form menu.

   For additional rules, select a row and choose Insert Edit Group Before or After from the Row menu.



3. On Cross Segment Edit Group Revision, use one grid row for each conditional logic statement. For each statement, complete the following fields and click OK:
   - And/Or Selection
   - (
   - If Seg
   - Segment Description
   - If Rel
   - If Value
   -)
   - Req
   - Then Seg
   - Segment Description
   - Then Rel
   - Then Value
   - Custom Message
   - If Segment Item
   - If Segment Branch

You can reference upper level items in a cross-segment editing rule with the If Segment Item field.

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.
(	A collection of open and closed brackets you use to group conditional 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
If Seg	The segment number is user defined and establishes the sequence in which the system asks questions about configurator features and options during sales order entry. Assembly inclusion rules reference this segment number to define prices, component parts, routing, and calculated values for configured items. The system uses the assembly inclusion rules to compare the segment answers to values. To create unique configurations, the system uses these values to assign parts and prices, calculate values, and determine routing. The system uses cross-segment editing rules to compare the segment answers to values and determine invalid configurations.
Segment Description	This window will allow you to enter specific values for the segments making up a configured item. Segment values are separated by a special character, called the segment delimiter.
If Rel	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 Value	Indicates an “if” logic relationship for rules. You can enter a specific UDC value or one of the following values: *VALUES Enter up to 45 values on a separate window. 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. If you leave this field blank, the default value is *ALL.
)	A collection of open and closed brackets you use to group conditional 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
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.
Then Seg	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.
Segment Description	Additional text that further describes or clarifies a field in J.D. Edwards systems.

<table>
<tr><th>Field</th><th>Explanation</th></tr>
<tr><td>Then Rel</td><td>A code that identifies the operands in Boolean logic. You can specify any of the following codes:
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</td></tr>
<tr><td>Then Value</td><td>Indicates a “then” logic relationship for rules. You can enter a specific UDC value or one of the following values:

*VALUES
Enter up to 45 values on a separate window. 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.

If you leave this field blank, the default value is *ALL.</td></tr>
<tr><td>Custom Message</td><td>Indicates whether the custom message appears.

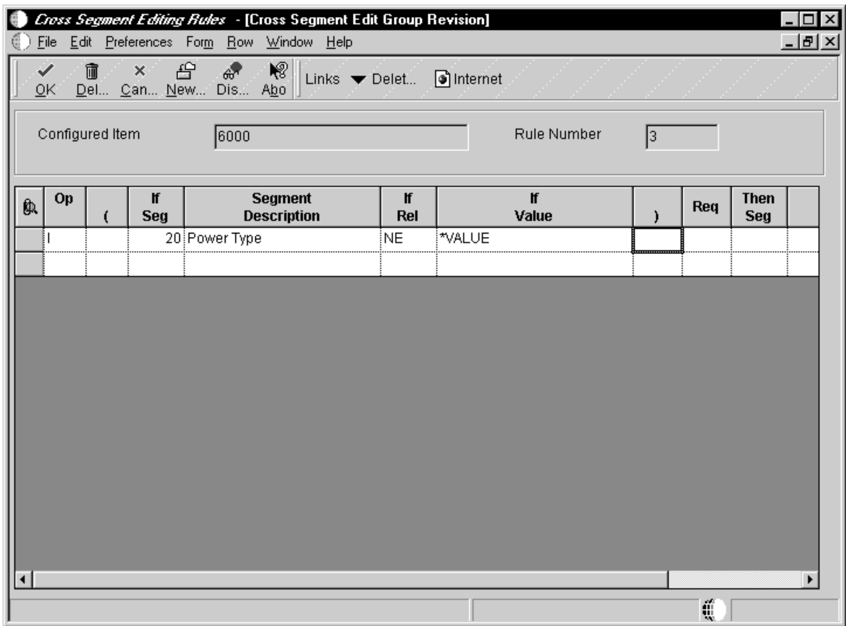
Valid values are:
Y Custom message appears
N Custom message will not appear

If this value is Y with a segment and condition, the custom message appears when that condition is false instead of the standard cross-segment error message.</td></tr>
<tr><td>If Segment Item</td><td>A number that the system assigns to an item. It can be in short, long, or 3rd item number format.</td></tr>
<tr><td>If Segment Branch</td><td>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.</td></tr>
</table>

▶ To set up values

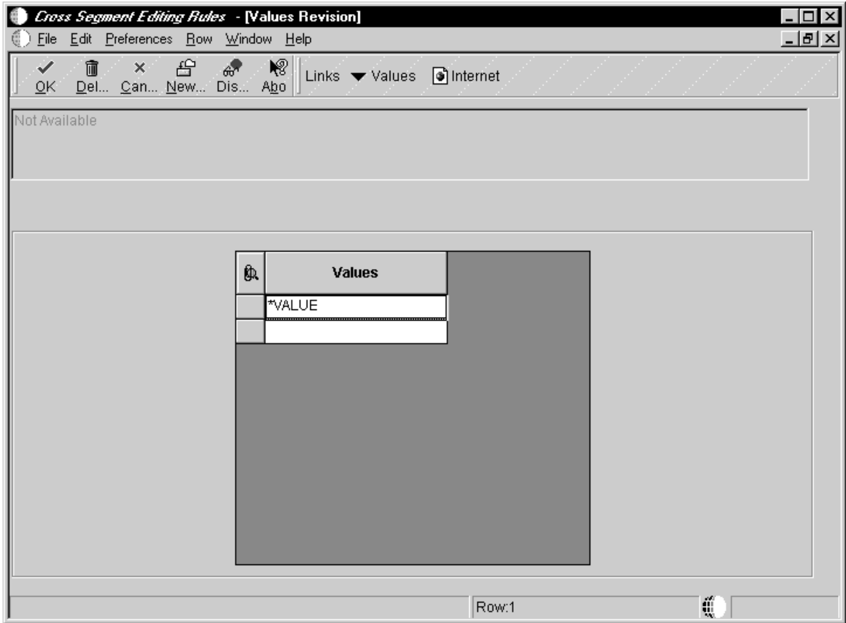
On Work With Cross-Segment Editing Rules

1. To locate a configured item, complete the following fields and click Find:
   - Configured Item
   - Branch/Plant
2. Choose a record and choose Insert Edit Group Before or After from the Row menu.



3. On Cross-Segment Edit Group Revision, complete one of the following fields with *VALUE.
   - Then Value
   - If Value
4. Choose Values from the Row menu.

   The system prompts you for the valid values for the rule.

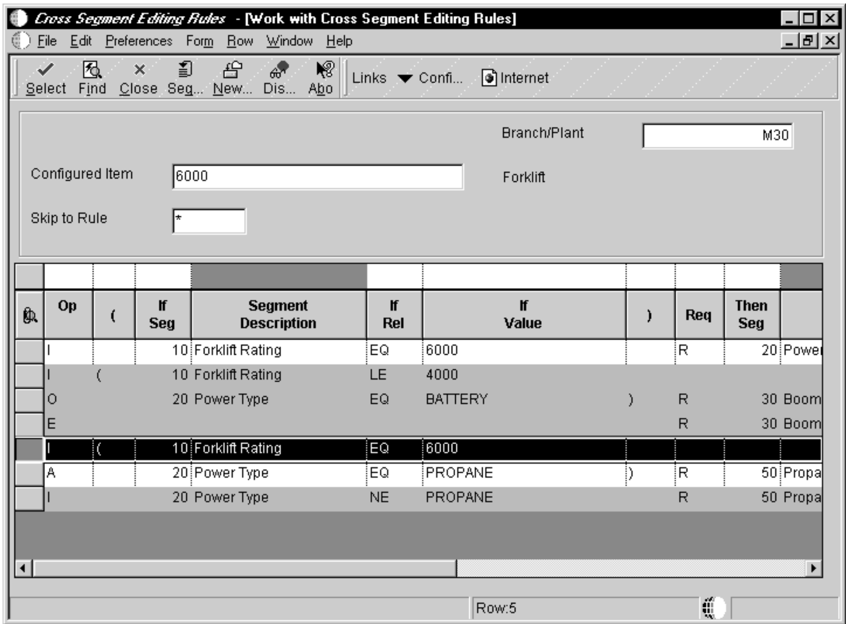


5. On Values Revision, complete the following field and click OK:
   - Values

Field	Explanation
Values	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'.

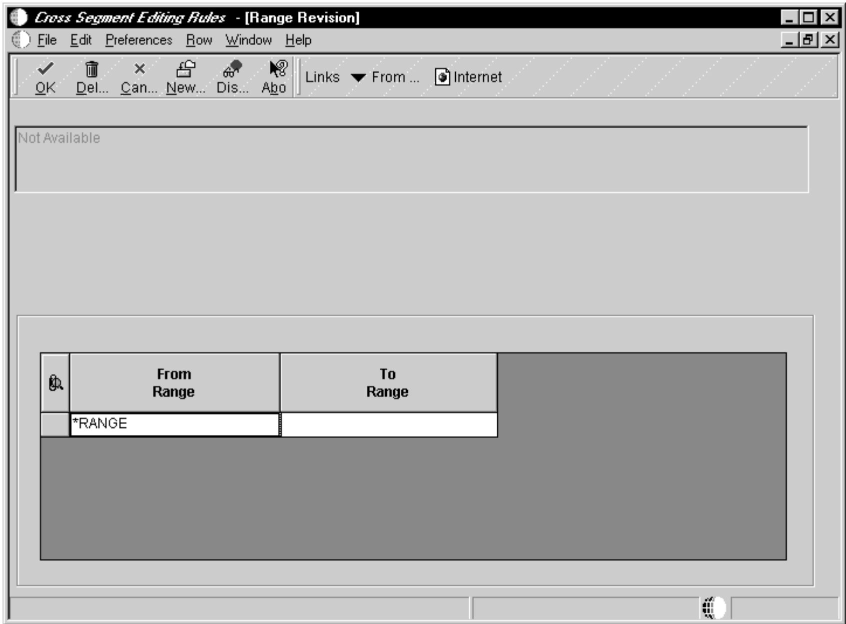
▶ To set up ranges

On Work with Cross Segment Editing Rules



1. To locate a configured item, complete the following fields and click Find:
   - Branch/Plant
   - Configured Item
2. Choose a record and choose Insert Edit Group Before or After from the Row Menu.
3. On Cross-Segment Edit Group Revision, complete one of the following fields with *RANGE:
   - Then Value
   - If Value
4. Choose Range from the Row menu.

   The system prompts you for range from and to values.



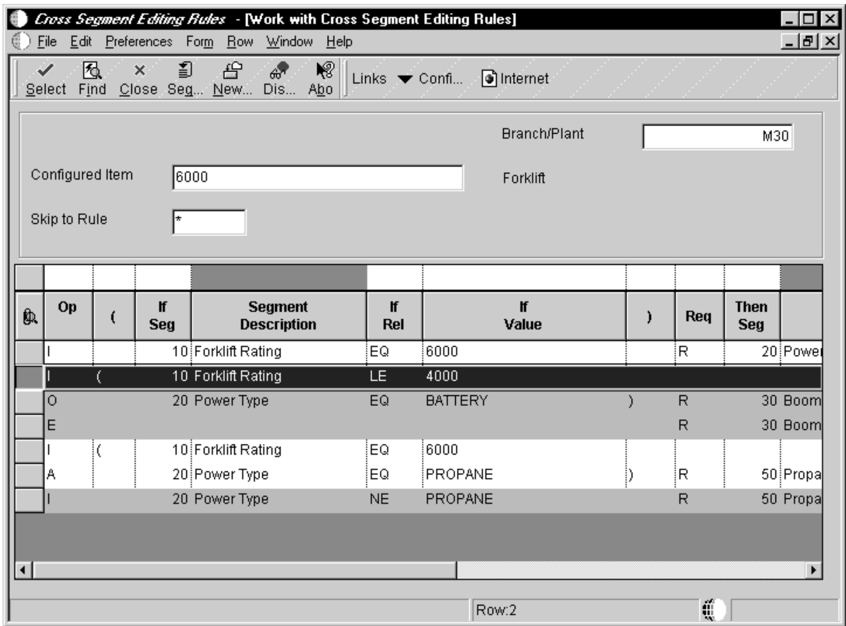
5. On Range Revision, complete the following fields and click OK:
   - From Range
   - To Range

Field	Explanation
From Range	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.
To Range	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.

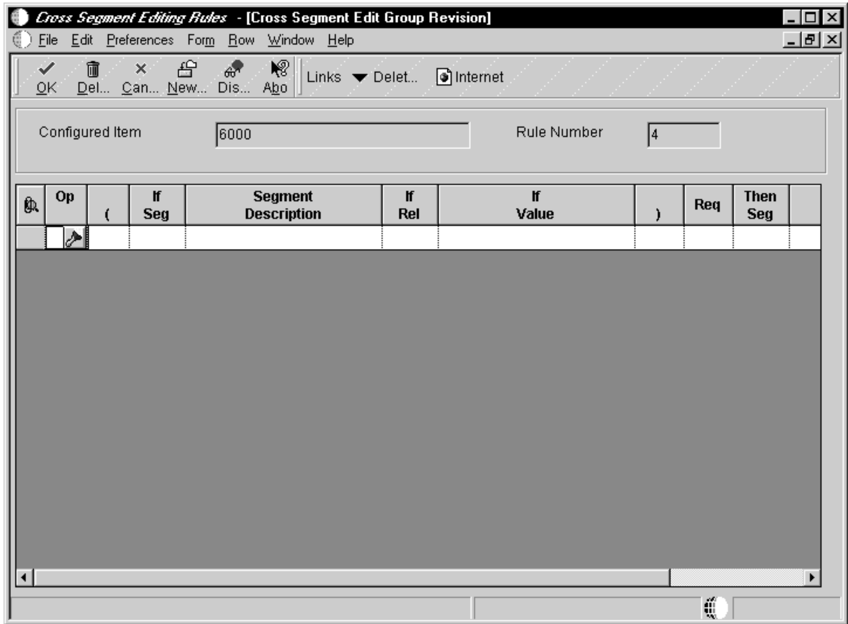
▶ To copy a rule

To save time during setup, you can copy a cross-segment editing rule from one configured item to another. To copy the entire configured item, including cross-segment editing rules, see *Copying a Configured Item*.

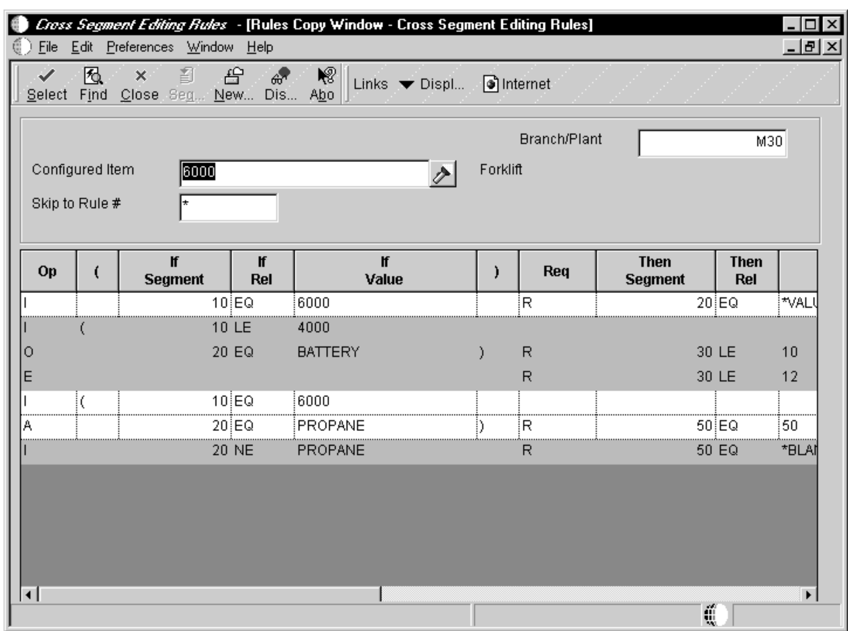
On Work with Cross Segment Editing Rules



1. To locate a configured item, complete the following fields and click Find:
   - Configured Item
   - Branch/Plant
2. Select a record and choose Insert Edit Group Before or After from the Row Menu.



3. On Cross Segment Edit Group Revision, choose Copy from the Row menu.



4. On Rules Copy Window – Cross Segment Edting Rules, locate the configured item from which you want to copy a rule.
5. Choose a rule and click Select.

See Also

- *Working with Error Messages*

Setting Up Custom Error Messages

From the Configurator Setup menu (G3241), choose Cross-Segment Editing Rules.

As you enter a sales order, error messages appear for invalid combinations defined by cross-segment editing rules. You can define custom messages or the system can generate an error message. System generated error messages appear as calculated segment values. You have two options for controlling how error messages appear:

Custom messages	Create error messages for your rules that contain 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	A system-generated message contains 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 BATTERY. Propane Tank {Seg. 050} is 50LBTK.

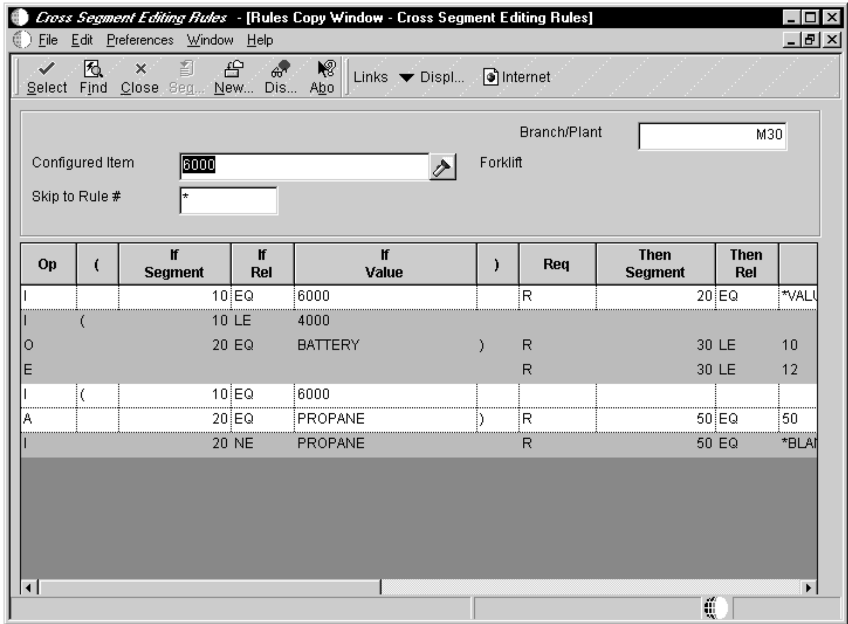
Hard or soft error messages might appear:

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

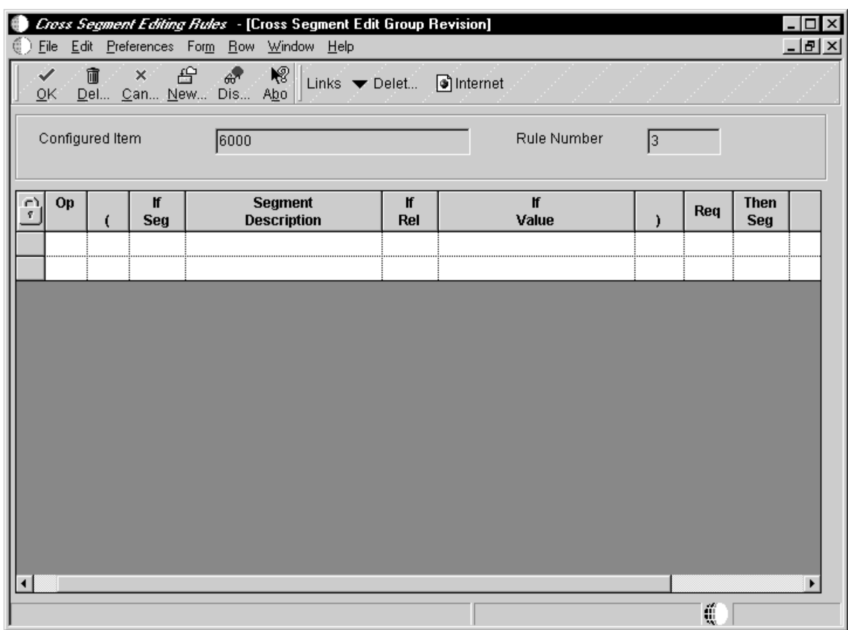
▶ To set up custom error messages

On Work with Cross Segment Editing Rules

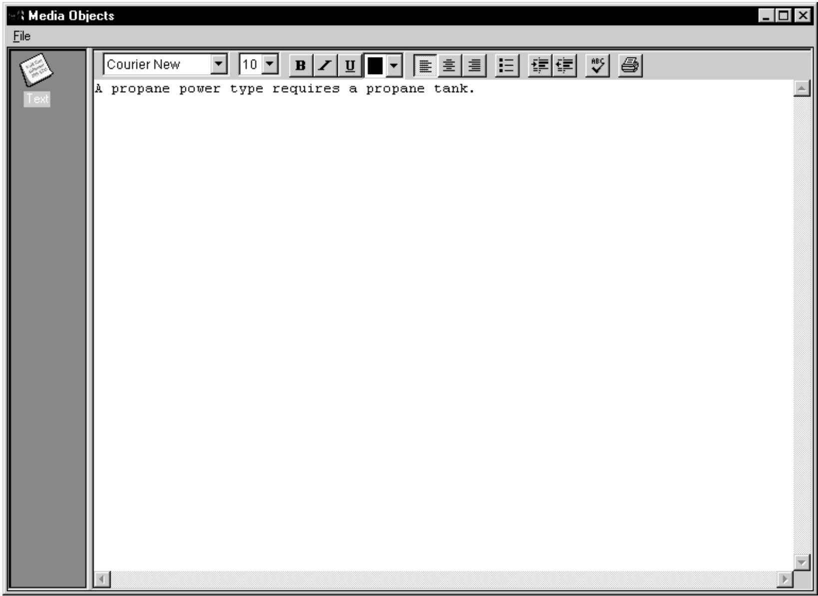
1. To locate a configured item, complete the following fields and click Find:
   - Branch/Plant
   - Configured Item



2. On Work with Cross Segment Editing Rules, choose a record and choose Insert Edit Group Before or After from the Row Menu.



3. On Cross Segment Edit Group Revision, complete the following field with Y:
   - Custom Message
4. Choose Custom Message from the Row menu.



5. On Media Objects, choose File, Add, Text.
6. Enter the text for the error message.
7. Select Save & Exit from the File menu.

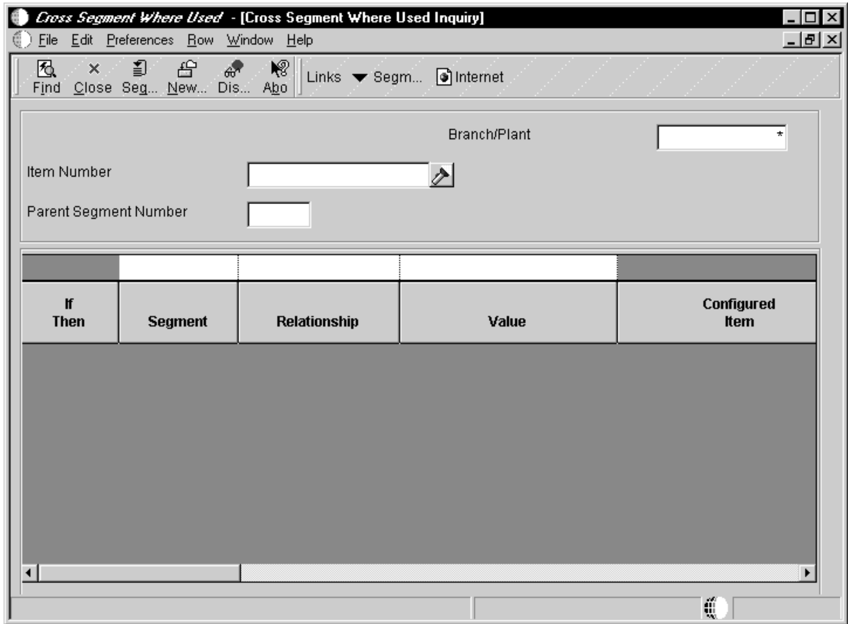
Reviewing Cross-Segment Editing Information

From the Configurator Setup menu (G3241), choose Cross Segment Where Used.

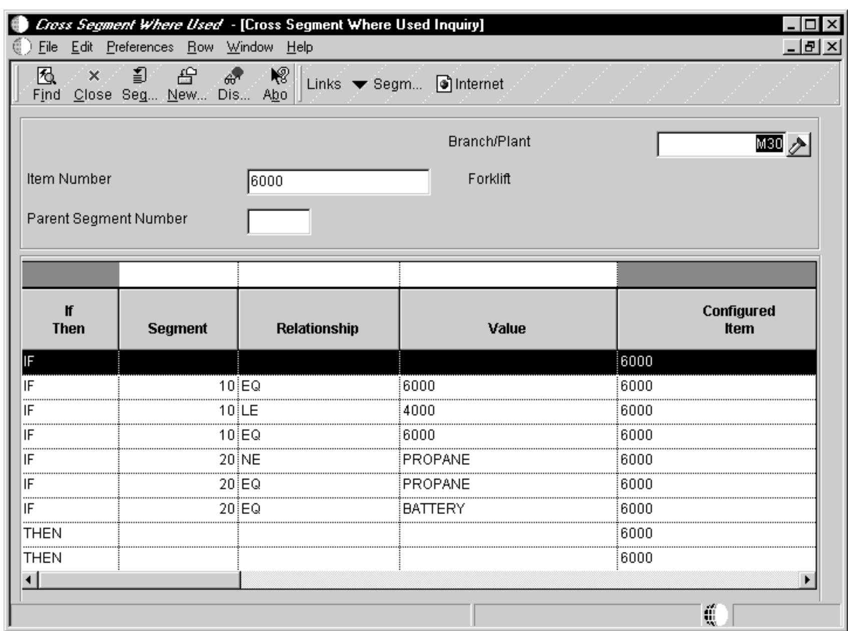
Review cross-segment editing information to help you maintain the rules. For the item number and segment that you specify, you can review rule logic and segment values.

▶ **To review cross-segment editing information**

On Cross Segment Where Used Inquiry



1. To locate a configured item, complete the following fields and click Find:
   - Branch/Plant
   - Item Number
   - Parent Segment Number



2. Review the following fields:
   - If Then
   - Segment
   - Relationship
   - Value
   - Configurator Rule Number
   - Configurator Sequence Number

Field	Explanation
Configurator Rule Number	The number associated with a set of Cross Segment Editing Rules or Assembly Inclusion Rules.
Configurator 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.

Understanding Assembly Inclusion Rules

Assembly inclusion rules translate requested options and values from sales order entry into the specific components, operations, user display information and calculated values that are necessary to build and price a configured item. An assembly inclusion rule includes logic statements and optional advanced information.

To understand assembly inclusion rules, you must understand the following concepts:

- Logic Statements
- Advanced Assembly Inclusion Rules

The six types of assembly inclusion rules include:

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.
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. You can use a calculated segment value in derived calculations for other rules.
Hot Spot (H) Rules	Define information and messages about a configured item which are processed for display purposes only. This information is displayed on the order entry form in a Hot Spot field. H rules are calculated like C rules. However, the results will not affect the configured string.

Pricing (X) Rules

Define the price/cost adjustment. The system processes X rules independently based on the kit pricing method you have selected. Typically, 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.

Based on whether the rules roll-up flag is checked, adjustments will either be reflected in the parent item's price, or be a new extended sales order detail line.

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.

Logic Statements

For each assembly inclusion rule, you define a logic statement for many conditions. This statement can determine which parts to include or how to price an item. Logic statements can be either conditional or unconditional.

Unconditional statements are identified by an asterisk (a "then" condition) in the And/Or Selection field. Unconditional rules are useful when you want the same rule applied regardless of the segment answers. Unconditional rules must be defined first, before conditional rules. Unconditional rules are used, for example, when a part is always included as a component, or when a price adjustment is always performed.

Conditional rules use boolean logic to control or condition an action based on segment answers. You can also create conditional rules that are compound statements of logic by using and/or operators. The following P assembly inclusion rule is an example of a compound logic statement:

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

Conditional logic statements use the following operators:

- If (required)
- Or (optional)
- Else (optional)
- Then (required)
- And (optional)

You set up logic statements on the Work With Assembly Inclusion Rules form.

Advanced Assembly Inclusion Rules

In addition to the logic statements, you can set up the following kinds of optional advanced assembly inclusion rules:

- Derived Calculations
- External Business Function References
- Configured Tables
- Smart Parts

You set up advanced assembly inclusion rules on the Advanced Rule Functions form.

Advanced assembly inclusion rule functionality varies according to the type of assembly inclusion rule you set up as seen in the following table:

	P Rules	Q Rules	C Rules	H Rules	X Rules	R Rules
External Program References	•	•	•	•	•	•
Configured Tables	•	•	•	•	•	
Smart Parts	•	•				
Derived Calculations	•	•	•	•	•	•

Derived Calculations

For each rule type, you can define calculations that refer to the values of one or more segments. You can use the following functions within a derived calculation:

- Segment references
- Algebraic formulas
- Trigonometric and logarithmic functions
- Substrings
- Concatenations
- External field references

You can define a derived calculation on either Assembly Inclusion Rules or Advanced Rules or within sales order entry.

The system checks derived calculations for accuracy when the user chooses calculation during sales order entry. The system also verifies changes to segment values within a configuration. Derived calculations can be changed in revisions forms without affecting the database.

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 the item name within equal signs. For example:

S3=Piston=	Indicates segment three of item Piston

Algebraic Formulas

Use algebraic formulas to combine different mathematical operations with the following operators: + , – , * , and /. You can imbed calculations by enclosing them in parentheses. You might want to 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 to keep the forklift from tipping over when its boom is fully extended with a full load:

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

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 (values expressed in radians):

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

The following logarithmic functions are available:

LOG	This function indicates log to base 10.
LN	This function indicates natural log.
**	This function indicates an exponent. 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 provide the following references: 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 which 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 next 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 next 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.

External Field References

You can select field values from the External Files Reference form 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
F03012	Customer Master
F41002	Unit of Measure Conversion
F41092	Supplemental Database
F46011	Item/Unit of Measure Profile

After you reference a field value, the information appears in the Derived Calculation field preceded by an ampersand (&). You can use the field independently or within a complex expression.

You can also include field values on External Files Reference. For example, a pricing assembly inclusion rule for item 6000 (forklift) uses a field reference to retrieve a base price from the Base Price table (F4106).

The system uses the component item number and branch from the rule to retrieve the appropriate tables. It also uses the Address Book number to retrieve data from the Address Book or Billing Instructions tables.

To 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.

External Business Function References

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

You can refer to an external custom business function for special calculations. This is useful if the calculation is particularly complex or involved. For R, P and Q rules, the external business function refers to the component number, component branch, and sold to number. For H, C or X rules, the external business function refers to the configured item number, branch/plant, and sold to number.

The external business function can also access and use the values of previously entered segments sorted in cache. The system passes the B3200000 data structure to the external business function.

Configured Tables

Configured tables are set up to simplify assembly inclusion rules. Although they take time to set up, tables reduce the number of rules and reduce processing time. Each table uses an assembly inclusion rule to reference return calculated segment values, prices, parts and display information to the sales or work order.

See Also

- *Setting up Tables*

Smart Parts

Depending on your item numbering scheme and your need for reducing assembly inclusion rules, you can set up smart parts, or customized item numbers, to derive defined variable segments. Using smart parts is a simplified version of using assembly inclusion rules.

For example, a manufacturer might have 100 different paint options for a configured item. Rather than set up 100 different assembly inclusion rules to allow for variations in paint color, the manufacturer might want to set up customized item numbers, or smart parts, to keep track of the different paint values. These smart parts would combine the segment item and the paint color into one item number as defined in the smart part field on the Advanced Rule Functions form.

Smart parts work with P and Q rules. You can build smart part numbers using the segment values from 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 item numbers that are the result of smart part calculations in the Item Master (F4101) and Branch/Plant (F4102) tables.

Smart part formulas can define short, second, or third part numbers. Smart parts use the part numbering symbol conventions defined in Branch/Plant Constants. For example, if the smart part formula uses the symbol to identify the third part number, the system places the second part number on the sales order and work order detail line.

You can build a smart part number using the following functions:

Segment referencing — 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=

Substring — 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.

Concatenation — 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.

Literal text — To name a smart part with existing segment names, use the part number, which in this example 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.

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, display order and calculated values that are necessary to build and price the configured item.

Depending on the functionality you need from your assembly inclusion rule, you can choose from the following rule options:

Component (P and Q) Rules	Quantity multiplier (similar to quantity per assembly)
Calculation (C) Rules	The value for a calculated segment
Hot Spot (H) Rules	User-defined calculations for display purposes only.
Pricing (X) Rules	Price multiplier
Routing (R) Rules	Run or machine hours multiplier for a routing or routing step

Setting up assembly inclusion rules consists of the following tasks:

- ❑ Defining assembly inclusion rules
- ❑ Locating assembly inclusion rule information

You cannot use the same multi-level configured item more than once within the same configuration.

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)

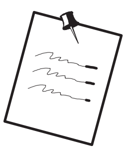
- R rules (if necessary)
- X rules
- H rules

Defining Assembly Inclusion Rules

From the Configurator Setup menu (G3241), choose Assembly Inclusion Rules.

Defining assembly inclusion rules consists of the following tasks:

- Defining unconditional rules
- Defining conditional rules
- Defining values
- Defining ranges
- Setting up advanced rules
- Copying rules

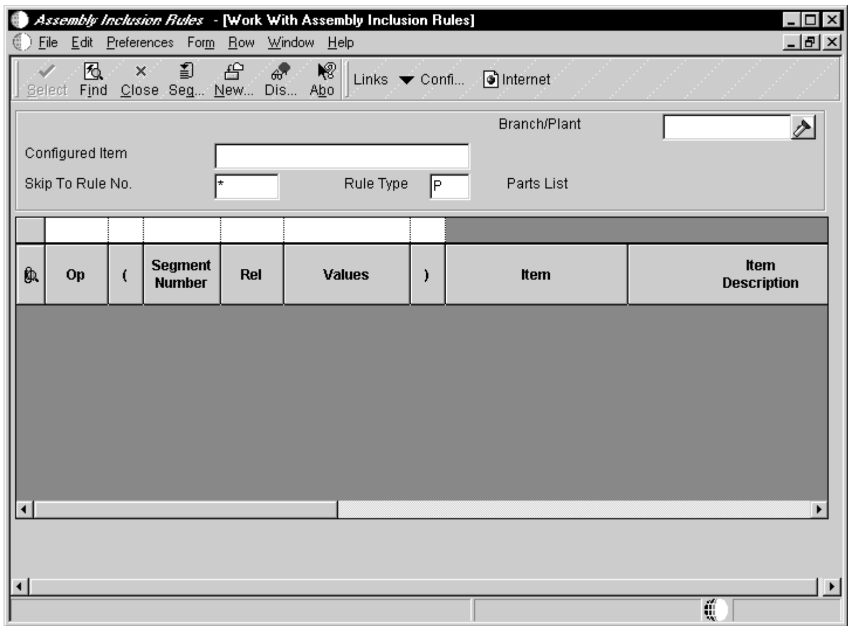


Before you can define H, or Hot Spot, assembly inclusion rules, you must define the Hot Spot user defined code value on user defined code table 32/HS.

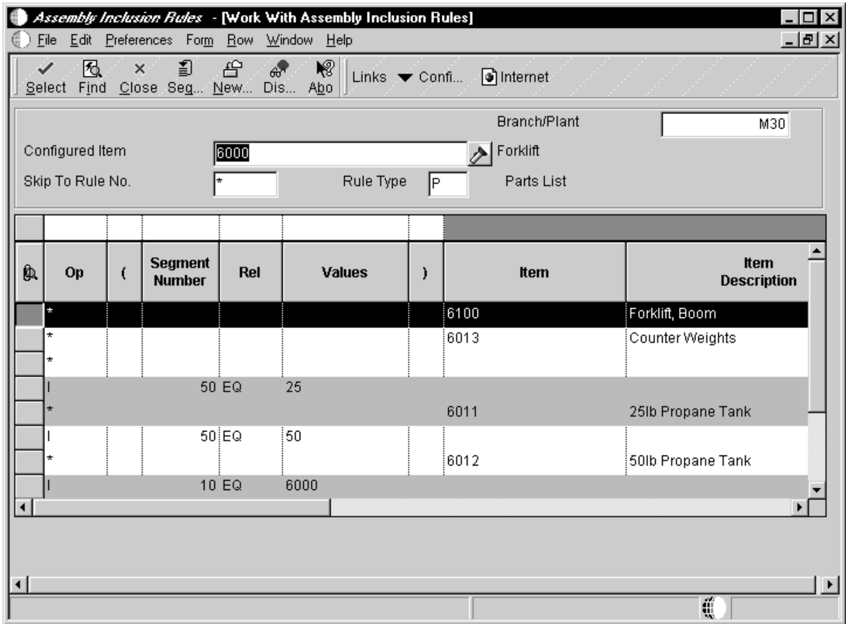
▶ To define unconditional rules

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

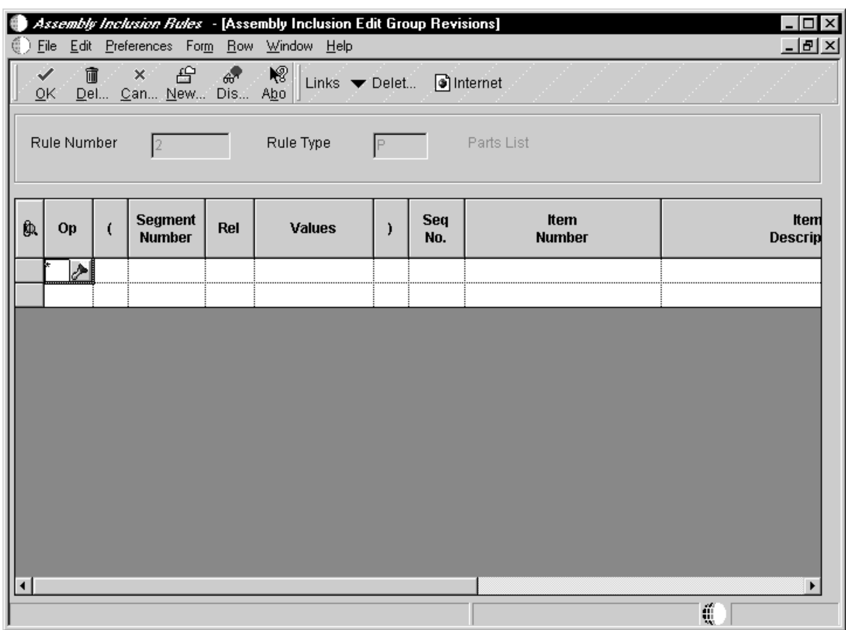
On Work With Assembly Inclusion Rules



1. To locate a configured item, complete the following fields and click Find:
   - Branch/Plant
   - Configured Item
   - Rule Type



2. Choose Insert Edit Group After from the Row menu.



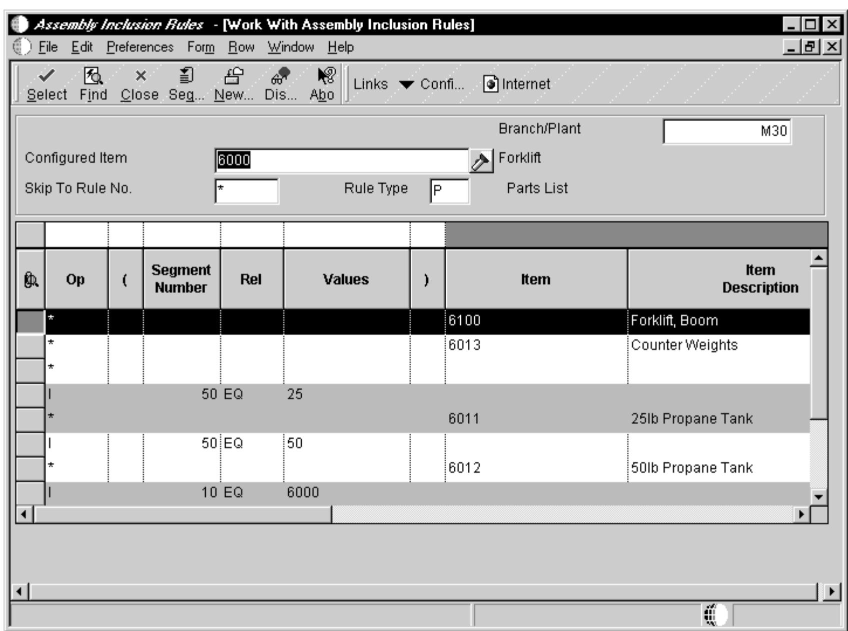
3. On Assembly Inclusion Edit Group Revisions, complete the following field with an asterisk:
   - Op

4. Complete the following fields and click OK:
   - Segment
   - Configurator Sequence Number
   - Segment Branch/Plant

Field	Explanation
Rule Type	A value that identifies the type of included components: P Part List Q Work Order Component C Calculation H Hot Spot X Price/Cost Adjustment R Route Sheet

▶ To define conditional rules

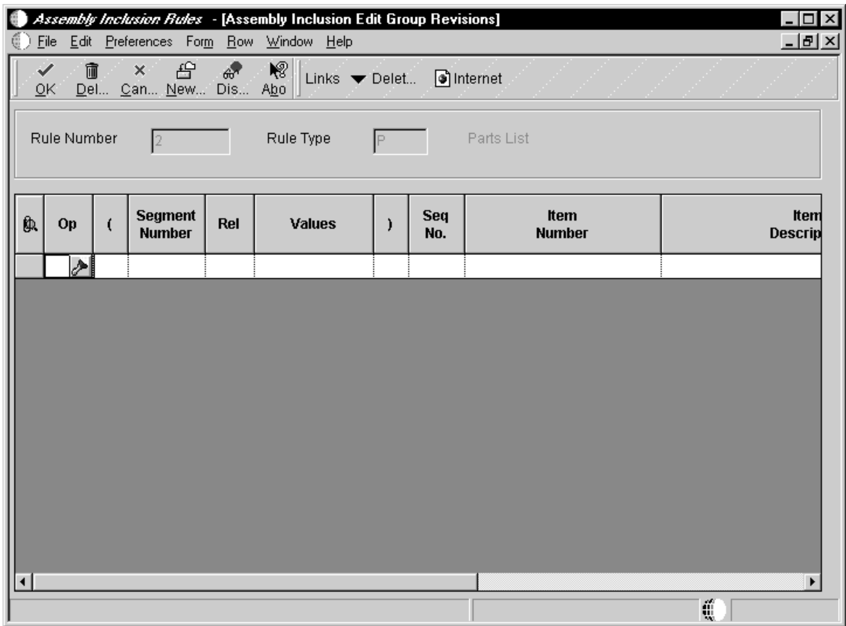
On Work With Assembly Inclusion Rules



1. Complete the following fields to locate a configured item and click Find:
   - Branch/Plant
   - Configured Item
   - Rule Type

2. To add the first rule, select Revision from the Form menu.

   For additional rules, choose Insert Edit Group Before or After from the Row menu.



3. On Assembly Inclusion Edit Group Revisions, use one grid row for each phrase of the conditional logic statement. To define a logic statement, complete the following fields:
   - Op
   - (
   - Segment Number
   - Rel
   - Values
   -)
4. Complete the following fields with rule information:
   - Seq No.
   - Rule Number
   - Rule Type

5. Complete the following fields with segment information:
   - Description
   - Number
   - Operation Seq No.
   - Segment
   - Segment Branch/Plant
6. For pricing rules, complete the following fields:
   - Unit Price
   - Unit Cost
7. Complete the following fields to determine a range of effectivity:
   - Effective Thru
   - Effective From
8. Complete the following optional fields and click OK:
   - Component Branch
   - Issue Type
   - Print Part
   - Derived Calculation
   - Smart Part
   - Rule Table
   - External Program

   The system separates different groups of logic statements with colored grid rows.

You can use the insert line option and the delete line option to revise the assembly inclusion rules.

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.
Bracket Selection Beginning	A collection of open and closed brackets you use to group conditional 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

Field	Explanation
Number – Parent Segment Number	The segment number is user defined and establishes the sequence in which the system asks questions about configurator features and options during sales order entry. Assembly inclusion rules reference this segment number to define prices, component parts, routing, and calculated values for configured items. The system uses the assembly inclusion rules to compare the segment answers to values. To create unique configurations, the system uses these values to assign parts and prices, calculate values, and determine routing. The system uses cross-segment editing rules to compare the segment answers to values and determine invalid configurations.
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
Configurator If Selection Value	Indicates an “if” logic relationship for rules. You can enter a specific UDC value or one of the following values: *VALUES Enter up to 45 values on a separate window. 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. If you leave this field blank, the default value is *ALL.
Bracket Selection Ending	A collection of open and closed brackets you use to group conditional 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

Field	Explanation
Configurator 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.
Configurator Rule Number	The number associated with a set of Cross Segment Editing Rules or Assembly Inclusion Rules.
Configurator Rule Type	A value that identifies the type of included components: P Part List Q Work Order Component C Calculation H Hot Spot X Price/Cost Adjustment R Route Sheet
Item Number – Unknown Format Entered	A number that the system assigns to an item. It can be in short, long, or third item number format.
Item	A brief description of an item, a brief description of a remark, or a brief description of an explanation.
Description	A brief description of an item, a brief description of a remark, or a brief description of an explanation.
Operation Seq No.	A number used to indicate an order of succession. In routing instructions, a number that sequences the fabrication or assembly steps in the manufacture of an item. You can track costs and charge time by operation. In bills of material, a number that 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 instructions for the item. The Shop Floor Management system uses this number in the backflush/preflush by operation process. In engineering change orders, a number that sequences the assembly steps for the engineering change. For repetitive manufacturing, a number that identifies the sequence in which an item is scheduled to be produced. 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.
Segment Branch/Plant	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.
Unit Price	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.

Field	Explanation
Unit Cost	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.
Effective From	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 Management, 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.
Effective Thru	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 Management, 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.

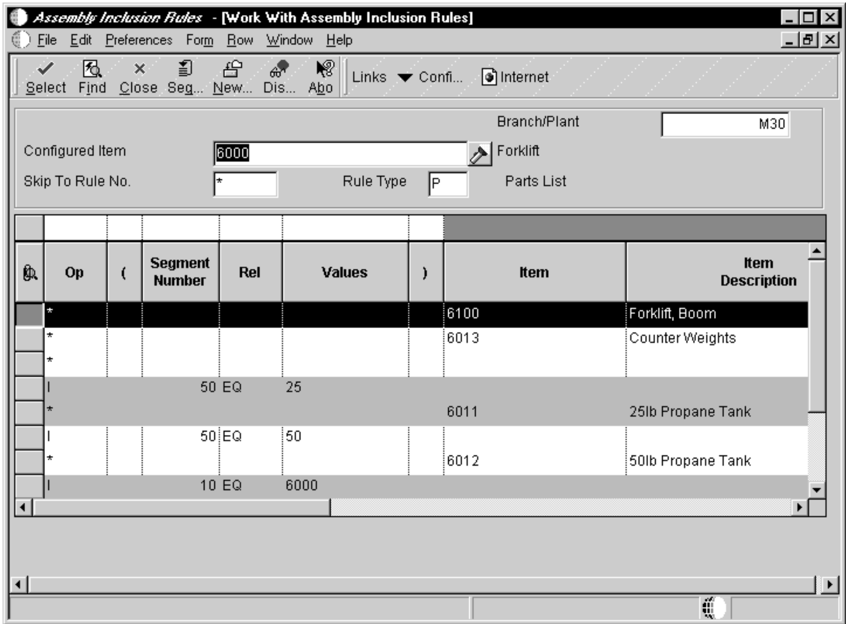
Field	Explanation
Issue Type	A code that indicates how the system issues each component in the bill of material from stock. In Shop Floor Management, it indicates how the system issues a part to a work order. Valid codes are: I Manual issue (default) F Floor stock (no issue) B Backflush (when part is 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.
Print Part	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
Derived Calculation	Defines an algebraic formula that calculates the quantity, price, hours or a 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 • Specifies 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 • Defines an external program for the calculation, enter the name of the external program and EXTVAR in the Derived Calculations field. Smart Parts • PS4 indicates a smart part number P2000 when the value of segment 4 is 2000.

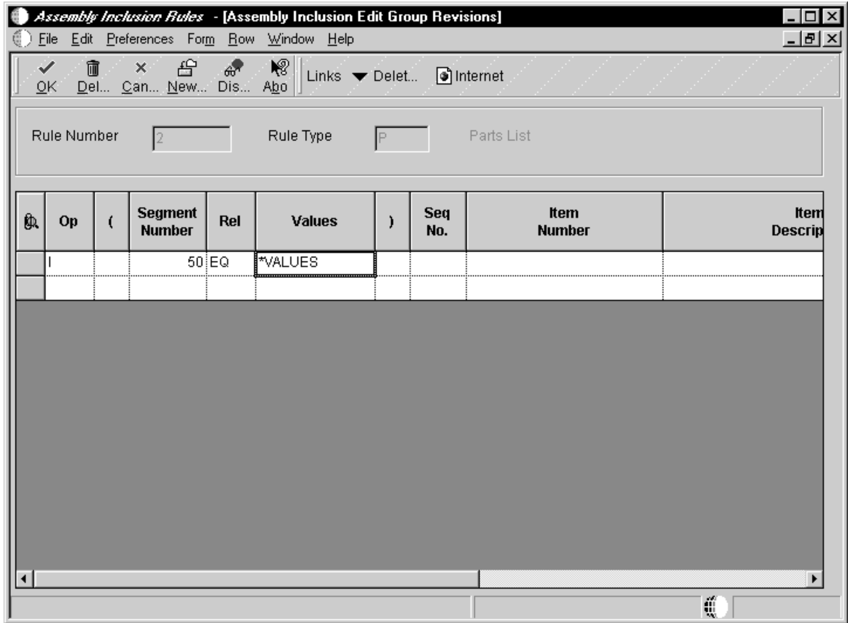
Field	Explanation
Smart Part	Defines a formula that calculates the part number associated with a rule. For example, • The part number consists of the literal 'P' and the value of segment 4. If the smart part calculation and the value of Segment 4 is 2000, then the smart part would be P2000. • To reference 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.
Rule Table	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.
External Program	The name of the external program from your MIS department that provides values for external variables.

To define values

On Work With Assembly Inclusion Rules

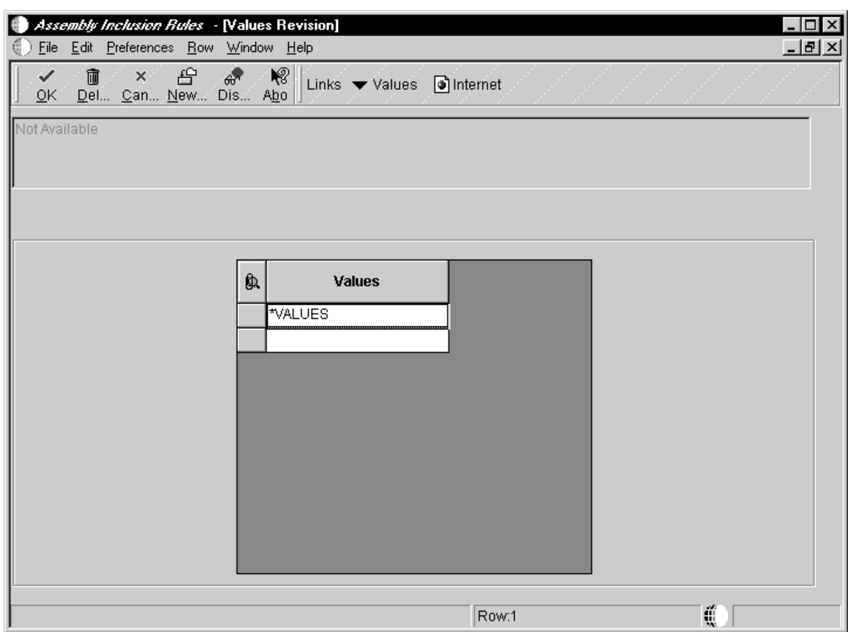


1. Complete the following fields to locate a configured item and click Find:
   - Branch/Plant
   - Configured Item
   - Rule Type
2. Choose Insert Edit Group Before or After from the Row menu.



3. On Assembly Inclusion Edit Group Revisions, complete the following field with *VALUES:
   - Values
4. Choose Values from the Row menu.

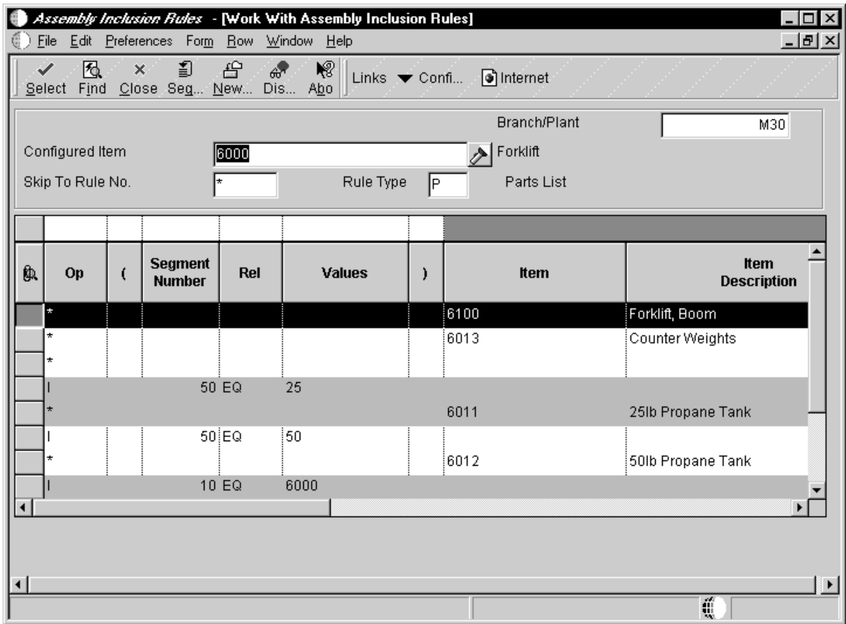
   The system prompts you for the valid values for the rule.



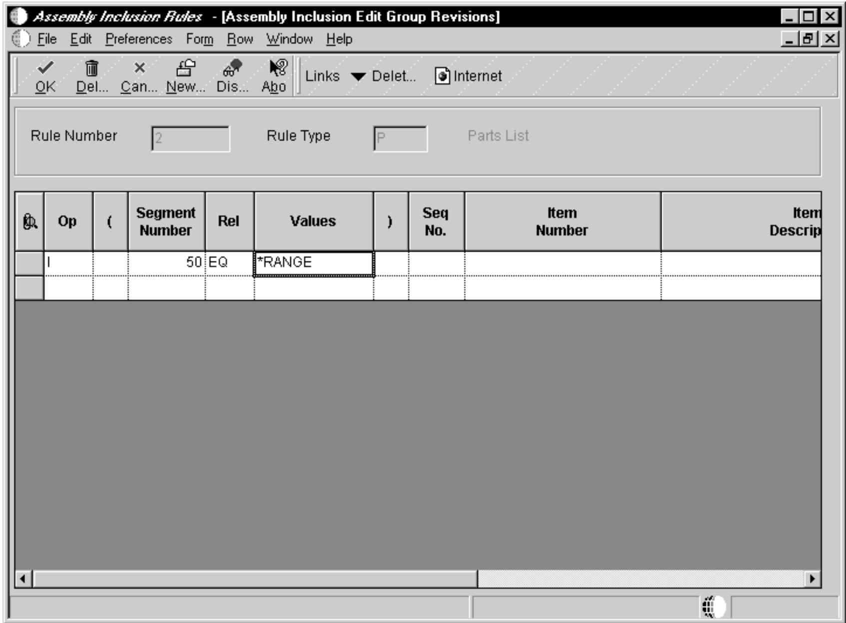
5. On Values Revision, complete the following field and click OK:
   - Selection value

To define ranges

On Work With Assembly Inclusion Rules

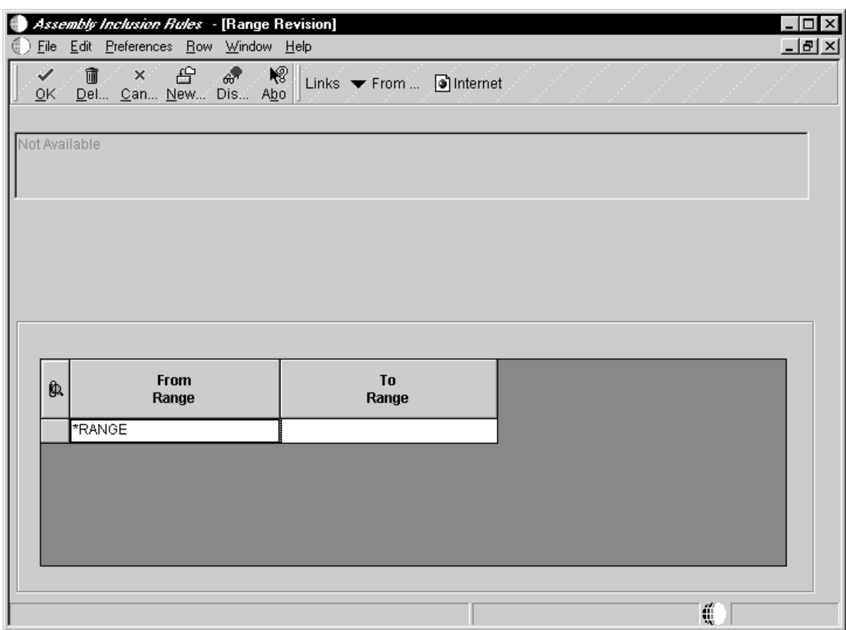


1. Complete the following fields to locate a configured item and click Find:
   - Configured Item
   - Rule Type
   - Branch/Plant
2. Choose Insert Edit Group Before or After from the Row menu.



3. On Assembly Inclusion Edit Group Revisions, complete the following field with *RANGE:
   - Values
4. Choose Range from the Row menu.

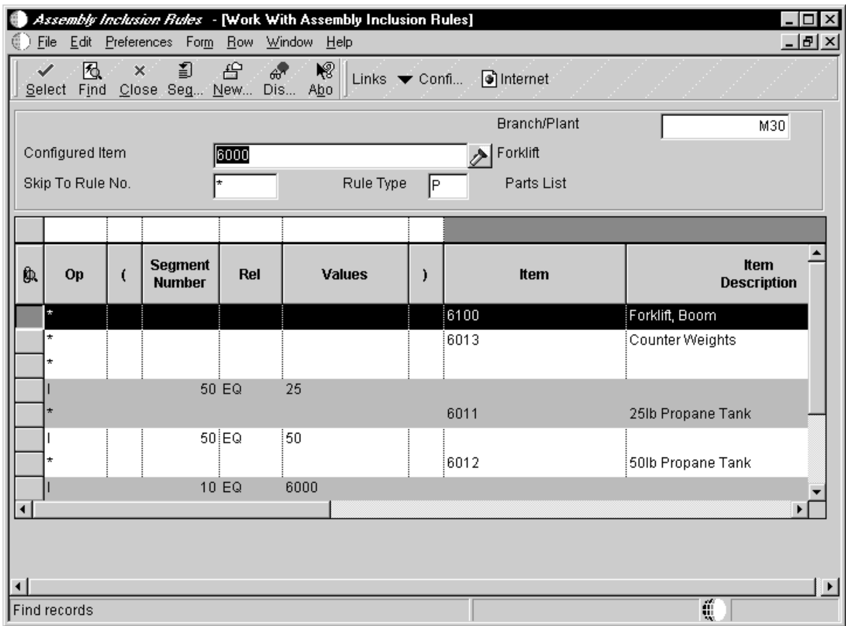
   The system prompts you for range from and to values.



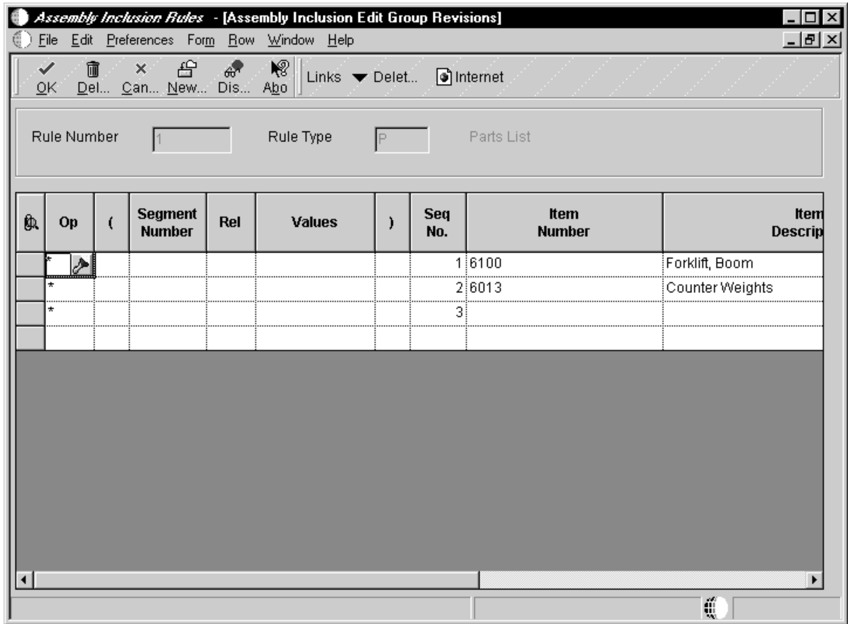
5. On Range Revision, complete the following fields and click OK:
   - From Range
   - To Range

▶ To set up advanced rules

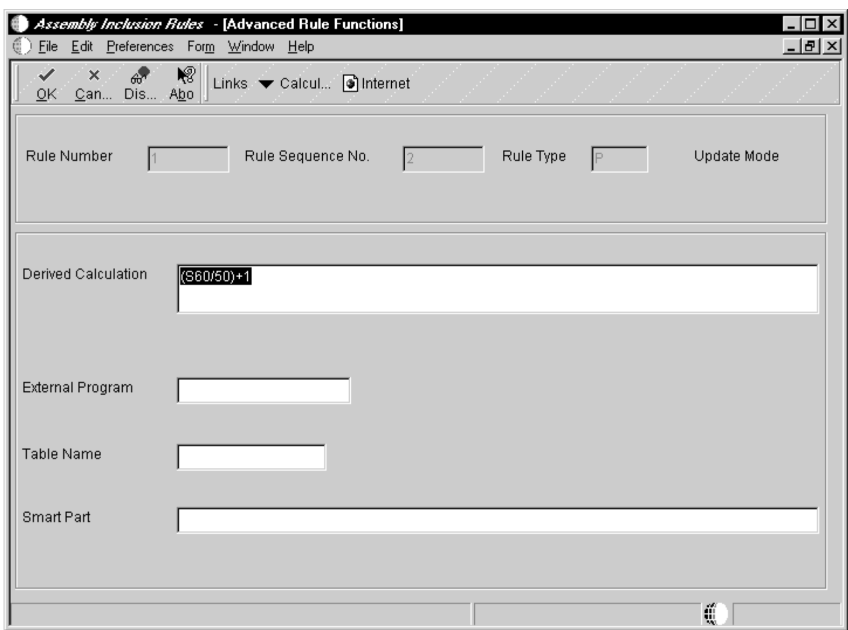
On Work With Assembly Inclusion Rules



1. Complete the following fields to locate a configured item and click Find:
   - Branch/Plant
   - Configured Item
   - Rule Type
2. Choose a rule and click Select.



3. On Assembly Inclusion Edit Group Revisions, choose a rule and choose Advanced Rules from the Row menu.

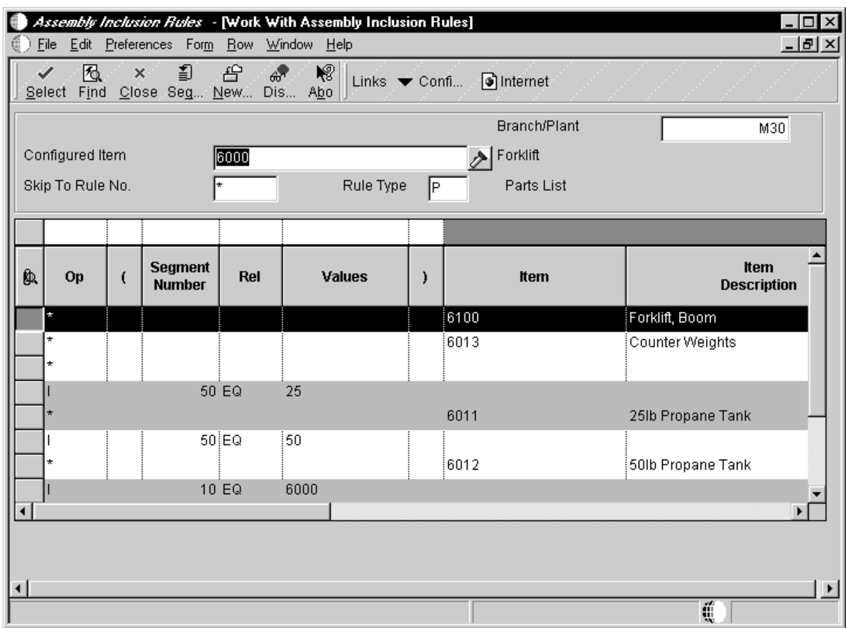


4. On Advanced Rule Functions, complete one or more of the following fields and click OK:
   - Derived Calculation
   - External Program
   - Table Name
   - Smart Part

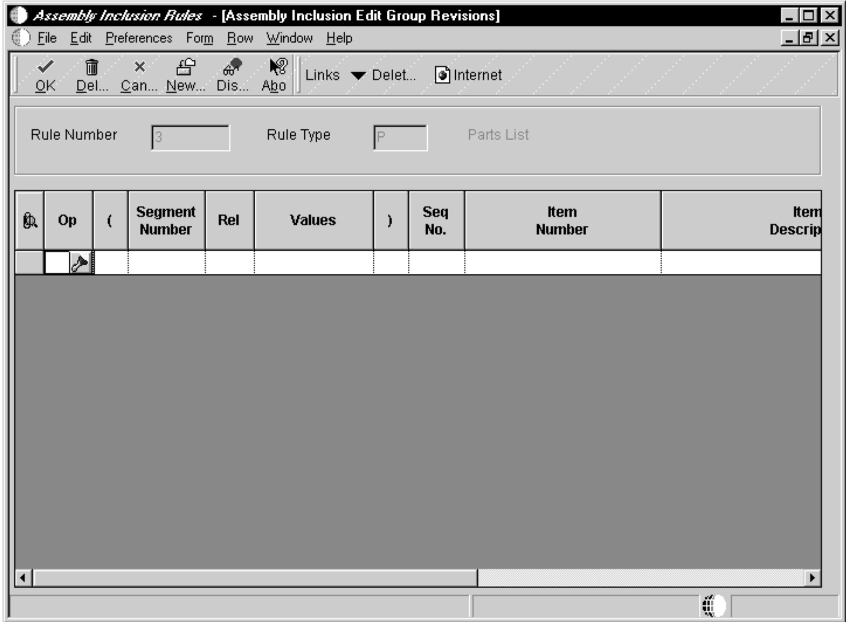
▶ To copy rules

To save time during setup, you can copy an assembly inclusion rule from one configured item to another. To copy the entire configured item, including assembly inclusion rules, see *Copying a Configured Item*.

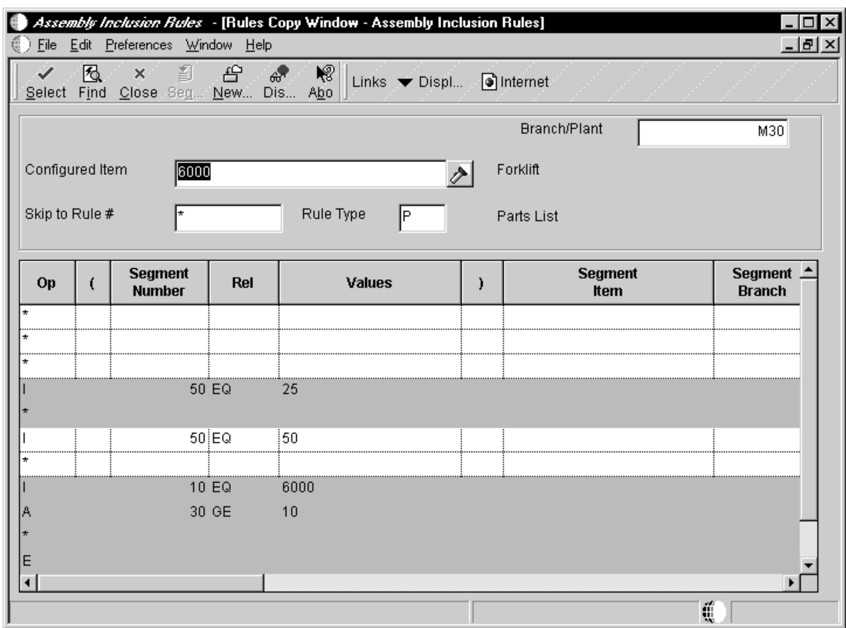
On Work With Assembly Inclusion Rules



1. Complete the following fields to locate a configured item and click Find:
   - Configured Item
   - Branch/Plant
   - Rule Type
2. Choose Insert Edit Group Before or After from the Row menu.



3. On Assembly Inclusion Edit Group Revisions, select a blank line.
4. Choose Copy from the Row menu.



5. On Rules Copy Window - Assembly Inclusion Rules, locate the configured item from which you want to copy a rule.
6. Choose one or more lines and click Select.

Locating Assembly Inclusion Rule Information

You review assembly inclusion rule information to help you maintain these rules. Rules and tables can be very complex. Using inquiry programs can help you pinpoint segments and components within the many rules and tables you might set up. You can determine the effect of component changes such as shortages and substitutions, and determine the effect of changes to valid segment values. For example, if a vendor discontinues a paint color, you can determine how many configurations are affected.

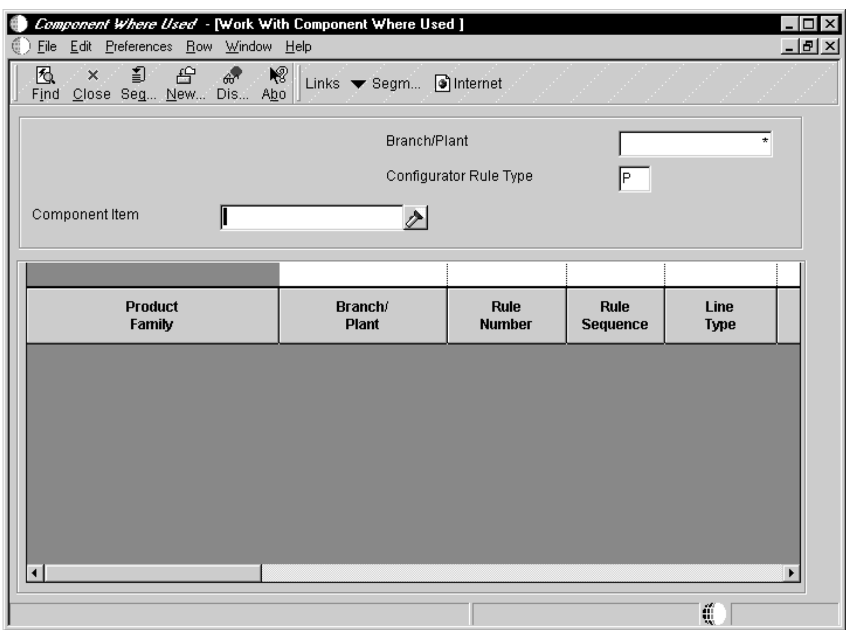
Locating assembly inclusion rule information consists of the following tasks:

- Locating component information
- Locating segment information
- Locating configured table information

▶ To locate component information

From the Configurator Setup menu (G3241), choose Component Where Used.

On Work With Component Where Used



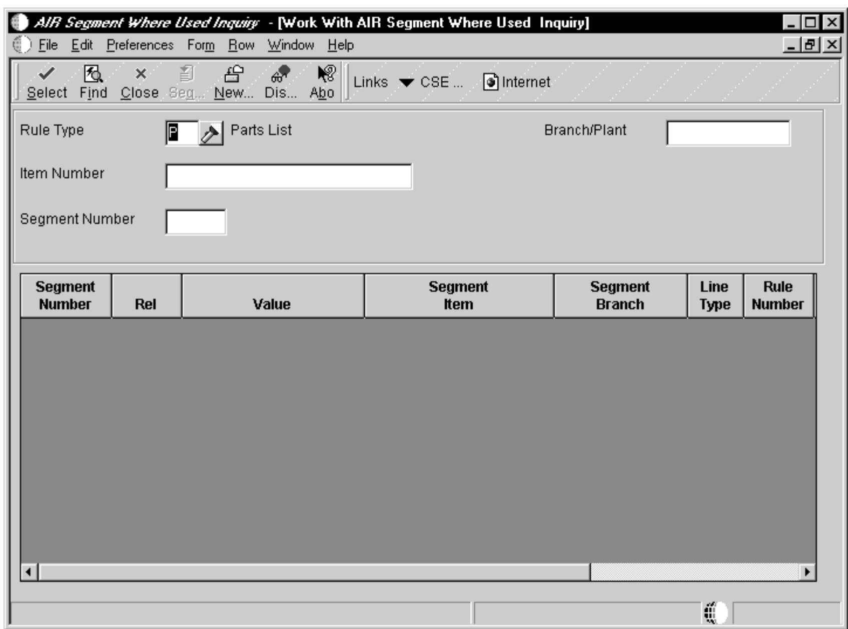
1. To locate a component, complete the following fields and click Find:
   - Branch/Plant
   - Configurator Rule Type
   - Component Item

2. Review the following fields:
   - Rule Number
   - Rule Sequence
   - Line Type

▶ To locate segment information

From the Configurator Setup menu (G3241), choose AIR Segment Where Used Inquiry.

On Work With AIR Segment Where Used Inquiry



1. To locate an assembly inclusion rule, complete the following fields and click Find:
   - Rule Type
   - Branch/Plant
   - Item Number
   - Segment Number
2. Review the following fields:
   - Segment Branch
   - Segment Item
   - Rule Type

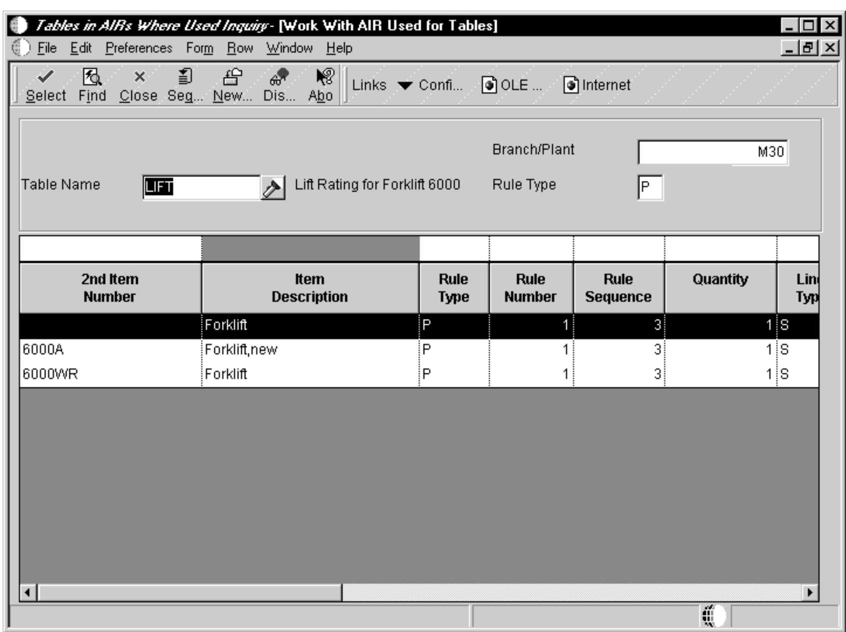
- Effective From
- Effective Thru
- Line Type
- Sequence Number
- Rule Number
- Branch/Plant
- Item Number

▶ To locate configured table information

From the Configurator Setup menu (G3241), choose Tables in AIRs Where Used Inquiry.

On Work With AIR Used for Tables

1. Complete the following fields and click Find:
   - Branch/Plant
   - Table Name
   - Rule Type



2. Review the following fields:
   - 2nd Item Number
   - Description
   - Rule Type
   - Rule Number
   - Rule Sequence
   - Quantity
   - Line Type
   - Effective From
   - Effective Thru
   - Oper Seq#
   - Issue Code
   - Branch/ Plant
   - Table Name
   - Short Item No
   - 3rd Item Number

Setting Up Tables

A configured rules table is a collection of data that you define for a configured item. When the system processes rules during sales order entry and work order generation, assembly inclusion rules can refer to tables to retrieve component parts, calculated values, price adjustments or display information.

Tables are commonly used to reduce the number of assembly inclusion rules that are required when segment answers vary greatly. Assembly inclusion rules refer to tables to return calculated segment values, prices, display information and component parts. The table type should be the same as the assembly inclusion rule type that refers to it.

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

Setting up tables consists of the following tasks:

- Defining table names
- Setting up configured tables
- Linking a table to an assembly inclusion rule
- Copying a configured item table
- Reviewing a configured table
- Printing table information

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

P Table (Quantity/Parts)	Defines part tables that can return multiple part numbers. P tables return part numbers to the sales order and eventually to the work order parts list to produce the configured item.
Q Table (Quantity/Parts)	Defines part tables that can return multiple part numbers. Conceptually similar to P tables, Q tables return part numbers only to the work order parts list. They do not return values to the sales order.

C Table (Calculated values)	Defines a calculated segment table that can return numeric or alphanumeric values as defined on Configured Item Segments. C tables return calculated values to segments. These values may then be used by other rule types to control or affect actions.
H Table (Hot Spots)	Defines numeric information about a configured item to be returned to the sales order entry form for display purposes only. H tables are conceptually similar to C tables. Examples of Hot Spot information include price, foreign price, domestic price, cost, foreign cost, domestic cost, and weight.
X Table (Pricing)	Defines a price table that returns one numeric value. X tables return prices to the sales order, based on one or more segment answers.

There is no table that corresponds to the assembly inclusion rule for routing.

Because a table might contain many segments (keys) and values, you must decide how the table information appears before you can review table information. As you work with table information, you can set a processing option for copying rows of data to speed data entry.

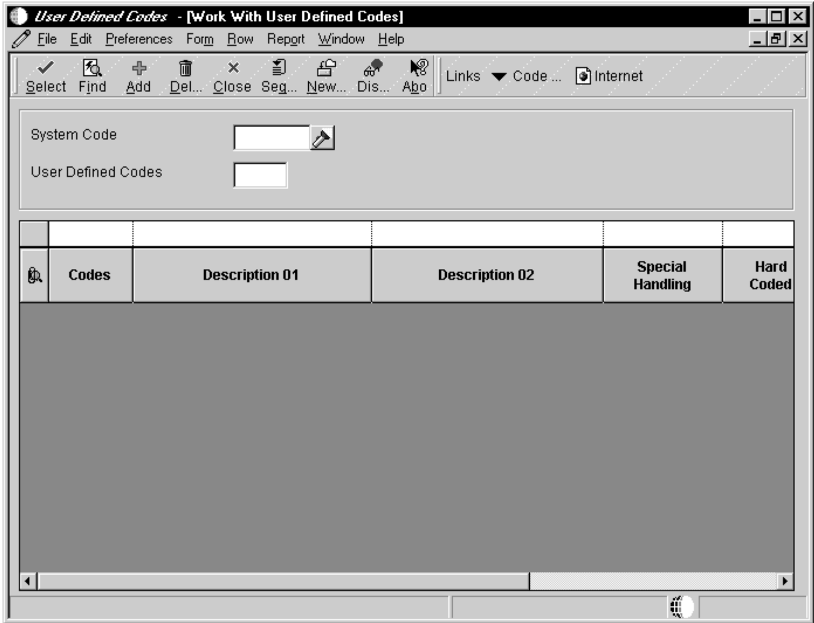
The tables used for rules processing within the Sales Configurator system are not User Defined Codes.

Defining Table Names

Before you set up any configured rules tables, you must first define the names for the tables that you plan to use. Table names are stored in user defined code table 32/TN.

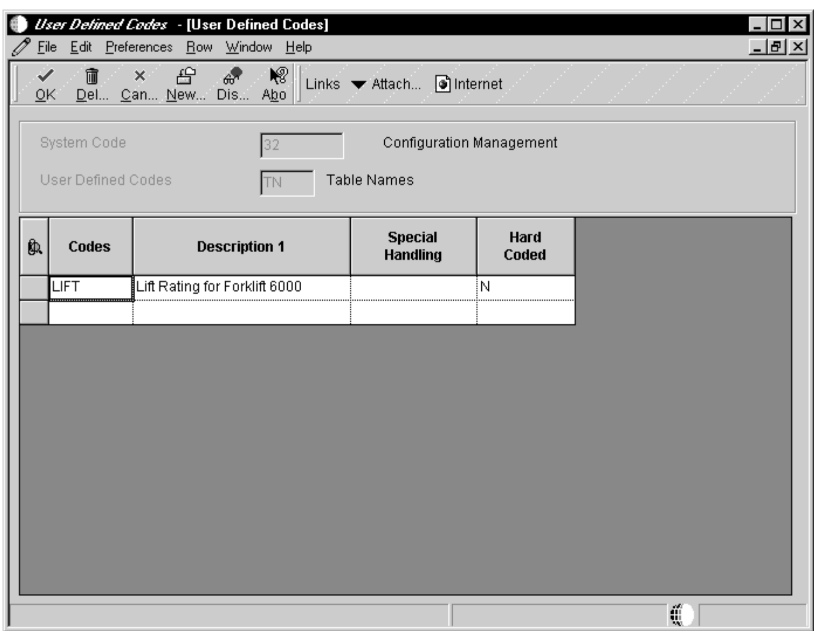
▶ To define table names

On Work With User Defined Codes



1. Complete the following fields and click Add:
   - Product Code
   - User Defined Codes

   Configured table names can be found in system 32, user defined code table TN.



2. On User Defined Codes, complete the following fields and click OK:
   - Codes
   - Description 1

Setting Up Configured Tables

Depending on the values that you define for each segment, you can specify the information that is returned to the sales order and the work order. You must define the values for each segment as a key to the table.

Setting up configured tables consists of the following tasks:

- Defining dimensions for configured tables
- Linking a table to a configured item
- Defining values for configured tables

X tables return prices to the sales order. Because only one value can be returned, the system limits setup options when you specify the return dimensions for an X table.

Similarly, H tables return user defined information about the configured item which displays in the Hot Spot field on the order entry form. H tables are also limited to one return value.

For setup, H and X tables differ from P, Q, and C tables in that only one value can be returned to the sales order.

When you enter a sales order for a configured item, you select answers for the segments that are defined for the item. For example, for a forklift, you might select a value of 4000 for segment 10 (Lift Rating), and a value of PROPANE for segment 20 (Power type).

Defining Dimensions for Configured Tables

From the Configurator Setup menu (G3241), choose Configured Table Definition.

Tables can have the following dimensions:

- One segment and one return
- One segment and multiple returns
- Multiple segments and one return
- Multiple segments and multiple returns

You should have an idea of what you want your table to do prior to defining its dimensions. A one segment, one return table is particularly helpful when you want to define price, cost, hot spot values or other specific information.

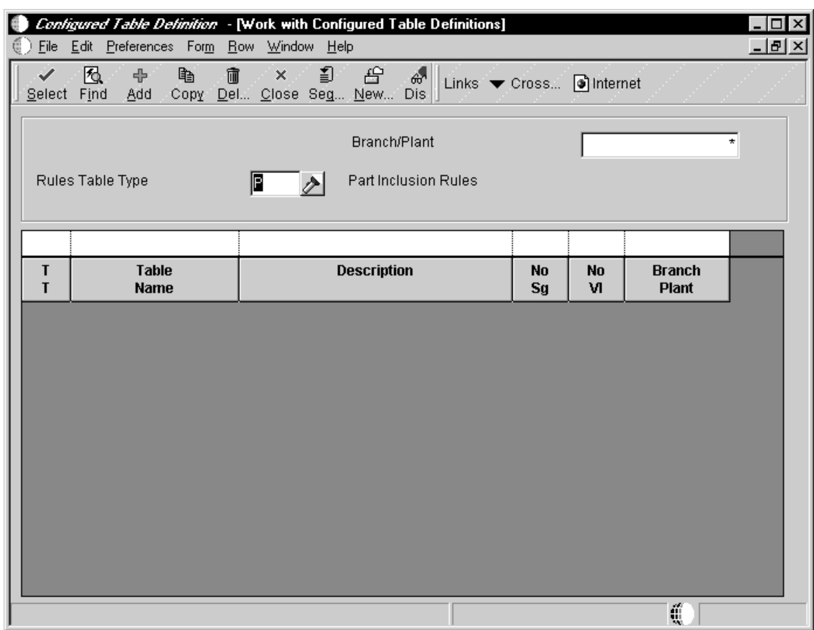
You might choose to create a one segment, multiple return table when one segment can return multiple information consistently. Many component item numbers may be related to a specific segment answer. For example, a paper manufacturer might configure a certain size of letterhead to return a corresponding size envelope and response card.

You might choose to create a multiple segment, multiple return table when using P or Q tables. P and Q tables are based on P and Q assembly inclusion rules, which return parts to the sales or work order.

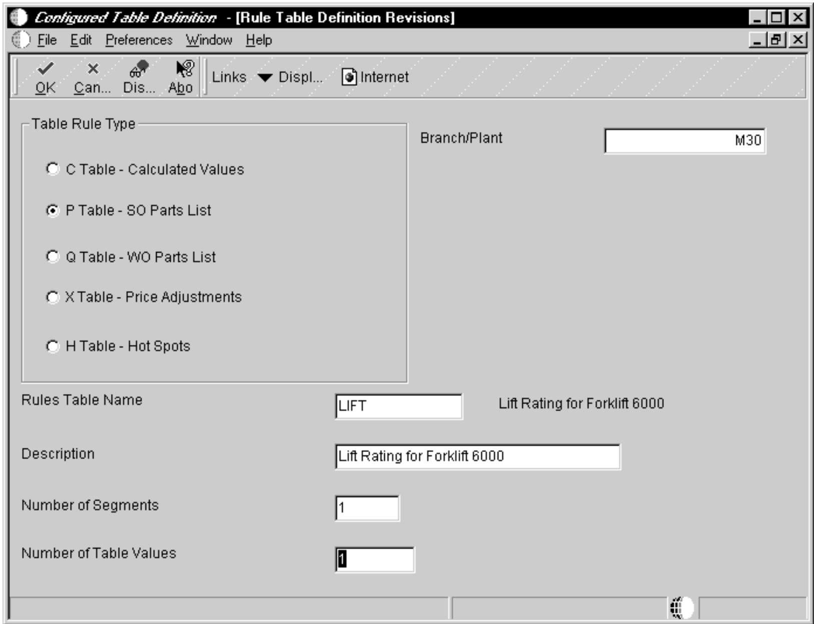
When working with tables with multiple segments and multiple returns, remember that the form displays segment information in columns and values returned in rows.

▶ To define dimensions for configured tables

On Work with Configured Table Definitions



1. Click Add.



2. On Rule Table Definition Revisions complete the following fields:
   - Branch/Plant
   - Rules Table Name
   - Description
3. To select the type of table, click one of the following options under the Table Rule Type heading:
   - Rule Table Type
   - P Table – SO Parts List
   - Q Table – WO Parts List
   - H Table – Hot Spots
   - Rule Table Type
4. Complete the following fields and click OK:
   - Number of Segments
   - Number of Table Values

   With H and X tables, the Number of Table Values field is automatically populated with a 1.

Field	**Explanation**
Branch/Plant	A number that identifies a branch, plant, work center, or business unit.

Field	Explanation
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.
Description	A brief description of an item, a brief description of a remark, or a brief description of an explanation.
Table Rule Type	A value that identifies the type of rule table. Valid values are: P Part list (on sales order and work order) Q Work order component (on work order only) C Calculated values H Hot Spot X Price/Cost adjustment
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.

Linking a Table to a Configured Item

From the Configurator Setup menu (G3241), choose Table/Item Cross-Reference.

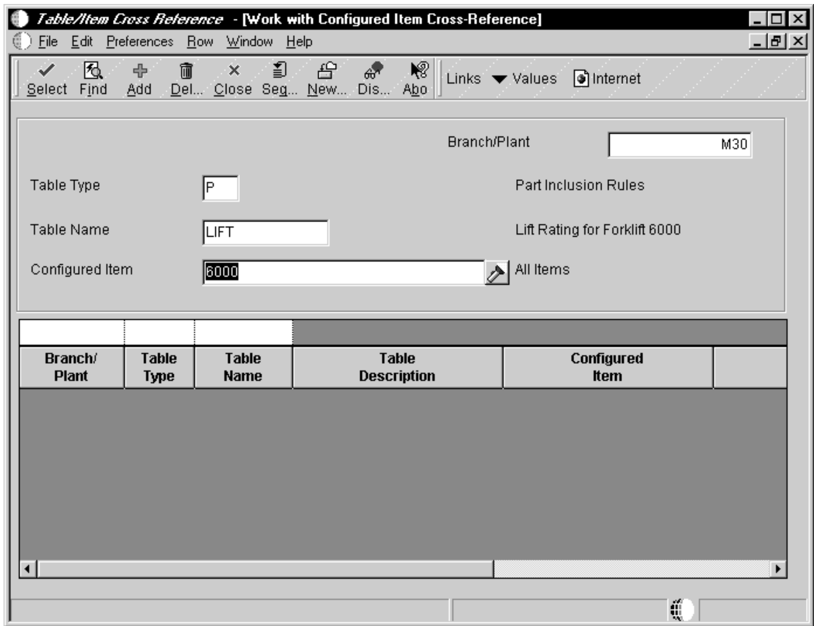
After you define a table, you associate it with a configured item and define the specific segments that access it. To create a cross-reference, the number of segments that you specify must equal the number of segments that you defined for the table. You can also specify a segment that accesses a different configuration level.

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

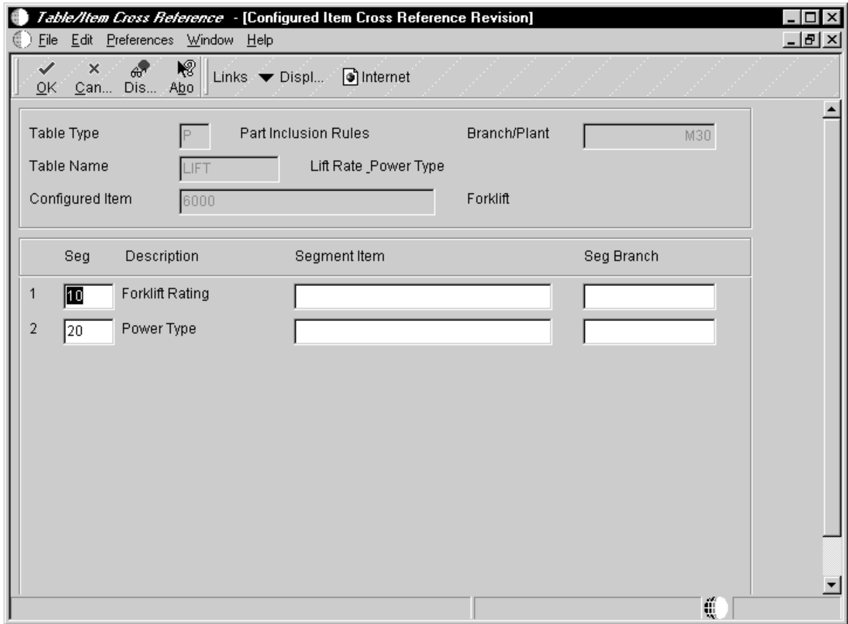
You can enter an item *ALL to define a generic cross-reference for all configured items. If you use *ALL, you must use the same segment numbers across all configured items.

To link a table to a configured item

On Work with Configured Item Cross-Reference



1. Complete the following fields and click Add:
   - Branch/ Plant
   - Table Type
   - Table Name
   - Configured Item



2. On Configured Item Cross Reference Revision, click OK.
3. To define the segment that accesses the table, complete the following fields and click OK:
   - Seg
   - Segment Item
   - Seg Branch

   When creating C tables that return multiple values, you must define destination segment numbers during the Table/Item Cross Reference step.

Field	Explanation
Seg	A brief description of an item, a brief description of a remark, or a brief description of an explanation.
Segment Item	A number that the system assigns to an item. It can be in short, long, or third item number format.
Seg Branch	Table Segment Branch

Processing Options for Table/Item Cross-Reference

```
Defaults

Defaults for the Work With Cross
    Reference form.

      Default Rule Table Type.                ____________
```

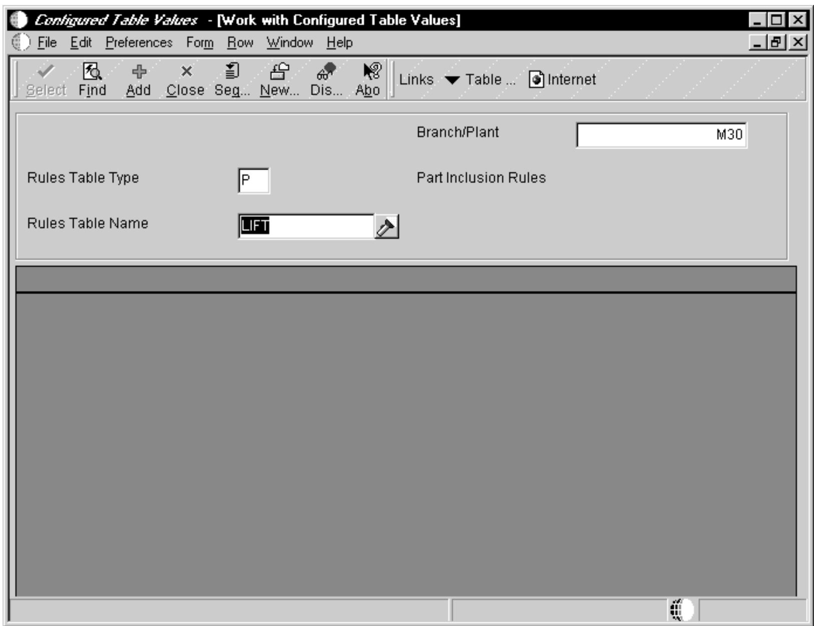
Defining Values for Configured Tables

From the Configurator Setup menu (G3241), choose Configured Table Values.

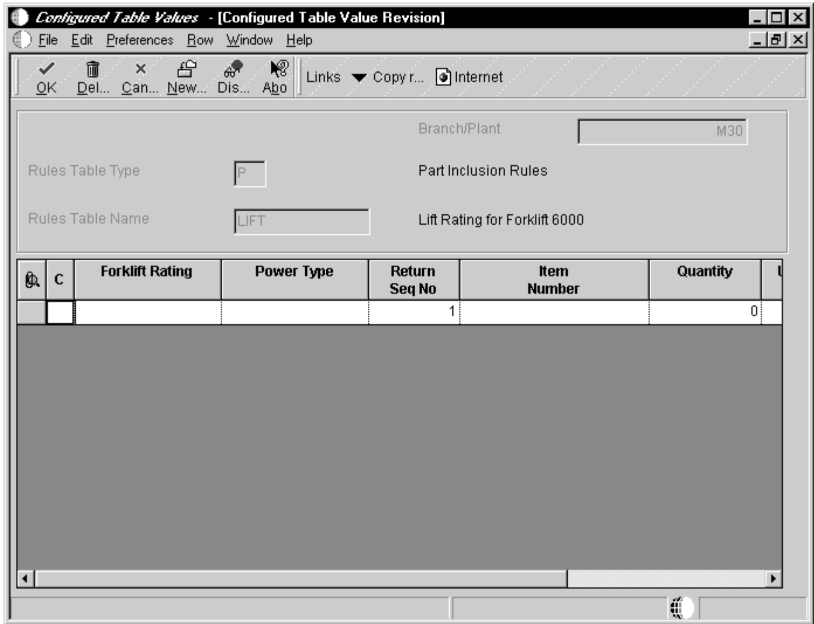
After you have defined dimensions and linked your table to a configured item, you are ready to define values.

▶ To define values for configured tables

On Work with Configured Table Values



1. Complete the following fields and click Add:
   - Branch/Plant
   - Rules Table Type
   - Rules Table Name

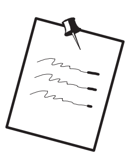


2. On Configured Table Value Revision, complete the following field with segment information:
   - Segment Value 1
   - Segment Value 2

   You complete as many segment value fields as you defined on the Rule Table Definition Revisions form when defining dimensions for your table. The names of your segment value fields are defined when you link your table to a configured item.

3. Complete the following fields and click OK:
   - Item Number
   - Quantity
   - UM
   - Return Seq No

   Each time you enter a value for a segment and the associated item number, a new blank row appears.



To speed the setup process, you can copy rows. Select a row and click Copy in the Tools menu, then change the row data as necessary for your table.

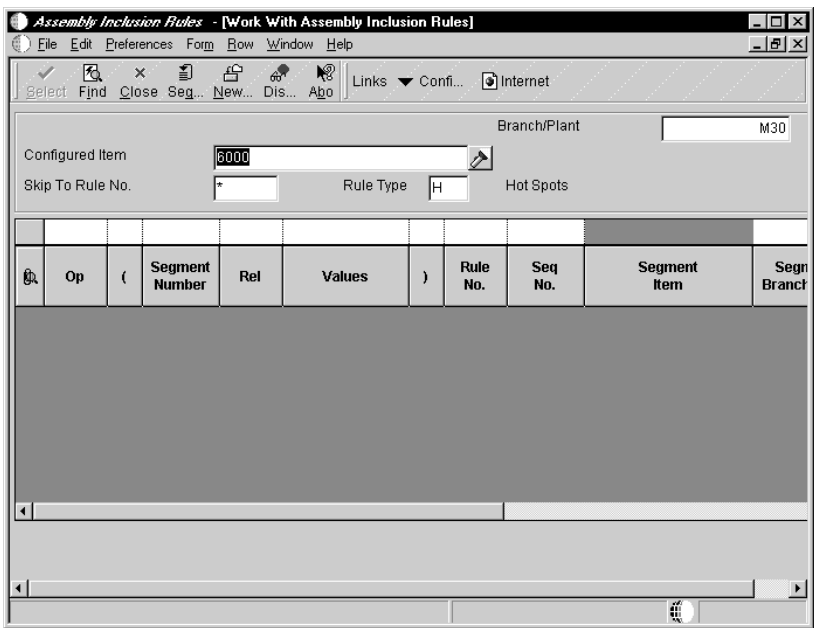
Linking a Table to an Assembly Inclusion Rule

From the Configurator Setup menu (G3241), choose Assembly Inclusion Rules.

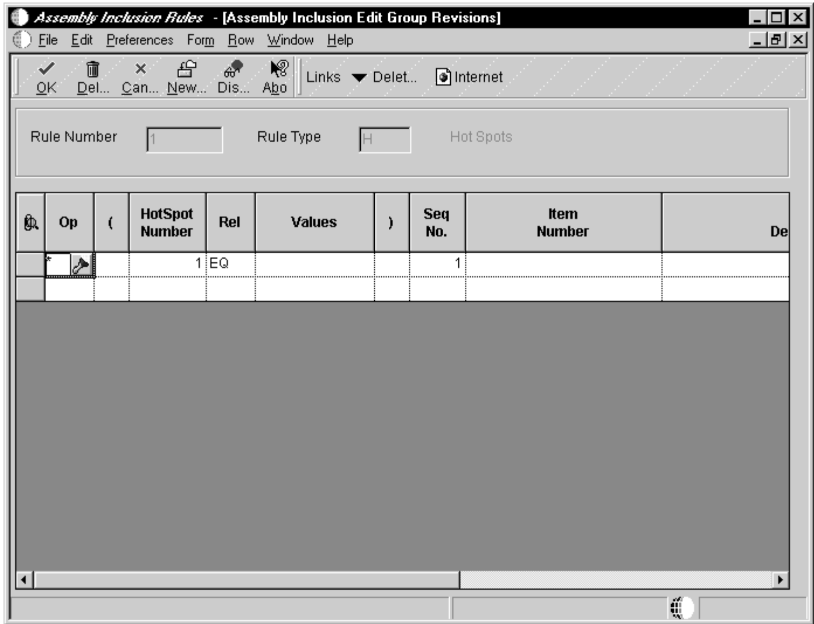
After you define a table and the segment that accesses its values, you must link the table to the assembly inclusion rule for that segment. Each table refers to an assembly inclusion rule to return calculated segment values, prices, and parts to the sales or work order.

▶ To link a table to an assembly inclusion rule

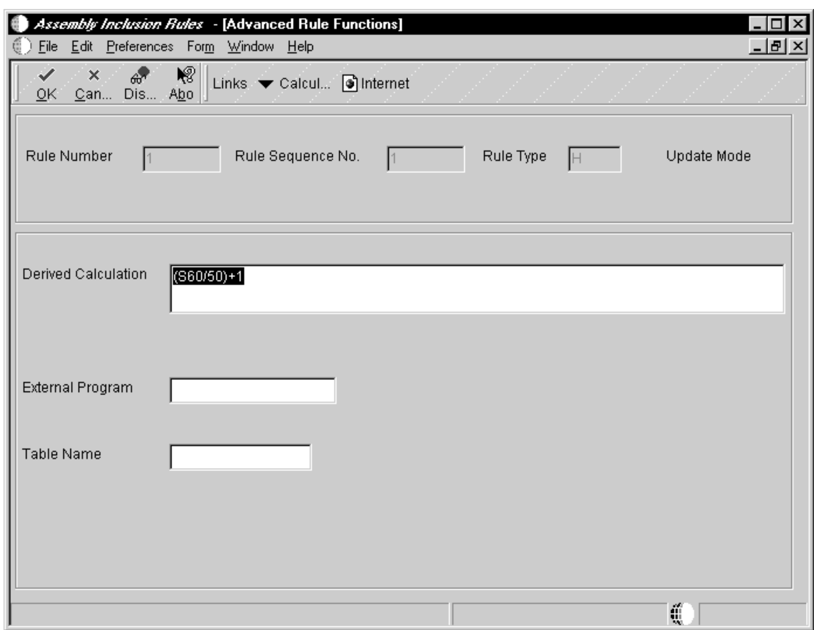
On Work With Assembly Inclusion Rules



1. Complete the following fields to locate the assembly inclusion rule for your configured item and click Find:
   - Configured Item
   - Branch/Plant
   - Rule Type
2. Select a row and choose Edit Group from the Row menu.



3. On Assembly Inclusion Edit Group Revisions, select a row and choose Advanced Rules from the Row menu.



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

Copying a Configured Item Table

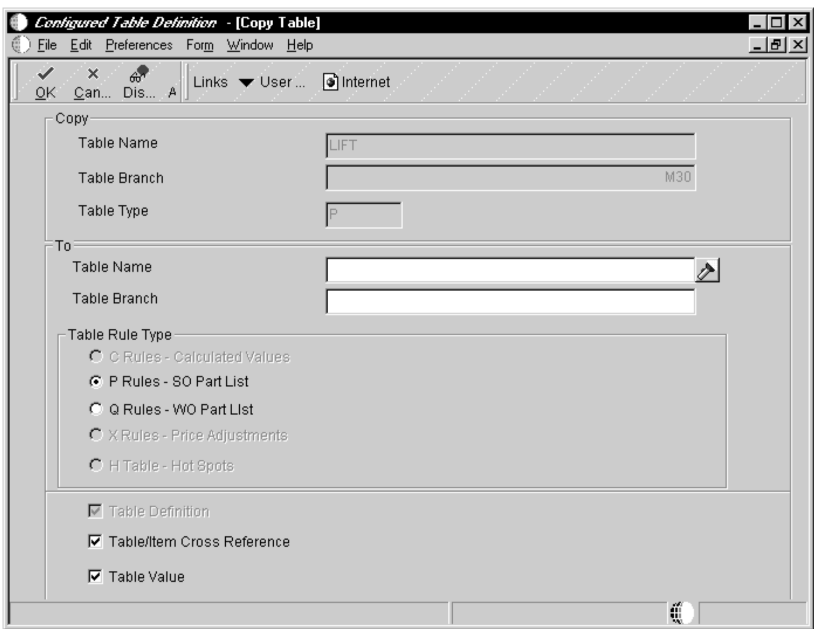
From the Configurator Setup menu (G3241), choose Configured Table Definition.

After you set up a configured item table, you can copy its definition, cross reference, and values to a new or existing table. Copying existing tables reduces setup time.

▶ To copy a configured item table

On Work with Configured Table Definitions

1. To locate an existing table, complete the following field:
   - Branch/Plant
2. To select the type of Table you want to copy, complete the following field and click Find:
   - Rules Table Type
3. Select a configured table and click Copy.



4. On Copy Table, to name the new table, complete the following fields under the To heading:
   - Table Branch
   - Table Name

5. To select which parts of the configured table to copy, click the following options and click OK:
   - OneWorld Event Point 01
   - Table Definition
   - Table Value

Field	Explanation
Table Branch	A number that identifies a branch, plant, work center, or business unit.

Reviewing a Configured Table

From the Configurator Setup menu (G3241), choose Component/Value Table Where Used Inquiry.

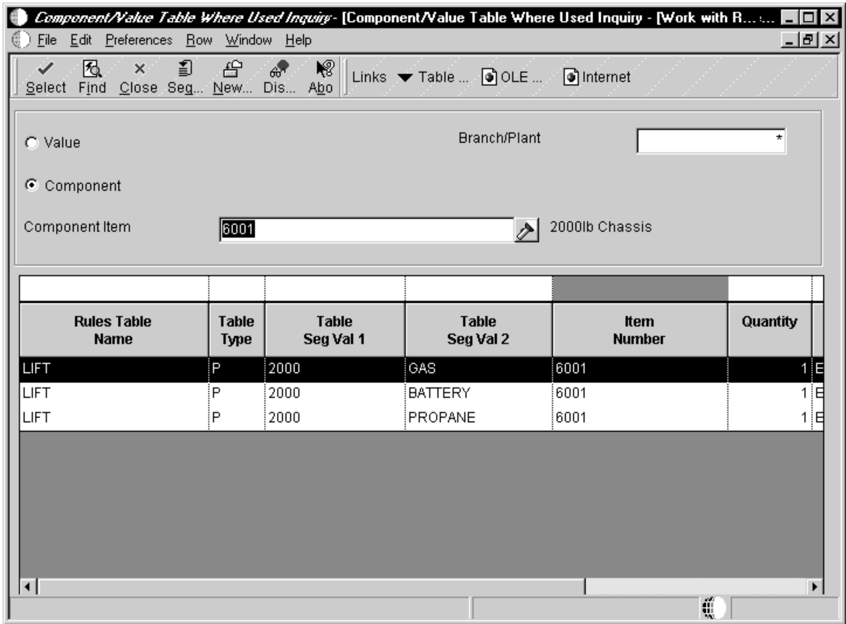
You can search for components or values used within configured tables by using the Component/Value Table Where Used Inquiry. You can search for returned values, or for specific components. The system will show you where the values or components exist within your configured tables.

▶ To review configured tables

On Work with Rules Table Detail

1. To search for a component, complete the following fields:
   - Component
   - Component Item
2. To search for a value returned by a table, complete the following fields:
   - Value
   - Table Value
3. Click Find.

   The fields available to you will be different depending upon whether you search for a component or a returned value.



4. For each table, review the following fields:
   - Rules Table Name
   - Table Type
   - Table Seg Val 1
   - Table Seg Val 2
   - Table Value
   - Branch Plant
   - Item Number
   - Quantity
   - UM

Field	Explanation
Component	This is the ASI (Application Specific Instructions) flag for the Data Dictionary.
Component Item	A number that the system assigns to an item. It can be in short, long, or third item number format.
Value	This is the ASI (Application Specific Instructions) flag for the Data Dictionary.
Table Value	The Rules Table Value is the value that is returned from a rules table.

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.
Table Type	A value that identifies the type of rule table. Valid values are: P Part list (on sales order and work order) Q Work order component (on work order only) C Calculated values H Hot Spot X Price/Cost adjustment
Table Seg Val 1	The Table Segment Value is a value used as a key to a table.
Table Seg Val 2	The Table Segment Value is a value used as a key to a table.

Printing Table Information

From the Configurator Setup menu (G3241), choose Table Report.

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

See Also

- *R3283P, Configured Rules Table Values* in the *Reports Guide* for a report sample.

Sales Orders

Configured Item 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 Sales Configurator system allows you to enter values for the segments of that configured item.

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

You can also create sales proposals within the Sales Order Entry program. Sales proposals contain information such as sales configuration, quotation, company's financial highlights, product information, pricing and discount information and product availability. You can use an automated document generation system to pull the various pieces of information from different departments, such as Sales, Accounting, Marketing, Inventory.

Working with configured item sales orders consists of the following:

- ❑ Working with configured item sales orders
- ❑ Storing and forwarding sales orders for configured items

See Also

For more information about sales orders and sales proposals, see the following chapters in the *Sales Order Management Guide*.

- *Working with Detail Information*
- *Generating a Proposal*

Working with Configured Item Sales Orders

Once you have set up your segments, cross-segment editing rules, assembly inclusion rules, and configured tables, the Sales Configurator system is ready to process sales orders for your configured items. Within sales order entry, Sales Configurator performs rule checking and processes sales and work orders.

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

- ❑ Entering a sales order for a configured item
- ❑ Reviewing a sales order for a configured item
- ❑ Adding nonstandard components and price adjustments
- ❑ Assigning common attributes to configured items
- ❑ Working with error messages
- ❑ Converting a sales quote for a configured item
- ❑ Revising a sales order for a configured item
- ❑ Reviewing configured text

You can view the multi-level nature of your configured item with the tree structure that appears on the sales order entry form. The tree is controlled by user defined processing options and can display the following information on each level:

- Item number
- Description
- Branch/Plant
- Unit of Measure
- Quantity

The tree structure also displays errors and changes in segment answers by each level.

Within the order entry process, you use calculation functionality to process your configured answers as they are entered. Calculation functionality expands the multi-level structure of the configured item. This functionality is set up to calculate when you reset the configuration to the default segment answers from a form exit, when you return string history, or by manually clicking the Calc button on the tool menu.

During sales order entry, calculation functionality verifies Configurator processes level by level in the following order:

- Segment agreement (includes user defined code validation, range checking, alpha versus numeric checking, length checking and required/option checking)
- C assembly inclusion rules
- Cross-Segment Editing rule validation by level
- P assembly inclusion rules
- Q, H, or X assembly inclusion rules as needed

Sales Configurator also calculates the weight of a configured item based on the multi-level items that comprise the parent item. You can choose to designate a base weight for the configured item. The weight is calculated as the item is being entered within sales order entry. You will need to enter the same weight units of measure for each segment that comprises the configured parent item. Weight is calculated using P rule components only.

Derived calculations and assembly inclusion rules are verified for accuracy during calculation functionality. Changes in segment values are evaluated in each configuration.

When all of the above processes are verified, the sales order can be completed. At this point, Hot Spot values, processed by H assembly inclusion rules, will appear.

Sales Configurator supports most preference profiles. However, it does not support preference profiles for multibranch commitments.

Technical Considerations

Multi-currency

The system applies pricing (X) rules to foreign currency sales orders. The system processes price adjustments as a base currency amount and converts the amount to a different currency amount if necessary.

During setup, you must define the pricing (X) rule in domestic currency. During sales order entry, the system converts the domestic price to the foreign currency.

Commitments

The Process Work Orders program commits component parts related to the configured parent. The system supports sales order commitments for work order line types for the parent item only.

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
- Partial shipments

Before You Begin

- ❑ Set the Sales Order Entry (P4210) 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 you leave the processing option blank, the system supplies the line type from the branch/plant.

- ❑ Set the processing options for Sales Configurator (P32942). Use the Interactive Versions application (GH9011) to define versions and set processing options. Sales Order Entry refers to a version of Sales Configurator. These processing options control media objects, cross-segment editing rule processing, form/tree display characteristics, initial hot spot selections, defaults for nonstandard components and price adjustments, defaults for the display of common attributes among configured items, and Component Revision form options.

Entering a Sales Order for a Configured Item

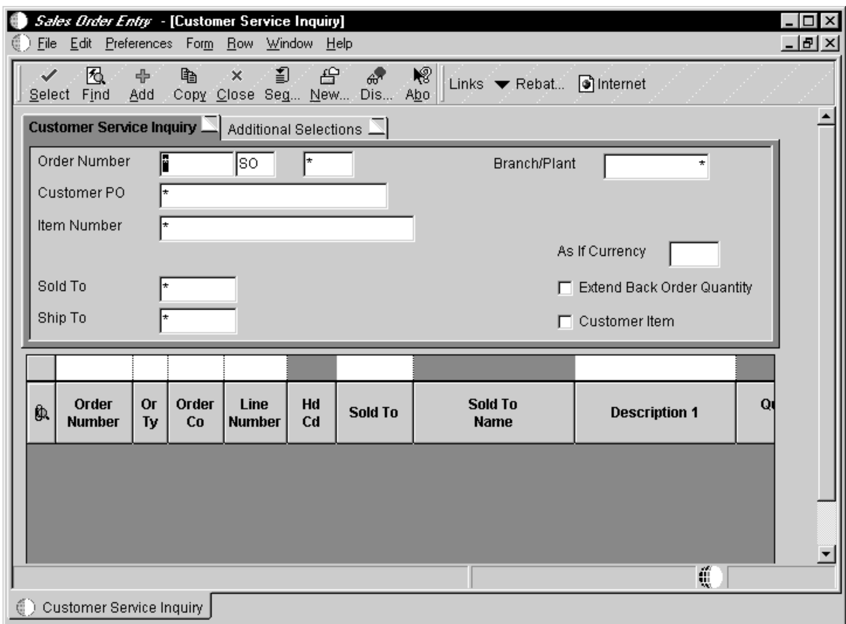
From the Configurator Daily Processing menu (G32), choose Sales Order Entry.

Entering a sales order consists of the following tasks:

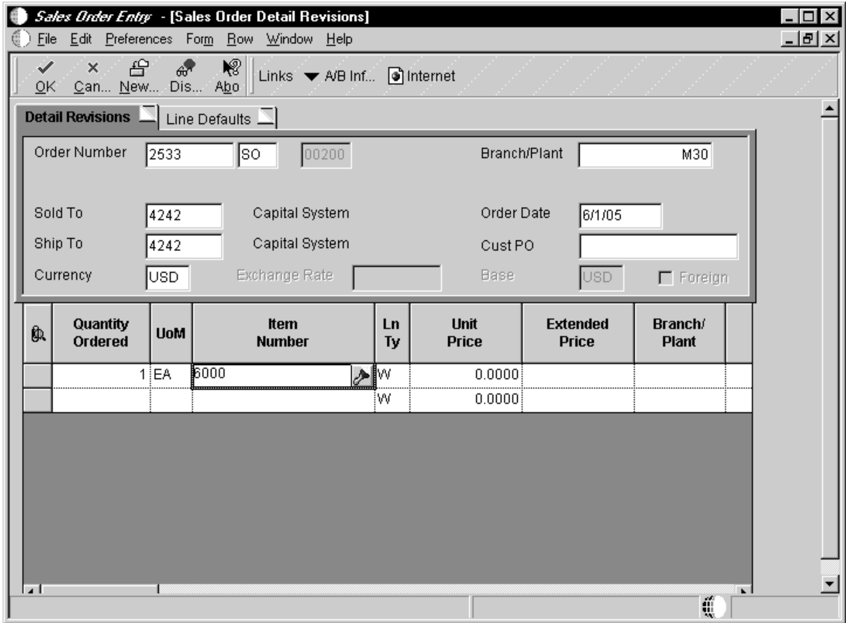
- Entering a sales order for a configured item
- Entering a sales order for a previously ordered configured item

▶ To enter a sales order for a configured item

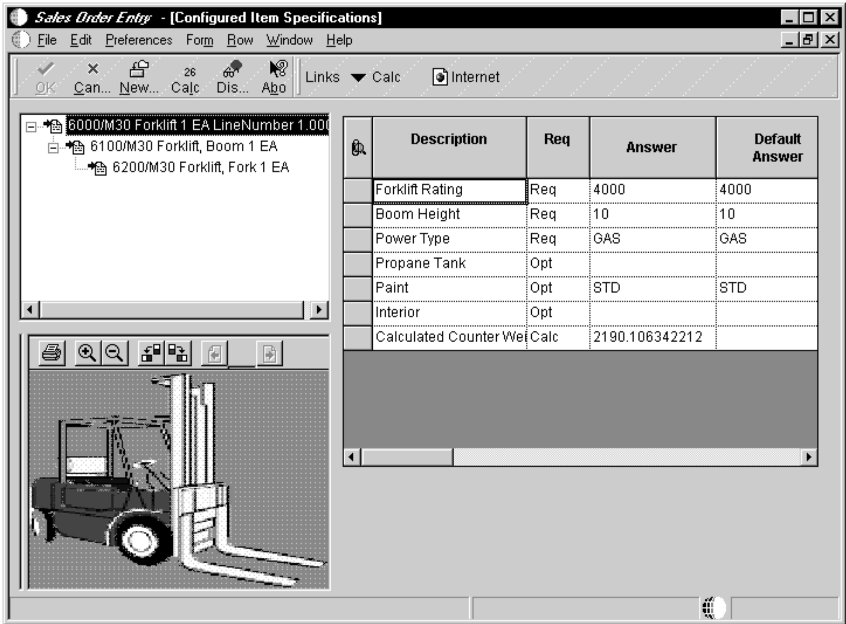
On Customer Service Inquiry



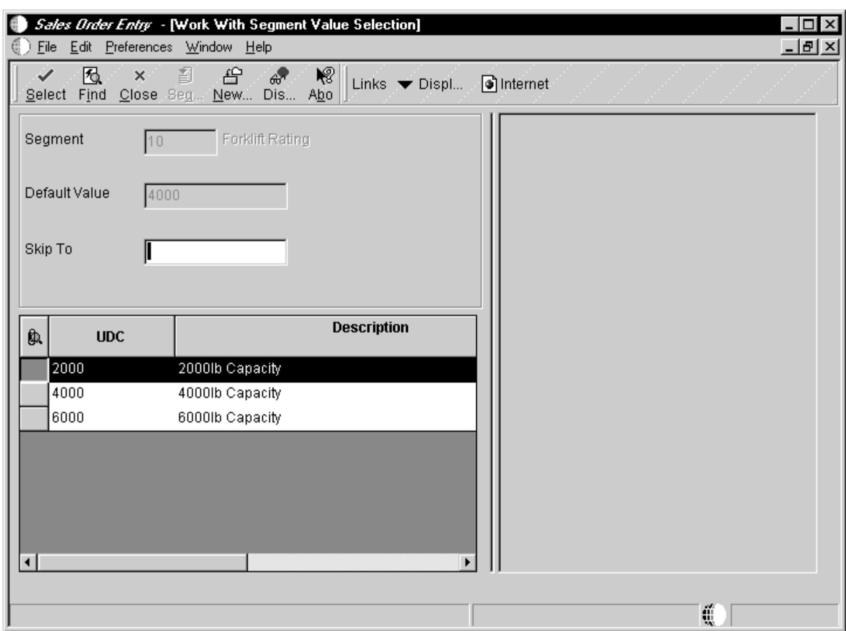
1. Click Add.



2. On Sales Order Detail Revisions, complete the following required fields with information about the customer:
   - Branch/Plant
   - Sold To
   - Ship To
   - Order Date
3. Complete the following required fields with information about the configured item and click OK:
   - Quantity Ordered
   - UoM
   - Item Number



4. On Configured Item Specifications, to accept the default values, click the Calc button and go to step 8.
5. To change values for the segments, click the Answer field.



6. On Work with Segment Value Selection, choose a row and click Select.

   Do this for every segment you want to change within your configured item.

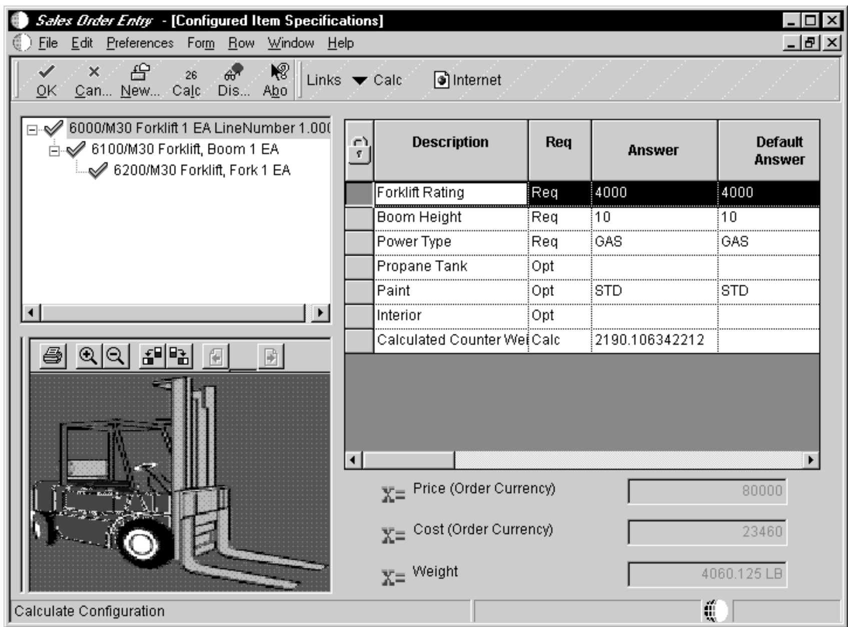
7. When you have finished configuring your item, click the Calc button.
8. If you do not receive any errors, click OK.

You will not be able to complete your sales order unless all hard error messages are corrected. For more information on error messages, see *Working With Error Messages.*

Example: Completed Sales Order

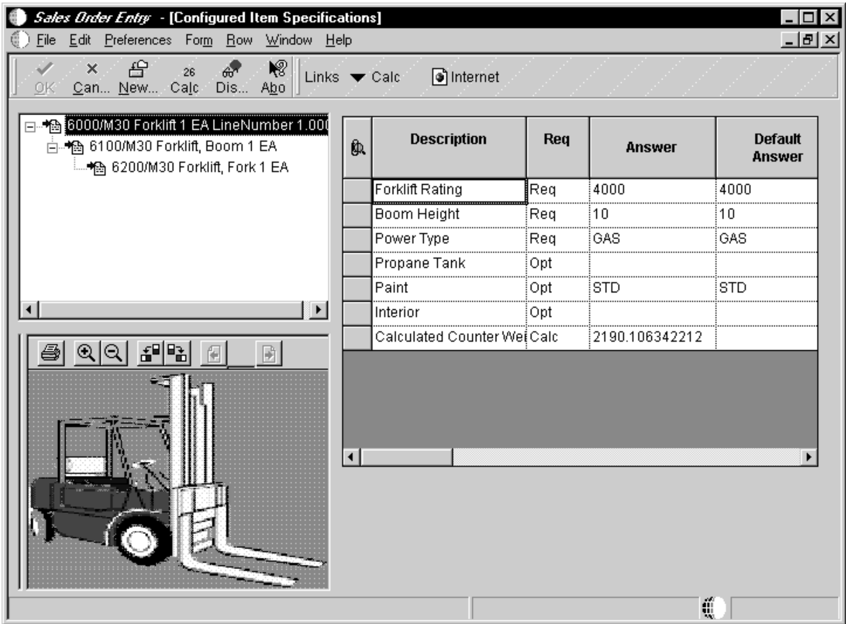
After calculation functionality has processed successfully, the sales order entry form display changes to include hot spot values. You can display up to three different hot spot values on the sales order entry form. To select other hot spot values, click on the hot spot icon and choose another hot spot user defined code.

The form also displays icons within the tree structure of your configured item which indicate by level that the configuration agrees with cross-segment editing rules.

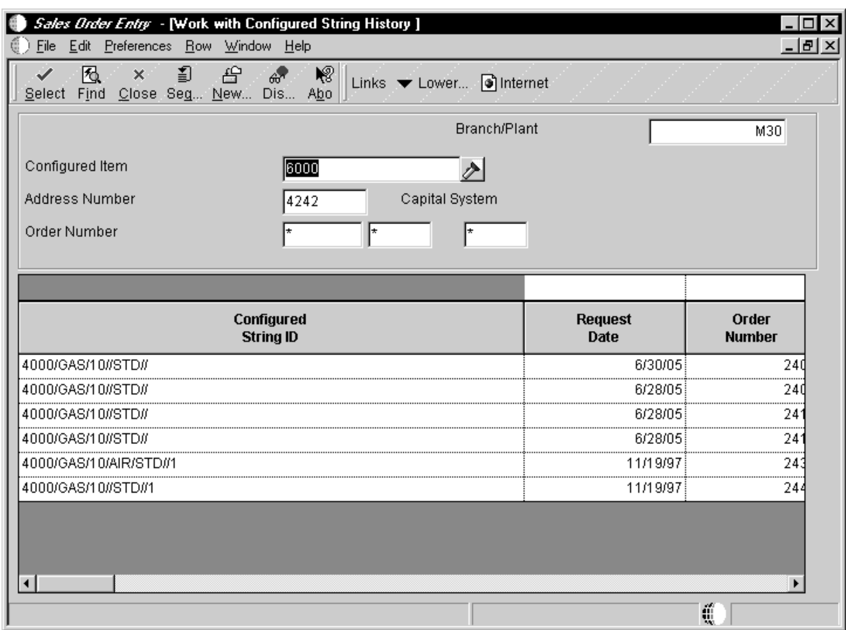


▶ To enter a sales order for a previously ordered configured item

On Configured Item Specifications



1. Select a row and choose String History from the Row menu.



2. On Work with Configured String History, click Find.
3. Choose a configured string and click Select.

4. On Sales Order Detail Revisions, revise the string as necessary and click OK.

When you cancel a sales order for a configured item, the system cancels the item's subassemblies and lower-level segments.

See Also

- *Working With Preferences* in the *Sales Order Management Guide* for more information about preference profiles.

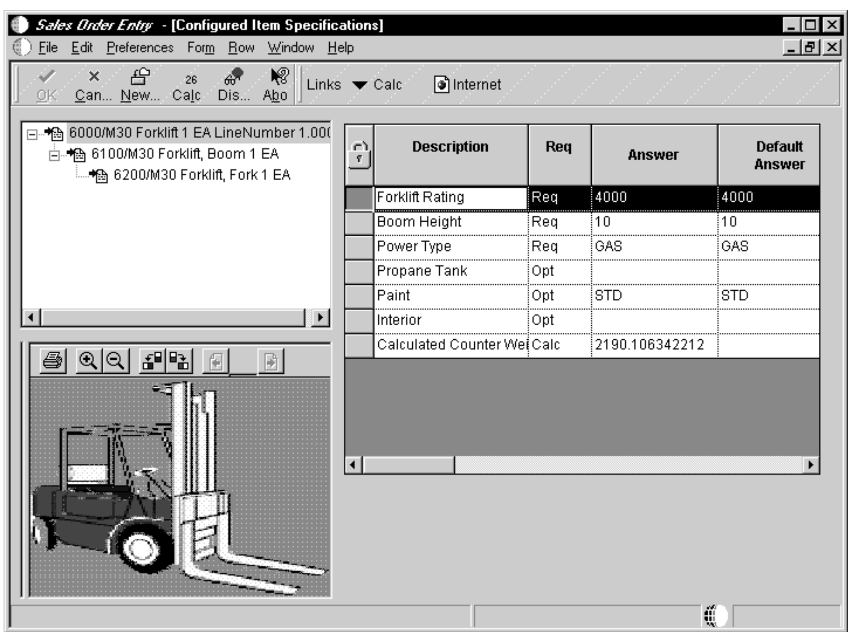
Reviewing a Sales Order for a Configured Item

From the Configurator Daily Processing menu (G32), choose Sales Order Entry,

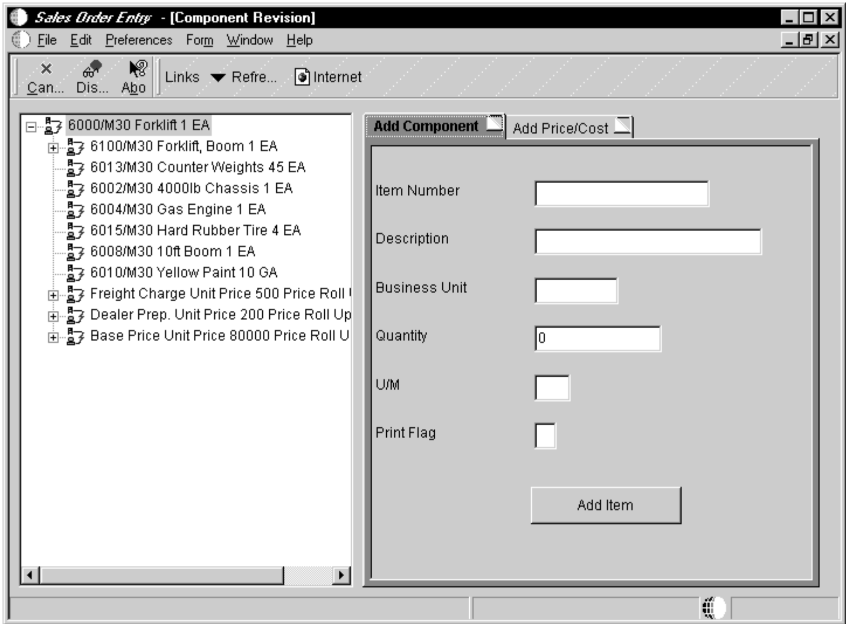
After you enter a sales order, you can review the multi-level structure of your configured item. The Sales Configurator system displays the complete configuration of your item in a tree structure format.

▶ **To review a sales order for a configured item**

On Configured Item Specifications



1. From the Form menu, choose Component Revision.



2. On Component Revisions, review the tree structure of your configured item.
3. To accept the structure, click Cancel.
4. On Configured Item Specifications, click the Calc button. When the calculation function completes processing without errors, click OK.

Adding Nonstandard Components and Price Adjustments

When you need to add special parts or prices to further customize a configured item, you can enter nonstandard configured components and price adjustments. Entering nonstandard components and price adjustments allows you to customize your configured item without creating new assembly inclusion rules, tables or smart parts.

Nonstandard components are priced according to the configured parent item’s price method code. Price or cost adjustments are similar to the X assembly inclusion rules set up for the configured item.

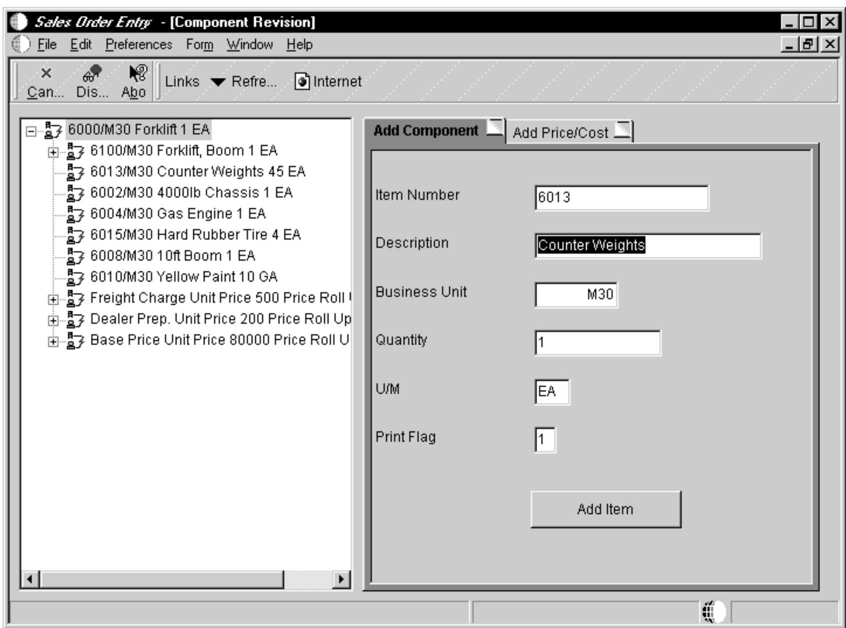
Nonstandard components and price adjustments are added on the Component Revisions form. This form allows you to review all sales order components and prices before the line item is confirmed.

▶ To add nonstandard components or price adjustments

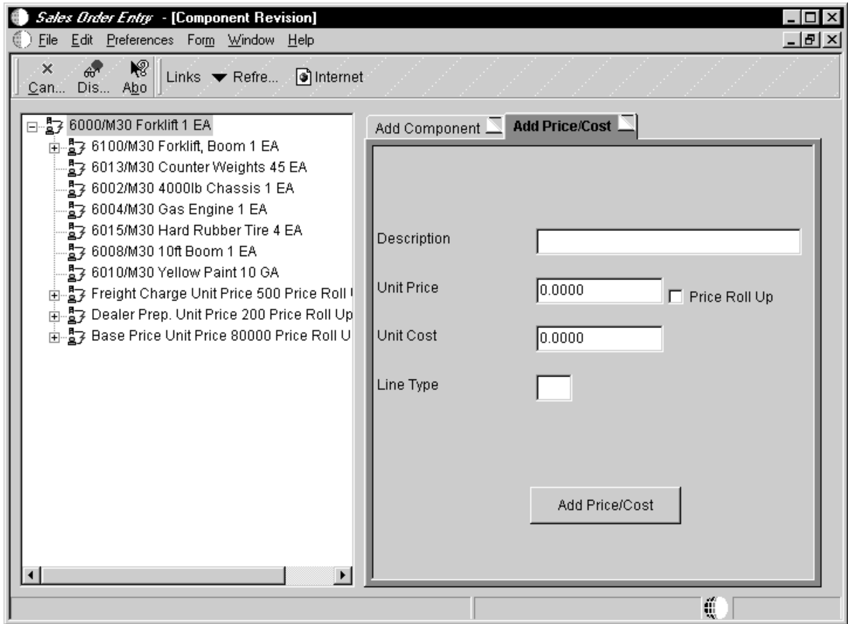
From the Configurator Daily Processing menu (G32), choose Sales Order Entry.

On Customer Service Inquiry

1. Click Add.
2. On Sales Order Detail Revisions, complete the following fields and click OK:
   - Branch/Plant
   - Sold To
   - Ship To
   - Order Date
   - Quantity Ordered
   - UoM
   - Item Number
3. On Configured Item Specifications, choose Component Revision from the Form menu.
4. On Component Revisions, click the Add Component tab.



5. Complete the following fields on the Add Component tab with segment information:
   - Item Number
   - Description
   - Business Unit
   - Quantity
   - U/M
   - Print Flag



6. Click the Add Price/Cost tab, and complete the following fields:
   - Description
   - Unit Price
   - Price Roll Up
   - Unit Cost
   - Line Type
7. To review your nonstandard configuration, choose Refresh Tree from the Forms menu.

You can delete nonstandard components or price adjustments of your configured parent item. Standard components and price adjustments cannot be deleted. Nonstandard segments can be distinguished from standard configured segments by the icon that precedes it on the tree display on the Component Revision form.

Field	Explanation
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
Unit Price	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).
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.
Unit Cost	The amount per unit, derived by dividing the total cost by the unit quantity. You can change the dollar amount for any cost method at any time. If you change the amount for the cost method that you use to track costs of goods sold, the system applies the new amount to your on-hand quantity of the item. It also creates journal entries to account for the difference between the old and the new amounts. Certain programs update the dollar amount for some cost methods. Examples include the following: • Last-in method - The system interactively updates this unit cost based on the last cost of the item at the time of a purchase order receipt or after an inventory adjustment. • Weighted average method - The system calculates and updates this amount by adding transaction quantities, adding transaction costs, and dividing the total cost by the total quantity. • Purchase method – The system updates similarly to the last-in method, but without landed costs.
Line Type	A code that controls how the system processes lines on a transaction. It controls the systems with which the transaction interfaces, such as General Ledger, Job Cost, Accounts Payable, Accounts Receivable, and Inventory Management. It also specifies the conditions under which a line prints on reports and is included in calculations. Codes include the following: S Stock item J Job cost N Nonstock item F Freight T Text information M Miscellaneous charges and credits W Work order

Assigning Common Attributes to Configured Items

To better organize your configured items, and to simplify configurations entered during sales order entry, you can assign common attributes to configured item segments. Common attributes are assigned on the Configured Common Attributes form.

Common attribute values operate as default answers for each configuration level. For example, a common attribute code defined as color may have a value returned as red. With common attributes activated, each configured level with the color common attribute code will automatically return the red value.

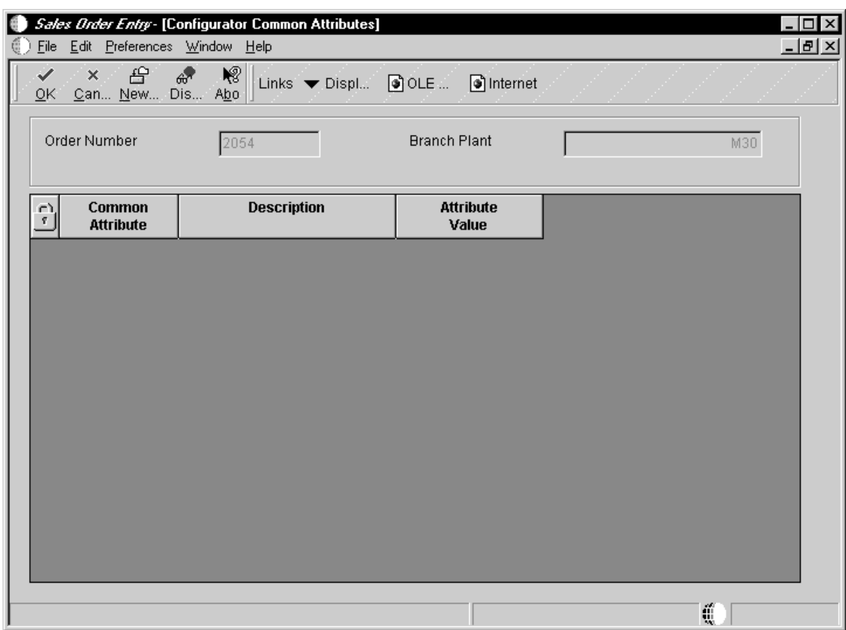
You can either view common attributes for all configured items, or view them as they apply within the current configuration. Additionally, you can change common attribute values during sales order entry. Set the processing option for Configured Item Specifcations (P32942) to control the display of common attributes.

▶ To assign common attributes to configured items

From the Configurator Daily Processing menu (G32), choose Sales Order Entry.

On Configured Item Specifications

1. From the Form menu, choose Common Attributes.



2. On Configurator Common Attributes, complete the following fields and click OK:
   - Common Attribute

- Description
- Attribute Value

Working with Error Messages

During the calculation process within sales order entry, the system checks the segment 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, either a hard or a soft error message appears.

Hard error messages indicate significant errors from cross-segment error checking. When you receive a hard error message, you will be unable to proceed with the sales order until you correct the error.

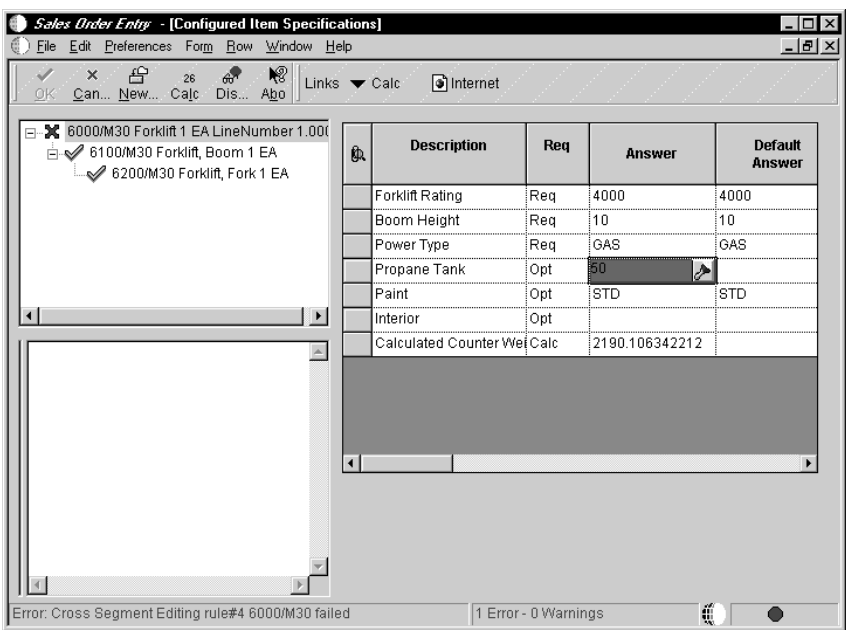
Soft error messages do not prevent you from completing the sales order, but provide error information. You can choose either to correct the error, or leave it as is. The sales order will process either way.

If the system finds errors in cross-segment editing rules, you will receive notification of error messages after calculation functionality has been processed.

▶ To work with error messages

From the Configurator Daily Processing menu (G32), choose Sales Order Entry.

On Configured Item Specifications



1. Click the Display Errors button to view your cross segment editing error.
2. To change segments, click the Answer field.
3. On Configured Item Specifications, click the Calc button to verify that the error has been corrected.

See Also

- *Setting Up Cross-Segment Editing Rules*

Converting a Sales Quote for a Configured Item

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

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

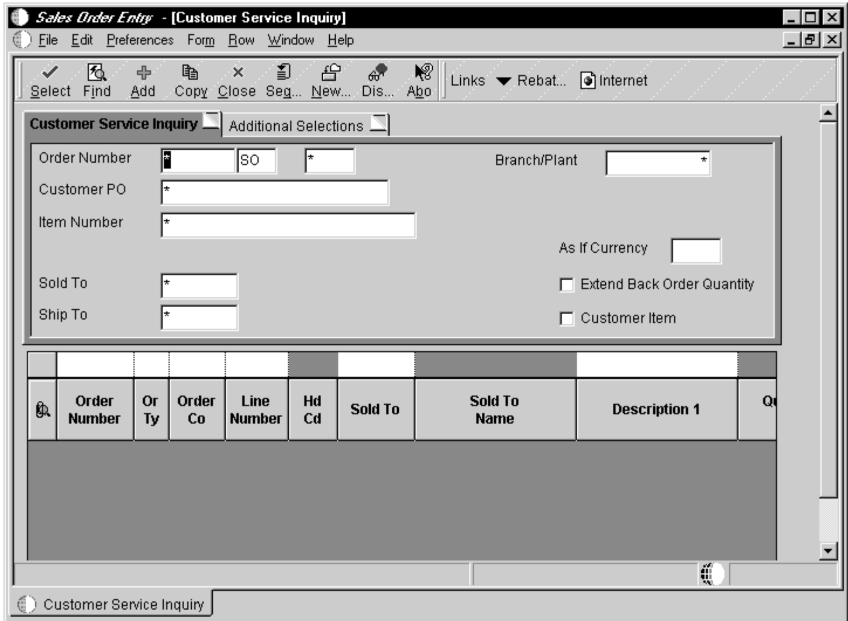
Before You Begin

- ❑ Set the order type processing option to SQ.
- ❑ Set the duplication order type to a non-quote document type.
- ❑ Specify the document type for sales quotes in the Document Type List field in Configurator Constants.
- ❑ Select the Cost Sales Quote flag on Configurator Constants if you want the costing to be based on R, Q or P rules at the time of sales order entry. If you do not select this flag, costing will only be done by the Work Order Processing program, based on R, Q or P rules.

► **To convert a sales quote for a configured item**

From the Configurator Daily Processing menu (G32), choose Sales Quote.

On Customer Service Inquiry



1. Locate the sales quote.
2. Select the sales quote and click Copy.
3. Process the sales order.

See Also

- *Setting up Constants*

Revising a Sales Order for a Configured Item

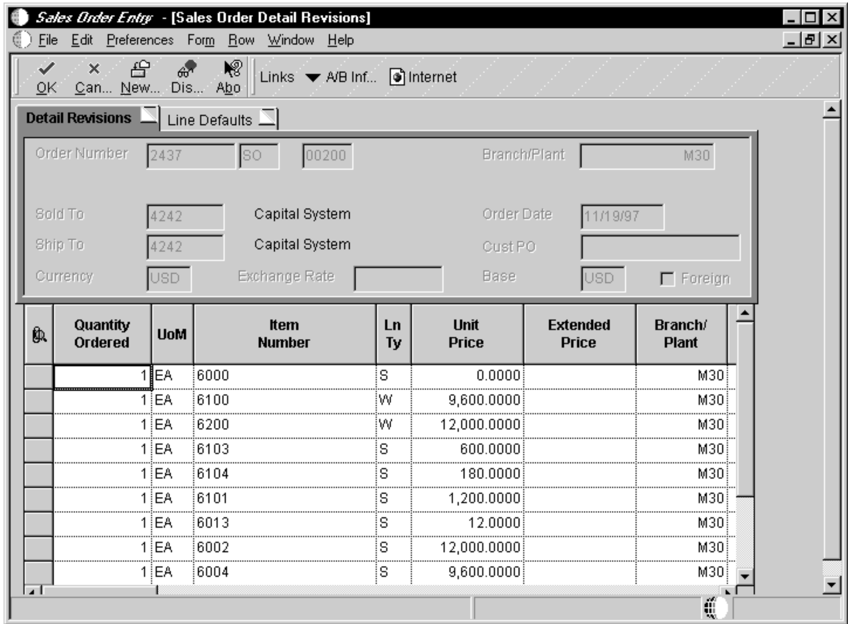
If a customer calls and needs to add or change information on a sales order, you can revise the sales order for a configured item. The Sales Configurator system also allows you to revise the work order for a configured item.

▶ To revise a sales order for a configured item

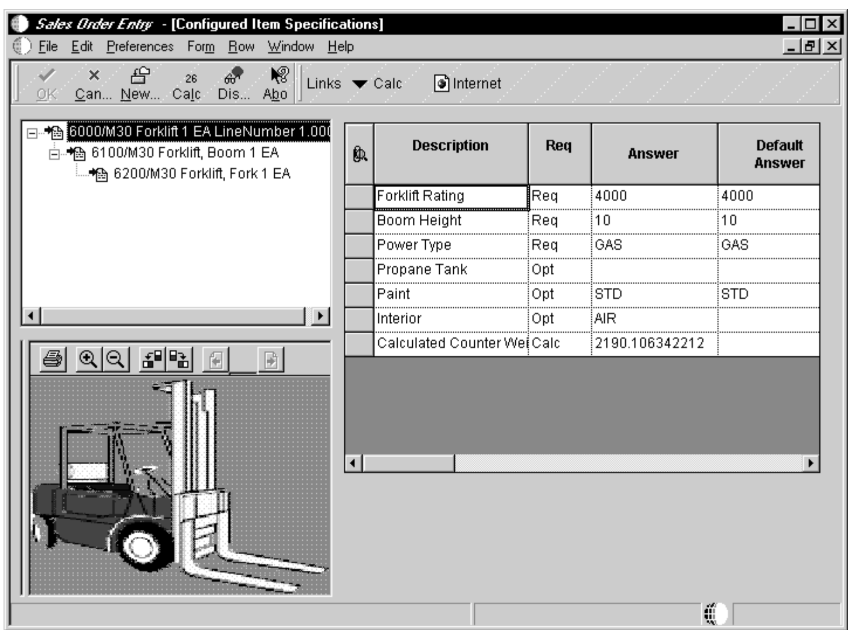
From the Configurator Daily Processing menu (G32), choose Sales Order Entry.

On Customer Service Inquiry

1. Locate the sales order for the configured item and click Select.



2. On Sales Order Detail Revisions, select a row and choose Kits/Configurator from the Row menu.



3. On Configured Item Specifications, revise the answers and click the Calc button.
4. If you do not receive any errors, click OK.

The changes appear on the sales order entry form.

Revising sales orders can also include the following:

Changing quantity	The system changes the sales order quantity and, if you set a processing option, also changes the quantity on the work order.
Changing segment value	The system changes the segment values on the sales order and, if you set a processing option, also changes the segment values on the work order. Changing a segment value may produce new configured components or prices. You may need to run work order processing again.
Changing pick date	The system recalculates work order start dates based on leadtimes. When you change a sales order's pick date, the system supports multi-level back scheduling for the associated work orders.
Purging sales order lines	The system purges sales order lines for components no longer required after the change.
Calculating new sales order line numbers	The system uses the configured item's base line number and increments by .001 for each configured component.
Reassigning work order numbers	The system retains work orders that are still valid after revising the sales order. The system may cancel work orders no longer required after the change by changing the status code of the work order.
Changing the work order cutoff status code	When working with work order entry program (P48013), if the work order status is less than the cutoff status, the system changes the work order. If the begin status code is not blank, the system updates the status to what is defined in the processing option. If the work order status is greater than or equal to the cutoff status, the system does not change the work order and if the change status code is not blank, updates the work order status to what you defined in the processing option.
Placing the sales order on hold (hold status code)	If the work order status in work order entry (P48013) is less than the cutoff status, and the hold status code is not blank, the system updates the work order status to the hold status code defined in the processing option. If the work order status is greater than or equal to the cutoff status, the system does not update the work order.

Cancelling the sales order (cancel status code)	If the work order status is less than the cutoff status and the cancel status code is not blank, the work order entry system (P48013) updates the work order status to the cancel status code defined in the processing option. If the work order status is greater than or equal to the cutoff status, the system does not update the work order.
Creating new work orders	The program creates a new work order if required after the change.

See Also

- *Setting Up Constants*

Reviewing Configured Text

You can review the configured text that you 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

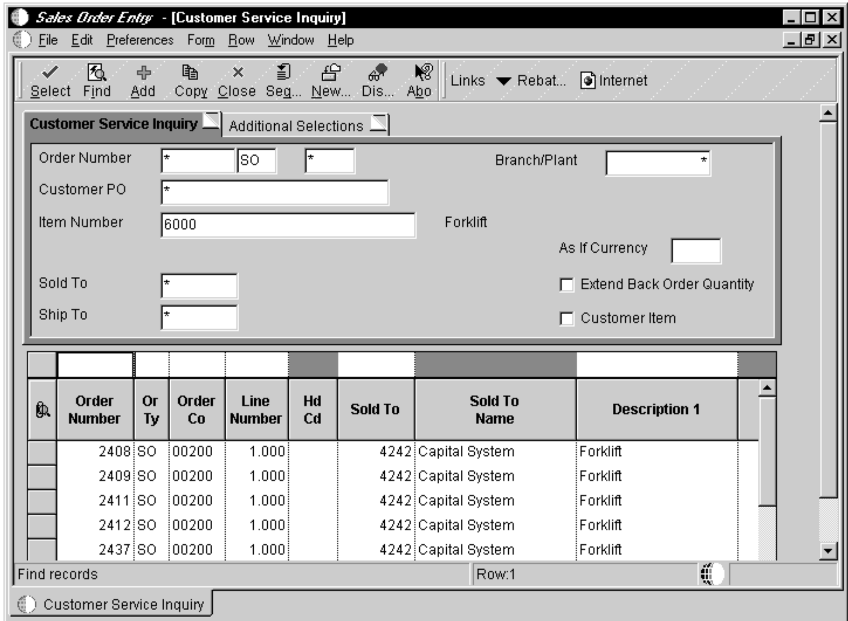
The system adds the configured text from the sales order to the work order.

▶ To review configured text

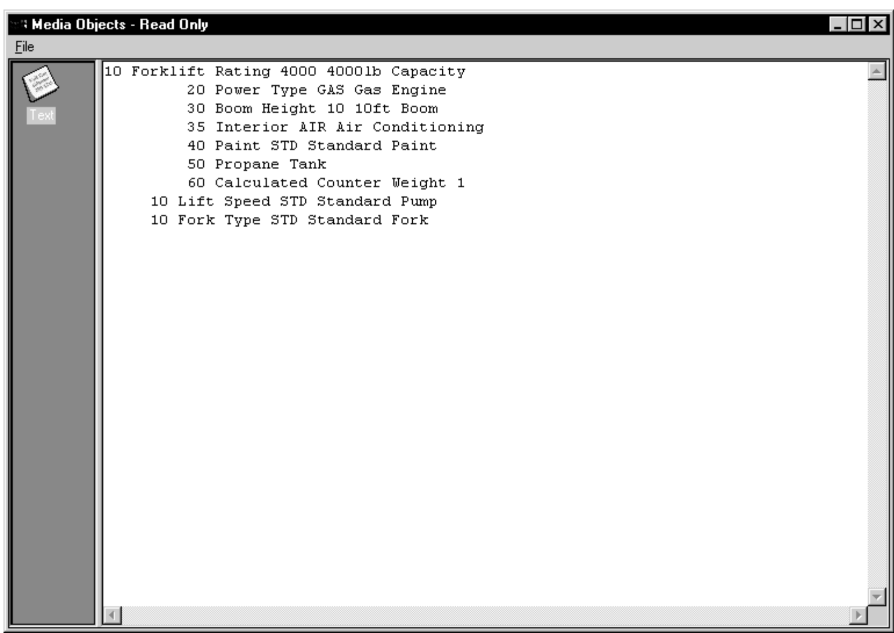
From the Configurator Daily Processing menu (G32), choose Sales Order Entry.

On Customer Service Inquiry

1. To locate a sales order for the configured item, complete the following field and click Find:
   - Item Number



2. Choose Media Objects.



3. On Media Objects, review the text.

See Also

- *Working with Detail Information* in the *Sales Order Management Guide* for more information about working with associated text.
- *Processing Options for Sales Order Entry* in the *Sales Order Management Guide.*

Processing Options: Configured Item Specifications

Defaults Tab

These processing options define the default information that the system uses during Configured Item Specifications (P32942).

1. Hot Spot Selection

A user defined code stored in table 32/HS that indicates the type of information that appears in the Hot spot field, for example, the domestic price, foreign price, or weight.

2. Configurator Print Flag

Use this processing option to determine whether configured parts print on sales orders and work orders. This processing option is used in the Pick Slip, Invoice Print, Bill of Lading, and Print Parts List programs.

Valid values are:

Y Print on the sales and work order. You can also use 1.
N Do not print on the sales and work order. You can also use 0.
2 Print on the sales order only.
3 Print on the work order only.

3. Line Type

Use this processing option to control how the system processes lines on a transaction. The line type 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.

This processing option uses line type to group X rule prices added on the fly.

Valid values are:

S Stock item.
J Job cost.
N Non-stock item.
F Freight.
T Text information.
M Miscellaneous charges and credits.
W Work order.

Processing Tab

These processing options control how the system processes and displays values within Configured Item Specifications (P32942).

4. Error Display

Use this processing option to specify whether to process and display all cross-segment editing errors from calculation functionality.

Valid values are:

1 Continue cross-segment editing processes and display all errors.
Blank Stop cross-segment editing processes at the first error.

5. Pre-expand Tree

Use this processing option to control the tree display of a configured item on the Component Revisions form.

Valid values are:

1 Load the component revisions tree pre-expanded.
Blank Load the component revisions tree without expanding.

6. Media Object Display

Use this processing option to specify whether to display media objects on the Configured Item Specifications form. This option controls context sensitive display of media objects related to items, segments, and user defined code values.

Valid values are:

1 Display media objects.
Blank Do not display media objects.

7. Media Object Display Order

Use this processing option to specify the order in which media objects appear on the Configured Item Specifications form, if there is more than one media object type attached to a configured item or segment. If there is more than one media object of the same type, the first attached object in the selected type will be displayed.

Valid values are:

1 Text.
2 Image.
3 OLE.
Blank Image.

8. Primary Item Number

Use this processing option to control how the tree structure appears on the Configured Item Specifications form.

Valid values are:

1 Suppress the primary item number on the tree structure.
Blank Do not suppress the primary item number on the tree structure.

9. Branch/Plant

Use this processing option to control how the tree structure appears on the Configured Item Specifications form.

Valid values are:

1 Suppress branch/plant on the tree structure.
Blank Do not suppress branch/plant on the tree structure.

10. Item Description

Use this processing option to control how the tree structure appears on the Configured Item Specifications form.

Valid values are:

1 Suppress the item description on the tree structure.
Blank Do not suppress the item description on the tree structure.

11. Quantity

Use this processing option to control how the tree structure appears on the Configured Item Specifications form.

Valid values are:

1 Suppress the quantity on the tree structure.
Blank Do not suppress the quantity on the tree structure.

12. Unit of Measure

Use this processing option to control how the tree structure appears on the Configured Item Specifications form.

Valid values are:

1 Suppress the unit of measure on the tree structure.
Blank Do not suppress the unit of measure on the tree structure.

13. Price/Cost Description

Use this processing option to control how the tree structure appears on the Configured Item Specifications form.

Valid values are:

1 Suppress the price/cost description on the tree structure.
Blank Do not suppress the price/cost description on the tree structure.

14. Unit Price

Use this processing option to control how the tree structure appears on the Configured Item Specifications form.

Valid values are:

1 Suppress the unit price on the tree structure.
Blank Do not suppress the unit price on the tree structure.

15. Price Rollup Flag

Use this processing option to control how the tree structure appears on the Configured Item Specifications form.

Valid values are:

1 Suppress the price rollup flag on the tree structure.
Blank Do not suppress the price rollup flag on the tree structure.

16. Unit Cost

Use this processing option to control how the tree structure appears on the Configured Item Specifications form.

Valid values are:

1 Suppress the unit cost on the tree structure.
Blank Do not suppress the unit cost on the tree structure.

17. Component Revision Price

Use this processing option to specify whether to display a particular price such as domestic, foreign, or order mode on the Component Revision form.

Valid values are:

1 Suppress the price.
2 Display only foreign price.

3 Display only order mode price.
4 Display both domestic and foreign prices.
Blank Display domestic price only.

18. Component Revision Cost

Use this processing option to specify whether to display a particular cost such as domestic, foreign, or order mode on the Component Revision form.

Valid values are:

1 Suppress the cost.
2 Display the foreign cost only.
3 Display the order mode cost only.
4 Display both the domestic and foreign costs.
Blank Display the domestic cost only.

19. Component Revision Weight

Use this processing option to specify whether the system displays the weight of your configured items on the Component Revision form.

Valid values are:

1 Do not display weight of configured items.
Blank Display weight of configured items.

20. Common Attribute Display

Use this processing option to specify whether the system displays common attributes among configured items.

Valid values are:

1 Display common attributes without automatic prompt.
2 Display common attributes with automatic prompt.
Blank Do not display common attributes.

21. Common Attribute Display Scope

Use this processing option to specify whether to display common attributes specific to the configured item.

Valid values are:

1 Display all common attributes.
Blank Display only common attributes used in configuration.

Storing and Forwarding Sales Orders for Configured Items

Store and forward sales order processing provides an efficient way to integrate a field sales force into the sales order management process. Store and forward sales orders ensure accuracy and timeliness. With store and forward, the field sales force can create sales orders on a PC and upload them. If you are at a remote site and do not have a dedicated line for access to the server, it might be more productive and cost effective to create sales orders on your PC during normal business hours. Then, you can upload them to the server for processing during off-peak hours.

Storing and forwarding sales orders for configured items includes the following tasks:

- ❑ Creating orders that you store and forward
- ❑ Uploading sales orders to the server
- ❑ Processing batch sales orders

When you create sales orders that you store and forward, the system edits and validates each sales order based on the information that you downloaded from the tables. It also creates a transaction control record for each sales order, assigns it a status of 1 (ready to process), and stores it in the Transaction Control table (F0041Z1).

For configured items, the system:

- Stores segments in the Configured Item Segments table (F3294Z)
- Prices, costs, and discounts the configured item
- Processes cross-segment editing rules and assembly inclusion rules
- Attaches configured text
- Stores configured item information in the Sales Order Detail Header table (F4201, F4211)
- Stores configured string history information on the PC
- Stores configurator information in a variety of S/32 files. (F32943, F3296, F32961, F329611, F3296T)
- Supports adding nonstandard components and price adjustments
- Supports base pricing and discounting

The Store and Forward Sales Order process does not support the following for configured items:

- Order changes after you have updated transactions on the server
- Availability checking of stocked configured items from remote clients
- Line splitting for configured item availability

After you enter a store and forward sales order, the system transfers the header information to the Batch Header Receiver table (F4201) and the detail information to the Batch Detail Receiver table (F4211). Configuration information is stored in the Configured Item Segments table (F3294Z). The information remains in those tables until you are ready to process the orders.

When you are ready to forward the sales orders, you must run the Batch Edit and Creation program. The system edits the store and forward order information and transfers it to a standard sales order.

You must run the Batch Edit and Creation program to generate the sales orders. After the system creates orders, you can either process the sales order as is or change any detail information by using sales order entry.

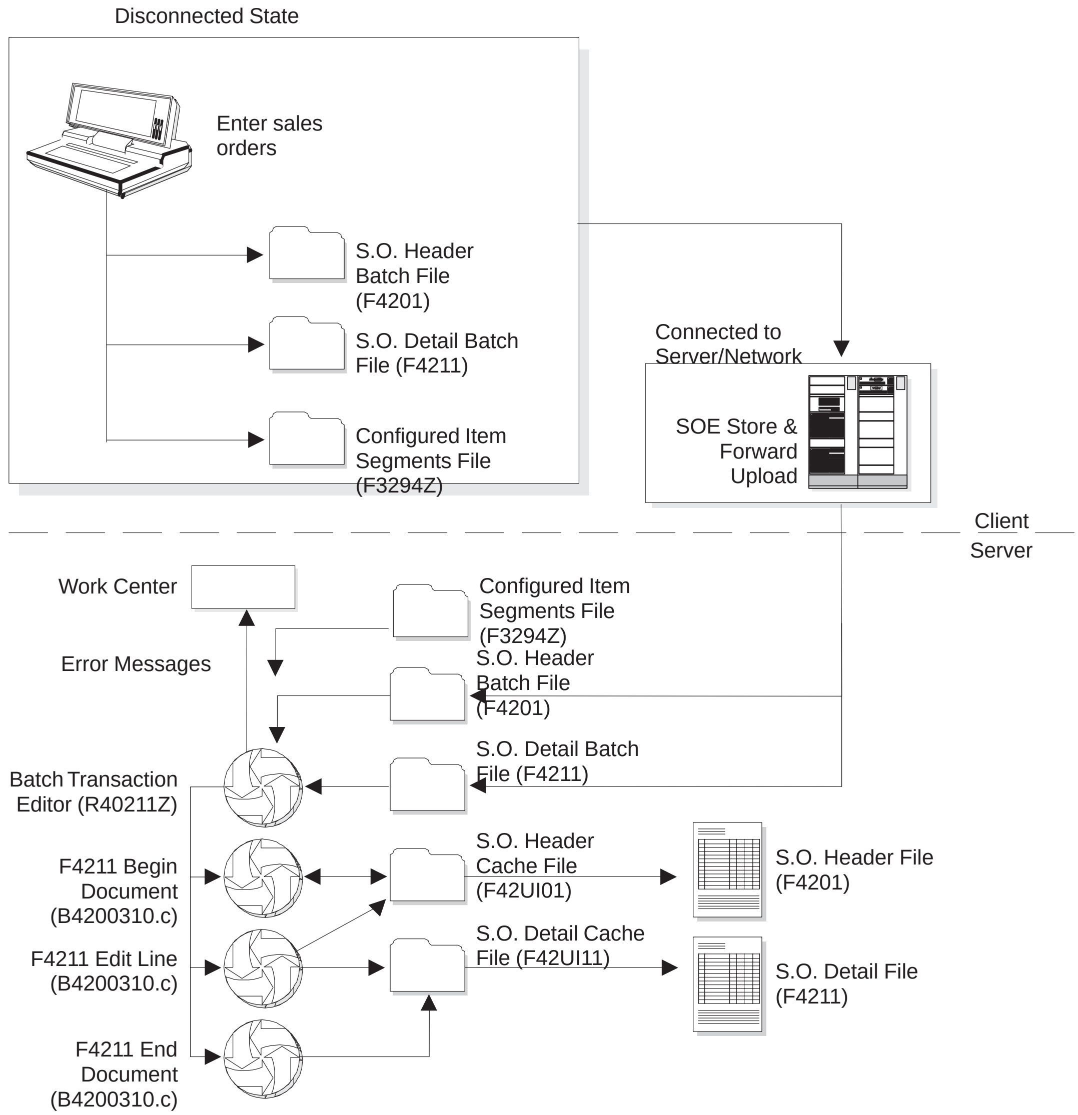
All setup files for Sales Configurator are stored on the PC. You should download setup files to the PC whenever significant changes are made.

Adding nonstandard components and price adjustments is supported within store and forward sales order entry for configured items.

Before You Begin

- ❑ Verify that the Customer Billing Instructions information is set up to process batch orders.
- ❑ Verify that the system administrator downloads the necessary technical master tables before you complete the steps to store and forward sales orders.
- ❑ Download the appropriate tables from the server to your PC. See *Downloading Master Tables to the Workstation* in the *Sales Order Management Guide.*

The following graphic illustrates the store and forward process.



Creating Orders That You Store and Forward

You can create standard J.D. Edwards sales orders for configured items using the store and forward environment. You store the sales orders on your PC until you are ready to upload, or forward, them to the server for processing.

You can review sales orders before you upload and process them. See *Correcting Batch Sales Orders* in the *Sales Order Management Guide* for more information.

After creating sales orders that you store and forward, you might need to modify or delete some of them. To do so, locate the sales order that you want to modify on the Work With Store & Forward Orders form. Make the changes to the sales order on your PC and upload it again.

See Also

- *Storing and Forwarding Sales Orders* in the *Sales Order Management Guide*

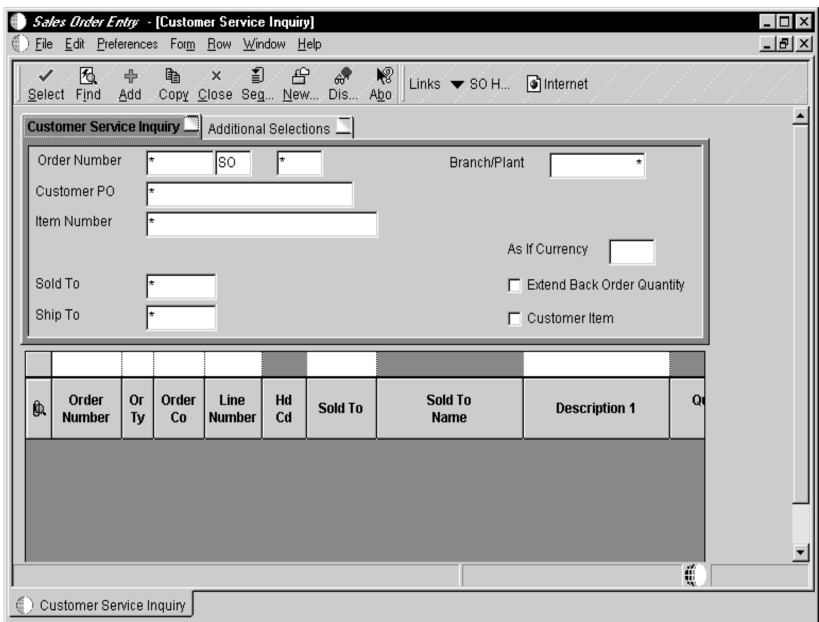
Before You Begin

❑ Set the processing options accordingly.

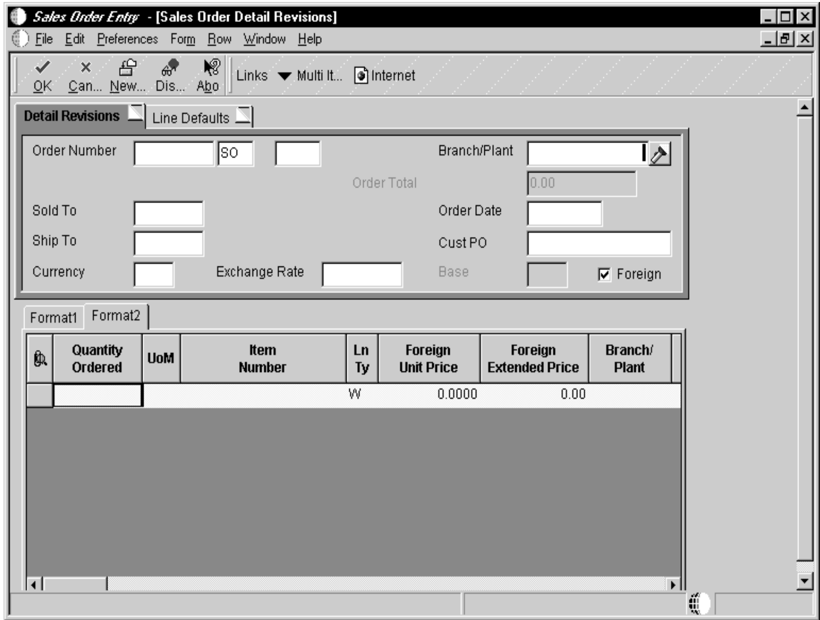
▶ To create orders that you store and forward

From the Configurator Daily Processing menu (G32), choose Store & Forward Orders.

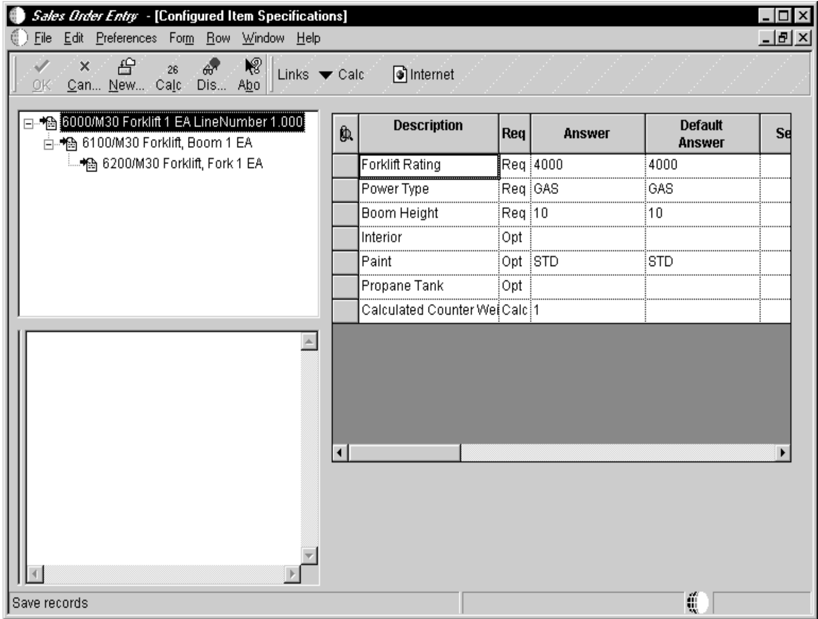
On Customer Service Inquiry



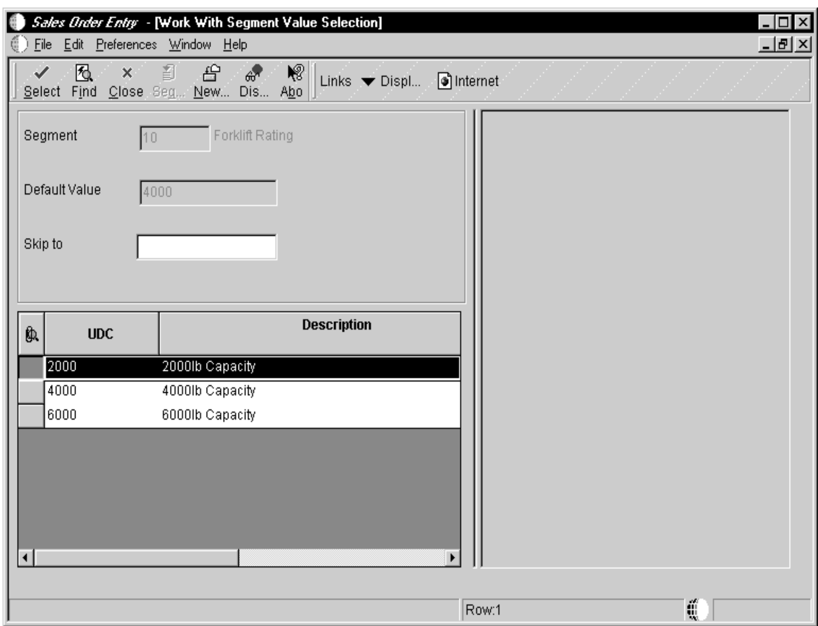
1. Click Add.



2. On Sales Order Detail Revisions, complete the following required fields with information about the customer:
   - Branch/Plant
   - Sold To
   - Ship To
   - Order Date
3. Complete the following required fields with information about the configured item and click OK:
   - Quantity Ordered
   - UoM
   - Item Number



1. On Configured Item Specifications, to accept the default values, click the Calc button and go to step 8.
2. To change values for the segments, click the Answer field.



6. On Work with Segment Value Selection, choose a row and click Select.

   Do this for every segment you want to change within your configured item.

7. When you have finished configuring your item, click the Calc button.
8. If you do not receive any errors, click OK.

For more information on error messages, see *Working With Error Messages*.

9. To finish creating the sales order, do one of the following:
   - Submit the order for processing, if the processing options are not set to automatically submit the order
   - Process the sales orders later by running the Edit and Creation program

   Regardless of when you process the orders, the Edit and Creation program edits the information and creates the sales orders. If there are no errors, the system adds information to the Sales Order Header table (F4201) and the Sales Order Detail table (F4211).

Uploading Sales Orders to the Server

After creating sales orders on your PC, you must upload them to the server for processing. To do this, you must be connected to the server and signed on to your normal production environment.

When you upload sales orders, the system:

- Creates records in the Batch Order Header (F4201) and Batch Order Detail (F41211) tables on the server.
- Updates the transaction control status of each sales order to 5 (uploaded) on the PC. After a sales order is updated to this status, you cannot modify it on the PC. You can make changes to it only on the server.

  If a sales order on the PC is a status of 1 (ready to process) or 2 (errors), you can make changes to it on the PC.
- Creates a transaction control record for each sales order on the server and assigns it a status of 1 (ready to process).
- For configured items, the system uploads the configured segment tables (F3294Z), (F3296), (F3296T), (F32943), (F32961), and (F329611).

After you upload your sales orders and process them, the system edits transaction control status of the sales orders on the PC to match the status of those on the server.

Before You Begin

❑ To maximize system performance, upload the sales orders during off-peak hours.

▶ To upload sales orders to the server

From the Configurator Daily Processing menu (G32), choose Upload Store and Forward Tran.

On Work With Batch Versions

1. Choose the Store and Forward Upload version.
2. From the Form menu, choose Run.
3. To limit the information that the system uploads, choose the Data Selection option on Version Prompting.
4. Click the Print or Preview option.
5. On Environment Overrides, enter the exact name of the target environment and click OK.

   The system creates a transmission upload report for all of the sales orders that you upload. Use this report to verify that the sales orders have been uploaded correctly.

Processing Batch Sales Orders

From the Additional Order Processes menu (G4212), choose Batch Edit and Creation.

After the system creates orders, you can either process the sales order as is or reprocess the configured item using rules defined on the server. To process sales orders, you must run the Batch Edit and Creation program. The system edits the information you entered and creates all orders at one time. To ensure the integrity of the data, the system creates sales orders for batch orders only after the editing process is complete.

Any of the orders that contain errors remain in the batch receiver tables as unprocessed. You must correct this information and then re-run the Batch Edit and Creation program.

On Work With Versions, select an existing version or create a new version to process batch sales orders.

When processing the sales orders that you uploaded, use the same program that you use to process batch input sales orders.

For configured items, the system:

- Accepts the configured item as entered or revalidates the configured item by retrieving segment values.
- Retrieves segment order values from the Configured Item Segments table (F3249Z)

- Processes cross-segment editing rules and assembly inclusion rules
- Stores information in the appropriate sales order and configurator tables
- Supports availability checking for stocked configured items
- Reports errors, including:
  - Segment UDC values
  - Segment range
  - Required segments
  - Alphanumeric segment requirements
  - Cross-segment editing rules
  - Assembly inclusion rules
- Creates a configured sales order for transactions with no errors

You can upload prices from the PC or recalculate them with the Batch Transaction Editor program. If you upload prices, they override existing prices.

When you connect to the server, you can review errors and batch status codes for each transaction. You can review batch status codes to identify where orders are in the process:

1 – The transaction is available for processing

2 – The transaction contains errors

3 – The system is processing the transactions

4 – Upload Transmission Active

5 – Unavailable – Waiting for Server Response

6 – Complete. The transactions are updated to the sales order header and detail files on the server.

You should correct errors with the server version of the Store and Forward Sales Order Entry program and rerun the Batch Edit and Creation program.

See Also

- *Processing Batch Sales Orders* in the *Sales Order Management Guide* for more information about submitting sales orders for processing and verifying sales order information

Processing Options for Batch Edit and Creation

Process

1. Enter '1' to Perform Availability Check and Kit Balancing ____________
2. Enter '1' to override prices, if ' ' use the Unit Price in F4106 ____________

Versions

1. Enter the Version ID of the Sales Order Entry ____________

Configurator

Configured Item Inventory Split.

Enter '1' to support a single split, or '2' to support multiple splits. Blank disables splitting. ____________

Configured Items

Configured Items

After you enter configured item information during sales order entry, you can work with configured items in your business cycle with other Manufacturing and Distribution programs.

Working with configured items consists of the following:

- ❑ Processing work orders
- ❑ Working with configured string history
- ❑ Understanding configured items and Manufacturing systems
- ❑ Understanding configured items and Distribution systems

Processing Work Orders

From the Configurator Daily Processing menu (G32), choose Work Order Generation.

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
- Create the work order routing instructions from the R type assembly inclusion rules
- Commit inventory
- Back-schedule configured routings

The sort sequence must be descending by work order number.

Before You Begin

❑ Set processing options for the Work Order Generation program for configured item processing.

Additional Considerations When Processing Work Orders

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.

Changing the sales order

Use Work Order Entry processing options, referenced by the sales order, to define the work order cutoff status. The cutoff status determines at what point changes to the sales order do not affect the work order. In other words, if the work order is already at that status or higher, and you change the sales order, then the work order status changes, but the parts list and routing are not affected.

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 defined on Item Branch for the work order start date. Because variable leadtimes depend on how the item is configured, you must enter leadtimes manually on Item Branch.

Work Order Generation calculates leadtimes for multi-level configured items, however Leadtime Rollup does not support configured items.

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. The program also updates standard costs on the associated sales order detail line.

Updating sales orders

Use a processing option to control whether the system updates the related sales order detail line status.

Configured text

Work Order Generation places configured item text on the work order and copies the configured text from R type (routing) assembly inclusion rules to the routing operation.

See Also

- *Processing Work Orders and Rate Schedules* in the *Shop Floor Management Guide*

Processing Options for Work Order Generation

```
Process

     1.  Generate Parts List and                        ____________
     Routing Instructions  1 = Parts
     list only  2 = Routing
     instructions only  3 = Both parts
     list and routing instructions
     Blank = Do not generate a parts
     list or routing instructions
     list or routing instructions
```

2. Update Parts List and Routing Instructions 1 = Update the existing parts list and routing instructions. Blank = Do not update the existing parts list or routing. ____________

Defaults

1. Work Order Date ____________
2. Header Status Code ____________

Parts List

1. Substitutions 1 = Substitution processing performed Blank = Substitution processing not performed.
not performed. ____________
2. Prior Revision Level 1 = Prior revision level used Blank = Prior revision level not used
used ____________
3. Preflush Items 1 = Material issued for all items Blank = Material issued only for preflushed items ____________
4. Commitment Processing Bypass 1 = Commitment processing not performed Blank = Commitment processing performed per commitment control ____________

Routing

1. Unit of Measure ____________
2. Document Type ____________
3. Line Type ____________
4. Beginning Status ____________
5. Subledger Field 1 = Work order number entered into the subledger field of the purchasing journal entries Blank = Work order number not used.
used. ____________

Sales/Config

1. Line Type ____________
2. Next Status ____________
3. Standard Cost Calculation 1 = Calculate standard cost 2 = Calculate standard cost only if it has not already been calculated Blank = Do not calculate standard cost
cost ____________

Printing 1

1. Work Orders 1 = Print work orders Blank = Do not print work orders or any associated information ____________
2. Parts Lists 1 = Print parts ____________

list Blank = Do not perform any
parts list print processing
list print processing
3. Parts List Detail 1 = Print detail information Blank = Do not print detail information ______________
information
4. Parts List on Separate Pages 1 = Print each parts list on a new page Blank = Print parts list on work order header page ______________
order header page
5. Consolidated Parts List (FUTURE) 1 = Consolidate the parts list Blank = Do not consolidate the parts list ______________
parts list
6. Parts List Component Text 1 = Print component (generic) text Blank = Do not print component text ______________
text

Printing 2

1. Routing Instructions 1 = Print routing instructions Blank = Do not perform any routing instructions print processing ______________
2. Routing Instructions on Separate Pages 1 = Print routing instructions on a new page Blank = Do not print routing instruction on new page ______________
instruction on new page
3. Routing Instructions Text 1 = Print routing instructions (generic) text Blank = Do not print routing instructions text ______________
instructions text
4. Shop Packet Summary 1 = Print shop packet summary Blank = Do not print summary ______________
5. Sales Order Text Lines 1 = Print sales order text lines Blank = Do not print sales order text ______________

Warehouse Mgt

1. Pick Requests 1 = Generate request only 2 = Generate request and process using subsystem Blank = No request processed ______________
Blank = No request processed
2. Location Driver Processing Version (R46171) ______________
3. Staging Location ______________
4. Staging Location Availability 1 = Check staging location for availability Blank = Does not check for availability ______________
availability

Versions

1. Work Order Print (R31415) ____________
2. Shortage Report (R31418) ____________
3. Bar Coding Report (R31413) ____________
4. Inventory Issues (P31113) ____________
5. Purchase Order Entry (P4310) ____________
6. Manufacturing Specifications (R37470) ____________

Interop

1. Work Order Transaction Type ____________
2. Parts List Transaction Type ____________
3. Routing Instructions Transaction Type ____________
4. Work Order Header Before Image 1 = Include before image Blank = Do not include before image image ____________
5. Parts List Before Image 1 = Include before image Blank = Do not include before image image ____________
6. Routing Instructions Before Image 1 = Include before image Blank = Do not include before image image image ____________

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

Working with configured string history consists of the following tasks:

- ❑ Generating the configured string history
- ❑ Reviewing the configured string history

Generating the Configured String History

From the Configurator Daily Processing menu (G32), choose 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 (F32943)
- Separates the string
- Generates a record for each segment value
- Stores the information in the Configured String Segments table (F32942)

The system does not generate the Configured String History table (F3295) automatically. You should run the Create Segment Value History program to create the configured string 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 the configured string history during sales order entry, where you can select from previously ordered configured items to enter on the current sales order.

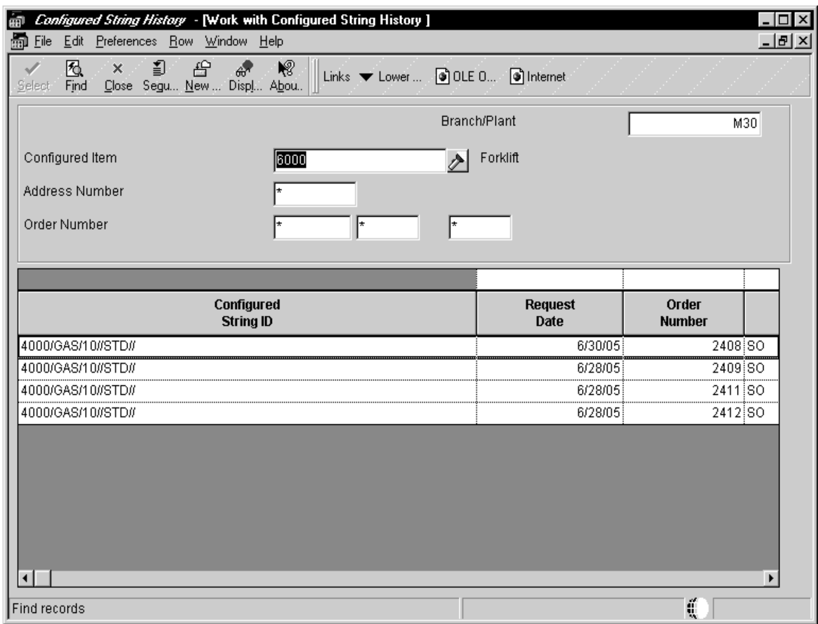
See Also

- *Working with Configured Item Sales Orders*

▶ To review the configured string history

From the Configurator Daily Processing menu (G32), choose Configured String History.

On Work with Configured String History



1. To locate a configured item, complete the following fields and click Find:
   - Branch/Plant
   - Configured Item
2. Complete the following optional fields:
   - Order Co
   - Or Ty
   - Order Number
   - Address Number
3. Review price and cost information in the following fields:
   - Configured String Segment 02
   - Configured String Segment 01
   - String ID

- Segment Configured Item Number
- Entered Unit Prc
- Memo Cost 1
- Lot Serial Number
- Location
- Line Number
- Request Date
- Configured String ID

Field	Explanation
Order Number	A number that identifies an original document. This can be a voucher, an order number, an invoice, unapplied cash, a journal entry number, and so on.
Or Ty	A user defined code (00/DT) that identifies the type of document. This code also indicates the origin of the transaction. J.D. Edwards has reserved document type codes for vouchers, invoices, receipts, and time sheets, which create automatic offset entries during the post program. (These entries are not self-balancing when you originally enter them.) 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 Purchase Order Processing documents J General Accounting/Joint Interest Billing documents S Sales Order Processing documents
Order Co	A number that, along with order number and order type, uniquely identifies an order document (such as a purchase order, a contract, a sales order, and so on). If you use the Next Numbers by Company/Fiscal Year facility, the Automatic Next Numbers program (X0010) uses the order company to retrieve the correct next number for that company. If two or more order documents have the same order number and order type, the order company lets you locate the desired document. If you use the regular Next Numbers facility, the order company is not used to assign a next number. In this case, you probably would not use the order company to locate the document.
Configured String ID	The configured string identifier as it was originally entered on a Sales Order.

Field	Explanation
Request Date	The date that an item is to arrive or that an action is to be complete.
Line Number	A number that identifies multiple occurrences, such as line numbers on a purchase order or other document. Generally, the system assigns this number, but in some cases you can override it.
Location	The storage location from which goods will be moved.
Lot Serial Number	A number that identifies a lot or a serial number. A lot is a group of items with similar characteristics.
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.
Entered Unit Prc	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.
Segment Configured Item Number	The configured item that a segment in an Assembly Inclusion Rule references.
String ID	A numerical value that represents a unique configured string.

Understanding 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 Management and Manufacturing and Distribution Planning systems.

This includes the following:

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

Working With Product Costing and Manufacturing Accounting

From the Configurator Daily Processing menu (G32), choose Work Order Generation.

Costing for configured items is different from costing for nonconfigured items. 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. It calculates frozen standard costs for the configured item and updates the unit and extended costs for the sales order. 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 standard costs in the Work Order Variance table (F3102) and uses these costs for related Manufacturing Accounting transactions. Configured items do not require rolled frozen standard costs in the Item Cost Component Add-Ons table (F30026). However, standard costs for purchased parts and manufactured parts used by configured items must be frozen (07 Cost Method in F4105) in order to be factored into F3102 standard costs for work orders.

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

See Also

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

Working with Work Order Completions

From the Daily Order Reporting menu (G3112), choose a completions option.

The Work Order Completions program uses the information entered in the Shop Floor Management system to create general ledger journal entries. Shop Floor Management creates no interactive journal entries; instead it processes all journal entries 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 hard commits the associated sales order and update the sales order's lot and location information.

See Also

- *Working with Completions* in the *Shop Floor Management Guide*

Reviewing Hours and Quantities

From the Daily Order Reporting – Discrete menu (G3112), choose Hours and Quantities.

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.

You can review 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.

See Also

- *Working with Hours and Quantities* in the *Shop Floor Management Guide*

Understanding 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

Understanding configured items and distribution includes the following:

- Working with configured item inventory
- Checking availability
- Working with pick lists
- Working with shipments
- Working with invoices

Working with Configured Item Inventory

The Sales Configurator 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.

You can adjust quantities for configured items in a specific location. Sales Configurator supports adjustments for locations with existing inventory and adjustments from zero quantity as long as the configuration-specific string history has been defined in the system.

See Also

For more information on working with item inventory, see the following chapters in the *Inventory Management Guide*.

- *Issuing Inventory*
- *Transferring Inventory*
- *Adjusting Inventory*

Checking Availability

Use the Summary and Detailed Availability forms to review the configured item segments.

Checking Availability During Sales Order Entry

To check availability during sales order entry, you must check the Check Availability checkbox in Configurator Constants. If the system finds the exact item and string match during sales order entry, all locations containing the specific configuration appear. You can review segment values for all levels of the configured item and select an item used on the sales order. However, the system does not check the availability of components.

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

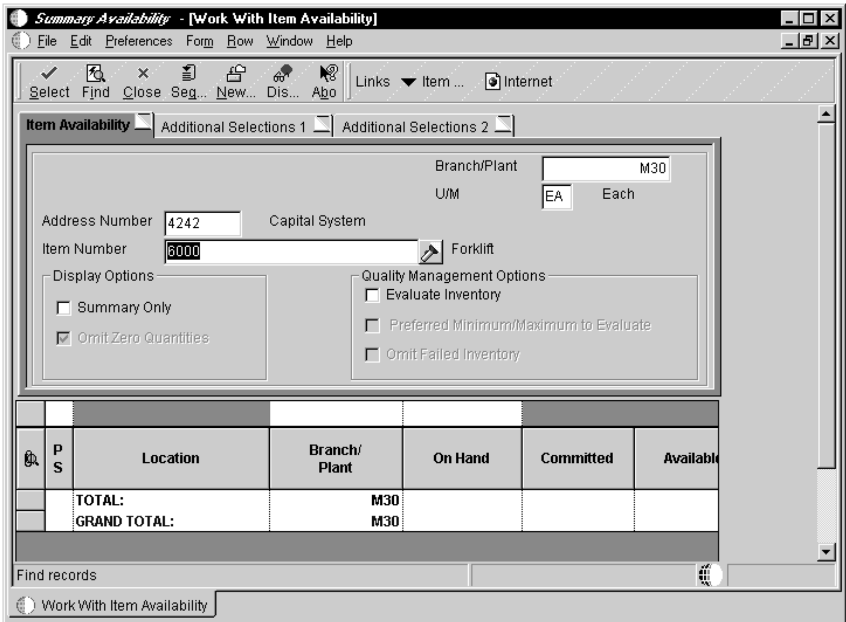
See Also

- *Working with Configured Item Sales Orders*
- *Locating Quantity Information* in the *Sales Order Management Guide*
- *Reviewing Sales Orders* in the *Sales Order Management Guide*

Example: Summary Availability

From the Inventory Inquiries menu (G41112), choose Summary Availability.

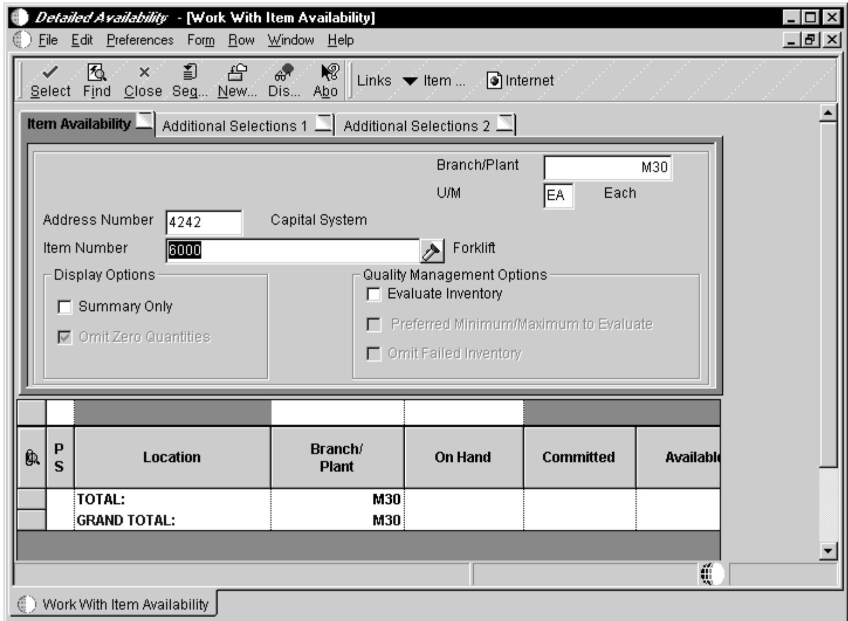
You can use Summary Availability to review inventory locations containing stock for a configured item. Review information such as on-hand, committed, and available quantities for each location.



Example: Detailed Availability

From the Inventory Inquiries menu (G41112), choose Detailed Availability.

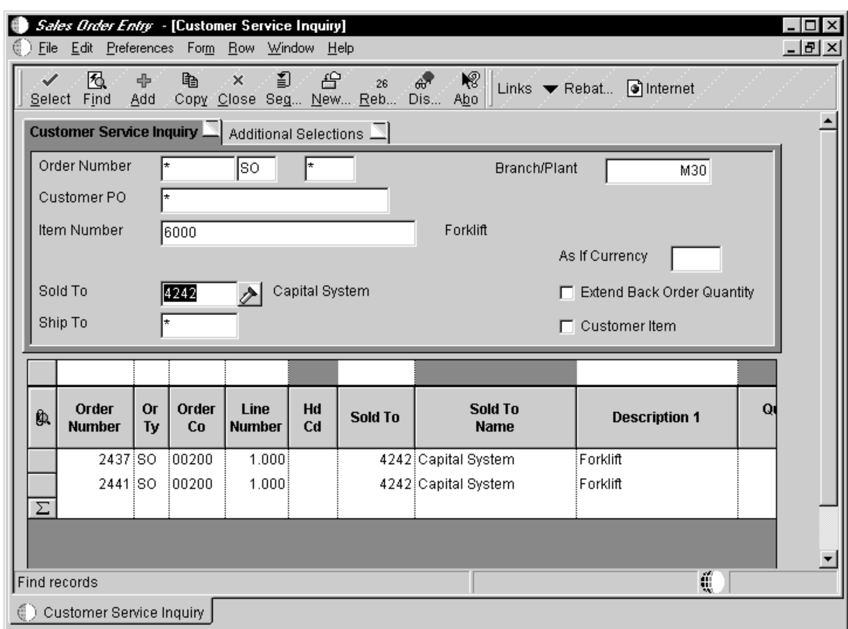
You can use Detailed Availability to review the status of configured items in a specific location. Review information such as on-hand quantity of a configured item and related commitments against that quantity.



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



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

See Also

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

Working with Shipments

The Sales Configurator system supports shipments of configured items. However, the system does not allow you to backorder a configured item.

Use the Confirm Shipments 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
- Review the Freight/Additional Charges Revisions program

See Also

- *Working With Shipments* 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.

See Also

- *Printing Standard Invoices* in the *Sales Order Management Guide*

Glossary

Glossary

actual demand. Actual customer orders and allocations of items/ingredients/raw materials to production or distribution.

aggregate leadtime. See cumulative leadtime.

aggregate planning. The sum of all forecasted demand (customer, distribution, manufacturing) for all items in a family for purposes of planning gross requirements.

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

alternate routing. A routing, less preferred than the primary routing, that results in an item identical to that produced by the primary routing.

application. A computer program or set of programs used to accomplish a task. In OneWorld, there are interactive applications and batch applications. Interactive applications are made up of a set of forms through which the user interacts with OneWorld. Interactive application identifiers begin with "P." For example, Address Book Revisions (P01012) is an interactive application. Batch applications run without user interaction. Reports and table conversions are examples of batch applications. Batch application identifiers begin with "R." For example, the Print Mailing Labels report (R01401) is a batch application.

assemble-to-order product. A product for which key components (bulk, semi-finished, intermediate, subassembly, fabricated, purchased, packaging, and so on) are planned and stocked in anticipation of a customer order. Contrast with make-to-order product.

assembly. A group of items or subassemblies that, when put together, constitute an end item.

assembly inclusion rule. A logic statement that specifies the conditions for using a part, adjusting the price or cost, performing a calculation, or using a routing operation for configured items.

associated service type. See linked service type.

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 refers to an account in the chart of accounts. AAIs define rules for programs that automatically generate journal entries, including interfaces between the Accounts Payable, Accounts Receivable, Financial Reporting, and General Accounting systems. Each system that interfaces with the General Accounting system has AAIs. For example, AAIs can direct the General Ledger Post program to post a debit to a specific expense account and a credit to a specific accounts payable account.

availability. For packaged product, the system checks availability. For bulk product, you can assume it is in stock and available for sale.

backflush. To deduct from inventory records the components or ingredients as a result of the production process. See also super backflush.

batch bill of material. A recipe or formula in which the quantity of each component is based on the standard batch quantity of the parent.

batch control. A feature that verifies the number of transactions and the total amount in each batch that you enter into the system.

batch input. A group of transactions loaded from an external source.

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

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

batch quantity. See standard batch quantity.

batch type. A code assigned to a batch job that designates to which system the associated transactions pertain, thus controlling which records are selected for processing. For example, the Post General Journal program selects for posting only unposted transaction batches with a batch type of O.

bill of material (BOM). A listing of all the subassemblies and raw materials that make up a parent assembly. The BOM is used with the master production schedule to determine the items for which purchase requisitions and production orders must be released. Display formats for bills of material include single level, multi-level, indented, planning, and costed.

broadcast message. 1) An e-mail message that you send to multiple recipients. 2) A message that appears on a form instead of in your mailbox.

bucketed system. A material requirements planning, distribution requirements planning, or other time-phased system in which all time-phased data is accumulated into time periods, or buckets. If the period of accumulation is one week, then the system is said to have weekly buckets.

bucketless system. A material requirements planning, distribution requirements planning, or other time-phased system in which all time-phased data is processed, stored, and displayed using dated records rather than defined time periods, or buckets.

bulk issue. Items issued from stores to work-in-process inventory, based on quantities estimated to cover requirements of individual work centers and production lines instead of individual job orders. A bulk issue can be used to cover a period of time or to fill a fixed-size container.

business unit. See facility.

by-product. A material of positive or negative value produced as a residual of or incidental to the production process. The ratio of by-product to primary product is usually predictable. By-products might be discarded, sold as is, or used for other purposes. See also co-product and restricted by-product.

capacity requirements planning (CRP). The function of establishing, measuring, and adjusting limits or levels of capacity by 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 Material Requirements Planning system are inputs to CRP, which “translates” these orders into hours of work by work center and by time period.

category code. A type of user defined code for which you can provide the title. For example, if you were adding a code that designated 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. Sometimes referred to as reporting codes. See also user defined code.

certificate of analysis (COA). A document that includes all of the tests performed and resulting test data for an item lot.

chart of accounts. The structure for general ledger accounts. The chart of accounts lists types of accounts, describes each account, and includes account numbers and posting edit codes.

committed material. Material on hand or on order that is assigned to specific future production or customer orders. Sometimes referred to as reserved material.

component. A raw material, ingredient, or subassembly that is used as an element of another assembly, process, or item. A component might be packaging material for a finished item.

component changeout. See component swap.

component swap. In Equipment/Plant Management, the substitution of an operable component for one that requires maintenance. Typically, you swap components to minimize equipment downtime while servicing one of the components.

composite leadtime. See cumulative leadtime.

configuration management. A rules-based method of ordering assemble-to-order or make-to-order products, in which characteristics of the product are defined as part of the Sales Order Entry process. Characteristics are edited using Boolean logic and then translated into the components and routing steps required to produce the product. The resulting configuration is also priced and costed, based on the characteristics defined.

configured item segment. A characteristic of a configured item defined during sales order entry. For example, a customer may specify a type of computer hard drive by stating the number of megabytes of the hard drive, rather than a part number.

constants. Parameters or codes that you set and that the system uses to standardize the processing of information by associated programs.

consuming location. The point on the production line where a component or subassembly is used in the production process. Consuming location is used in kanban processing.

corrective maintenance. Any maintenance work that falls outside the scope of preventive or predictive maintenance. Corrective maintenance can be planned, unplanned, or emergency, for example, to respond to equipment failure. Contrast with preventive maintenance and predictive maintenance.

corrective work order. A work order that is used to formally request corrective maintenance, and to communicate all details pertaining to the corrective maintenance task.

cost component. An element of an item's cost, for example, material, labor, or overhead.

cost rollup. A simulated scenario in which work center rates, material costs, and labor costs are used to determine the total cost of an item.

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

co-product. An end item produced as the result of a process. There are usually two or more co-products. See also end item and by-product.

crew size. The number of people required to perform an operation.

critical path leadtime. See cumulative leadtime.

cross segment edit. A logic statement that establishes the relationship between configured item segments. Cross segment edits are used to prevent ordering of configurations that cannot be produced.

cumulative leadtime. The longest planned length of time needed to accomplish the activity in question. For any item planned through material requirements planning, cumulative leadtime is determined by reviewing the leadtime for each bill of material path below the item. The path with the longest leadtime defines the cumulative leadtime. Sometimes referred to as critical path leadtime, aggregate leadtime, or composite leadtime.

current cost. The cost associated with an item at the time a parts list and routing are attached to a work order or rate schedule. Current cost is based on the latest bill of material and routing for the item.

data dictionary. A database table that OneWorld uses to manage the definitions, structures, and guidelines for the usage of fields, messages, and help text. J.D. Edwards has an active data dictionary, which means that it is accessed at runtime.

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

date pattern. A period of time set for each period in standard and 52-period accounting.

default. A code, number, or parameter that the system supplies when the user does not specify one.

detail. The specific information that makes up a record or transaction. Contrast with summary.

detail area. An area of a form that displays detailed information associated with the records or data items displayed on the form. See also grid.

direct labor. Labor that is applied to the product being manufactured.

direct material. Measurable quantities of material that becomes a part of the final product.

dispatch list. A list of sequenced work orders or rate schedules that contain detailed information on location, quantity, and capacity requirements. Dispatch lists are usually generated daily and are oriented by work center or line.

effectivity date. The date on which a component or an operation is to be added or removed from a bill of material or an assembly process. Effectivity dates are used in the planning process to create demands for the correct items. Normally, bills of material and routings provide for an effectivity start date (from) and stop date (through), signifying the beginning and end of a particular relationship. Sometimes referred to as effective date.

electronic commerce. See Electronic Data Interchange.

Electronic Data Interchange (EDI). The paperless, computer-to-computer exchange of business transactions, such as purchase orders and invoices, in a standard format with standard content.

engineering change order (ECO). A work order used to implement and track a change in a manufactured product. This includes changes in design, quantity of items required, and assembly or production process.

enterprise resource planning (ERP). A closed-loop, integrated system that enables manufacturers and distributors to coordinate all of the activities necessary to fulfill customer demand. This includes activities associated with suppliers, customers, inventory, shop floor, product costing and accounting, forecasting, and planning and scheduling.

Enterprise Workflow Management. A OneWorld system that provides a way of automating tasks, such as notifying a manager that a requisition is waiting for approval, using an e-mail-based process flow across a network.

expedite. To process production or purchase orders in less than the normal leadtime.

explosion. The process of calculating the demand for the components of a parent item by multiplying the parent item requirements by the quantity per specified in the bill of material. Sometimes referred to as requirements explosion. Contrast with implosion.

exponential smoothing. A forecasting technique in which past observations are geometrically discounted according to their age. The heaviest weight is assigned to the most recent data. The smoothing is termed exponential because data points are weighted in accordance with an exponential function of their age.

facility. An entity within a business for which you want to track costs. For example, a facility might be a warehouse location, job, project, work center, or branch/plant. Sometimes referred to as a business unit.

family. See master planning family.

feature. A characteristic of a product or service, such as an option, accessory, or attachment.

field. 1) An area on a form that represents a particular type of information, such as name, document type, or amount. 2) A defined area within a record that contains a specific piece of information. For example, a supplier record consists of the fields Supplier Name, Address, and Telephone Number.

file. A set of information stored under one name. See also table.

finished good. See end item.

firm planned order (FPO). A work order that has reached a user defined status. When this status is entered in the processing options for the various manufacturing programs, messages for those orders are not exploded to the components.

first in, first out (FIFO). A method of inventory valuation for accounting purposes, based on the assumption that oldest inventory (first in) is the first to be used (first out). There is no relationship with the actual physical movement of specific items.

fixed cost. An expense that does not vary with the production volume, for example, setup cost.

fixed order quantity. A lot-sizing technique in MRP or inventory management whereby the system generates planned or actual orders for a predetermined quantity. If the net requirements for a period exceed the fixed order quantity, the system generates orders for multiples of the fixed order quantity.

fixed overhead. Manufacturing costs 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.

fixed quantity. A value that indicates that the amount of a component or ingredient used in the manufacturing process of an end item remains the same, regardless of the quantity of the end item produced. Contrast with variable quantity.

forecast. An estimate of future demand, determined by mathematical means using historical data, subjective estimates from informal sources, or a combination of both.

forecast consumption. The reduction of forecast demand, based on actual sales orders received or shipped, up to the forecast quantity.

form. The element of the OneWorld graphical user interface by which the user exchanges data with interactive applications. Forms are made up of controls, such as fields, options, and the grid. These controls allow the user to retrieve information, add and revise information, and navigate through an application to accomplish a task.

frozen cost. The cost of an item, operation, or process, after the frozen update program is run, that is used by the Manufacturing Accounting system.

frozen update program. A program that freezes the current simulated costs, thereby finalizing them for use by the Manufacturing Accounting system.

Gantt chart. A control chart that shows graphically the relationship between planned performance and actual performance.

grade. A rating assigned to an item, based on how well the item meets required specifications.

grid. A control that displays detail information on a form. The grid is arranged into rows, which generally represent records of data, and columns, which generally represent fields of the record. See also detail area.

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

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

indented where-used. A bill of material listing for one component, every parent item and subassembly, and the respective quantities required. Each of these parent items calls for the given component item in a bill of material table. The component item is shown closest to the left margin of the listing in the bill, with each parent indented to the right, and each of their respective parents indented even further to the right.

ingredient. In process manufacturing industries, the raw material or component of a recipe or formula.

integrity test. A process used to supplement a company's internal balancing procedures by locating and reporting balancing problems and data inconsistencies.

interactive processing. Processing actions that occur in response to commands that you enter directly into the system. During interactive processing, you are in direct communication with the system, and it might prompt you for additional information while processing your request. Contrast with batch processing.

intermediate. Material processed beyond raw material and used in higher level items. Intermediates are not stocked in inventory, sold to customers, or planned by material requirements planning.

in-process inventory. See work-in-process (WIP).

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

job queue. A group of jobs waiting to be batch processed. See also batch processing.

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

kanban. Information cards attached to a group or bin of items that travel in and out of a work center. Kanbans indicate to producing work centers what has been consumed and what needs to produced next. Some companies use various shapes, sizes, and colors of cards for ease of recognition and to indicate an item's priority. OneWorld uses electronic kanbans.

labor cost. The monetary amount of labor performed during manufacturing.

ledger type. A code that designates a ledger used by the system for a particular purpose. For example, all transactions are recorded in the AA (actual amounts) ledger type in their domestic currency. The same transactions may also be stored in the CA (foreign currency) ledger type.

level. The code used for every item or assembly in a product structure to signify the relative level in which that item or assembly is used within the product structure. Normally, the end items are assigned to level 0 with the components and subassemblies of the item assigned to level 1 and so forth. The material requirements planning explosion process starts from level 0 and proceeds downward, one level at a time.

linked service type. A service type that is associated with a primary service type. Linked service types are cancelled and the maintenance tasks are performed when the primary service type to which they are linked comes due. You can specify whether the system generates work orders for linked service types, as well as the status the system assigns to work orders that have already been generated. Sometimes referred to as associated service types. See also primary service type and service type.

lot. A quantity produced together that shares the same production components. Lots are uniquely identified to allow for traceability.

lot number control. Assignment of unique numbers to each instance of receipt. This number carries forth into subsequent manufacturing processes. Thus, in review of an end item lot, each lot consumed can be identified as having been used for the manufacture of the specific end item lot.

maintenance loop. See maintenance route.

maintenance route. A method of performing PMs for multiple pieces of equipment from a single preventive maintenance work order. A maintenance route includes pieces of equipment that share one or more identical maintenance tasks that can be performed at the same time for each piece of equipment. Sometimes referred to as maintenance loop.

maintenance work order. In J.D. Edwards systems, a term used to distinguish work orders created for the performance of equipment and plant maintenance from other work orders, such as manufacturing work orders, utility work orders, and engineering change orders.

make-to-order product. A product that is produced after receipt of a customer's order. The final product is usually a combination of standard purchased items and items specially designed to meet the needs of the customer. Frequently, long leadtime components are planned prior to the order arriving to reduce the delivery time to the customer. Contrast with assemble-to-order product. See also make-to-stock product.

manufacturing and distribution planning. Planning that includes Resource and Capacity Planning and Material Planning Operations. Resource and Capacity Planning allows you to prepare a feasible production schedule that reflects your demand forecasts and production capability. Material Planning Operations provides a short-range plan to cover material requirements that are needed to make a product.

manufacturing calendar. See work day calendar.

master planning family. Products that are grouped together for material planning purposes, based on shared characteristics.

Master Production Scheduling (MPS). The act of creating a master schedule. See also master schedule.

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

master table. A database table used to store data and information that is permanent and necessary to the system's operation. Master tables might contain data, such as paid tax amounts, supplier names, addresses, employee information, and job information.

material requirements planning (MRP). A set of techniques that uses bill of material, inventory data, and the master schedule to calculate the time-phased net material requirements for every component item and subassembly. MRP suggests a replenishment plan to support the production of the quantities that are specified in the master schedule. See also master schedule.

menu masking. A security feature that lets you prevent individual users from accessing specified menus or menu selections.

model work order. In Equipment/Plant Management, a work order that functions as a template for the creation of other work orders. You can assign model work orders to service types. When the service type comes due, the system automatically generates a work order based on information from the model work order.

net added cost. The cost to manufacture an item at the current level in the bill of material. Thus, for manufactured parts, the net added cost includes labor, outside operations, and cost extras applicable to this level in the bill of material, but not materials (lower-level items). For purchased parts, the net added cost also includes the cost of materials.

next numbers. A feature used to control the automatic numbering of items such as new G/L accounts, vouchers, and addresses. Next numbers provides a method of incrementing numbers.

nonconforming product. Items that do not meet the requirements of a relevant specification, contract, regulation, or quality test.

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

operation sequence. The sequential steps that an item follows in its flow through the plant. For instance, operation 10: cut bar stock; operation 20: grind bar stock; operation 30: shape; operation 40:

polish; operation 50: inspect and send to stock. This information is maintained in the routing table.

operation yield. The planned percent of output at an operation. For example, if the operation yield is 90% and 100 units are started at that operation, planned output is 90 units that will be available to the next operation.

output queue. See print queue.

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

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.

parent item. See end item.

parent/child relationship. See parent/component relationship.

parent/component relationship. 1) In Equipment/Plant Management, the hierarchical relationship of a parent piece of equipment to its components. For example, a manufacturing line could be a parent and the machinery on the line could be components of the line. In addition, each piece of machinery could be a parent of still more components. 2) In Product Data Management, a hierarchical relationship of the components and subassemblies of a parent item to that parent item. For example, an automobile is a parent item and its components and subassemblies include: engine, frame, seats, and windows. Sometimes referred to as parent/child relationship.

pay on consumption. The method of incurring a liability for items received from a supplier only when the material is used in the production process.

phantom bill of material. A bill of material used primarily for non-stocked items that represents an item that is physically built, but rarely stocked. The item is instead used in the next step or level of manufacturing. Material requirements planning uses the phantom bill of material to explode the requirements through the phantom item to its components. See also explosion.

planning bill of material. An artificial grouping of items or events in bill of material format, used to facilitate master scheduling of material planning, and forecasting. Sometimes referred to as pseudo bill of material.

planning calendar. See work day calendar.

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

PM. Maintenance tasks and procedures that are routine and repetitive, such as periodic lubrications and filter replacements. Preventive maintenance procedures are designed to eliminate breakdowns and the need for corrective maintenance. Contrast with corrective maintenance and predictive maintenance.

potency. Identifies the percent of a process item in solution. For example, 80% solution could be used in a process that called for 100%, but would require 25% more in terms of quantity to meet the requirement (100 / 80 = 1.25).

predictive maintenance. A maintenance strategy that uses computerized data collection and analysis of equipment operating parameters to predict the point at which equipment is expected to fail and then schedules the appropriate procedures just before the expected equipment failure. Predictive maintenance can significantly reduce costs and equipment downtime by eliminating unnecessary preventive maintenance procedures. In addition, by predicting and averting catastrophic equipment failure, predictive maintenance reduces overall maintenance costs and allows for equipment to be operated for its full service life. Contrast with corrective maintenance and preventive maintenance.

preference profile. The ability to define default values for specified fields for a user defined hierarchy of items, item groups, customers, and customer groups.

preflush. To deduct materials from inventory when the parts list and routing are attached.

preventive maintenance (PM). One or more service types that are due to be performed for a piece of equipment, based on the service intervals for each service type. When you complete a preventive maintenance, a new preventive maintenance cycle begins for the service types included in the preventive maintenance.

preventive maintenance cycle. The sequence of events that make up a preventive maintenance task, from its definition to its completion. Because most preventive maintenance tasks are commonly performed at scheduled intervals, parts of the preventive maintenance cycle repeat, based on those intervals.

preventive maintenance schedule. The combination of service types that apply to a specific piece of equipment, as well as the intervals at which each service type is scheduled to be performed.

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

primary service type. A service type to which you can link related service types. For example, for a particular piece of equipment, you might set up a primary service type for a 1000-hour inspection and a linked service type for a 500-hour inspection. The 1000-hour inspection includes all tasks performed at 500 hours. When a primary service type is scheduled to be performed, the system schedules the linked service type. See also linked service type.

print queue. A list of tables, such as reports, that you have submitted to be written to an output device, such as a printer. The computer spools the tables until it writes them. After the computer writes the table, the system removes the table identifier from the print queue.

priority. 1) The relative importance of jobs in a queue. 2) The sequence in which jobs should be completed.

processing option. A feature that allows you to direct the functions of a program. For example, processing options allow you to specify defaults for certain forms, control the format in which information prints on reports, and change how information appears on a form or in a report.

Product Data Management (PDM). In J.D. Edwards software, the system that enables a business to organize and maintain information about each item it manufactures. Features of this system, such as bills of material, work centers, and routings, define the relationships among components and how they can be combined to manufacture an item. PDM also provides data for other manufacturing systems including Manufacturing Accounting, Shop Floor Management, and Manufacturing and Distribution Planning.

product family. See master planning family.

product line. A group of products whose similarity in manufacturing procedures, marketing characteristics, or specifications allow them to be aggregated for planning, marketing, and occasionally, costing. See also master planning family.

production line. A series of work centers or machines allocated to the production of a limited number of items with similar routings.

projected cost. The target expenditure in added value for material, labor, and so forth during manufacture. See also standard cost.

pseudo bill of material. See planning bill of material.

purchased part. An item bought from a supplier.

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

queue. The jobs waiting to be processed at a given work center. As queues increase, so do average queue time and work-in-process inventory.

recipe. See bill of material.

record. A collection of related, consecutive fields of data that the system treats as a single unit of information.

repetitive manufacturing. Producing items in high-volume concentration, often with entire production lines dedicated to a family of products.

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

replenishment point. The location on or near the production line where additional components or subassemblies are to be delivered.

requirements explosion. See explosion.

reserved material. See committed material.

resource requirements planning (RRP). The process of converting the production plan into capacity needs for key resources, such as workforce, machinery, warehouse space, suppliers' capabilities, and in some cases, money. Comparison of capacity required of items in the master schedule to available capacity is usually done for each key resource.

restricted by-product. A restricted secondary or incidental product produced while making another product. Such by-products cannot be sold because they are restricted from sale by government policies. The company might have to forego making a product if a restricted by-product is produced.

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

rollup. See cost rollup.

rough cut capacity planning (RCCP). The process of converting the master schedule into capacity needs for key resources, such as workforce, machinery, warehouse space, suppliers' capabilities, and in some cases, money. Comparison of capacity required of items in the master schedule to available capacity is usually done for each key resource.

run size. See standard batch quantity.

safety stock. 1) A quantity of stock planned to be on hand to protect against fluctuations in demand or supply. 2) In Master Production Scheduling, the additional inventory or capacity planned as protection against forecast errors or short-term changes in the backlog. Overplanning can be used to create safety stock.

scheduling workbench. A multiple-function program that allows the sequencing of work orders, rate schedules, or both on a production line. Sequencing can be manual or automatic, based on user defined category code definition. Sequencing includes forward, finite scheduling, including the option to cross shifts or days.

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

scrap rate. See scrap factor.

sequencing. Determining the order in which a facility processes different jobs.

serial number. A unique number assigned to identify a specific item with a lot size of one.

service interval. The frequency at which a service type is to be performed. Service intervals can be based on dates, periods, or statistical units that are user defined. Examples of statistical units are hours, miles, and fuel consumption.

service type. An individual preventive maintenance task or procedure, such as an inspection, lubrication, or overhaul. Service types can apply to a specific piece of equipment or to a class of equipment. You can specify that service types come due based on a predetermined service interval, or whenever the task represented by the service type becomes necessary.

setup cost. The labor costs associated with setting up an operation for the next product.

shop calendar. See work day calendar.

Shop Floor Management. A system that uses data from Product Data Management, Master Production Scheduling, and Material Requirements Planning to create, maintain, and communicate status on shop orders (work orders).

shrink factor. A percentage factor in the item master record that compensates for expected loss during the manufacturing cycle either by increasing the gross requirements or by reducing the expected completion quantity of planned and open orders. The shrink factor differs from the scrap factor in that the former affects all uses of the part and its components and the scrap factor relates to a single component. Sometimes referred to as shrinkage rate.

shrinkage rate. See shrink factor.

significant item numbers. Item numbers that are intended to convey certain information, such as the source of the part, the material in the part, the shape of the part, and so forth. Contrast with nonsignificant item numbers.

simulated cost. After a cost rollup, the cost of an item, operation, or process according to the current cost scenario. This cost can be finalized by running the frozen update program. You can create simulated costs for a number of cost methods, for example, standard, future, and simulated current costs. See also cost rollup.

single level where-used list. A type of bill of material that lists each parent in which a specific component is directly used and in what quantity it is used.

specification. A statement of the technical requirements of an application or item and the process involved to ensure the requirements are met.

spool. The function by which the system stores generated output to await processing.

standard cost. The expected, or target cost of an item, operation, or process. Standard costs represent only one cost method in the Product Costing system. You can also calculate, for example, future costs or current costs. However, the Manufacturing Accounting system uses only standard frozen costs.

standard costing. A costing method that uses cost units determined before production. For management control purposes, the system compares standard costs to actual costs and computes variances.

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

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

substitution. To use alternate components in production when primary items are not available.

summary. The presentation of data or information in a cumulative or totaled manner in which most of the details have been removed. Many systems offer forms and reports that summarize information stored in certain tables. Contrast with detail.

super backflush. To create backflush transactions against a work order at pay points defined in the routing. By doing so, you can relieve inventory at strategic points throughout the manufacturing process. See also backflush.

supplier scheduling. A process of providing suppliers with consistent shipping information and advanced demand profiles to support just-in-time production and delivery. The supplier scheduling system includes a business agreement and delivery schedule for each supplier. Supplier scheduling includes a formal priority planning system and EDI functionality to provide the supplier with valid due dates.

supply chain. The link from the initial raw materials to the consumption of the finished product.

supplying location. The location from which inventory is transferred once quantities of the item on the production line have been depleted. Used in kanban processing.

system. A group of related applications identified by a name and a system code. For example, the Address Book system code is 01. All applications, tables, and menus within a system can be identified by the system code.

system code. A code that identifies a system, for example, 01 for the Address Book system and 31 for the Shop Floor Management system.

table. In database environments, a two-dimensional entity made up of rows and columns. All physical data in a database are stored in tables. See also file.

threshold percentage. In Equipment/Plant Management, the percentage of a service interval that you define as the trigger for maintenance to be scheduled. For example, you might set up a service type to be scheduled every 100 hours with a threshold percentage of 90 percent. When the equipment accumulates 90 hours, the system schedules the maintenance.

traceability. The ability to trace the production history of a product for quality or warranty purposes. This is usually done through the use of lot or serial numbers to link raw materials from the supplier to the end product. Lot/serial number traceability can be a government requirement in certain regulated industries, such as the pharmaceutical or automotive industries. See also lot.

unit cost.The total cost of labor, material, and overhead for one unit of production.

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

user defined code (UDC). A code that users can define, assign code descriptions, and assign valid values. Examples of such codes are unit-of-measure codes, state names, and employee type codes.

user defined code type. The identifier for a table of codes with a meaning that you define for the system, such as ST for the Search Type codes table in Address Book. OneWorld provides a number of these tables and allows you to create and define tables of your own.

value added. Amount of increased worth of inventory through manufacturing, processing, or packaging.

variable quantity. A value that indicates the amount of a component or ingredient that varies based on the quantity of the end product produced. Contrast with fixed quantity.

variance. 1) In Product Costing and Manufacturing Accounting, the difference between two methods of costing the same item. For example, the difference between the frozen standard cost and the current cost is an engineering variance. Frozen standard costs come from the Cost Components table, and the current costs are calculated using the current bill of material, routing, and overhead rates. 2) In Equipment/Plant Management, the difference between revenue generated by a piece of equipment and costs incurred by the equipment.

vocabulary overrides. A feature that you can use to override field, row, or column title text on forms and reports.

work day calendar. A calendar, used in planning functions, that consecutively lists only working days so that component and work order scheduling can be done based on the actual number of work days available. Sometimes referred to as planning calendar, manufacturing calendar, or shop floor calendar.

work order life cycle. In Equipment/Plant Management, the sequence of events through which a work order must pass to accurately communicate the progress of the maintenance tasks it represents.

work-in-process (WIP). One or more 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. Sometimes referred to as in-process inventory.

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