

PeopleSoft®

EnterpriseOne JDE5
Sales Configurator
PeopleBook

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Sales Configurator PeopleBook
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Overviews

Industry Overview

Industry Environment and Concepts for Sales Configurator

Customers today require manufacturers to build complex product configurations that follow their detailed specifications. Manufacturers build a basic product to customer specifications and might even provide some level of customization.

Configured items are products that customers specify and that are not made-to-stock items that can be bought ready-made. Because customers specify configured products, features and options are associated with the final product. Thus, infinite combinations of the end item can exist.

In addition, customers want improved service, including detailed, real-time information at order entry, and shorter lead times from order to delivery of the product.

Manufacturers need to respond to the pressure and opportunities presented by the configuration and customization needs of their customers. Currently, manufacturers struggle with manual paperwork, slow response times, lack of systems integration, and product volume versus complexity. Manufacturers need the agility to provide specialized (configured) products at a competitive price.

To be agile, manufacturers require assistance inputting customer specifications that create a valid configuration of an end product. A manufacturer then needs to communicate the customers' requirements to the rest of its organization. A company's sales, manufacturing, and service organizations need a fast, accurate, and flexible system on which they can rely.

Methods Used Today

Typically, manufacturers use three different approaches to handle complex product configurations. The first approach is to create unique end-part numbers. This approach creates a part number for every combination of features and options that build a viable end-item product. This method can be cumbersome and not conducive to change because the number of parts can become too large to effectively manage.

The second approach is to create generic end-part numbers with extended manual descriptions. Embedded in the text is critical information about the features and options that are included in a final product. All inventory records in the system appear as the same product because it bears the same part number even though the features and options might be different for each end item. This technique leaves a poor audit trail for parts, priority and capacity planning are limited, and costs are distorted. These results occur because the (software) system has no way to retrieve and use the embedded text information.

The third approach is to use a configurator, a tool developed to handle complex products.

Definition of a Configurator

The configurator is a tool that automates the selection and configuration of highly complex products. Highly complex products have related features and options. A relationship results when an association or correlation between the features and options or associated parts exists within its subassemblies. A configurator allows a manufacturer to configure its existing product to the detailed and specific requests of its customers. It guides users to create a

customized end-item product through product definition (features and options), rules, and calculations. The result is a valid, highly-configured product.

The configurator formerly was called a *product configurator* because it configured an end-item product to customer specifications. Although the configurator performs the same function, the new term for a configurator is *sales configurator* because configurators are quickly becoming a vital part of automating the sales process.

Configurators assist sales order entry people during the sales process. The information gathered and generated during sales order entry is then communicated to the organization to support manufacturing and distribution processes.

Using a Configurator in Your Business

You need to understand your business environment to determine whether configurators are suitable for it. Configurators are suited to to-order manufacturing environments. The basic to-order environments are:

- **Pick-To-Order:** The pick-to-order environment is the selection of kits (parts lists of components). The pick-to-order environment can use kit processing or a configurator. The tool that you use depends on the product specifications. In general, kit processing can process features and options. Usually, no relationship exists between the kits or the parts in each individual kit. All combinations of kits and parts are allowed. Thus, the kit processing technique can be used for validation. Kit processing might not be appropriate for complex specifications or conditional part requirements.

An example of a pick-to-order environment is the computer industry. When a customer chooses a monitor, printer, and other items, you can select kits to include the appropriate cable, user guides, packaging materials, and so on that are required to ship with the customer's product.

- **Assemble-To-Order:** Assemble-to-order manufacturing is a manufacturing environment in which the customer is met after the features and options have been fabricated, but before final assembly of the product. Thus, the raw material and components are built up to some subassembly level called features and options. After the customer has communicated specifications, the subassemblies are built into the final end-product.

An example of an assemble-to-order environment is the touch-free car wash machine. Although there are relationships between the features and options, the individual features, options, and frame can be sub-assembled. After the customer's specifications are identified, the feature and option subassemblies can be mounted to the frame to build the final complete machine.

- **Make-To-Order:** In make-to-order manufacturing, the customer communicates specifications before production begins at any level in the product structure. No subassemblies exist in this manufacturing method, only raw material and components. Production begins after the customer identifies specifications.

Examples of this production method are building products (lumber), windows, and doors. These are make-to-order products because the customer must specify the length, width, thickness, finish, style, and other attributes of these products before any production can begin.

- **Engineer-To-Order:** Engineer-to-order starts at the raw material and component level, and builds to the end-item. No features and options exist at all in an engineer-to-order environment. Usually, engineer-to-order products are so specialized and for such a specific use that only one end-item is ever built. However, the use of the processes to build the product and some common components might be prevalent.

Examples of engineer-to-order end-item products are space shuttles, satellites, custom homes, and architectural projects, such as buildings and bridges. These products are usually built to special specifications only once.

A configurator is best suited for assemble-to-order and make-to-order manufacturing environments. Kit processing is usually better suited to pick-to-order environments, if no relationships exist between kits or components within kits. An engineer-to-order environment produces one-of-a-kind items that may never be built again. Thus, investing in a configurator and the associated setup would not be cost effective in that environment.

Understanding Your Product

You need to understand your product and manufacturing processes. To assist you in better understanding your product and manufacturing processes, perform extensive data gathering and product analysis.

To understand your manufactured product, gather and review sales and marketing materials. Determine the way in which the sales and marketing team understands the features, options, final product, and relationships of your product. What is presented to the customer?

Review engineering drawings and bills of material. Also, review manufacturing routings for manufactured items and assemblies (features, options, final product). Determine how your engineering and manufacturing teams view the product. How is the product defined and manufactured?

Conduct interviews with people from sales and marketing, sales order entry, manufacturing, assembly, and engineering to better define and understand the features, options, final assembled product, and the relationships between these components. Determine whether everyone has the same understanding of the product, and if not, clarify discrepancies.

Assessing the Need for a Configurator

After you determine your business manufacturing environment and gain an understanding of your product's features, options, final assembled product, and, most importantly, the relationships that exist between them, you can determine whether you need a configurator.

For a product that is manufactured in a to-order environment and that has no relationship between the features and options or the associated parts within those subassemblies, kit processing might be the best tool. However, a configurator is not a cost-effective tool for complex, one-of-a-kind end items that you manufacture in an engineer-to-order environment.

A basic decision point in determining the need for a configurator is that the final manufactured product is complex and is based on customer specifications. Also, a relationship exists between features and options, and some might not be compatible with others. Manufacturing routings and product pricing also change based on the final end-item configured product.

If the relationships between features and options need to be defined to prevent invalid product configurations in your to-order manufacturing environment, then a configurator might be a good tool for your company.

Benefits of a Configurator

Although a sales configurator requires an intensive, detailed, front-end setup, it provides benefits by allowing you to perform the following:

- Specify features and options
- Establish relationship(s) between features and options

- Generate a configured parts list
- Create a configured routing
- Establish a configured price
- Reduce order lead time
- Improve customer service
- Create fewer end part numbers
- Produce a configuration audit trail

When selling complex, highly-configurable manufactured products, the presentation and quoting assistance that a configurator provides can be a powerful sales tool. Sales order entry clerks do not need to know the product intimately to enter a sales order. The configurator leads the clerks through the configuration and provides error messages so that the customer can order a valid configured product. Clerks also can communicate real-time information, such as price and weight, to customers.

After an order is complete and the customer accepts it, the sales order communicates appropriate and correct information to the manufacturing and distribution departments. An integrated system facilitates a correct product build in a timely manner.

Although a configurator requires detailed setup, as well as timely and careful maintenance for product changes, it is a powerful tool for which the benefits cannot be overlooked. A sales configurator communicates accurate customer specifications and product requirements throughout the entire organization.

Idea to Action: The Competitive Advantage

The following list contains examples of typical problems with the configuration process, the Idea to Action that will resolve each problem, and the return on investment.

We cannot change fast enough to respond to the customization and multiconfiguration needs of our customers.	Use the Sales Configurator system to configure manufactured and assembled end-item products. The Sales Configurator system features seamless integration with the Inventory Management system, Sales Order Management system, and the Manufacturing and Distribution modules. The Sales Configurator system allows you to create configured bills of material, routings, pricing, and other important business information. It improves customer service levels by providing real-time, configured, product specifications and information at sales order entry. Seamless integration from the front office to the back office improves communication with other departments within the company, which, in turn, improves product quality by reducing errors.
High Tech/Electronics Industry - We cannot change fast enough to respond to the customization and multiconfiguration needs of our customers.	Use the Sales Configurator system to configure manufactured and assembled end-item products. The Sales Configurator system features seamless integration with the Inventory Management system, Sales Order Management system, and the Manufacturing and Distribution modules. As design-to-market speed becomes increasingly important, the rules-based Sales Configurator system becomes a staple in the electronics industry. For example, Gateway stocks assemblies but does not configure a computer until a customer orders it.
The Industrial Commercial Equipment (ICE) usually incorporates complex assemblies and mechanisms and sophisticated control systems. They are usually highly-engineered and highly-customized with many modifications.	Use the Sales Configurator system to configure manufactured and assembled end-item products. The Sales Configurator system features seamless integration with the Inventory Management system, Sales Order Management system, and the Manufacturing and Distribution modules. The Sales Configurator system provides the ability to expand customers' choices while reducing order lead times. The rules-based Sales Configurator system decreases engineering involvement in the front end. Status codes can be integrated with the Sales Order Management system to allow changes to be made up to a specified point in the manufacturing process.
We have so many relationships between our product features and options that our sales order entry personnel are not always able to order them properly. We find many problems when we build the products on the manufacturing floor.	Use the Sales Configurator system to solve this problem. You can define the features and options, as well as the relationship and limitations between those features and options. Sales order entry personnel do not need in-depth product knowledge. The Sales Configurator system communicates the validity of a customer's choice of features and options through error messages and other visual cues. When order entry is complete, you have a configured bill of material and routing to use in manufacturing the product.

High Tech/Electronics Industry - Our product pricing structure for configured items is so complex that we are unable to give our customers real-time pricing at order entry.

Use the Advanced Pricing system in conjunction with the Sales Configurator system to create accurate and timely pricing at sales order entry. Because configurations are determined at the time of order, electronics industry companies use advanced pricing to provide customers with automatic price quotes at the time of ordering.

IFA - We can build our product to a certain point and then stock it. We can then customize the stocked item to customer specifications at the last operation. How can we communicate this information to manufacturing?

Use the Store and Forward feature in the Sales Configurator system to communicate customer requirements when it fits your process. The IFA industry is moving towards a to-order/postponement environment whereby standard configurations are built and inventoried, and then customized at the last possible point in the manufacturing process. Store and Forward, used with the Sales Configurator system, allows sales representatives to work with the client on-site and transfer the data at a later time.

We have special calculations that we need to run when we create a new order.

Use the Advanced Assembly Inclusion Rule features in the Sales Configurator system to enable your order entry. You can use segment referencing, algebraic formulas, trigonometric and logarithmic functions, substrings, concatenations, external field references, external business function references, configured tables, and smart parts. You can perform calculations during product configuration validation. Thus, calculated values are available for use by sales order entry personnel and the customer.

When we create sales orders, all the detail information is included. In most cases, the customer does not need the information on the sales order. We want to print only the pertinent lines on the customer sales order.

Use the Assembly Inclusion Rule feature in the Sales Configurator system to customize the sales order. Use P Assembly Inclusion Rules to add parts to the sales order and work order parts list, and use Q Assembly Inclusion Rules to add parts to the work order parts list only. These assembly inclusion rules allow you to customize your sales order and work order parts list to communicate appropriate information.

Increased customization of products for customers increases process simplification with production.

Use the Sales Configurator system to simplify production processes. This system creates configured bills of material and routings. Seamless integration from the front office to the back office improves communication between sales order entry and manufacturing. This integration improves product quality and reduces errors. This process, in turn, can increase throughput and simplify processes.

Sales Configurator Overview

Many manufacturers sell configured items. A configured item is a product that is assembled from an arrangement of features and options. Features and options might include size, capacity, power rating, color, materials used, and so on. For example, a forklift is a configured item that is assembled from an arrangement of features and options that might include the power source, counterweight, paint type, paint color, as well as the boom assembly, the engine type, the hydraulics system, and so on.

Additional examples of configured items include:

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

When customers place orders for configured items, they expect to be able to specify features and options about the items. The J.D. Edwards Sales Configurator system allows you to respond to complex customer orders for configured items. Using the Sales Configurator system, you can assemble a large variety of configured items from relatively few components. You can set up configurations of features and options that constitute the configured items that you want to have available for sale, based on your best business practices and the needs of your customers.

When you enter a sales order for a configured item, the Sales Configurator system queries you about the features and options of the item that you requested. After you respond to the query about the configured item, the system verifies the information that you provide with the setup information that you previously defined. If the configuration is valid, the system processes the order.

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 have the following characteristics:

- 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

Using the Sales Configurator system, you can do the following to facilitate your best business practices:

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

System Integration

The Sales Configurator system is a front-office-to-back-office product. It integrates sales with manufacturing, from entering the sales order, to generating the work order, to shipping the product to the customer.

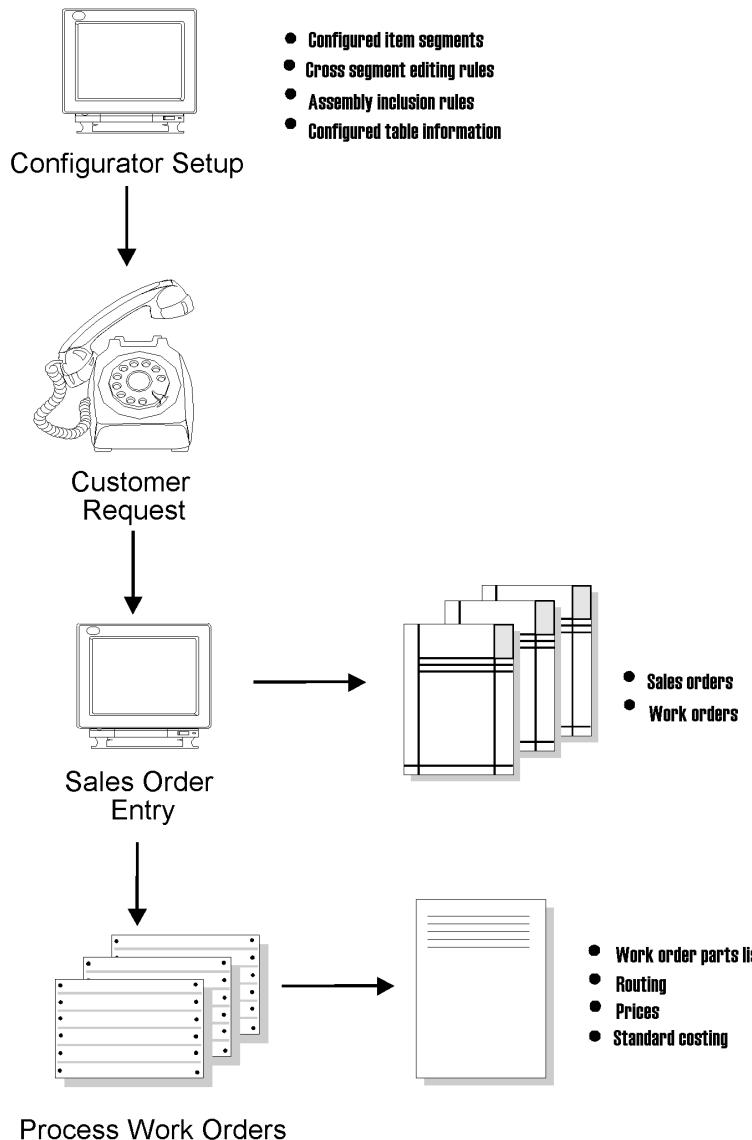
The Sales Configurator system is a business enabler for configuring manufactured and assembled end-item products. The Sales Configurator system features seamless integration with the Inventory Management, Sales Order Management, Manufacturing, and Distribution systems.

With the Sales Configurator system, you can define the features and options, as well as the relationship and limitations between those features and options. Sales order entry personnel do not need in-depth product knowledge. The configurator communicates the validity of a customer's choice of features and options through error messages and other visual cues. When order entry is complete, you have a configured bill of material and routing to use in manufacturing the product.

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

The following illustration shows the integration of the Sales Configurator system:

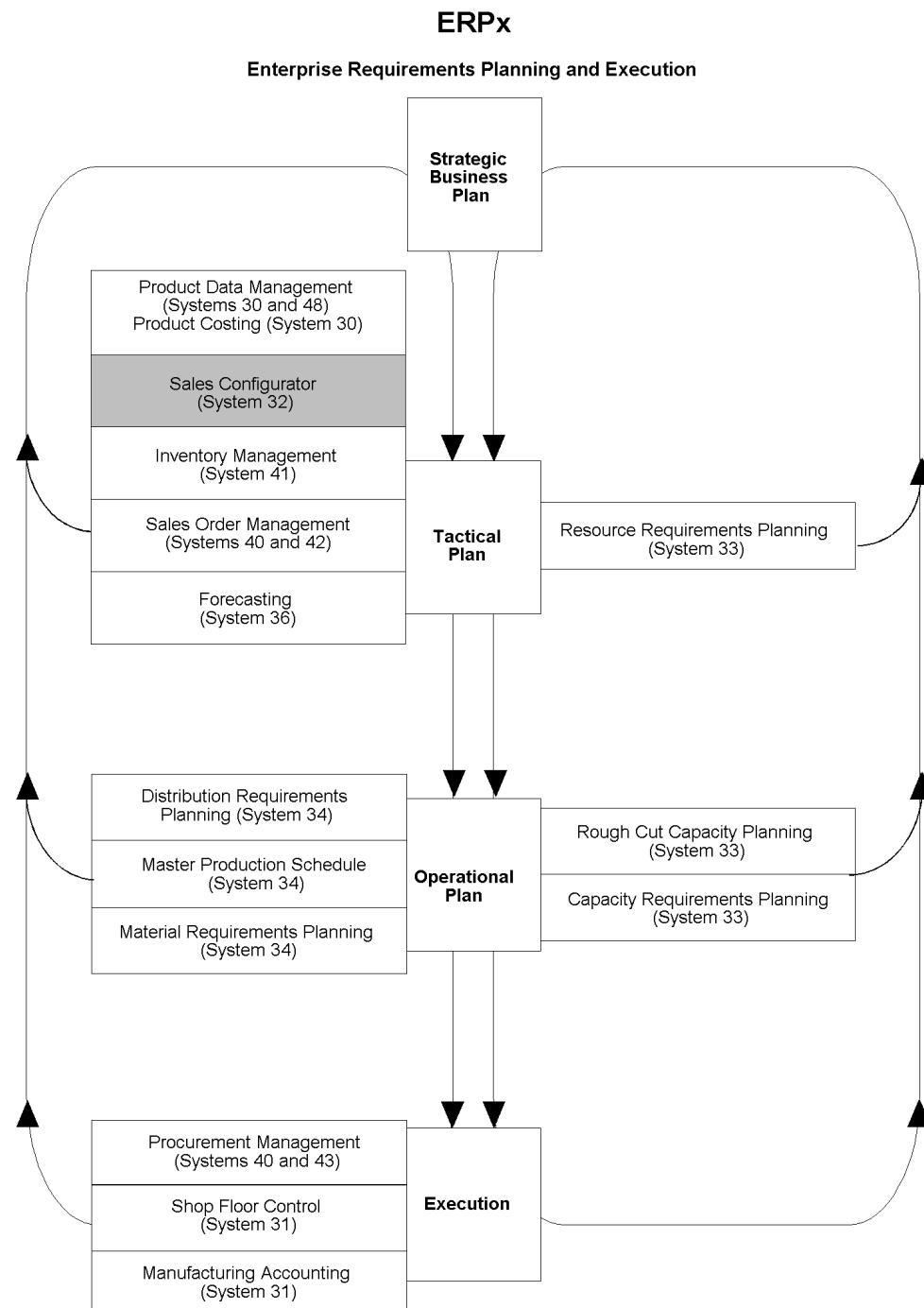


Enterprise Requirements Planning and Execution Review

The Sales Configurator system is one of many systems in the Enterprise Requirements Planning and Execution solution.

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 product that is assembled from an arrangement of features and options. Features and options might include size, capacity, power type, color, materials used, and so on.
Segment	The features and options that constitute a configured item. Each segment represents a characteristic of the configured item. For example, the forklift used in the demo data (configured item 6000) includes the following segments: <ul style="list-style-type: none">• Forklift rating (segment 10)• Power Type (segment 20)• Boom height (segment 30)• Paint (segment 40) You can further specify the options available within each segment. For example, the following are available options within the forklift rating segment: <ul style="list-style-type: none">• 2000 pounds• 4000 pounds• 6000 pounds
Configured string	A string of values, separated by delimiters, that the system creates when you enter a sales order for a configured item. Each value represents a segment. For example, a configured string for item 6000 (forklift) might be: 2000/PROPANE/08/STD/3587.4659217 <ul style="list-style-type: none">• 2000 (pounds) is the forklift rating• PROPANE is the power type• 08 (feet) is the boom height• STD is the paint type and color• 3587.4659217 (pounds) is the calculated counterweight
Multilevel configured item	A configured subassembly within a configured item. A configured item, such as a forklift, is sometimes referred to as multilevel configured item because it includes subassemblies such as the boom, engine, hydraulics, and so on. Each subassembly can also include a subassembly, such as the carburetor assembly within the engine. A multilevel configured item has a tree structure, or hierarchy such as the following: <ol style="list-style-type: none">1. Forklift2. Engine3. Carburetor The Sales Configurator system validates subassemblies in the same way in which it validates end-product configured items. The segments included in each subassembly must be valid when the system queries the setup information that you provided. <p>See the graphic at the end of this overview for an example of a multilevel configured item.</p>

Cross-segment editing rules	<p>Logic statements that you use to establish the relationships between the segments of a configured item. For example:</p> <p>If segment 10 (forklift rating) = 6000 pounds, then segment 30 (boom height) must = 12 (feet), else segment 30 must be <= 10 (feet).</p> <p>By using cross-segment editing rules, you can avoid invalid configurations, and end-users will be less likely to enter invalid sales orders. The system validates the segments on the sales order with the cross-segment editing rules. Error messages appear for configurations that violate the rules.</p>
Assembly inclusion rules	<p>Rules that translate requested features and options from the sales order into the specific values, components, operations, and calculated values that are necessary to build and price the configured item. For example:</p> <p>If segment 10 = 6000 and segment 30 >= 10, then use part F170, else use part F175.</p>

Analyzing Your Configured Items

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

- How do your customers order the configured item?
- How will you price the configured item?
- Which features and options make up the configured items?
- Which routings do the configured items require?
- Which calculations are required to support prices, features, options, components, and routing steps?

The answers to these questions (and similar questions that arise) help you determine which features and options to consider for possible inclusion in the configured items that you intend to make available to your customers. You will also have solid information from which to develop the best strategy for assembling the configured items. Determining your strategy for assembling configured items can save time during the initial system setup and facilitate subsequent adjustments.

Problem to Solve

Industrial Commercial Equipment (ICE) usually incorporates complex assemblies and mechanisms, and sophisticated control systems. They are usually highly-engineered and highly-customized with many modifications.

Solution

The Sales Configurator system provides the ability to expand customers' choices while reducing order lead times. The rules-based Sales Configurator decreases engineering involvement in the front end. Status codes are integrated with the Sales Order Management system to allow changes to be made up to a specified point in the manufacturing process.

Features

The Sales Configurator system enables you to perform the following functions:

- Specify a variety of features and options within configured items
- Establish relationships between segments to prevent invalid product configurations
- Define multilevel configured items
- Define multiple work orders resulting from and associated to each level of multilevel configured items
- 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 assembly inclusion rules reference

The Sales Configurator system creates configured bills of material, routings, pricing, and other important business information. Customer service levels are increased by providing real-time configured product specifications and information at sales order entry. Seamless integration from the front office to the back office improves communication with other departments within the company. This process, in turn, improves product quality by reducing errors.

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 between the segments of configured items.
Configurator Constants (F3209)	Stores constants that you define to control processing at the branch/plant level.
Cross Segment Editing Rules - Values (F32921)	Stores the *VALUES definitions for cross-segment editing rules and assembly inclusion rules.
Cross Segment Editing Rules - Range (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 Detail (F32943)	Stores the history for the configured items of all the configurations ordered.
Configured String Master – OneWorld (F32944)	Contains the configured string identifier for each multilevel configuration.
Configured String Detail (F32942)	Stores the configured string for each multilevel segment.
Configured String Detail - OneWorld (F32945)	Stores the segment values for each configured string. It also identifies the segment level in the configuration.
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 populated with the returned values.
Rules 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 File (F4102)	Stores branch/plant information, such as quantities and branch-level category codes
Item Location File (F41021)	Stores primary and secondary locations for an item.
Item Branch File (F4102)	Stores cost information for an item.
Item Base Price File (F4106)	Stores base price information for an item.

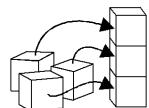
Sales Order Detail File (F4211)	Defines which level of the configured item is related to a component and defines complete information for each line of the sales order.
Sales Order Header File (F4201)	Maintains the billing instruction, address, and delivery information for a customer order.
Configurator Batch Segments (F3294Z)	Defines the answers to each segment question recorded during store-and-forward order entry.
Configurator Level Sequence File (F3296)	Defines relationships between sales order components and the configuration hierarchy.
Configured Level Sequence File Table (F3296T)	Defines sales order components that the user added and that are not from the rules-based processing (used in OneWorld only).
Configurator Cost/Price Adjustment File (F32961)	Defines the relationships between (x) rules-based price/cost adjustments and detail sales order line items. This table is a summarized table by line type.
Configurator Detail Cost/ Price Adjustment Table (F329611)	Defines the relationships between rules-based detailed price and cost adjustments, summarized adjustments, and detail sales order line items. The table also indicates price and cost adjustments that the user added and that are not from rules-based processing (used in OneWorld only).

Menu Overview

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

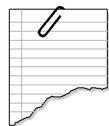
Menu Overview - Sales Configurator

Configurator G320



System Setup

S Configurator Setup G3241

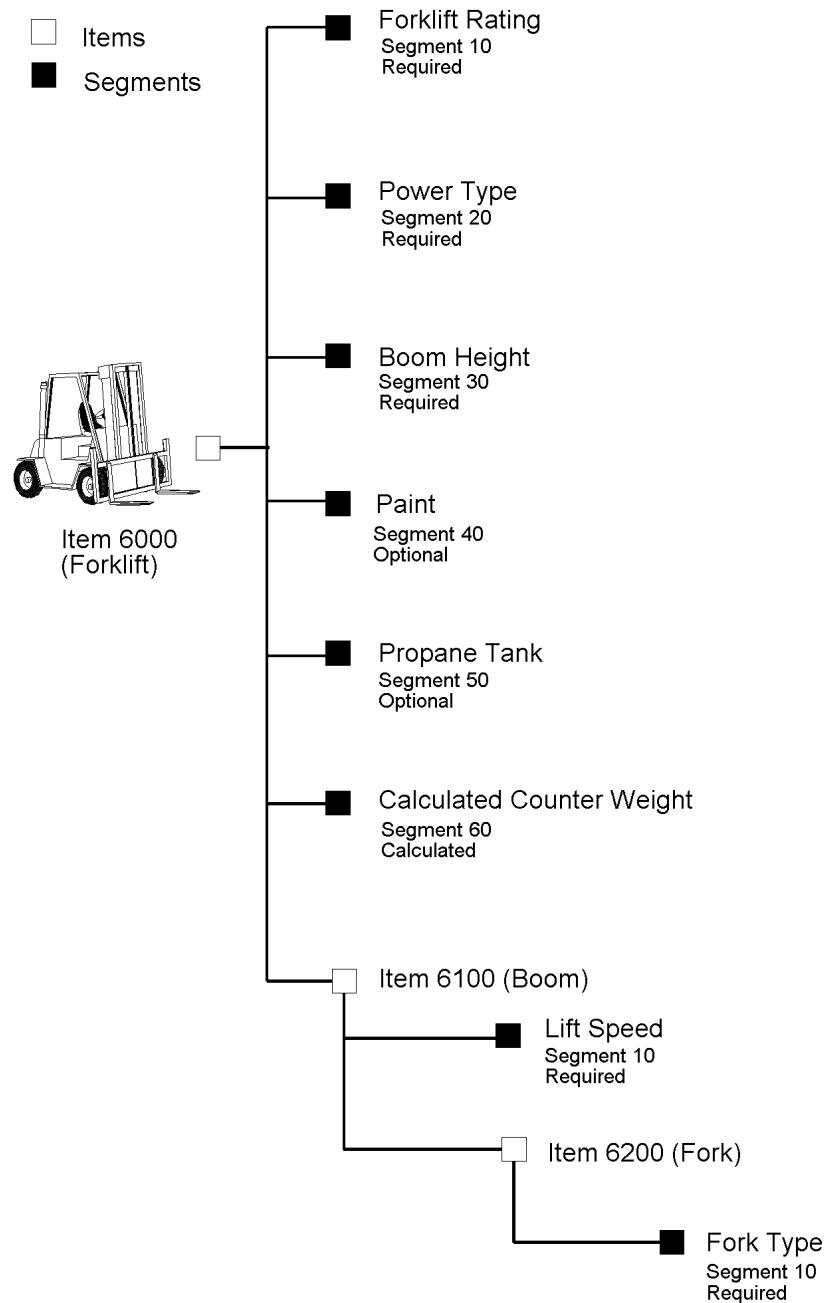


Daily Processing

S Configurator G32

Example: Multilevel Configured Item

The graphic that follows this paragraph is an example of a multilevel 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.

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

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

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

- Branch/plant-specific information about work order processing
- Sales quote processing
- Availability checking
- Display of calculated segments

Segments are the features and options of a configured item. Segments represent product characteristics such as color, material, or size. For clarification purposes, you assign numbers to each segment of the configured item. Information from the Display Order 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 that are necessary to build the configured item. Different types of assembly inclusion rules allow you to define the following:

- 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 number of required rules, simplifies rule maintenance, and improves processing time.

Understanding Setup Prerequisites

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

- Inventory Management
- Sales Order Management
- Product Data Management

Note

The information provided here is specific to setting up the Sales Configurator system. For more information regarding setup of these other 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 the Sales Configurator system, 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 lead time 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

You can use price adjustment, or X assembly inclusion rules, to affect the price for the configured item, regardless of the price method that you selected.

See Also

- Entering Basic Item Information* in the *Inventory Management Guide*
- Entering Branch/Plant Information* in the *Inventory Management Guide*

Sales Order Management

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

Before you can enter sales orders for configured items, you must enter information that is specific to your business in 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 to the cycle steps for creating the work order parts lists and completing work orders for configured items. Optionally, both of these manufacturing processes can update associated sales order activity.

After you define 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 components of the configured item. 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 the following:

- 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, such as a line item for free items.

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

See Also

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

Product Data Management

The Product Data Management (PDM) system enables you to organize and maintain information about each item that 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 manufactured components for the configured item. 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 the Sales Configurator system, 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 Routing Instructions* in the *Product Data Management Guide*
- Understanding Bills of Material* in the *Product Data Management Guide*

Setting Up Constants

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

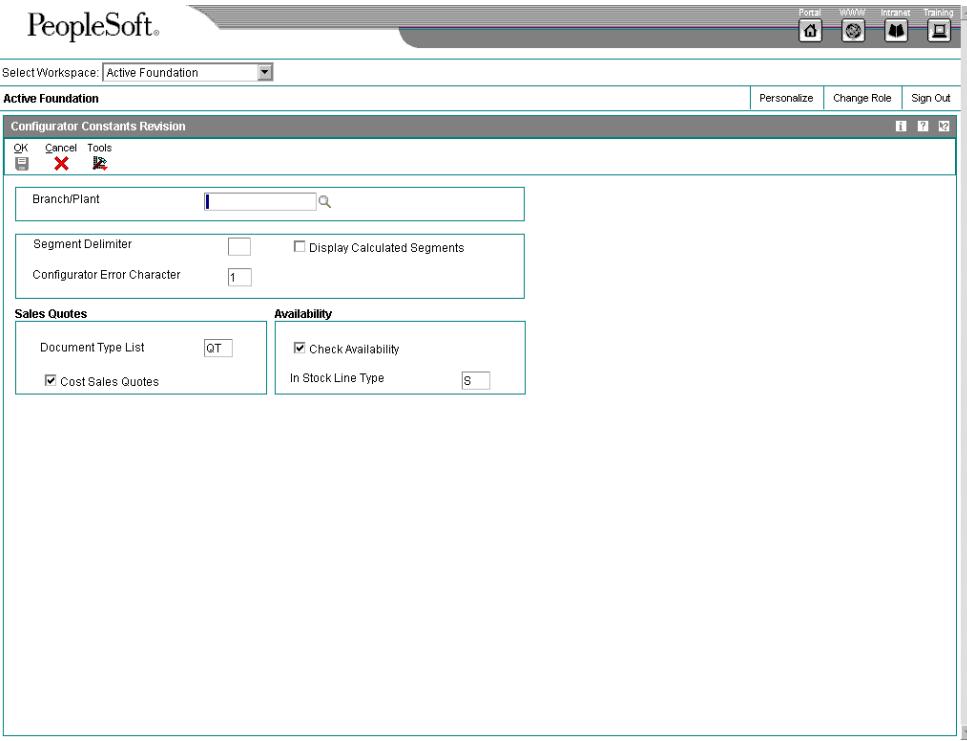
- Define the configured string delimiter
- Define whether the calculated segments appear during sales order entry
- Verify parent availability during sales order entry
- Determine the cost of sales quotes with manufacturing labor and overhead
- Define which stocked line type to use if the system finds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

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

► To set up constants

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

1. On Work With Configurator Constants, 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 and click OK:
 - In Stock Line Type
 - Document Type List

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. Segments define the features and options of complex configured items.

Each segment is a specific feature or option group within a configured item. Features and options are defined as required, optional, or calculated. A required or optional segment identifies the valid values from which you can choose. Segments define the choices available within a specific feature or option by using user defined codes or ranges of values. The system performs some type of calculation for calculated segments to determine information regarding the specific feature.

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 multilevel 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 verifies 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 the Sales Configurator system. You must know information about each segment to determine the price of the configured item and the cost to manufacture the item.

You can define the following 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 using one of the following:

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

Note

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

Common Attributes

A Common Attribute in the Sales Configurator system is a trait or characteristic that is shared by several segments in a configured item. You can set up and define a common attribute in UDC table 32/CA. You can then attach the common attribute to a particular segment via the Common Attribute field in Configured Item Segments.

Common Attribute Example

The furniture industry often uses common attributes. In a configuration for a sofa, a common attribute might be Color. The Color common attribute is associated with the segments for the sofa frame, bottom sofa cushions, sofa arm covers, and decorative pillows. After the customer picks a color, that value can be input in the attribute field on the common attribute form. The color is then applied as the answer to all segments that are associated with that particular common attribute.

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 the Sales Configurator system allows you to include within sales order entry a visual cue of configured items and segments, including information that might initially exist on a paper document. Media objects can be 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 that you define appear on Configured Item Specifications. Within the tree structure that appears on Configured Item Specifications, you can click a level, and the media object displays the image from the item master for the related configured item number. The segment or segment-answered user defined code displays the media object when a row is selected.

Configurator processing options control whether the media objects change during real time, based on events. Other processing options define the class of media objects (text, image, OLE) that appear in the window during sales order entry.

You set up media objects on the Segment Values form. You can also retrieve media objects 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

- ❑ *Media Objects and Imaging* in the *System Administration Guide* for more information about setting up media objects
- ❑ *Working With Configured Item Sales Orders* for more information about displaying media objects

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.

Note

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.

1. On Work with Configured Items, complete the following field and click Find to locate a configured item:
 - 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.

PeopleSoft®

Seg Num	Description	Req	Default Value	Display Order	Common Attribute	Code Num	Product Code	User Code	Lower Limit of Value
<input checked="" type="checkbox"/> 10	Forklift Rating	R	4000	10		Y	32	LR	
<input type="checkbox"/> 20	Power Type	R	GAS	30	N	32	PT		
<input type="checkbox"/> 30	Boom Height	R	10	20	Y	32	BH		
<input type="checkbox"/> 35	Interior	O		60 PKG	N	32	IN		
<input type="checkbox"/> 40	Paint	O	STD	50 PKG	N	32	PA		
<input type="checkbox"/> 50	Propane Tank	O		40	Y	32	TK		
<input type="checkbox"/> 60	Calculated Counter Weight	C		70	Y				
<input type="checkbox"/> 66	Additional fork (spare)	R	NO	75	N	32	AF		

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

- Text String
- Display Item

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:

- Seg Num
- Description
- Req
- Default Value
- Display Order
- Code Num
- Save Seg

5. Complete the following optional fields for segment user defined code table values:

- Product Code
- User Code

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

6. To specify a range of acceptable values, complete the following fields:

- Lower Limit of Value
- Upper 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:

- SpB Nbr
- SpA Nbr
- Print Segment Number
- Print Segment Description
- Print Segment Value
- Print Segment Value Description

8. Complete the following optional fields and click OK:

- D C
- Updt CC

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

See Also

- Setting Up Assembly Inclusion Rules*

Setting Up User Defined Segment Values

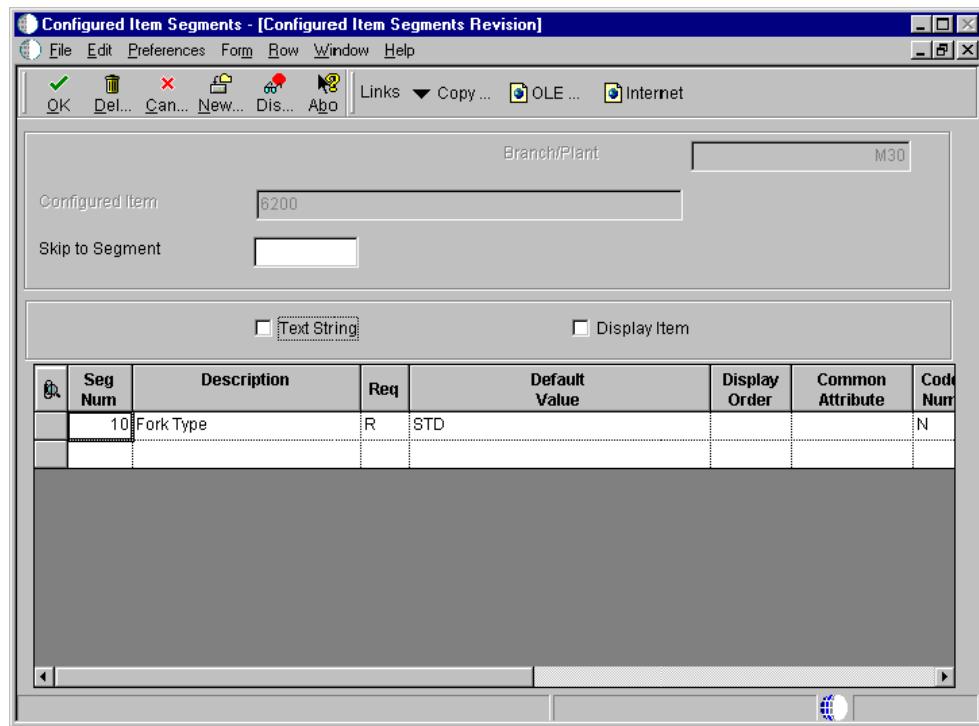
You can create a user defined code table of segment values for a noncalculated segment. The user defined code table that the segment references presents the choices that are available within that particular feature or option. This task is optional.

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.

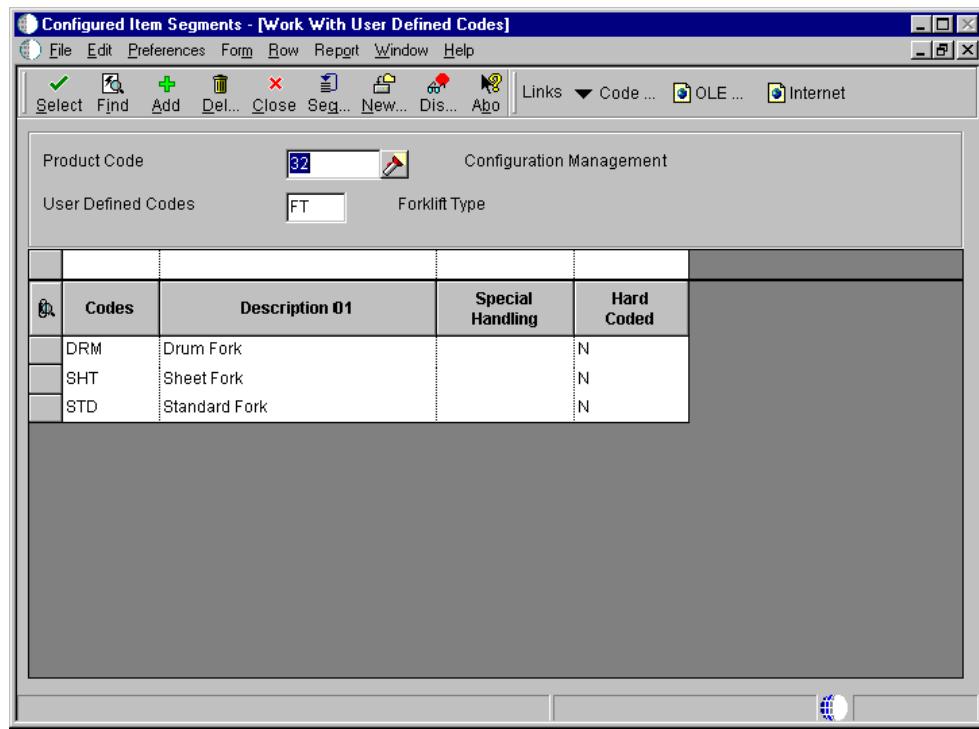
► To set up user defined codes

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

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

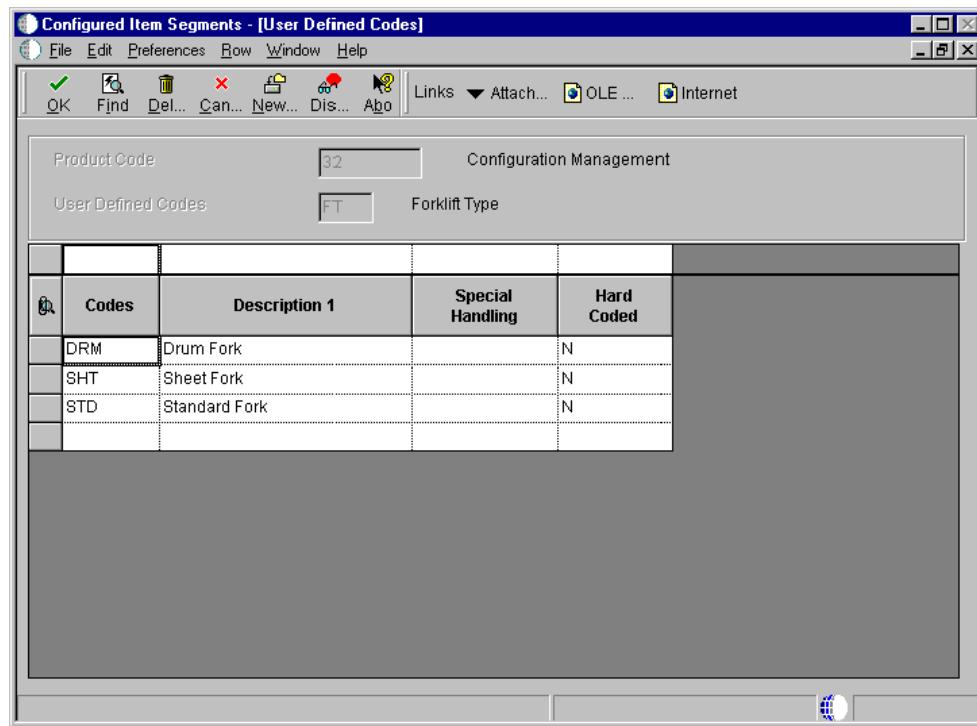


3. On Configured Item Segments Revision, select a row and choose User Defined Codes from the Row menu.



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 and click OK:

- Codes
- Description 1
- Special Handling
- Hard Coded

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

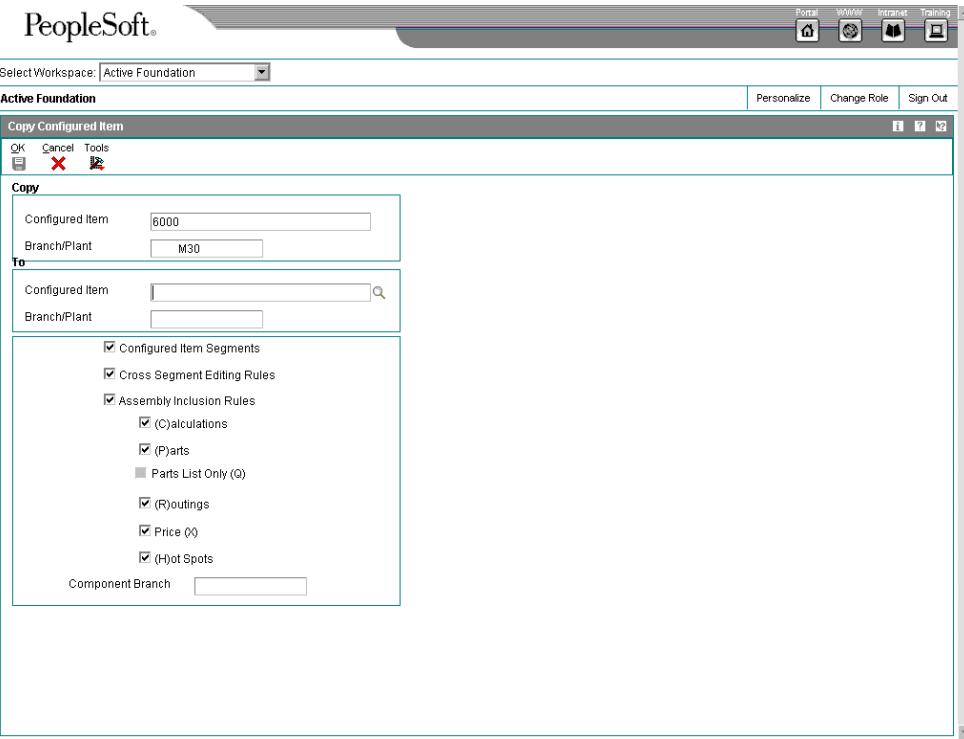
Copying a Configured Item

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.

1. On Work with Configured Items, complete the following field and click Find to locate a configured item:
 - 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:
 - Configured Item
 - Branch/Plant
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
 - (C)alculations
 - (P)arts
 - Parts List Only (Q)
 - (R)outings
 - Price(X)
5. Complete the following field and click OK:
 - Component Branch

Note

When you copy a configured item, you can copy any attribute from the original item. However, you cannot copy, for example, a Q assembly inclusion rule if your original item was set up with a P rule.

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 procedure 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.

1. On Segment UDC Where Used, 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 among the configured item segments with Boolean logic statements. The Sales Configurator system uses cross-segment editing rules to validate that the feature and option values that you choose create a valid product configuration. This validation 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 Logic

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

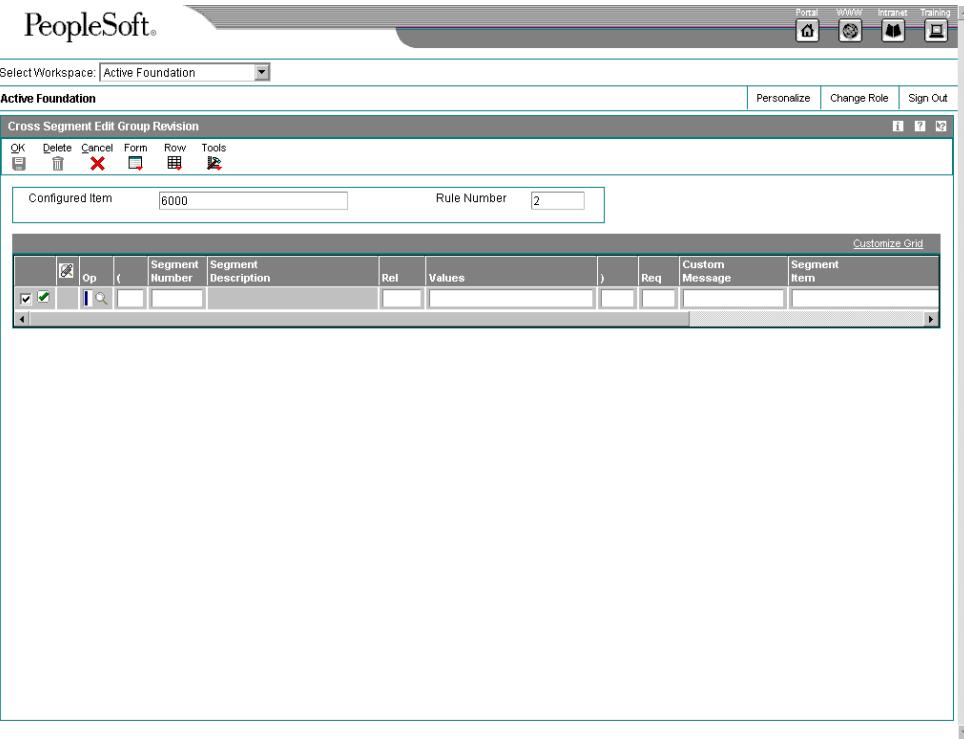
For each cross-segment editing rule, you can define an if/then/else logic statement for many conditions. For example, a forklift might require a different value for segment 30 (boom height), depending on the value of segment 10 (lift rating). The following cross-segment editing rule illustrates this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

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.

► To set up logic statements

1. On Work with Cross Segment Editing Rules, complete the following fields and click Find to locate a configured item:
 - Configured Item
 - Branch/PlantA 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, choose Revisions from the Form menu.
3. For add additional rules, select a row and choose Insert Edit Group Before or After from the Row menu.



4. 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:
 - Op
 - (
 - If Seg
 - Segment Description
 - If Rel
 - If Value
 -)
 - Req
 - Then Seg
 - Segment Description
 - Then Rel
 - Then Value
 - Custom Message

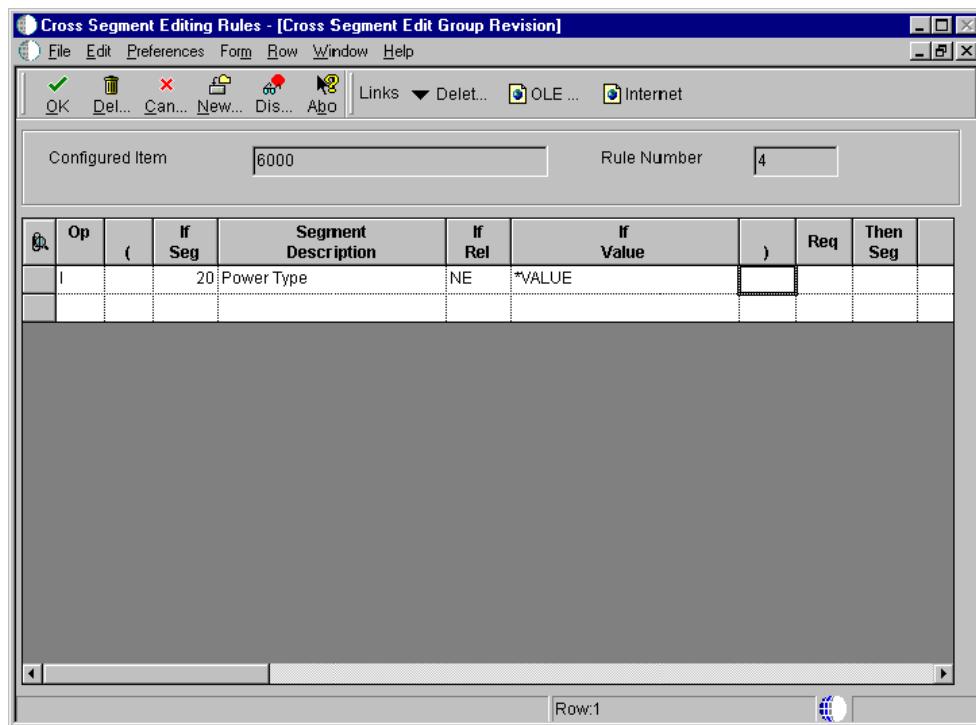
- If Segment Item
- If Segment Branch
- Effective From
- Effective Thru

Note

You can reference upper-level items in a cross-segment editing rule.

► To set up values

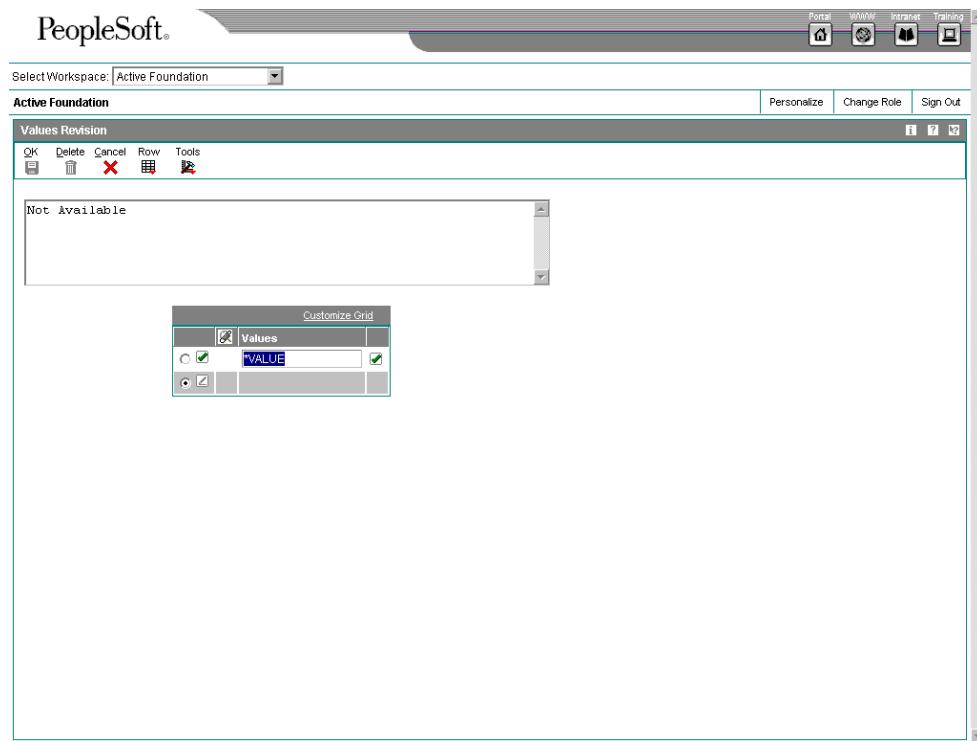
1. On Work With Cross Segment Editing Rules, complete the following fields and click Find to locate a configured item:
 - Configured Item
 - Branch/Plant
2. Choose a record and choose Insert Edit Group, Insert Before, or Insert After from the Row menu.



3. On Cross Segment Edit Group Revision, complete one of the following fields with *VALUE.

- Then Value
- If Value

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

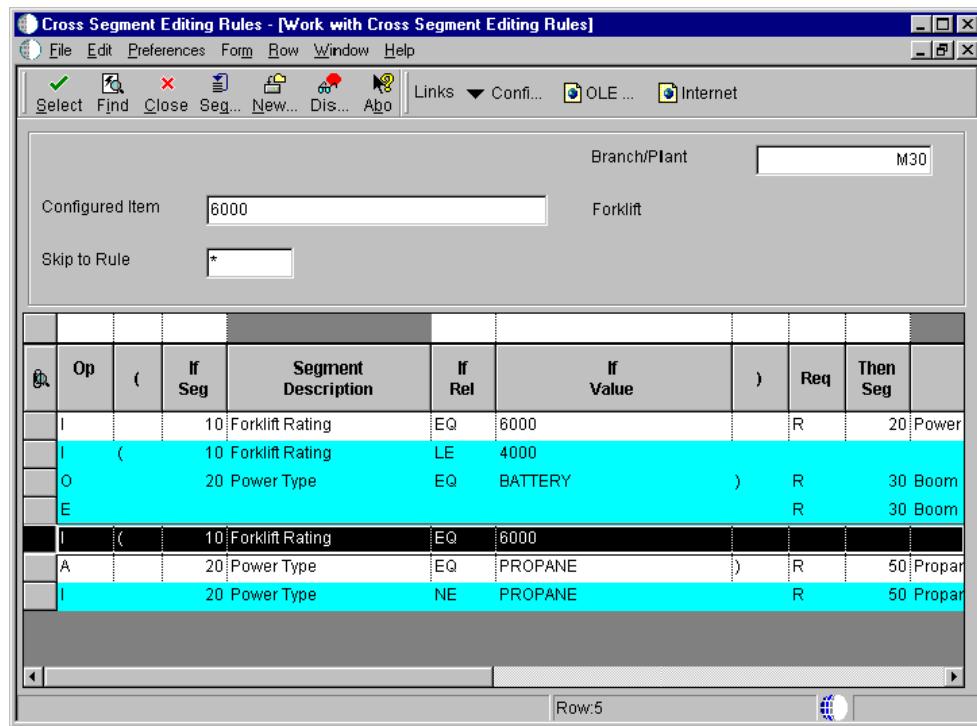


4. On Values Revision, complete the following field and click OK:

- Values

► To set up ranges

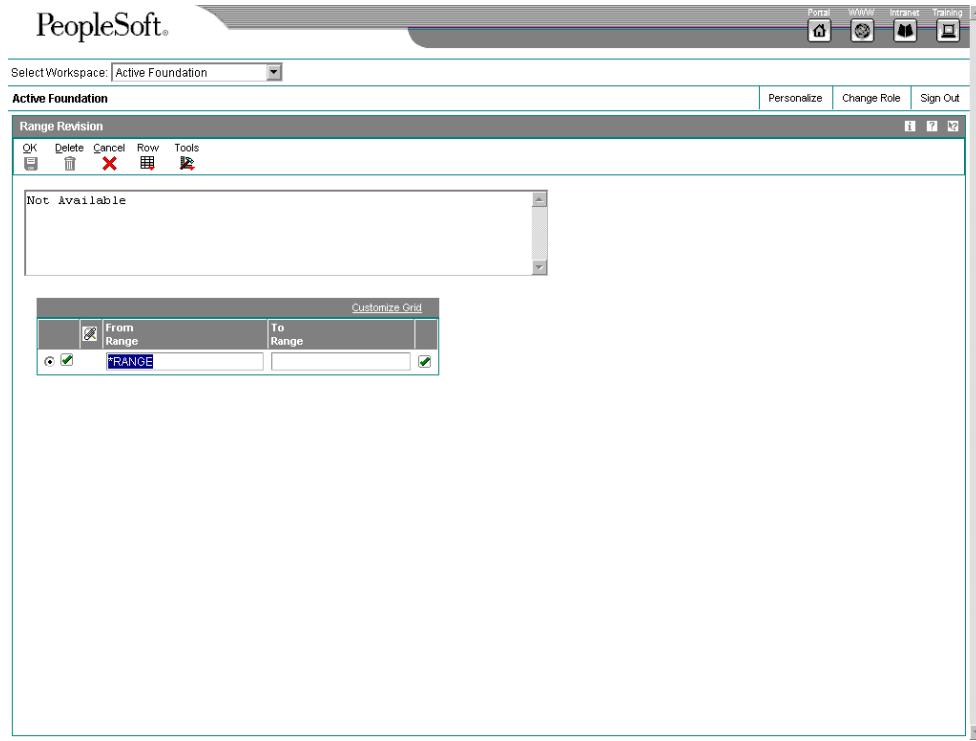
1. On Work with Cross Segment Editing Rules, complete the following fields and click Find to locate a configured item:
 - Branch/Plant
 - Configured Item
2. Select a record and choose Insert Edit Group, Insert Before, or Insert After from the Row menu.



3. On Cross Segment Edit Group Revision, complete one of the following fields with *RANGE:

- If Value
- Then Value

The system prompts you for range from and to values.



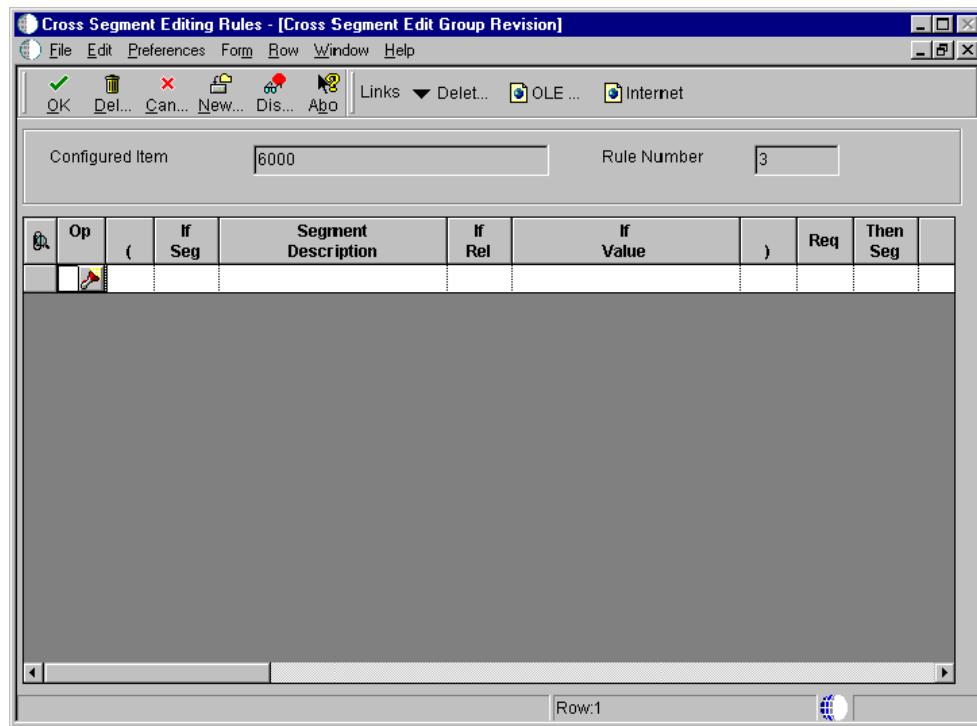
4. On Range Revision, complete the following fields and click OK:

- From Range
- To Range

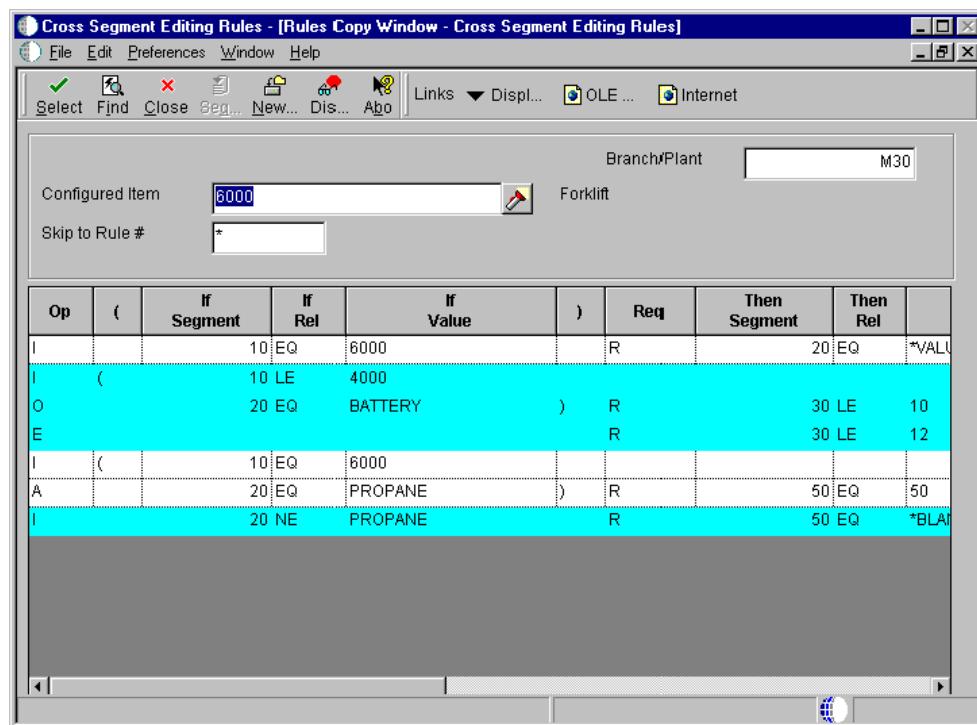
► To copy a rule

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](#).

1. On Work with Cross Segment Editing Rules, complete the following fields and click Find to locate a configured item:
 - Configured Item
 - Branch/Plant
2. Select a record and choose Insert Edit Group, Insert Before, or Insert 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 Editing Rules, locate the configured item from which you want to copy a rule.
5. Choose a rule and click Select.
6. On Cross Segment Edit Group Revision, click OK.

See Also

- Working with Error Messages*

Setting Up Custom Error Messages

As you enter a sales order, error messages appear for invalid combinations that are defined by cross-segment editing rules. You have two options for controlling how error messages appear. You can define custom messages, or the system can generate an error message. You can use custom error messages to include more detail or to simplify the content to make the error message easier to understand. System-generated error messages appear as calculated segment values (Boolean logic).

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.

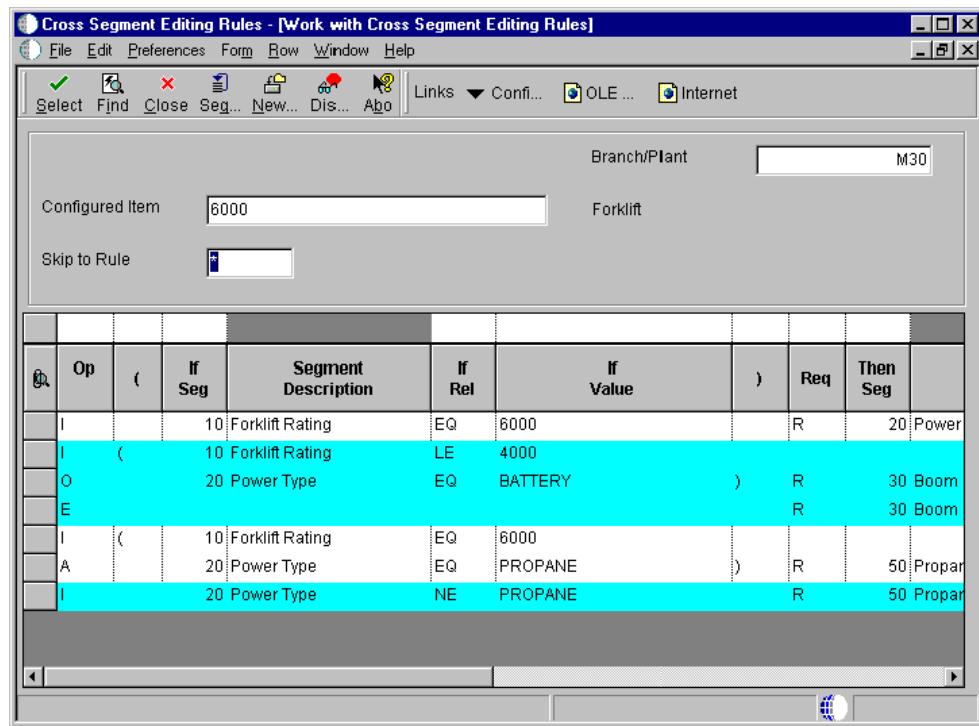
The following error messages might appear:

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.

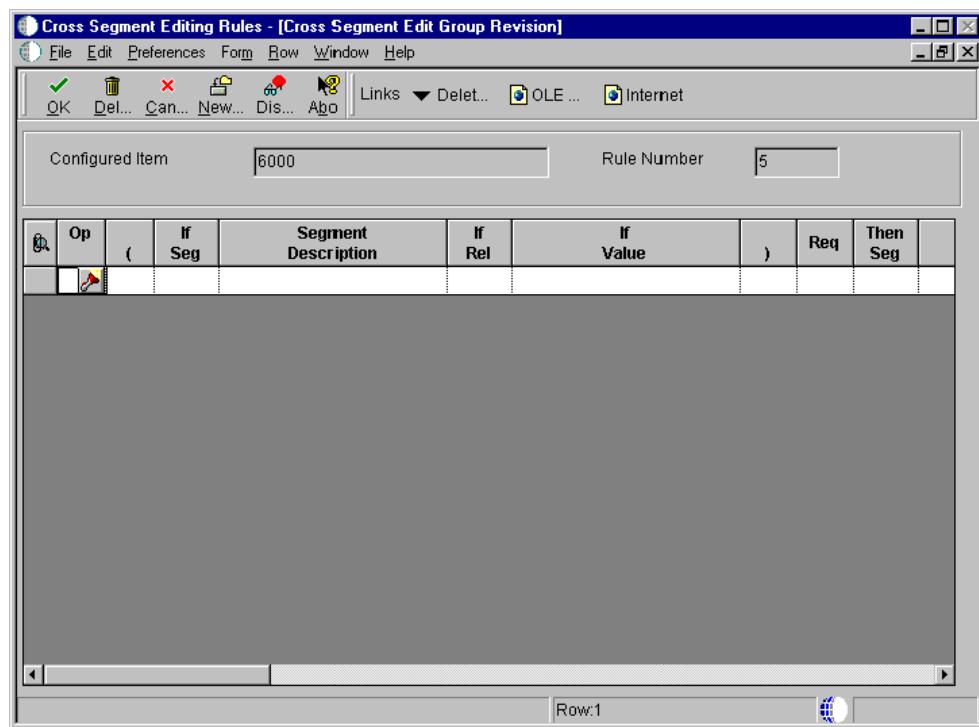
► To set up custom error messages

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

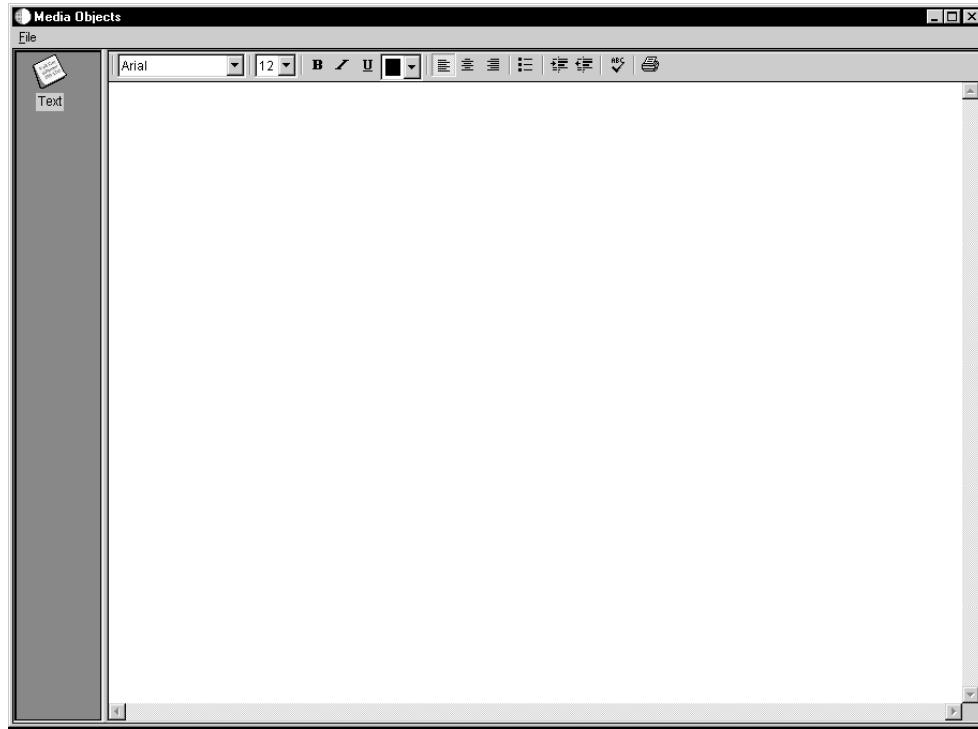
1. On Work with Cross Segment Editing Rules, complete the following fields and click Find to locate a configured item:
 - Branch/Plant
 - Configured Item



2. On Work with Cross Segment Editing Rules, choose a record and choose Insert Edit Group, Insert Before, or Insert 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 New, and then Text from the File menu.
6. Enter the text for the error message.
7. Select Save & Exit from the File menu.

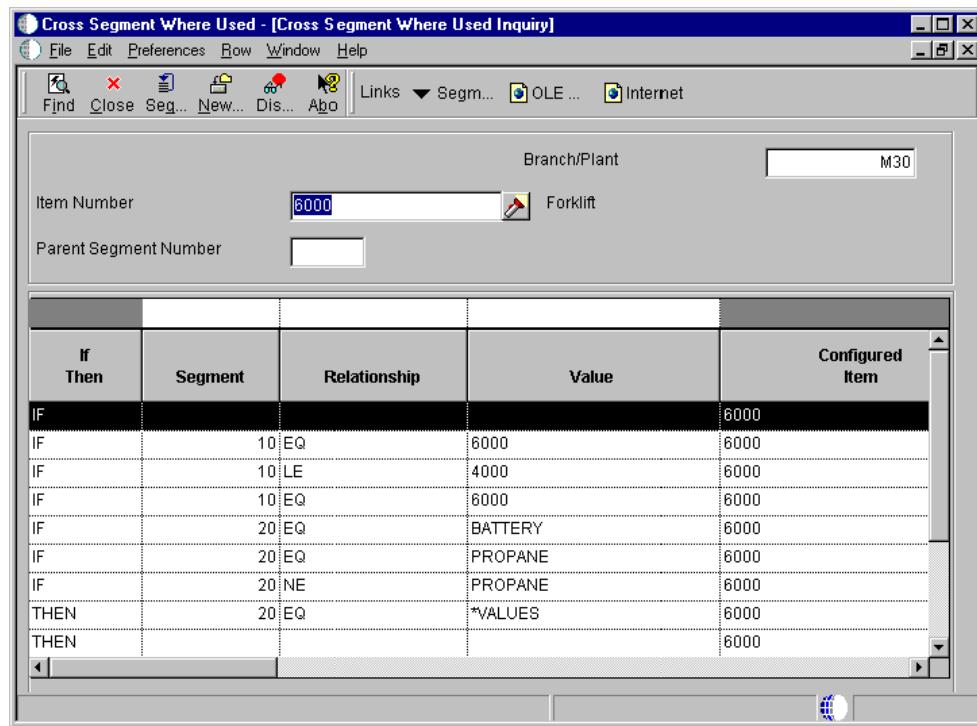
Reviewing Cross-Segment Editing Information

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

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

1. On Cross Segment Where Used Inquiry, complete the following fields and click Find to locate a configured item:
 - Branch/Plant
 - Item Number
 - Parent Segment Number



2. On Cross Segment Where Used Inquiry, review the following fields:

- If Then
- Segment
- Relationship
- Value
- Rule #
- SEQ #

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 you need to build and price a configured item. An assembly inclusion rule includes logic statements and optional advanced information.

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 multilevel 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 the calculated segments for a configured item. 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 that are processed for display purposes only. This information appears on the order entry form in a Hot Spot field. H rules are calculated similar to C rules. However, the results do not affect the configured string.
Pricing (X) Rules	Define the price and cost adjustments. The system processes X rules independently, based on the kit pricing method that you selected. Typically, you should not set up cost adjustments when you use work order-generated line types. X rule cost adjustments affect only the sales order. Work Order Generation recalculates the cost without the X rule. For example, if segment 40 equals CUS, then adjust the price by 650.00 USD. Based on whether the rules roll-up option is turned on, adjustments will either be reflected in the price of the parent item or be entered in 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.

Business Case: Assembly Inclusion Rules

Problem to Solve

When we create sales orders, all of the detail information shows up on the sales order. In most cases, the customer does not need all of the information, and it crowds the sales order. Also, some detailed information is not appropriate for the customer to see. We want to print only pertinent lines on the customer sales order.

Solution

Use the Assembly Inclusion Rule features in the Sales Configurator system to customize the sales order. Use P Assembly Inclusion Rules to add parts to the sales order and work order parts list, and use Q Assembly Inclusion Rules to add parts to the work order parts list only. These assembly inclusion rules allow you to customize your sales order and work order parts list to communicate the appropriate information.

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.

An unconditional statement is identified by an asterisk (a *then* condition) in the And/Or Selection field. Use unconditional rules when you want to apply the same rule, regardless of the segment answers. You must define unconditional rules before you define 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 use and/or operators to create conditional rules that are compound statements of logic. 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 optional advanced assembly inclusion rules. You set up advanced assembly inclusion rules on the Advanced Rule Functions form.

Advanced assembly inclusion rule features vary according to the type of assembly inclusion rule that you set up, as illustrated in the following table:

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

Business Case: Advanced Assembly Inclusion Rules

Problem to Solve

We have special calculations that we need to run when we create a new sales order.

Solution

Use the Advanced Assembly Inclusion Rule features in the Sales Configurator system to enable your order entry to take advantage of segment referencing, algebraic formulas, trigonometric and logarithmic functions, substrings, concatenations, external field references, external business function references, configured tables, and smart parts. This feature allows you to perform calculations when you validate product configuration. Thus, calculated values are available to sales order entry personnel and the customer.

Derived Calculations

For each rule type, you can define calculations that refer to the values of one or more segments. You can define a derived calculation on either Assembly Inclusion Rules or Advanced Rules, or within sales order entry.

The system reviews 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 embed calculations by enclosing them in parentheses. You might want to embed segment numbers in the formula to include segment values as part of the calculation.

For example, the following formula calculates the counterweight that is 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) Indicates the sine of 1.5.

COS(S3) Indicates the cosine of segment three.

TAN(S3) Indicates the tangent of segment three.

ARC(S3) Indicates the arctangent of segment three.

The following logarithmic functions are available:

LOG Indicates log to base 10.

LN Indicates natural log.

****** 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 that you want to reference. For example, if segment 10 is 400012, then the following is true:

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 table:

F4101 Item Master

F4102 Item Branch File

F41021 Item Location File

F4105 Item Cost File

F4106 Item Base Price File

F0101 Address Book Master

F03012 Customer Master by Line of Business

F41002 Item Units of Measure Conversion Factors

F41092 Item Supplemental Data Base User Defined Codes

F46011 Item Unit of Measure Definitions

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 Item Base Price File 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 Item Units of Measure Conversion Factors table, 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 enter 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, which 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 that are sorted in cache. The system passes the B3200000 data structure to the external business function.

Configured Tables

You can set up configured tables 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 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 Item Branch File (F4102) tables.

Smart part formulas can define short, second, or third part numbers. Smart parts use the part numbering symbol conventions that are 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 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) combines 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 is 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 information and calculated values that you need to build and price the configured item.

Depending on the features that 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 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

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

Note

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

The default value for hot spots is non-numeric. If the Description 02 column is blank or the value is N, then the hot spot formula is treated as a string (it displays the formula rather than a calculated number). If the expected answer is numeric and the hot spot is not hard-coded, then the Description 02 column should contain YX, where Y shows that the result is numeric and X is the number of the decimal places to be rounded. You use the Hot Spot Description menu option (P0004A) on the G3241 menu to set up hot spots.

Example 1

A numeric hot spot rounded to four decimal places should be set up as Y4 in the Description 02 column.

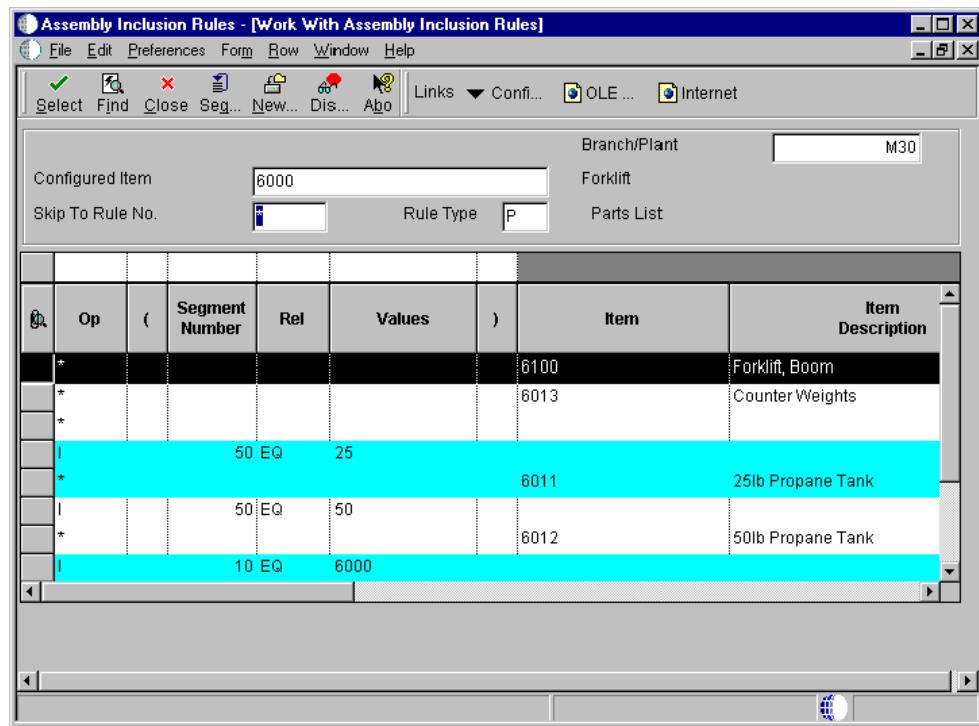
Example 2

Suppose that a user-defined hot spot that is not hard-coded exists, and has a value of 002. When the configurator is called during Sales Order Entry, you can select the hot spot, 002, to appear. However, because no H rule is defined for the particular configured item that references hot spot 002, the hot spot displays 0.

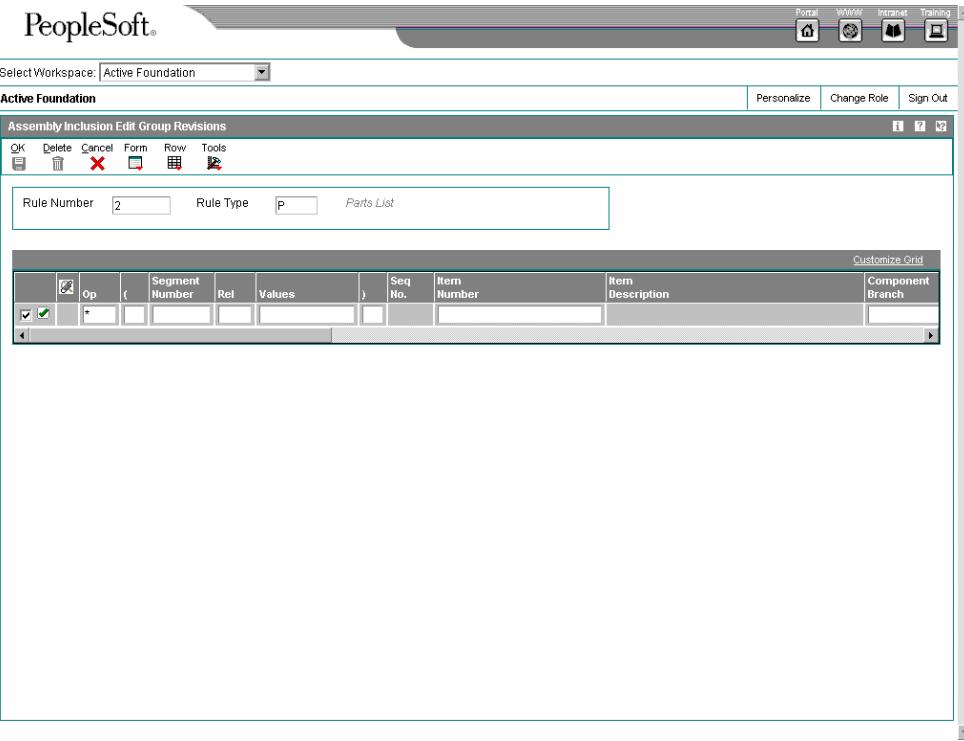
► To define unconditional rules

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.

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



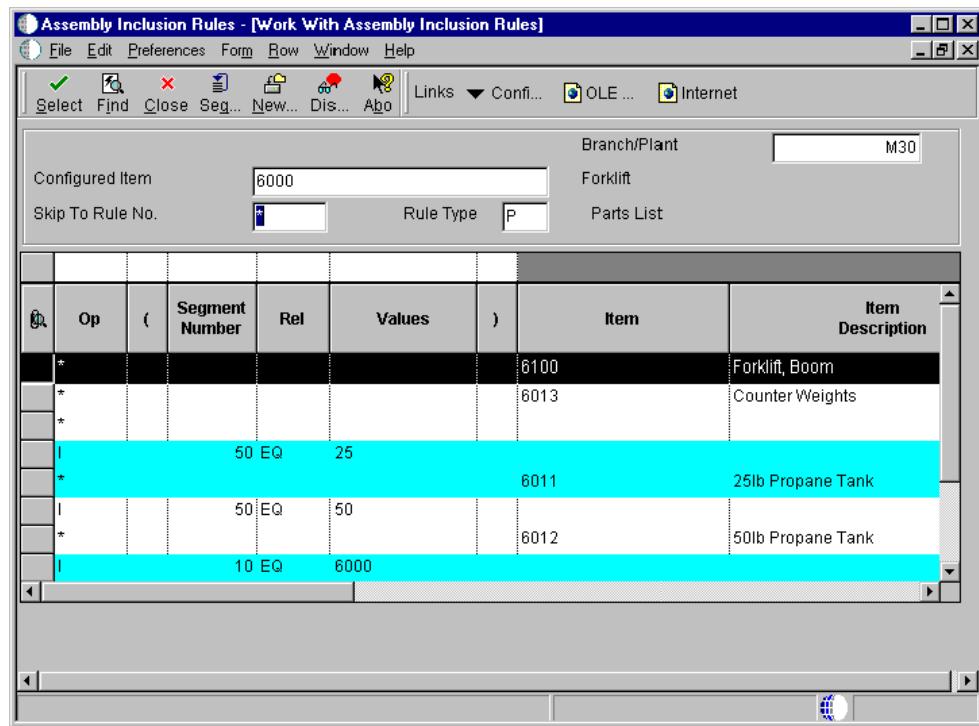
1. On Work With Assembly Inclusion Rules, complete the following fields and click Find to locate a configured item:
 - Branch/Plant
 - Configured Item
 - Rule Type
2. Choose Insert Edit Group, and then Insert After from the Row menu.



3. On Assembly Inclusion Edit Group Revisions, complete the following field with an asterisk:
 - Op
4. Complete the following fields and click OK:
 - Segment Item
 - Seq No.
 - Segment Branch/Plant

► **To define conditional rules**

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

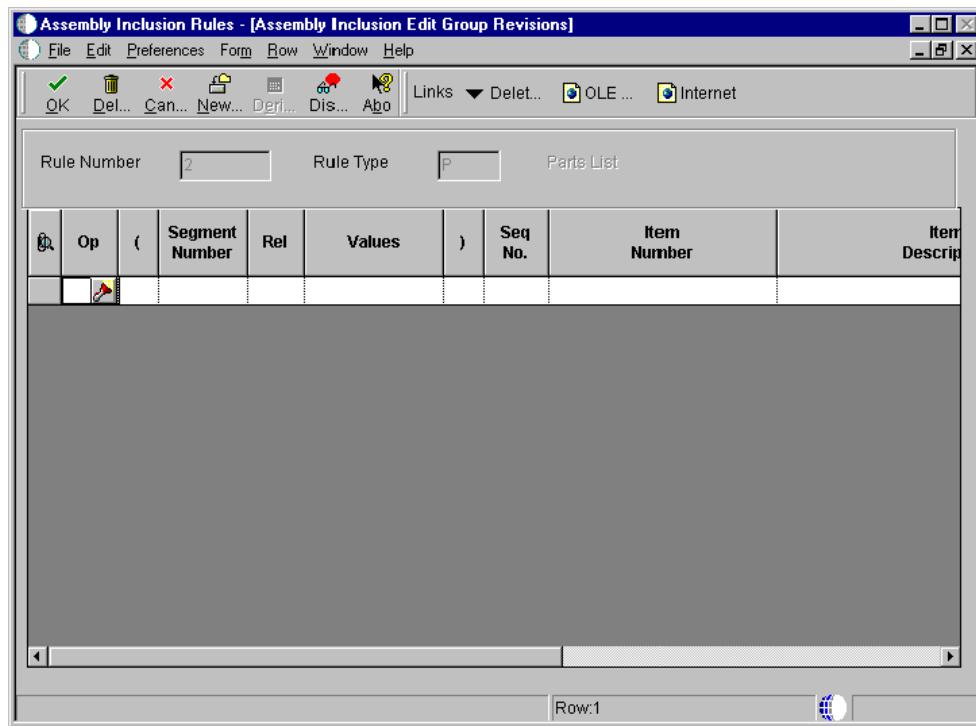


1. On Work With Assembly Inclusion Rules, complete the following fields and click Find to locate a configured item:

- Branch/Plant
- Configured Item
- Rule Type

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

For additional rules, choose Insert Edit Group, Insert Before, or Insert 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:
 - Item Number
 - Description

- Operation Seq No.
- Segment Item
- 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 From
- Effective Thru

8. Complete the following optional fields

- Component Branch
- Print Part
- Issue Type
- Derived Calculation
- Smart Part
- Rule Table
- External Program

9. Click OK:

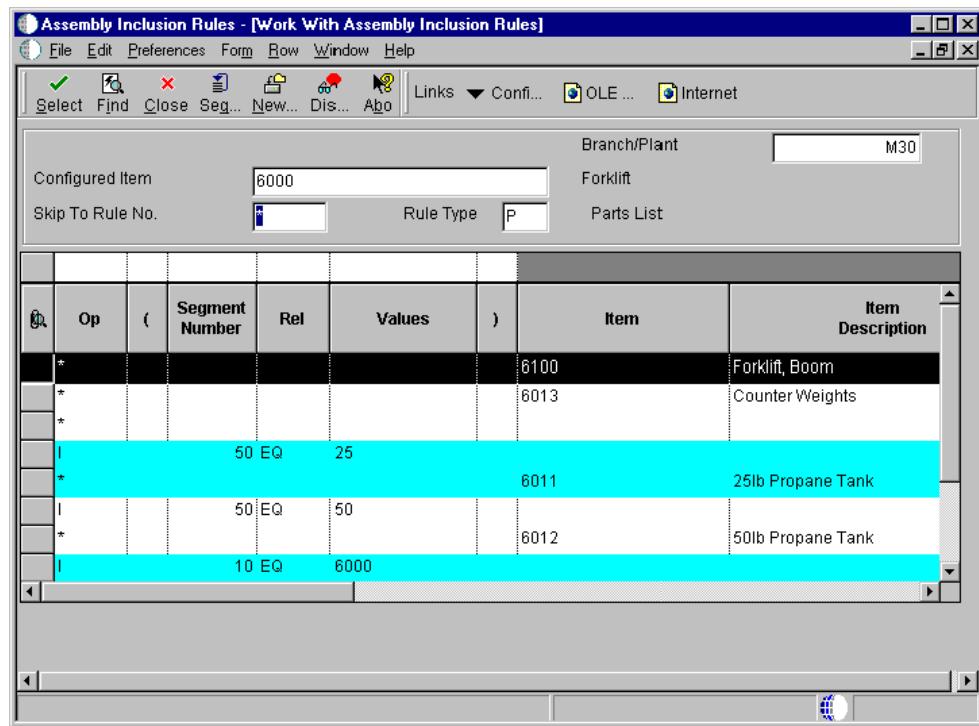
The system separates different groups of logic statements with colored grid rows.

Note

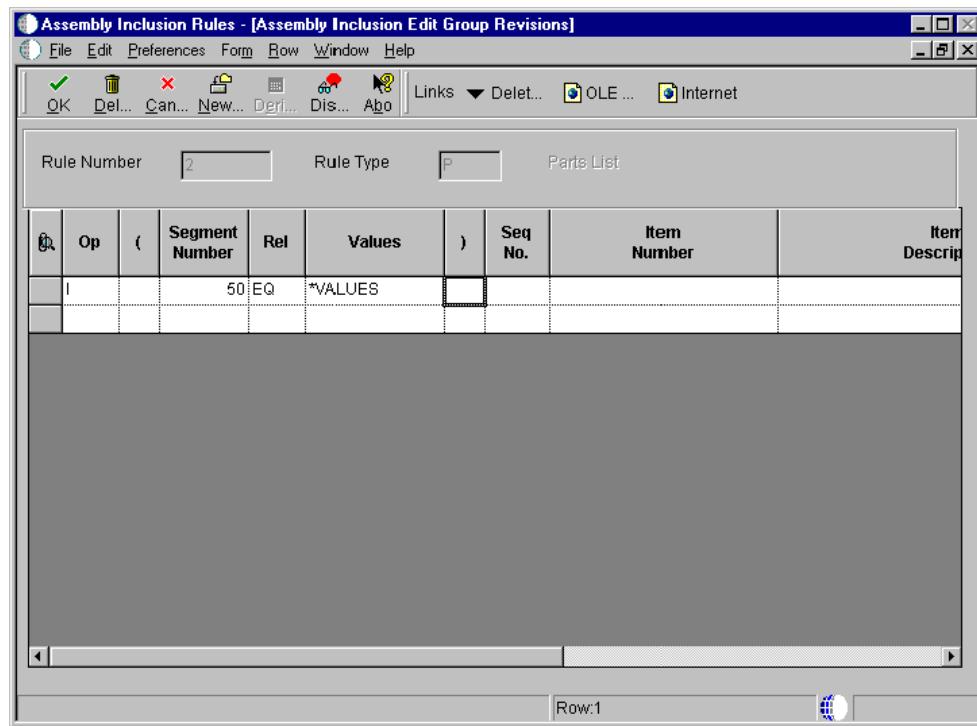
You can use the insert line option and the delete line option to revise the assembly inclusion rules.

► To define values

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



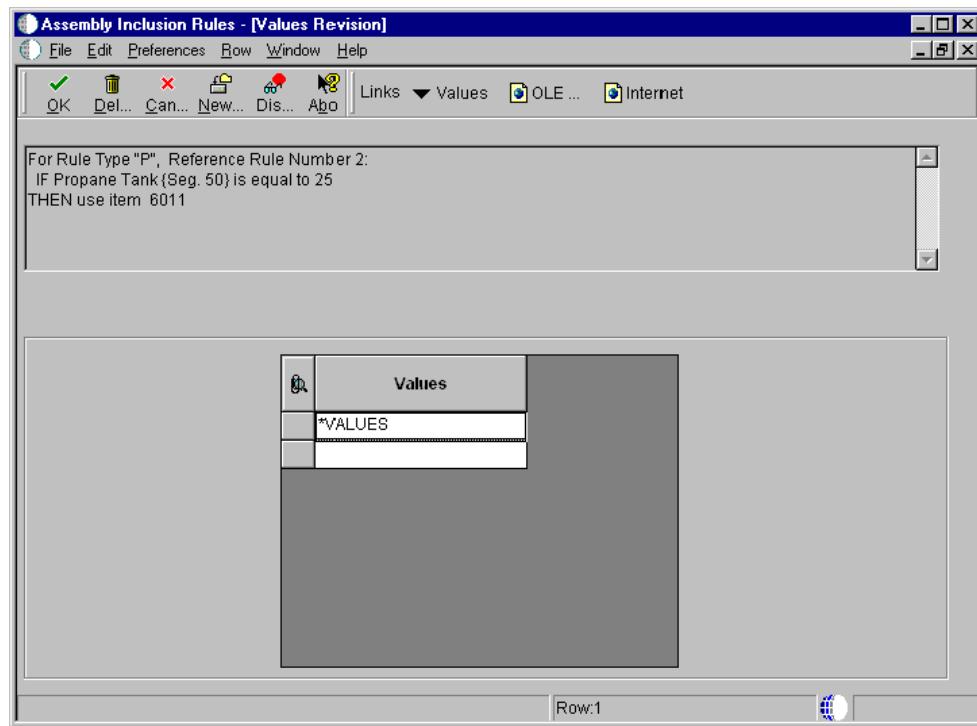
1. On Work With Assembly Inclusion Rules, complete the following fields and click Find to locate a configured item:
 - Branch/Plant
 - Configured Item
 - Rule Type
2. Choose Insert Edit Group, Insert Before, or Insert After from the Row menu.



3. On Assembly Inclusion Edit Group Revisions, complete the following field with *VALUES:

- Values

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

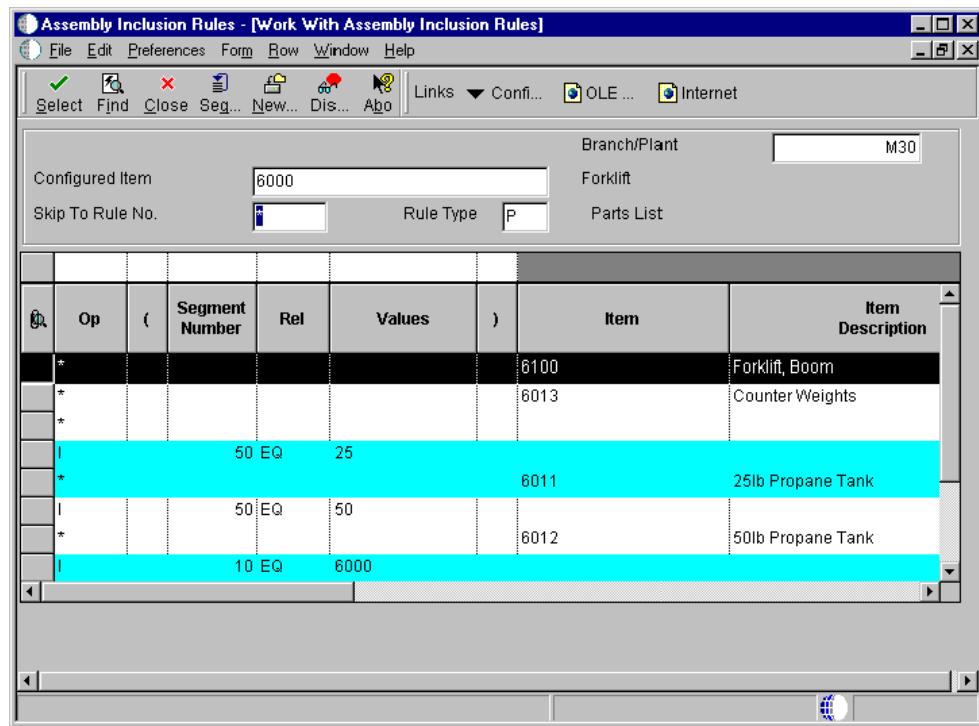


4. On Values Revision, complete the following field and click OK:

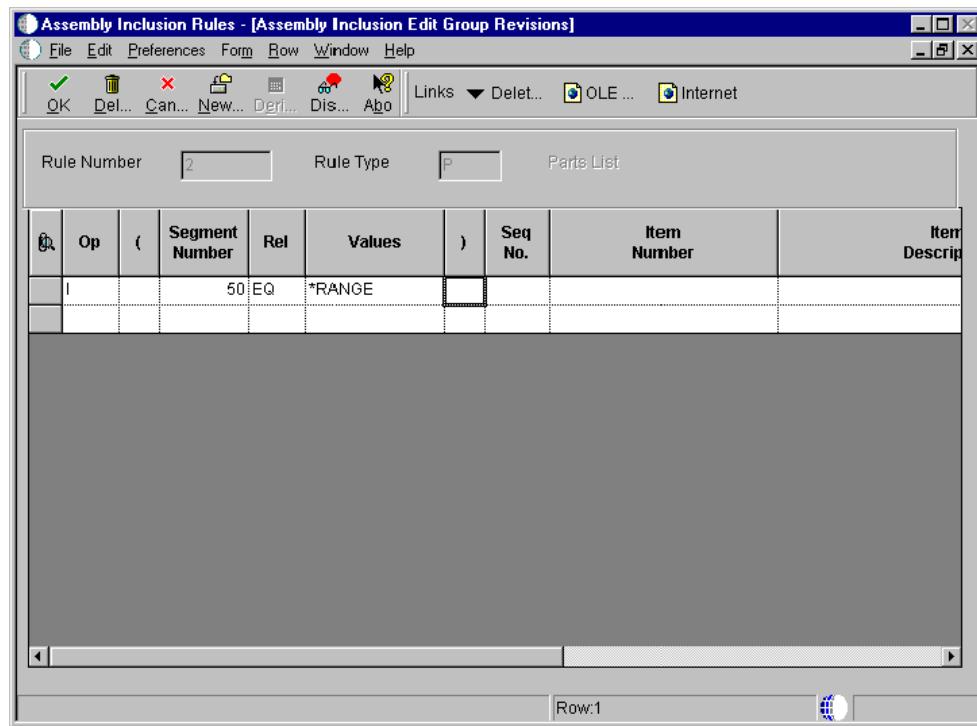
- Values

► **To define ranges**

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



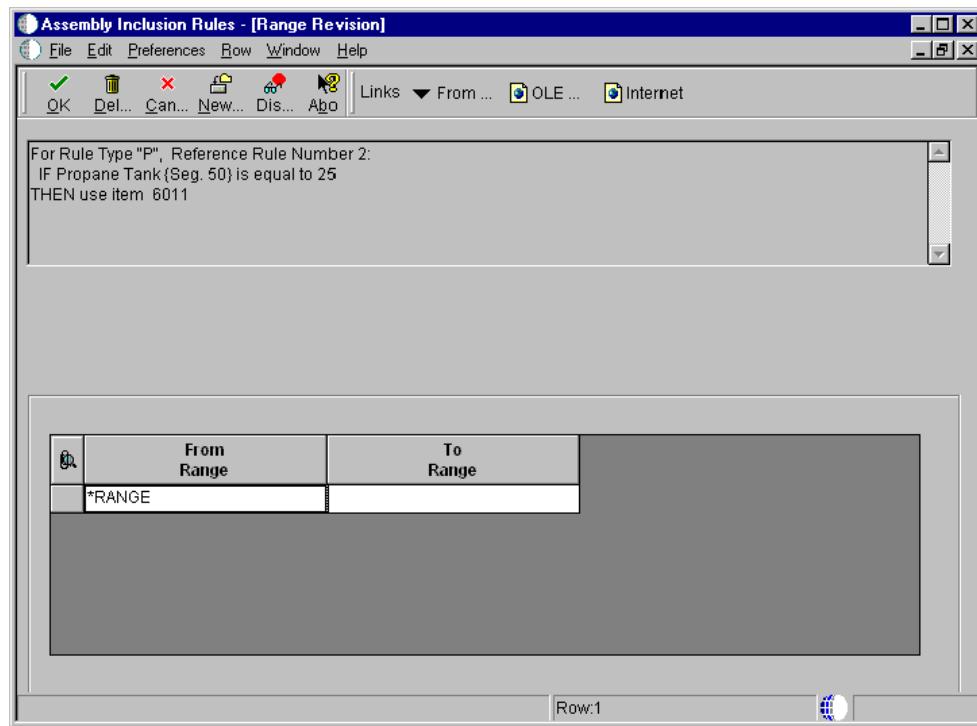
1. On Work With Assembly Inclusion Rules, complete the following fields and click Find to locate a configured item:
 - Branch/Plant
 - Configured Item
 - Rule Type
2. Choose Insert Edit Group, Insert Before, or Insert After from the Row menu.



3. On Assembly Inclusion Edit Group Revisions, complete the following field with *RANGE:

- Values

The system prompts you for range from and to values.

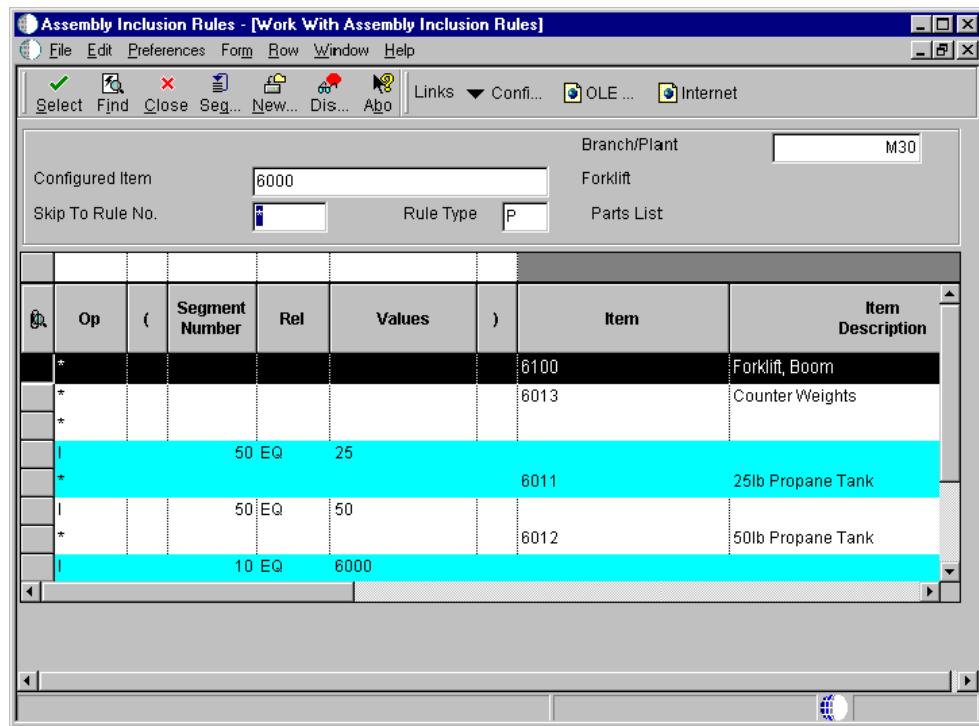


4. On Range Revision, complete the following fields and click OK:

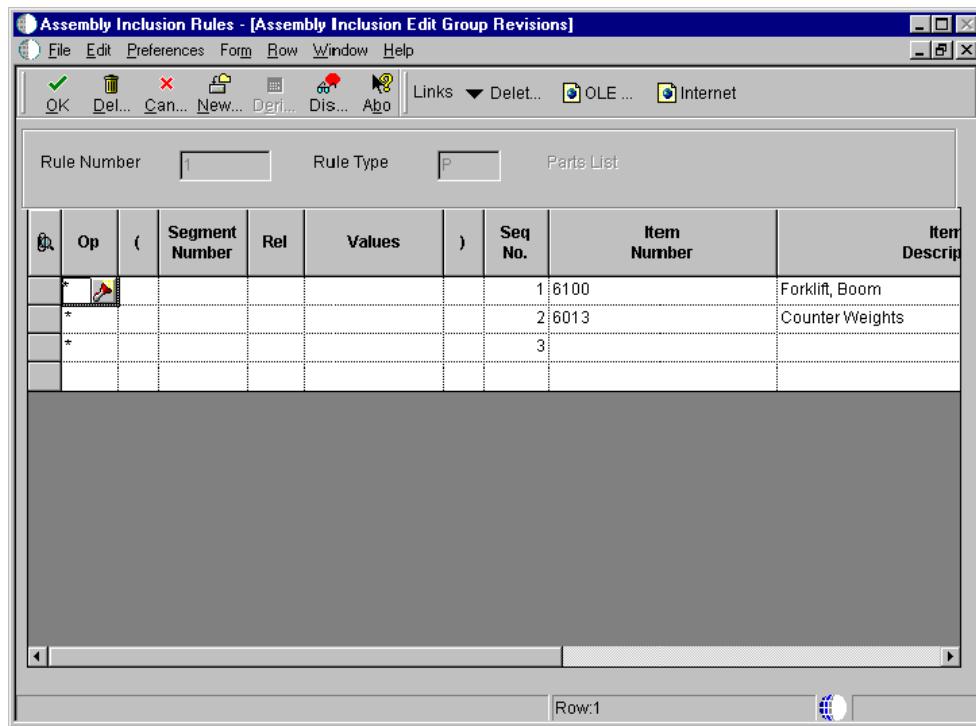
- From Range
- To Range

► **To set up advanced rules**

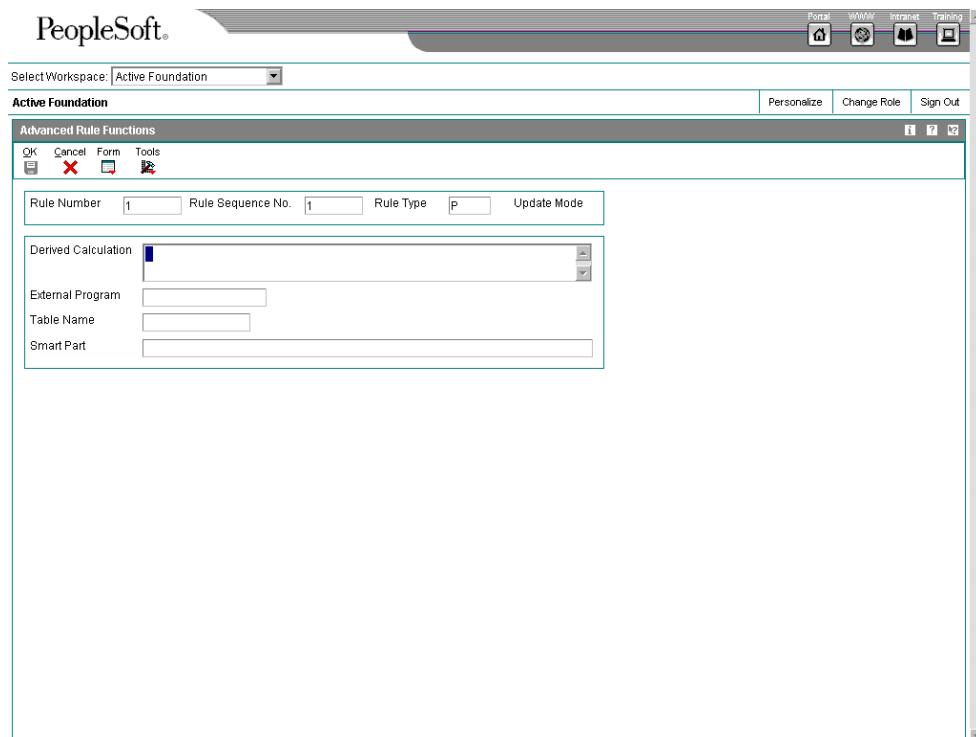
From the Configurator Setup menu (G3241), choose Assembly Inclusion Rules.



1. On Work With Assembly Inclusion Rules, complete the following fields and click Find to locate a configured item:
 - 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.

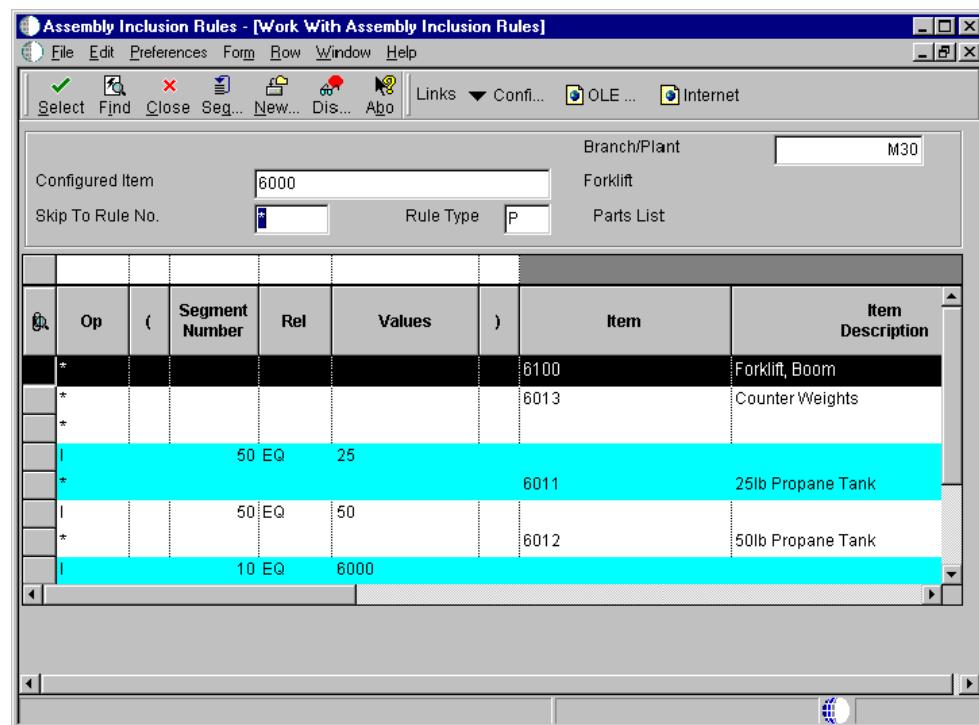


- On Advanced Rule Functions, complete one or more of the following fields and click OK:
 - Derived Calculation
 - External Program
 - Table Name
 - Smart Part

► To copy rules

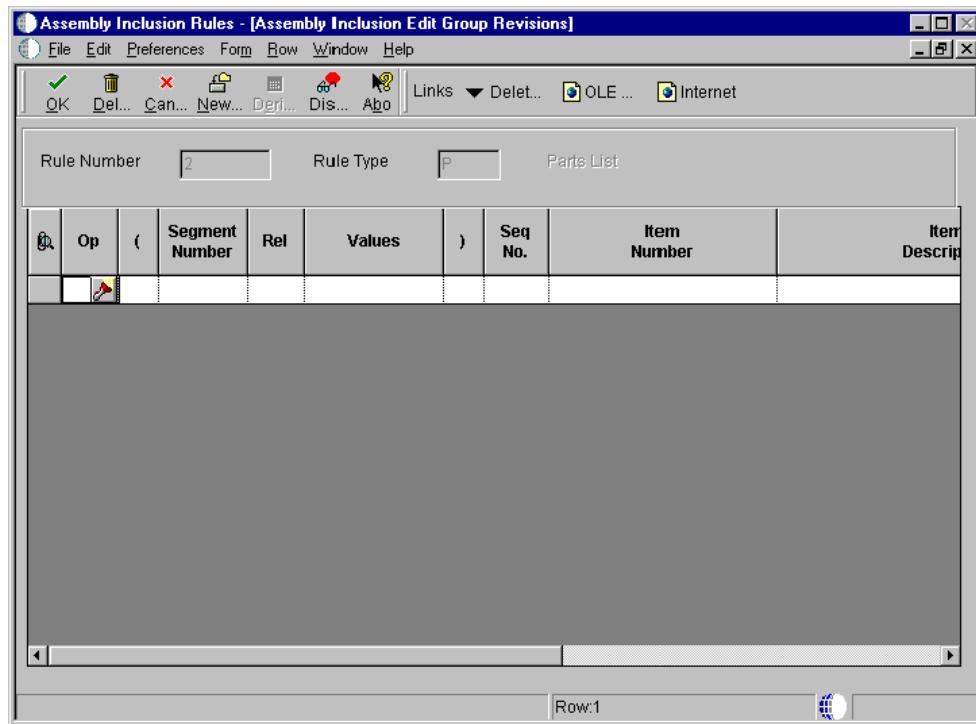
To save time during setup, you can copy an assembly inclusion rule from one configured item to another. To copy the entire configured item, including assembly inclusion rules, see [Copying a Configured Item](#).

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

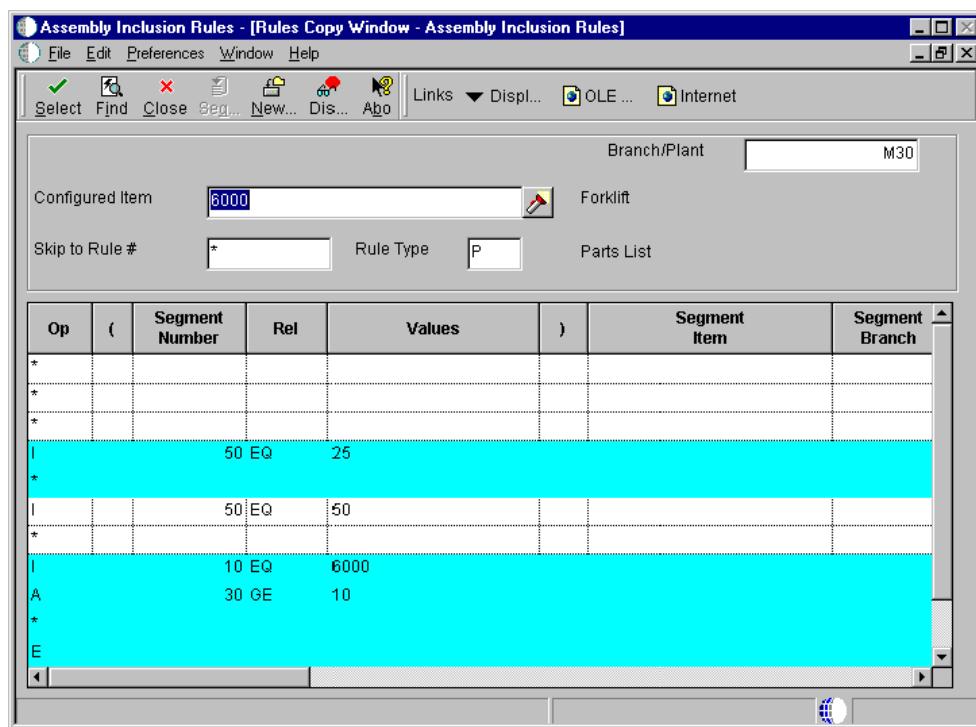


- On Work With Assembly Inclusion Rules, complete the following fields and click Find to locate a configured item:
 - Branch/Plant
 - Configured Item
 - Rule Type

- Choose Insert Edit Group, Insert Before, or Insert After from the Row menu.



- On Assembly Inclusion Edit Group Revisions, select a blank line.
- 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 that 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.

► To locate component information

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

1. On Work With Component Where Used, complete the following fields and click Find to locate a component:
 - Branch/Plant
 - Configurator Rule Type
 - Component Item
2. Review the following fields:
 - Rule Number
 - Rule Sequence
 - Line Type

► To locate segment information

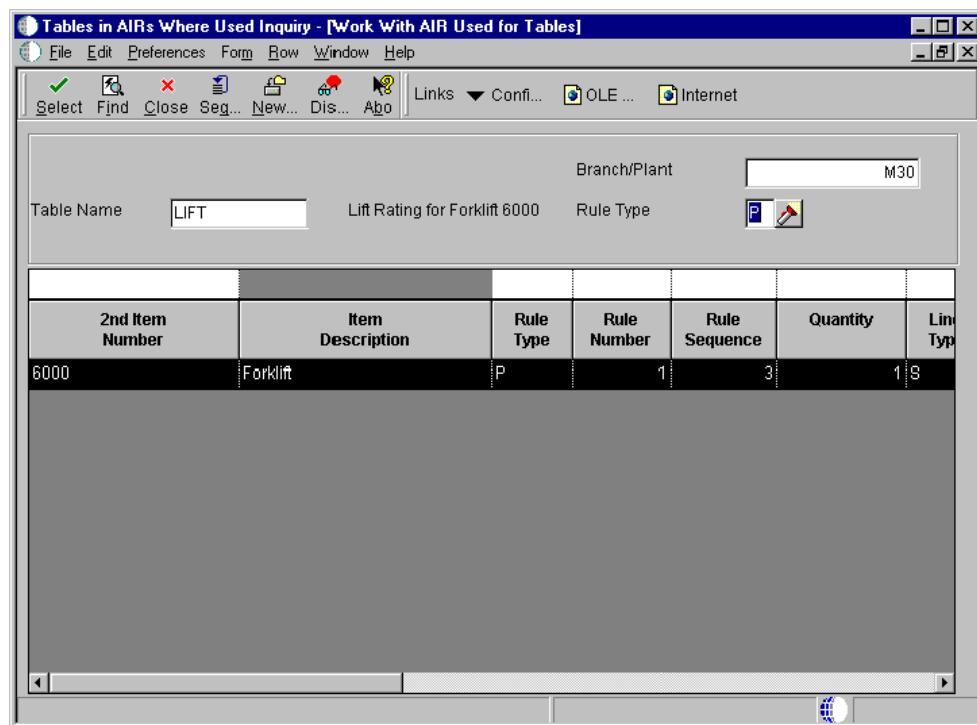
From the Configurator Setup menu (G3241), choose AIR Segment Where Used Inquiry.

1. On Work With AIR Segment Where Used Inquiry, complete the following fields and click Find to locate an assembly inclusion rule:
 - Rule Type
 - Item Number
 - Segment Number
 - Branch/Plant
2. Review the following fields:

- Segment Item
- Segment Branch
- Rule Number
- Sequence Number
- Effective From
- Effective Thru

► **To locate configured table information**

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



1. On Work With AIR Used for Tables, 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.

You can use tables 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.

Defining Table Names

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

P Table (Quantity/Parts)	Defines part tables that can return multiple part numbers. To produce the configured item, P tables return part numbers to the sales order and, eventually, to the work order parts list.
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. Other rule types can then use these values 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.

No table 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 speed data entry by setting a processing option for copying rows of data.

Note

The tables used for rules processing within the Sales Configurator system are not user defined codes.

Before You Begin

- ❑ Define names for the tables that you plan to use. Table names are user defined values and are stored in user defined code table 32/TN. See *Adding a User Defined Code* in the *OneWorld Foundation Guide*.

Setting Up Configured Tables

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

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 that appears 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

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 might 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.

Note

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

► To define dimensions for configured tables

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

1. On Work with Configured Table Definitions, click Add.

PeopleSoft®

Select Workspace: Active Foundation

Active Foundation

Personalize Change Role Sign Out

Rule Table Definition Revisions

Table Rule Type

<input type="radio"/> C Table - Calculated Values	Branch/Plant m30
<input checked="" type="radio"/> P Table - SO Parts List	Effective From Date
<input type="radio"/> Q Table - WO Parts List	Effective Thru Date
<input type="radio"/> X Table - Price Adjustments	
<input type="radio"/> H Table - Hot Spots	

Rules Table Name: lirt

Description:

Number of Segments: 1

Number of Table Values: 1

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:
 - C Table - Calculated Values
 - P Table - SO Parts List
 - Q Table - WO Parts List
 - H Table - Hot Spots
 - X Table - Price Adjustments
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 1.

Linking a Table to a Configured Item

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.

Note

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 for all configured items.

► To link a table to a configured item

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

1. On Work with Configured Item Cross-Reference, complete the following fields and click Add:
 - Branch/Plant
 - Table Type
 - Table Name
 - Configured Item

The screenshot shows the PeopleSoft Configurator Setup interface. The main window title is "Configured Item Cross Reference Revision". The dialog box contains the following fields:

Table Type	P	Part Inclusion Rules	Branch/Plant	M30
Table Name	LIFT			
Configured Item	6000	Forklift		

Below the dialog box is a table with columns: Seg, Description, Segment Item, and Seg Branch. It contains two rows of data:

Seg	Description	Segment Item	Seg Branch
1	11 Forklift Rating		
2	20 Power Type		

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.

Processing Options for Table/Item Cross-Reference (P3282)

Defaults

Defaults for the Work With Cross Reference form.

Default Rule Table Type.

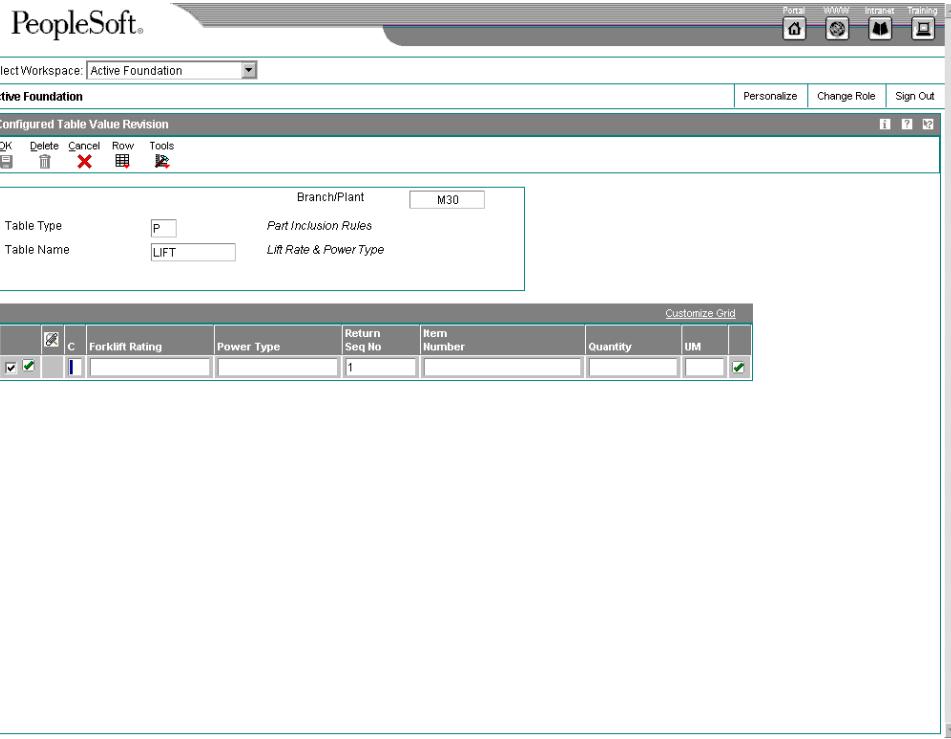
Defining Values for Configured Tables

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

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

1. On Work with Configured Table Values, 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 you defined 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:

- Return Seq No
- Item Number
- Quantity
- UM

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

Note

To speed the setup process, you can use one of two methods to copy rows. The first method is to select a row and then choose Copy row from the Row menu. You can then change the row data as necessary for your table. The second method is to enter 1 in the C field of the row that you want to copy. After you complete the fields in a row and press the Enter key, that

row is copied into the next row. When you no longer want to automatically copy a row, or if you need to make changes, clear the C field.

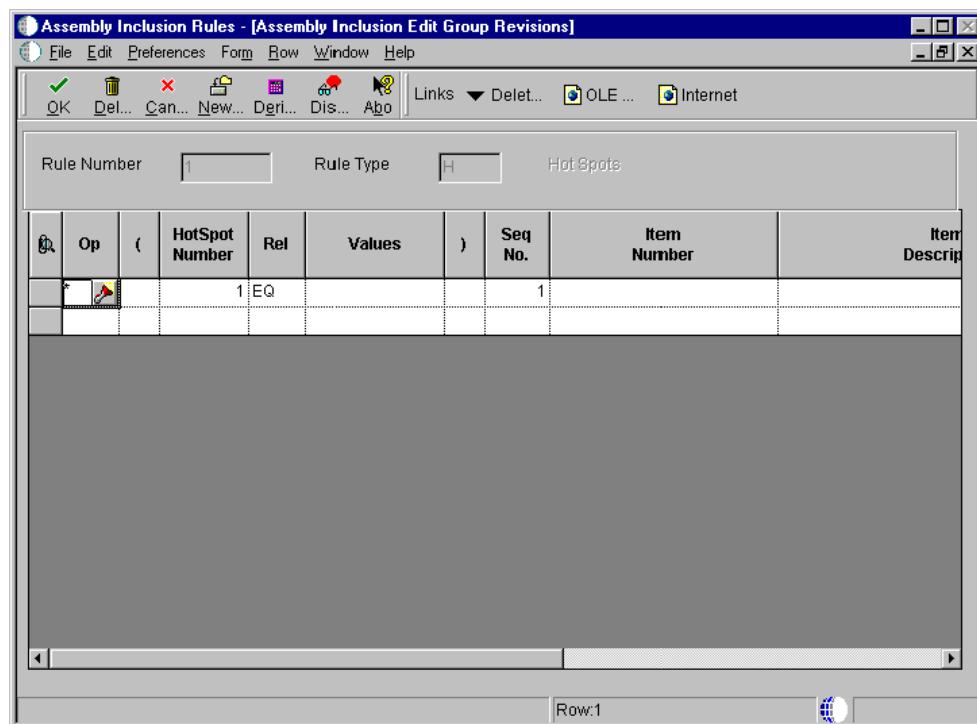
Linking a Table to an Assembly Inclusion Rule

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.

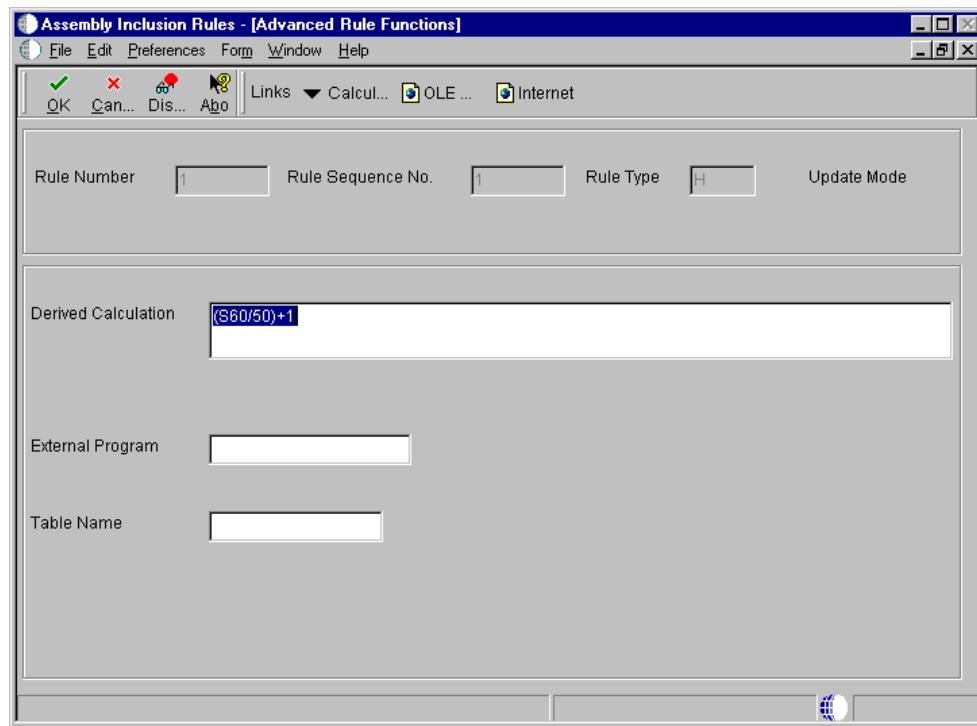
► To link a table to an assembly inclusion rule

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

1. On Work With Assembly Inclusion Rules, complete the following fields and click Find to locate the assembly inclusion rule for your configured item:
 - Branch/Plant
 - Configured Item
 - 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 and click OK:
 - Table Name
5. On Assembly Inclusion Edit Group Revisions, click OK.

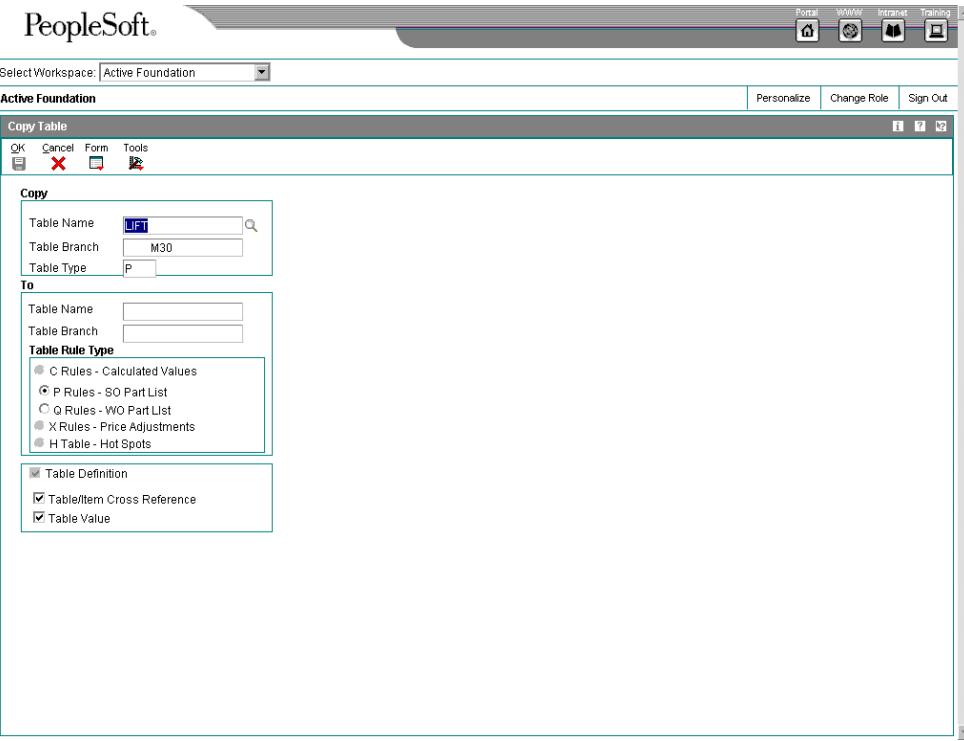
Copying a Configured Item Table

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

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

1. On Work with Configured Table Definitions, complete the following field to locate an existing table:
 - Branch Plant
2. To select the type of Table that 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 applicable options and then click OK:
 - Table Definition
 - Table/Item Cross Reference
 - Table Value

Reviewing a Configured Table

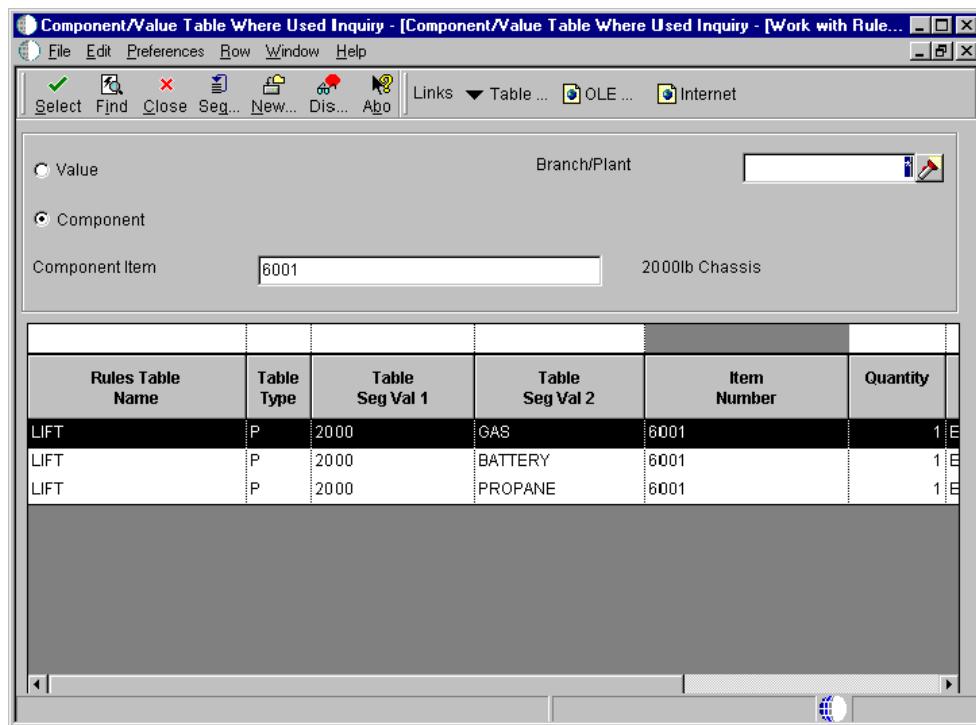
You can search for components or values used within configured tables by using the Component/Value Table Where Used Inquiry. You can search for returned values or for specific components. The system indicates where the values or components exist within your configured tables.

► To review configured tables

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

1. On Work with Rules Table Detail, complete the following fields to search for a component:
 - 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
- Item Number
- Quantity
- UM
- Table Value
- Branch Plant

Printing Table Information

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

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 using 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 no errors exist, 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 gather the various pieces of information from different departments, such as sales, accounting, marketing, and inventory.

See Also

- Working with Detail Information* in the *Sales Order Management Guide*
- Generating a Proposal* in the *Sales Order Management Guide*

Working with Configured Item Sales Orders

After you set up the 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, the Sales Configurator system performs rule checking and processes sales and work orders.

You can view the multilevel 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

Many configured sales order line items can share a common attribute. A common attribute used in a configured item can be set at the start of an order. The chosen value can be applied as the default to each subsequent line item entered. This feature is useful in a high attribute selection and high line item sales order environment. The feature can save time and labor during the sales order entry process. It also prevents unnecessary errors during sales order entry. The common attribute can then be revised in the middle of order entry to accommodate changes in customer specifications.

The Common attribute can be set to automatically prompt at the beginning of sales order entry (between the Sales Order form and the Configured Item Specifications form). It can also be manually selected from a form exit within Configured Item Specifications.

For example, the furniture industry can use common attributes to configure a sofa. In a configuration for a sofa, a common attribute might be Color. The Color common attribute is associated with the segments for the sofa frame, bottom sofa cushions, sofa arm covers, and the decorative pillows. After the customer picks a color, you can input that value in the attribute field on the Common Attribute form. The color is then applied as the answer to all segments that are associated with that particular common attribute.

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

Within the order entry process, you use the calculation feature to process your configured answers as they are entered. The calculation feature expands the multilevel structure of the configured item. This feature 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 when you manually click the Calc button on the tool menu.

During sales order entry, the calculation feature 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 versus optional 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

The Sales Configurator system also calculates the weight of a configured item based on the multilevel 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 entered within sales order entry. You must 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. 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, appear.

Note

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

Technical Considerations

Multicurrency	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: <ul style="list-style-type: none">• Blanket orders• Transfer orders• Drop ship orders

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 the branch/plant record for each configured item. If you leave the processing option blank, the system supplies the line type from the branch/plant.
- Set the processing options for the Sales Configurator system (P32942). Use the Interactive Versions application (GH9011) to define versions and set processing options. Sales Order Entry refers to a version of the Sales Configurator system. These processing options control media objects, cross-segment editing rule processing, form and 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

► To enter a sales order for a configured item

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

1. On Customer Service Inquiry, click Add.

Sales Order Entry - [Sales Order Detail Revisions]

File Edit Preferences Form Row Window Help

OK Cancel New... Discard Abort Links A/B Inf... OLE... Internet

Detail Revisions Line Defaults

Order Number	2533	SO	00200	Branch/Plant	M30
			On Credit Hold per		
Sold To	4242	Capital System		Order Date	7/19/00
Ship To	4242	Capital System		Cust PO	
Currency	USD	Exchange Rate		Base	USD
					<input type="checkbox"/> Foreign

Quantity Ordered	UoM	Item Number	Ln Ty	Unit Price	Extended Price	Branch/ Plant
1	EA	6000	W	0.0000		
			W	0.0000		

Row:1

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

PeopleSoft®

Select Workspace: Active Foundation

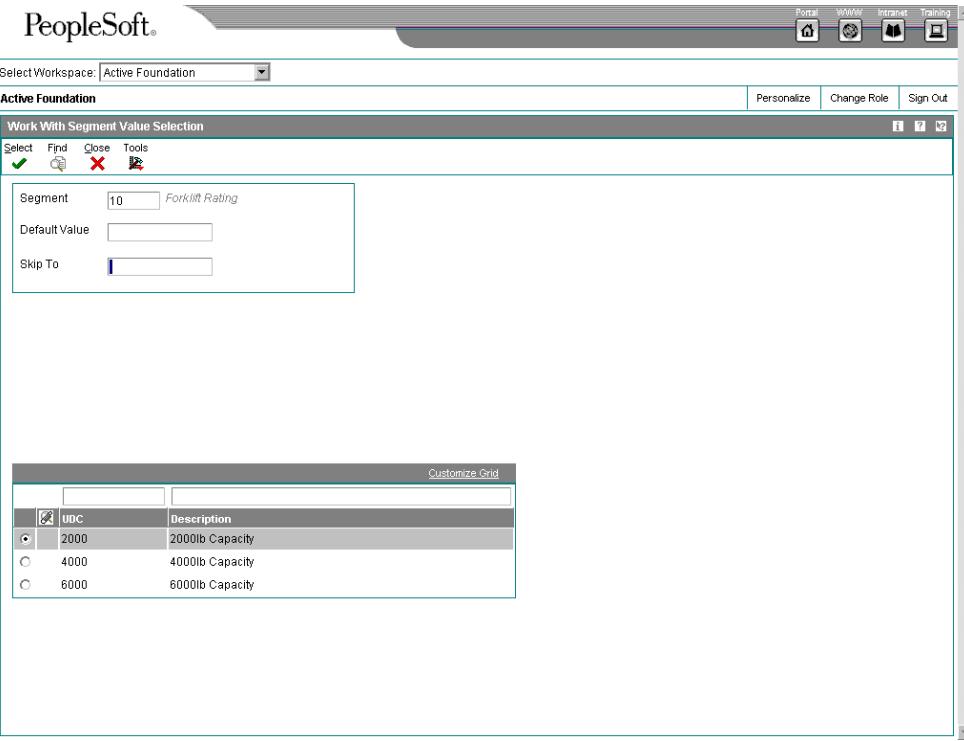
Active Foundation

Configured Item Specifications

Description	Req	Answer	Default Answer	Seg	Code Num (Y/N)	Product Code	Us Cr
<input checked="" type="checkbox"/> Forklift Rating	Req	4000	4000	10 Y	32	LR	
<input type="checkbox"/> Boom Height	Req	10	10	30 Y	32	BH	
<input type="checkbox"/> Power Type	Req	GAS	GAS	20 N	32	PT	
<input type="checkbox"/> Propane Tank	Opt			50 Y	32	TK	
<input type="checkbox"/> Paint	Opt	STD	STD	40 N	32	PA	
<input type="checkbox"/> Interior	Opt			35 N	32	IN	
<input type="checkbox"/> Calculated Counter Weig Calc		2190.106342212		60 Y			
<input type="checkbox"/> Additional fork (spare)	Req	NO	NO	65 N	32	AF	

Text1

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.

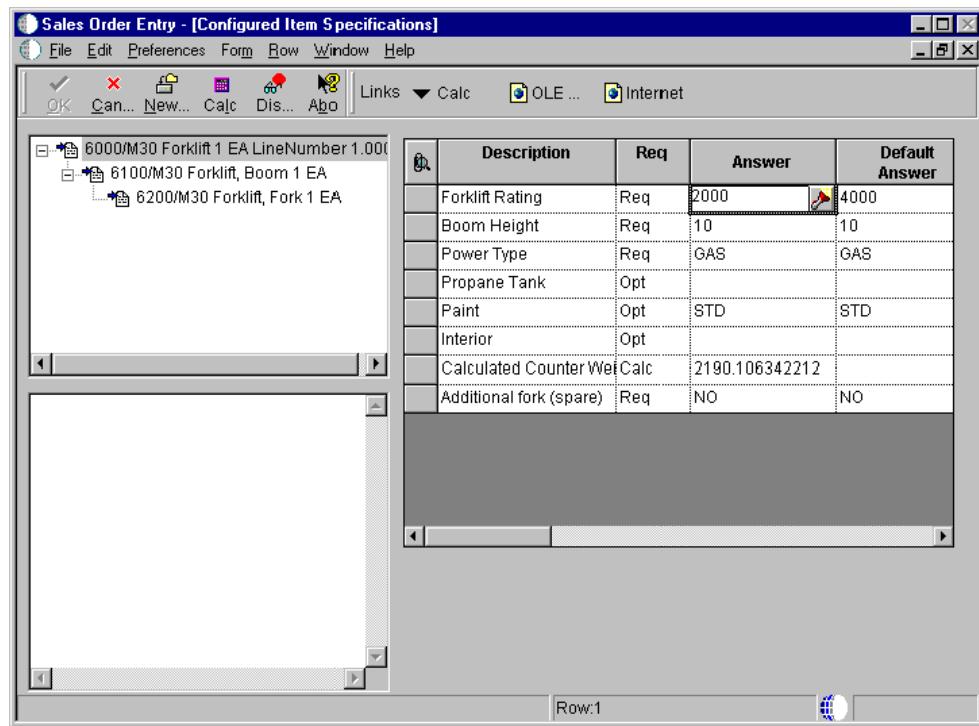


6. On Work With Segment Value Selection, choose a row and click Select.
Repeat this step for every segment that you want to change within your configured item.
 7. When you have finished configuring your item, click the Calc button.
 8. If you do not receive any errors, click OK.
- You cannot complete your sales order until you correct all hard errors. For more information about error messages, see [Working With Error Messages](#).

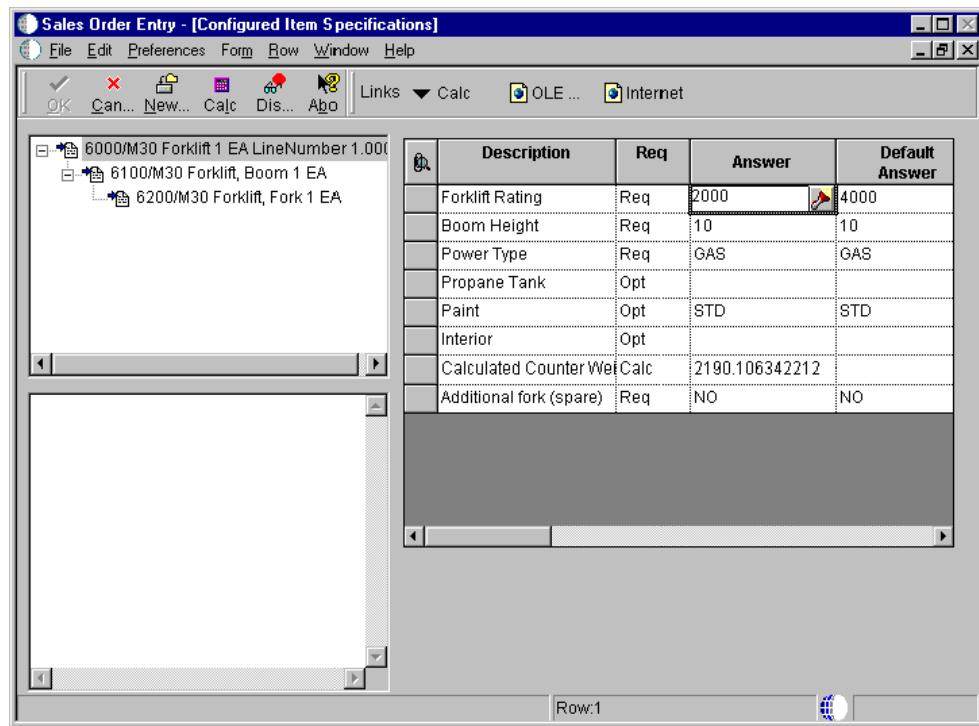
Example: Completed Sales Order

After the calculation has processed successfully, the Sales Order Entry form displays 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.

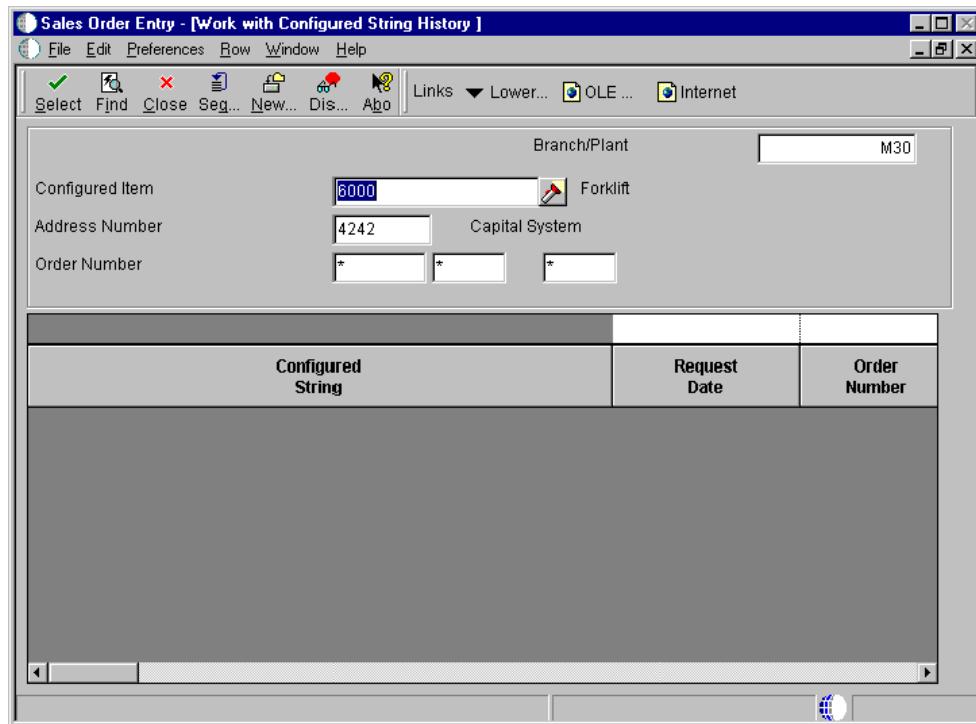
Within the tree structure of your configured item, the form also displays icons that indicate by level that the configuration agrees with cross-segment editing rules.



► To enter a sales order for a previously-ordered configured item



1. On Configured Item Specifications, 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.

Note

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

See Also

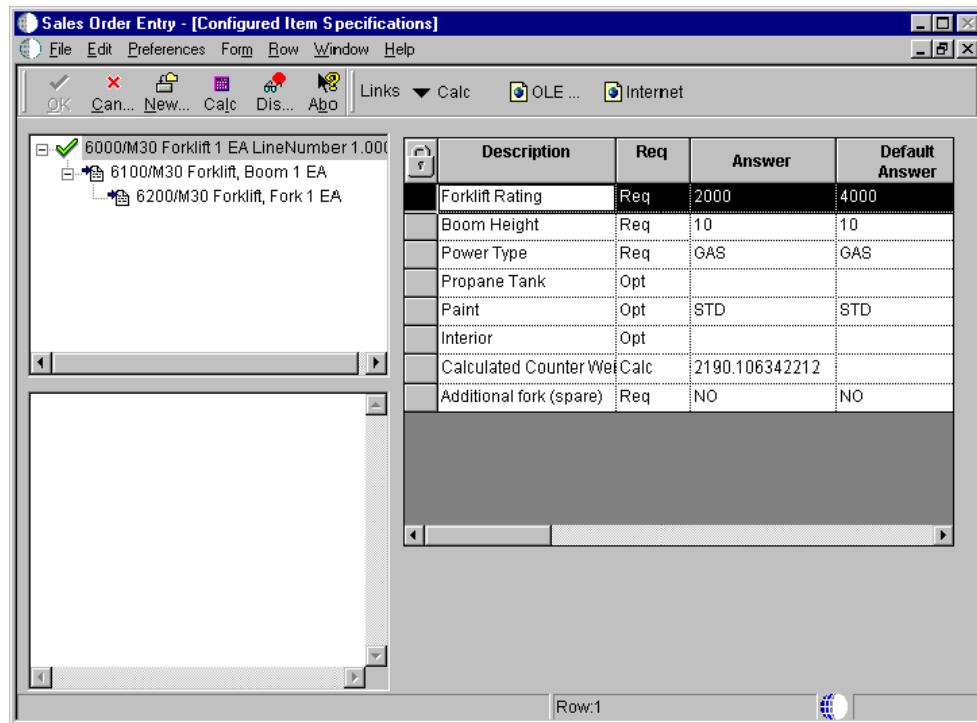
- Working With Preferences* in the *Sales Order Management Guide* for more information about preference profiles

Reviewing a Sales Order for a Configured Item

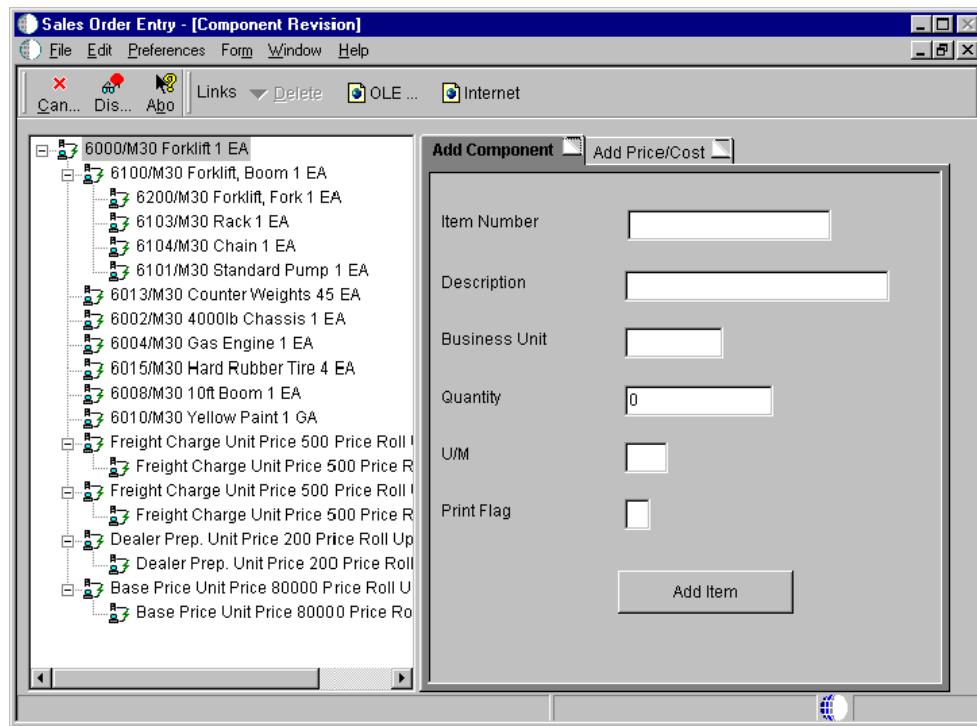
After you enter a sales order, you can review the multilevel structure of your configured item in a tree structure format.

► To review a sales order for a configured item

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



1. On Configured Item Specifications, choose Component Revision from the Form menu.



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.
5. 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 price method code for the configured parent item. Price or cost adjustments are similar to the X assembly inclusion rules that are set up for the configured item. They affect only the sales order, not the work order.

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

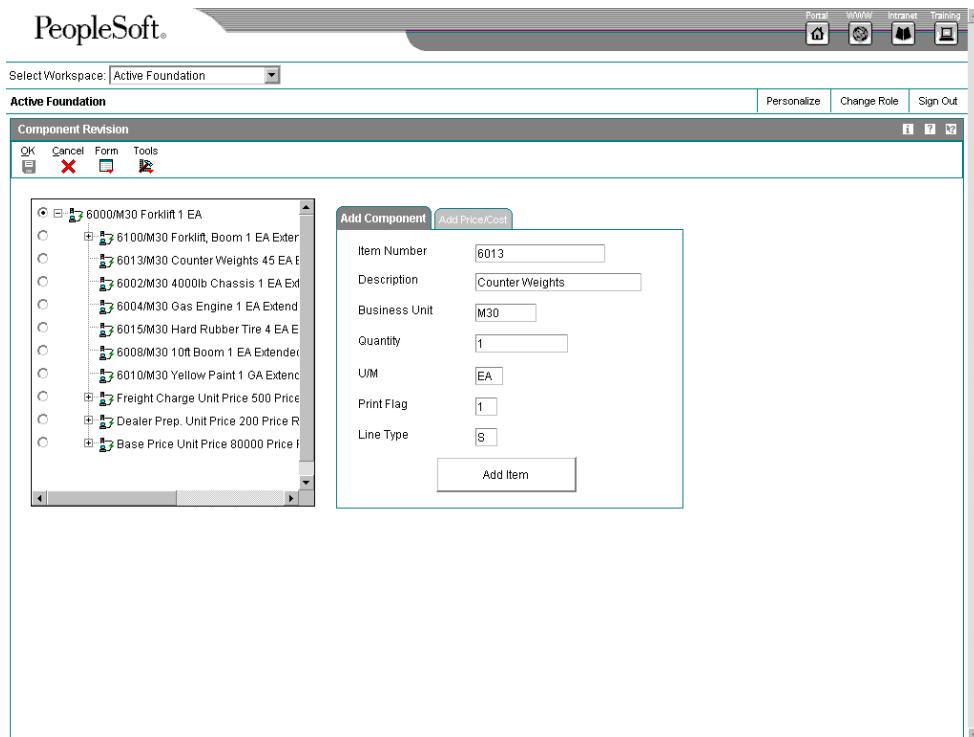
► To add nonstandard components or price adjustments

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

1. On Customer Service Inquiry, 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 Revision, click the Add Component tab.



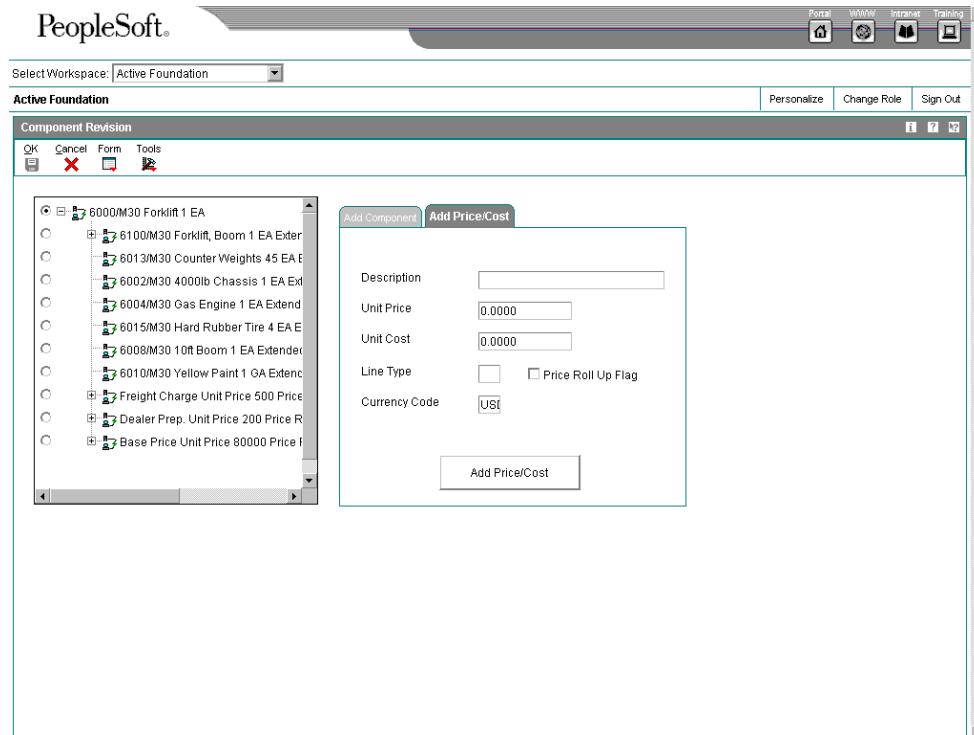
5. On the Add Component tab, complete the following fields with segment information:
 - Item Number
 - Description
 - Business Unit
 - Quantity

- 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 Form menu.

Note

You can delete nonstandard components or price adjustments for your configured parent item. You cannot delete standard components and price adjustments. A nonstandard segment can be distinguished from a standard configured segment by the icon that precedes it on the tree display on the Component Revision form.

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. You assign common attributes assigned on the Configurator Common Attributes form.

Common attribute values operate as default answers for each configuration level. For example, a common attribute code defined as color might have a value Red. With common attributes activated, each configured level with the common attribute code of color automatically returns 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.

Before You Begin

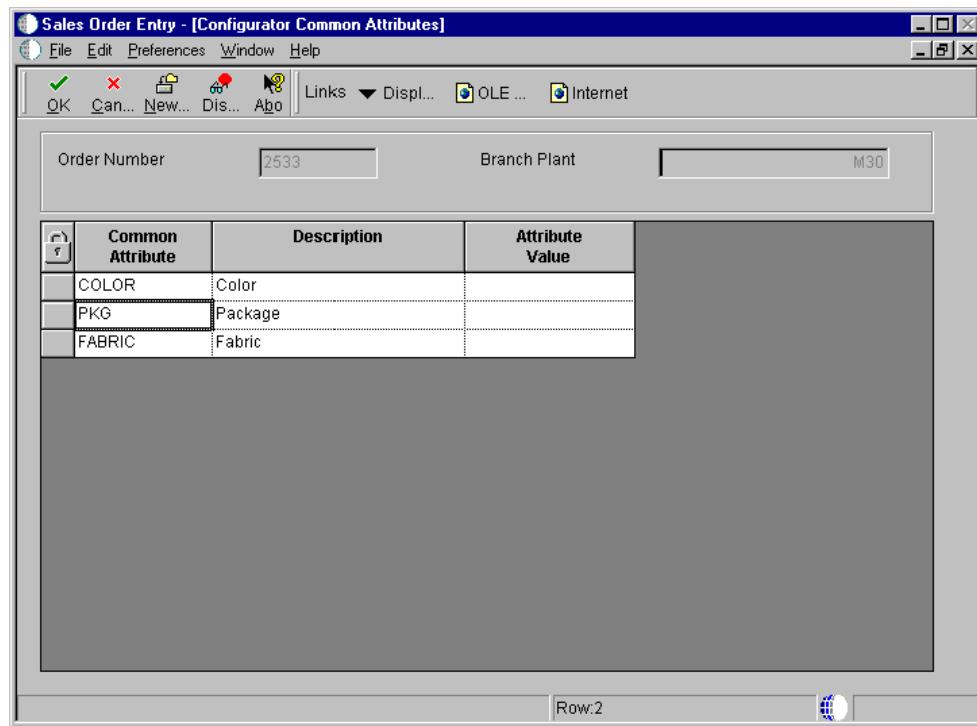
- Set the processing option for Configured Item Specifications (P32942) to automatically prompt for the display of common attributes.

► To assign common attributes to configured items

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

1. On Customer Service Inquiry, 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

Because you set the processing options for Configured Item Specifications to automatically display common attributes, the Configurator Common Attributes form appears.



3. On Configurator Common Attributes, complete the following fields and click OK:

- Common Attribute
- Description
- Attribute Value

When you click OK, the Configured Item Specifications form appears, and you can continue to enter the sales order.

Working with Error Messages

During the calculation process within sales order entry, the system verifies the segment values that you enter with 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.

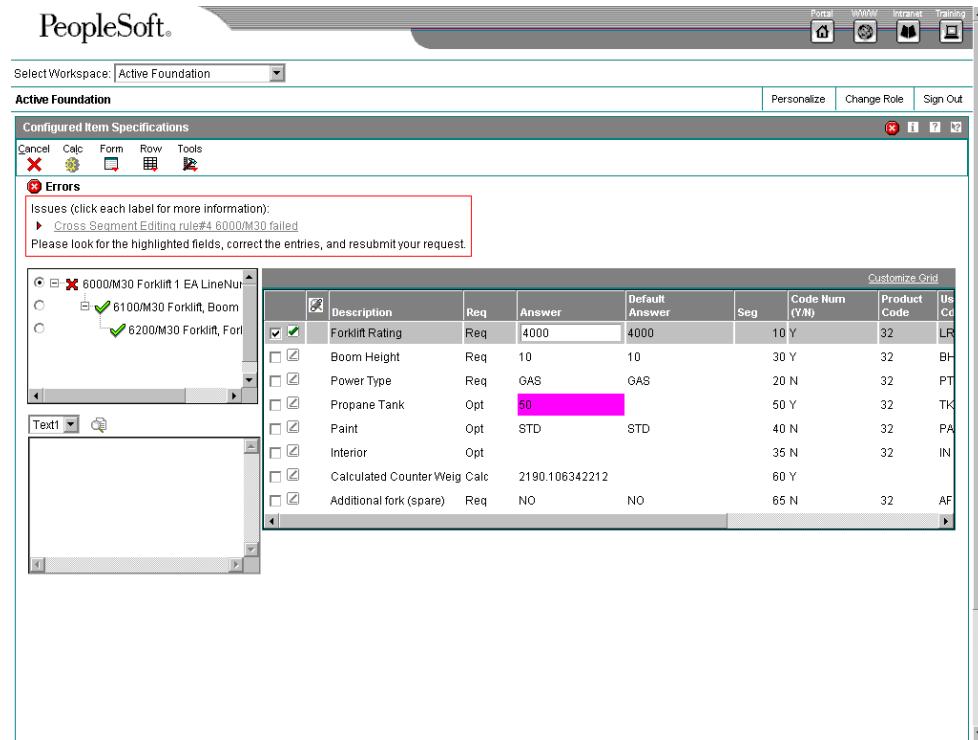
Hard error messages indicate significant errors from cross-segment error checking. When you receive a hard error message, you cannot proceed with the sales order until you correct the error.

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 it is, and the sales order processes either way.

If the system finds errors in cross-segment editing rules, you receive notification that error messages exist after the calculation processes.

► To work with error messages

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



1. On Configured Item Specifications, click the Display Errors button to view your cross-segment editing error.
2. To change segments, click the Answer field.
3. On Work with Segment Value Selection, choose a row and click Select.
4. On Configured Item Specifications, click the Calc button to verify that the error has been corrected.
5. Click OK.

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 in the same way in which you enter a sales order, except that you set a processing option that sets the document type for sales quotes.

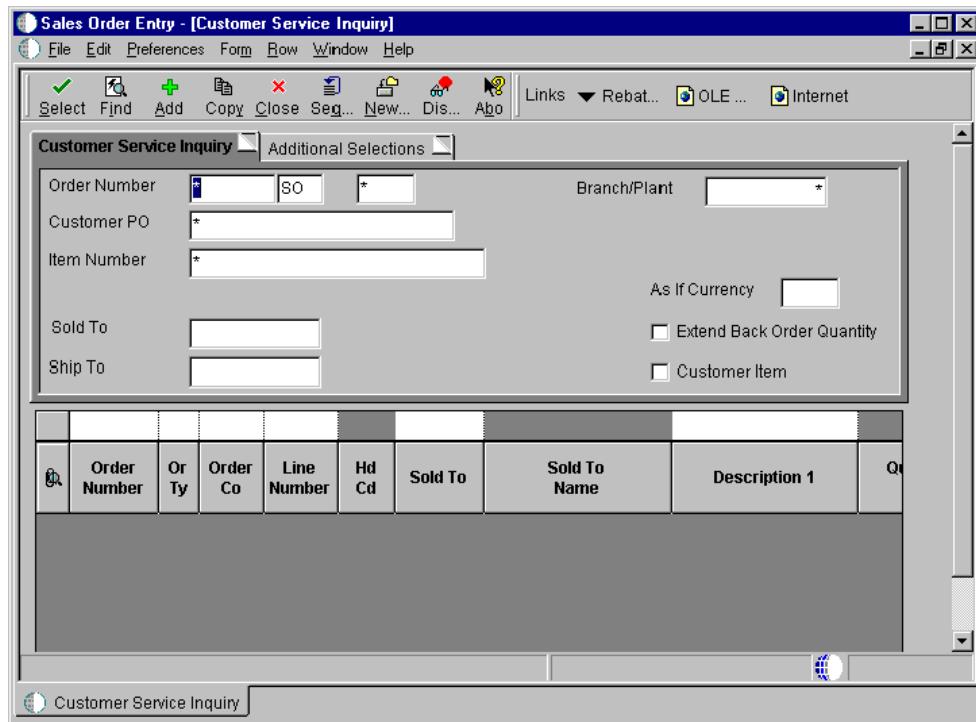
Before You Begin

- Set the order type processing option to SQ.

- Set the duplication order type to a nonquote document type.
- Specify the document type for sales quotes in the Document Type List field in Configurator Constants.
- Turn on the Cost Sales Quote option 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 turn on this option, costing is performed only by the Work Order Processing program, based on R, Q or P rules.

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

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



1. On Customer Service Inquiry, 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

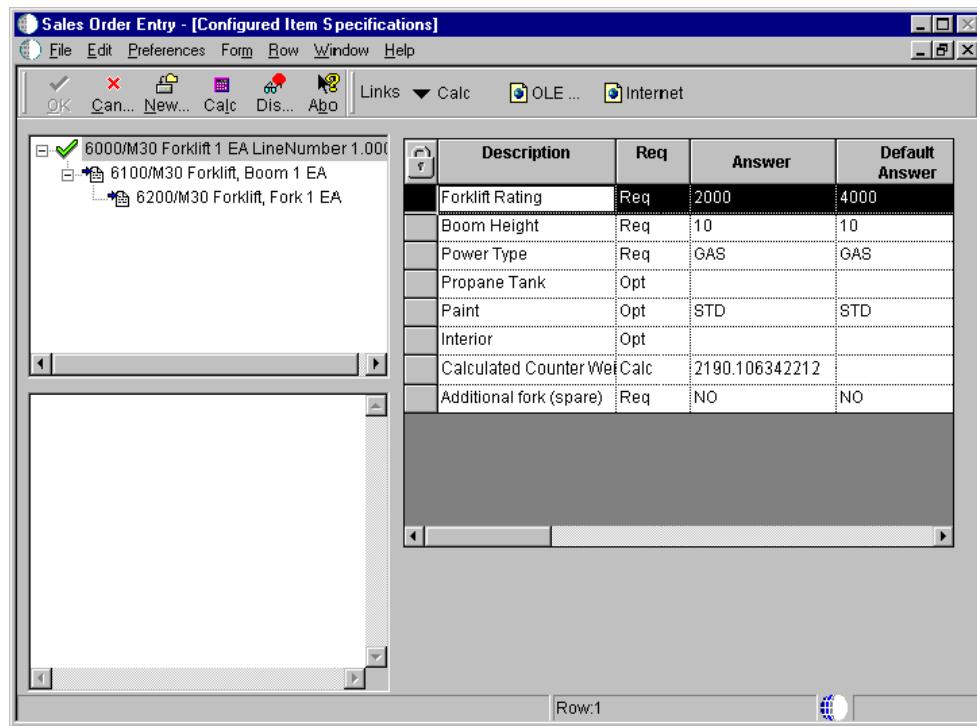
From the Daily Processing menu (G32), choose Sales Order Entry.

1. On Customer Service Inquiry, locate and select the sales order for the configured item and then click Select.

The screenshot shows the 'Sales Order Entry - [Sales Order Detail Revisions]' application window. At the top, there are tabs for 'Detail Revisions' and 'Line Defaults'. The main area contains several input fields: 'Order Number' (2401), 'Branch/Plant' (M30), 'On Credit Hold per' (checkbox), 'Sold To' (4242), 'Capital System', 'Order Date' (6/10/05), 'Ship To' (4242), 'Capital System', 'Cust PO' (checkbox), 'Currency' (USD), 'Exchange Rate' (empty), 'Base' (USD), and 'Foreign' (checkbox). Below these fields is a large table titled 'Detail Revisions' with the following data:

Quantity Ordered	UoM	Item Number	Ln Ty	Unit Price	Extended Price	Branch/ Plant
134	EA	220	S	650.0000	87,100.00	M30
50	EA	210	S	798.0000	39,900.00	M30
80	EA	220	S	650.0000	52,000.00	M30
230	EA	210	S	798.0000	183,540.00	M30
74	EA	220	S	650.0000	48,100.00	M30
250	EA	210	S	798.0000	199,500.00	M30
60	EA	220	S	650.0000	39,000.00	M30
45	EA	220	S	650.0000	29,250.00	M30
			W	0.0000		

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 might produce new configured components or prices. You might need to run work order processing again.
Changing pick date	The system recalculates work order start dates based on lead times. When you change the pick date for a sales order, the system supports multilevel back-scheduling for the associated work orders.
Purging sales order lines	The system purges sales order lines for components that are no longer required after the change.
Calculating new sales order line numbers	The system uses the base line number for the configured item 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 might cancel work orders that are no longer required after the change by changing the status code of the work order.
Changing the work order cutoff status code	<p>When working with the 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.</p> <p>If the work order status is greater than or equal to the cutoff status, the system does not change the work order. If the change status code is not blank, the work order status is updated to what you defined in the processing option.</p>
Placing the sales order on hold (hold status code)	<p>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.</p> <p>If the work order status is greater than or equal to the cutoff status, the system does not update the work order.</p>
Cancelling the sales order (cancel status code)	<p>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.</p> <p>If the work order status is greater than or equal to the cutoff status, the system does not update the work order.</p>
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 the following:

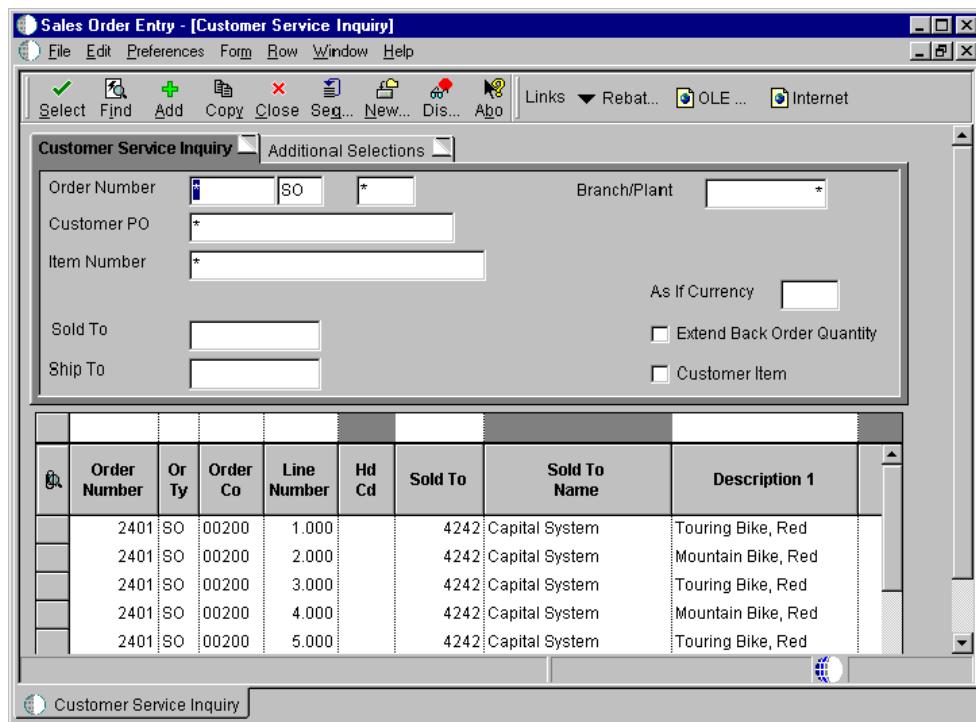
- Part number of the configured parent
- Segment number
- Segment description
- Segment value
- Description of the associated user defined code table value

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

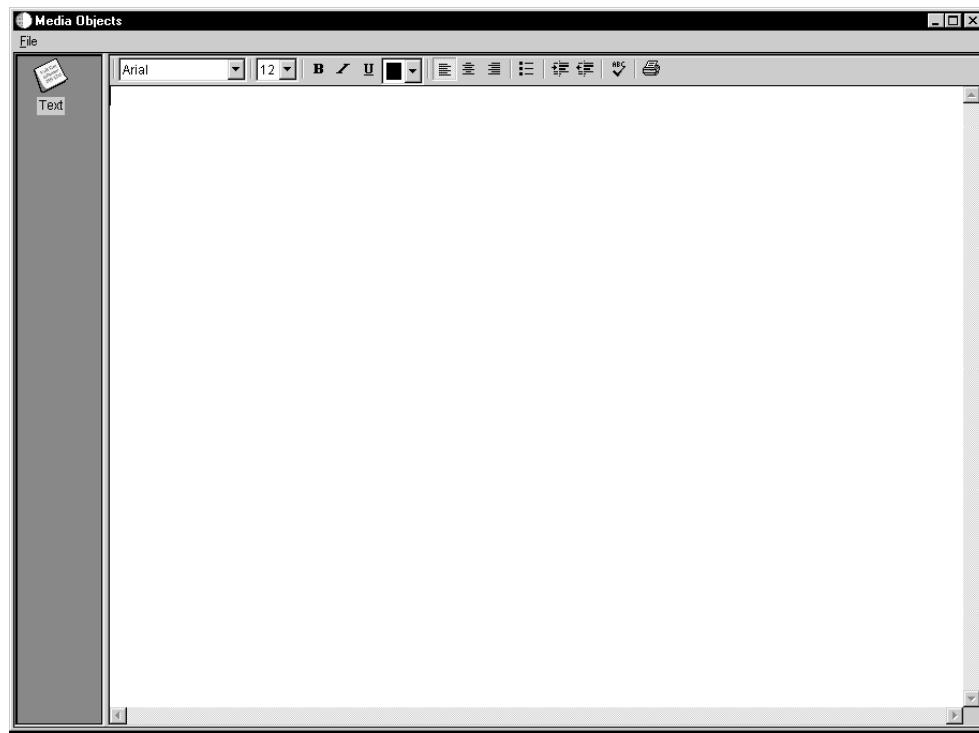
► To review configured text

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

1. On Customer Service Inquiry, complete the following field and click Find to locate a sales order for the configured item:
 - Item Number



2. Select an order in the detail area.
3. From the Row menu, choose Order.
4. From the Order drop-down list, choose Attachments and then Detail Attachments.



5. 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 for Configured Item Specifications (P32942)

Defaults Tab

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

Hot Spots:**1. Hot Spot Selection (Top)**

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. Hot Spot Selection (Middle)

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.

3. Hot Spot Selection (Bottom)

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.

User Added Items:

4. 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.

User Added Price/Cost:

5. 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 specify how the system processes and displays values within Configured Item Specifications (P32942).

Cross Segment Editing:

1. 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.

Component Revision:

2. 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.

Media Objects:

3. 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.

4. Media Object Display Order

- '1' - Text
- '2' - Image
- '3' - OLE

If left blank, '2' will be used

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

Configured Item Tree Display:

5. 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.

1 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.

1 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.

8. 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.

9. 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.

10. Component Revision Price

'1' = Suppress

'2' = Foreign only

'3' = Order Mode

'4' = Both Domestic and Foreign

Blank - Domestic only

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.

11. Component Revision Cost

'1' = Suppress

'2' = Foreign only

'3' = Order Mode

'4' = Both Domestic and Foreign

Blank – Domestic only

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.
 - 1 Display the foreign cost only.
 - 1 Display the order mode cost only.
 - 1 Display both the domestic and foreign costs.
- Blank Display the domestic cost only.

12. 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.

Price/Cost on Tree:**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. Common Attribute Display

'1' - On, No Automatic Prompt

'2' - On, Automatic Prompt

Blank - Off

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.

18. Common Attribute Display Scope

'1' – Display all Common Attributes

Blank – Display active Common Attributes

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.

19. 'C' Rules Calculation

'1' – Omit upon entry

Blank – Perform upon entry

Use this processing option to specify whether to perform calculations using C rules for configured items upon entry. Valid values are:

Blank Perform upon entry

1 Omit upon entry

20. Substitute Configured Item Text

'1' - Substitute all existing text

Blank - Append existing text

Note: Store and Forward mode disregards this option (always replaces text)

Use this processing option to specify whether to substitute Configured Item

Text (which exists as a media object) or to append it. Valid values are:

Blank Append existing text

1 Substitute all existing text

Understanding Partial Shipments for Configured Items

OneWorld allows you to ship part of an order quantity for configured items so that you can do the following:

- Ship configured items as they are completed
- Reduce inventory handling costs
- Receive payments for shipped quantities of the order

Sales orders for configured items can often have large order quantities, including parts and subassemblies. Typically, as configured items (and their components) are completed, they remain in inventory until the entire order is complete. However, by shipping partial quantities of configured items as they are completed, you can effectively manage inventory and reduce handling costs, and you can periodically bill for the quantity completed instead of waiting for the entire order to be completed.

Note

The back-order feature is not available when shipping partial quantities of a configured item.

Shipping a Partial Order Quantity of a Configured Item

When a customer orders a quantity of configured items, you can ship less than the total order quantity as you manufacture the items. For example, a customer might order a large quantity of personal computers. As you complete the computers, you can make multiple shipments of the personal computers until you complete the original order.

The following table illustrates a typical sequence of events that you can follow to ship a partial quantity of a configured item.

Sales Order Entry (P4210)	You enter a sales order for a configured item. The system creates related work orders when the order line type is W. See Entering a Sales Order for a Configured Item for information about entering a sales order.
Order Processing (R31410)	You run the Order Processing program. The system attaches parts lists and routings for all related work orders. See Processing Work Orders for information about creating parts lists and routings for work orders for configured items.
Work Order Inventory Issues (P31113)	You issue parts for the work orders that are associated with a configured item, beginning at the lowest level work order. If the configured item consists of nested configured items, such as the forklift (item 6000) in the demo data, the sequence is as follows: <ul style="list-style-type: none"> • Issue and then complete the work order for the fork (item 6200) • Issue and then complete the work order for the boom assembly (item 6100) • Issue and then complete the work order for the forklift (item 6000) See Issuing Material in the <i>Shop Floor Management Guide</i> for information about issuing parts for work orders.
Work Order Completions (P31114)	You create the inventory is created in this step. For an order of configured items that is not shipped until the entire order quantity is complete, a scenario like the one illustrated with the forklift is typical. For a partial shipment, Work Order Completions is the first opportunity to split the sales order. When partially completing a work order for a configured item, the related sales order lines are also split through work order completions. For example, if the original quantity on the sales order for a configured item is ten, but only six are complete, the related sales order line is split into two lines to show the partial quantity that is complete (ready for shipment) on one line and the rest of the quantity that is not yet complete on another line. For each order quantity of a configured item that you complete, you must assign a lot or location. When you ship partial quantities, you can assign each partial quantity of the original order to a different lot or location.
Note	
Splitting the sales order from Work Order Completions does not prevent you from further splitting the sales order from Ship Confirm. See Completing Discrete Work Orders and Completing Partial Quantities on Work Orders in the <i>Shop Floor Management Guide</i> for information about how to complete a work order.	
Print Pick Slips (R42520)	You run the Print Pick Slips program for the appropriate work orders. The system prints a pick list for warehouse workers to use when they pull the order. See Working with Picking Documents in the <i>Sales Order Management Guide</i> for information about how to print pick slips.

Shipment Confirmation (P4205)	<p>Continuing the partial completion scenario above (six of ten items are complete), you might choose to ship all six of the completed items, or you might choose to ship only some of them. If you choose to ship all six, the sales order displays two sets of lines for the configured item. One line is for the six items that are complete. The completed items have a new status and line number. The completed items are also hard-committed to the lot number assigned to them on Work Order Completions. The other line is for the four items that are not yet complete. These items remain at the same status and line number. They do not have a lot number assigned to them. If you select the first line and ship the entire quantity (six) of completed items on that line, then that line is finished. You have completed a partial shipment.</p> <p>If you choose to ship only some of the six completed items, you can use Shipment Confirmation to designate, by lot or location, which items you shipped. Just as you use Work Order Completions to designate which items are complete, you can use Shipment Confirmation to designate which of the completed items have been shipped to the customer. The sales order displays three sets of lines for the configured item: one line for the items that are complete and shipped, one line for items that are complete but not shipped, and one line for the items that are not complete. You can continue to split the shipment as many times as necessary to meet your business needs.</p> <p>When you ship a partial quantity of a configured item, the system maintains the relationships of the configured item's components to their parent. The components become text line types and are included in the parent configured item. These text lines do not appear on Shipment Confirmation. Miscellaneous line types, such as freight charges, also do not appear on Ship Confirm.</p> <p>See Working with Shipments in the <i>Sales Order Management Guide</i> for more information.</p>
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Shipping a Partial Order Quantity of Components

In addition to shipping a partial quantity of completed configured items, you can also ship partial quantities of components. You can ship partial quantities of only those components for which the parent does not generate a work order to complete (S line type).

For example, a customer might order a large number of personal computers that include a monitor, CPU with preloaded software, keyboard, mouse, and cabling. To begin the transition from the old to the new personal computers, the customer might request that you ship the CPUs and the software prior to the rest of the components so that the customer can install the software and set up the CPUs before actually assembling the personal computers.

In this scenario, you can ship all or a part of the CPUs and software (components) separately from the personal computers (parent configured items). You can override the quantity to be shipped for the CPUs and software, and disassociate them from the parent configured item. The CPU becomes a new parent, and the software remains a child of the CPU, but both are disassociated from the personal computer. You must manage, track, and ship any remaining quantities of the CPUs and software separately from the personal computers until you have shipped the entire order quantity on the original sales order.

Understanding Duplicate Components

You can add multiple instances of a configured component item to a configured parent item. Each new instance of the component can be configured uniquely or be an exact copy of an instance of the component that you previously configured. You can use a single part number

to represent the various configurations of a component item, thus reducing the number of part numbers that you must manage.

To include multiple instances of a configured component item in a parent item, you add the appropriate P-type assembly inclusion rules to the parent item. You can include multiple instances of the configured component item to the configured parent item with unconditional or conditional rules, depending on your business needs.

Whether multiple instances of the configured component item are included as part of the default configuration (using unconditional rules) or as part of a subsequent configuration (using conditional rules), each instance can be configured differently, but have the same part number. Using a single part number allows you to set up all the associated segments, assembly inclusion rules, and cross-segment editing rules for a single item, and then customize various configurations for that item.

See Also

- Setting Up Assembly Inclusion Rules* for more information about P rules

Example: Duplicate Components

The following cabinet can be configured with two or three drawers, depending on the height of the cabinet:

- * body (unconditionally add a configurable cabinet body to the configuration)
- * drawer (unconditionally add a configurable drawer to the configuration)
- * drawer (unconditionally add a configurable drawer to the configuration)
- I height = 36 * drawer (if the height of the cabinet is 36 inches, add a third configurable drawer to the configuration)

Each instance of the drawer in this example can be configured differently but have the same part number.

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 to your server. If you are at a remote site and do not have a dedicated line with which to access the server, a more productive and cost-effective might be 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.

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 File table (F0041Z1).

For configured items, the system performs the following task:

- Stores segments in the Configurator Batch 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 Header File table (F4201) and the Sales Order Detail File table (F4211)
- Stores configured string history information on the PC
- Stores configurator information in a variety of S/32 files, such as F32943, F3296, F32961, F329611, and 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 Sales Order Header File table (F4201) and the detail information to the Sales Order Detail File table (F4211). Configuration information is stored in the Configurator Batch 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 the sales order entry.

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

Note

You can add nonstandard components and price adjustments using store and forward sales order entry for configured items.

Industry Example

The Industrial Fabrication and Assembly (IFA) industry is moving toward a to-order/postponement environment whereby standard configurations are built and inventoried, and then customized at the last possible point in the manufacturing process. Store and forward, used with Configurator, allows sales representatives to work with the client on-site and transfer the data later.

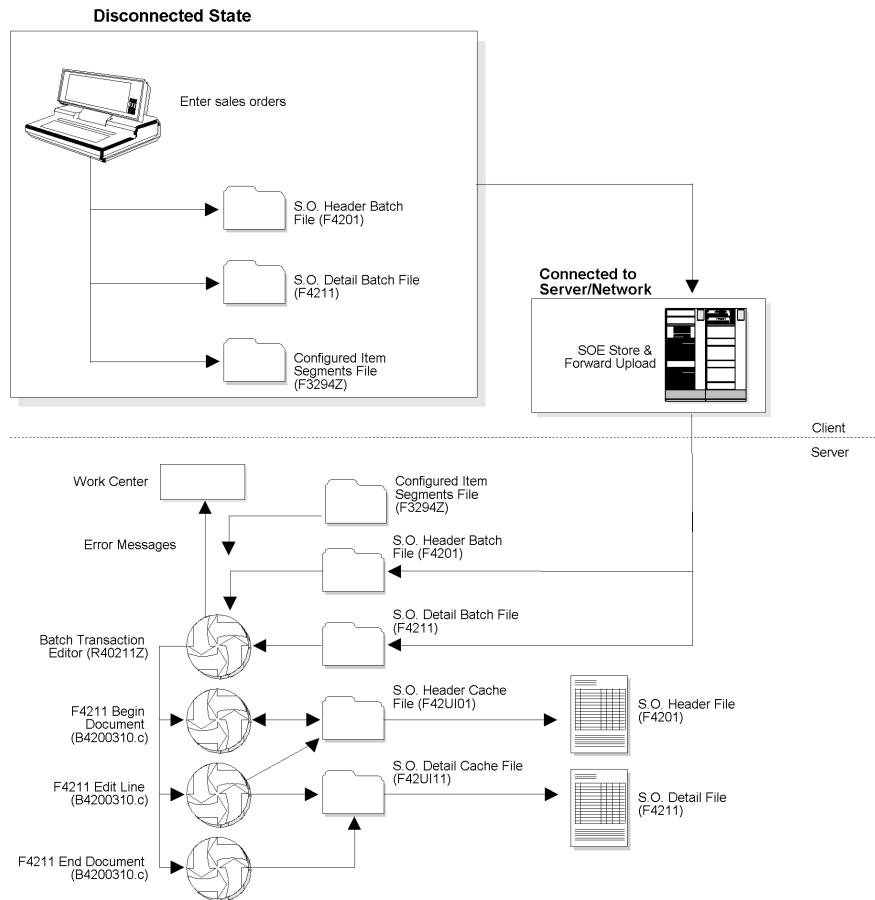
Before You Begin

- ❑ 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*.

Store and Forward Process

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

- ❑ *Working with Store and Forward Orders in the Sales Order Management Guide*

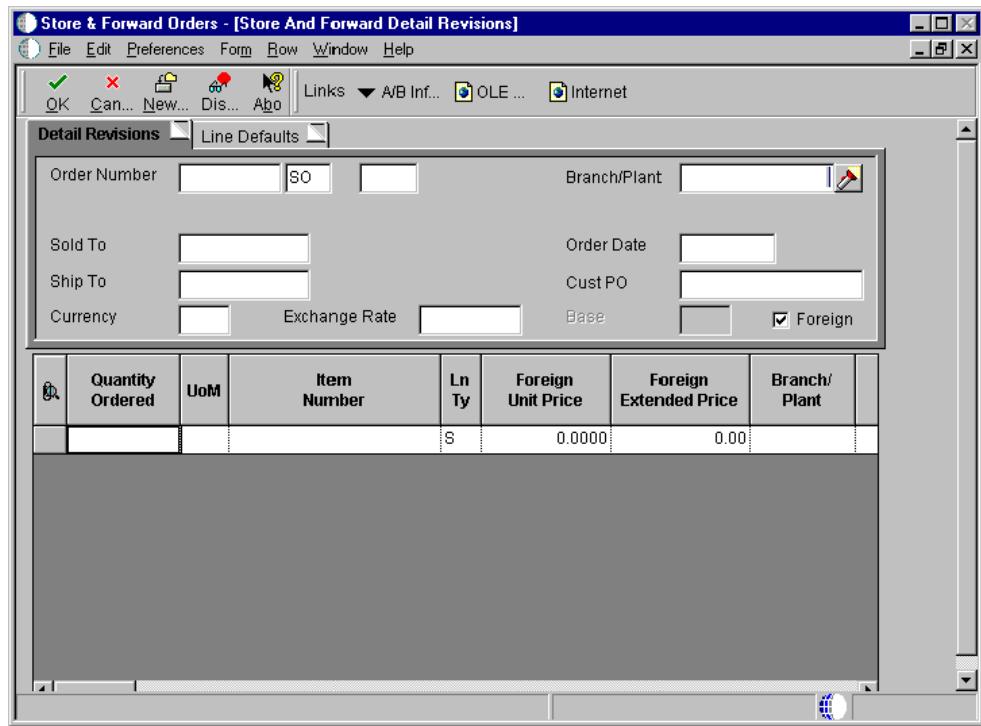
Before You Begin

- ❑ Set the processing options appropriately.

► To create orders that you store and forward

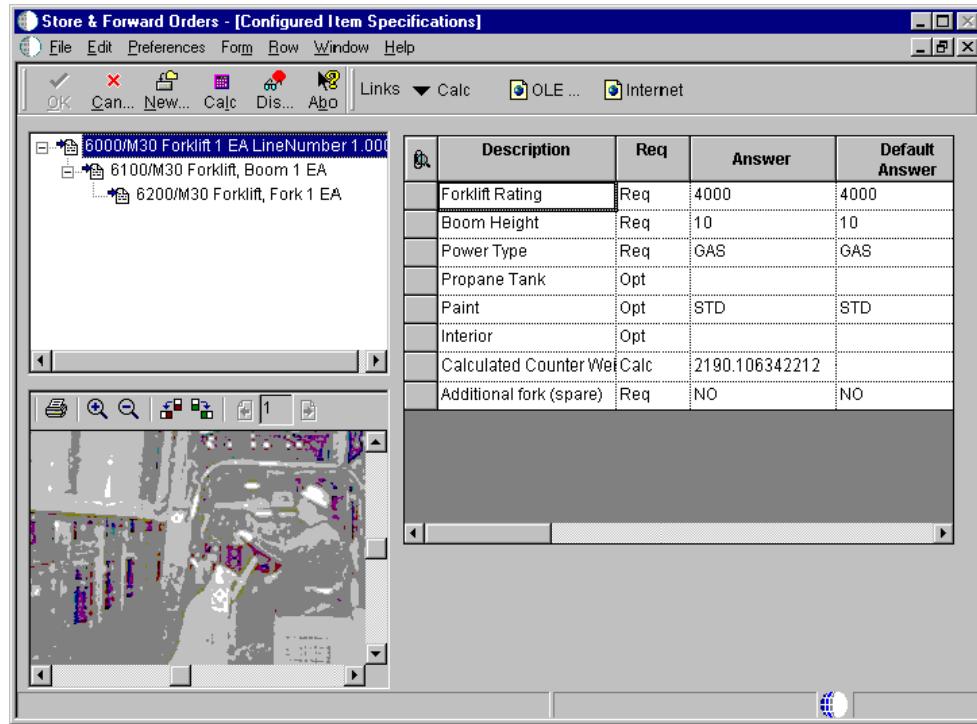
From the Daily Processing menu (G32), choose Store & Forward Orders.

1. On Store And Forward Order Inquiry, click Add.

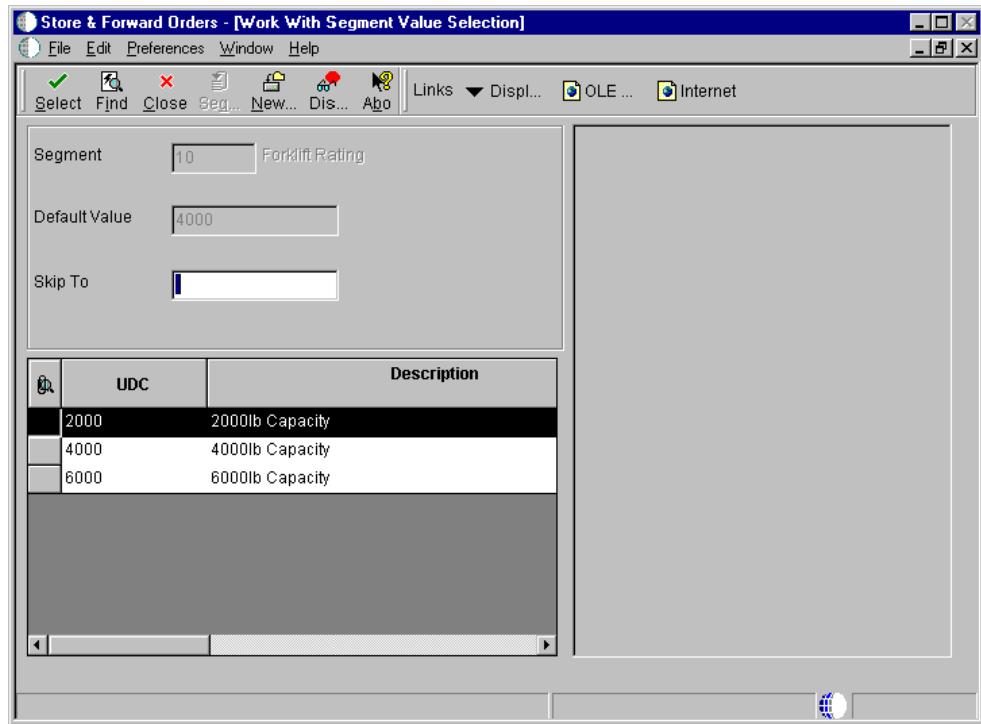


2. On Store And Forward Detail Revisions, complete the following required fields with information about the customer:
 - Branch/ Plant
 - Sold To
 - Ship To
 - Order Date
3. Complete the following required fields with information about the configured item, and click OK:
 - Quantity Ordered

- 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. Complete this step for every segment that 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 about 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 Batch Edit and Creation program.

Regardless of when you process the orders, the Batch Edit and Creation program edits the information and creates the sales orders. If no errors exist, the system adds information to the Sales Order Header File table (F4201) and the Sales Order Detail File 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 connect to the server and sign on to your normal production environment.

When you upload sales orders, the system performs the following tasks:

- Creates records in the Sales Order Header File (F4201) and Sales Order Detail File (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 modify it only on the server.

If a sales order on the PC has 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, uploads the configured segment tables (F3294Z, F3296, F3296T, F32943, F32961, and F329611).

After you upload your sales orders and process them, the system edits the transaction control status of the sales orders on the PC to match the status of the sales orders 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 Daily Processing menu (G32), choose Upload Store and Forward Tran.

1. On Work With Batch Versions – Available Versions, 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 Order Edit and Creation.

After the system creates orders, you can either process the sales orders as they exist, or reprocess the configured item using rules that are defined on the server. To process sales orders, you must run the Batch Edit and Creation program. The system edits the information that you enter and creates all of the 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 rerun the Batch Edit and Creation program.

On Work With Batch Versions – Available 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 performs the following tasks:

- 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 (F3291)
- 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 Sales Order Batch Transaction Editor program. If you upload prices, existing prices are overridden.

When you connect to the server, you can review errors and batch status codes for each transaction. The following batch status codes 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 - The upload transmission is active.
- 5 - The transaction is unavailable and is 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

-
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 systems.

Processing Work Orders

From the 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

Note

When you run the R31410 program to generate work orders, you must set the data/sort sequence to descending by work order to ensure that the back-scheduling of work orders is accurate. You can generate work orders without setting the data sequencing to descending, and the work orders will be created correctly with the associated parts lists and routing. However, back-scheduling, and the costing of configured components might not be correct.

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 the parts list and routing for a work order, 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	You can 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 the 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 lead times	<p>Work Order Generation calculates start and end dates for each operation and the start date for the work order. Work Order Generation back scheduling uses fixed or variable lead times that you have defined on Item Branch for the work order start date. Because variable lead times depend on how the item is configured, you must enter lead times manually on Item Branch.</p> <p>Work Order Generation calculates lead times for multilevel configured items. However, Leadtime Rollup does not support configured items.</p>
Updating standard costs	Work Order Generation determines the standard cost of a configured item 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	You can use a processing option to control whether the system updates the status of the related sales order detail line.
Reviewing configured text	Sales Order Generation places configured item text on the work order. Work Order Generation 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 (R31410)

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
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.
 - 2. Prior Revision Level
1 = Prior revision level used
Blank = Prior revision level not 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
 - 5. Batch Bill of Material Processing
1 = Bypass batch bill processing
Blank = Perform batch bill processing
 - 6. Parts List Text
1 = Copy the component's generic text
Blank = Do not copy the component's generic text
 - 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.
 - 6. Batch Routing Processing
1 = Bypass batch routing processing
Blank = Perform batch routing processing
 - 7. Routing Text
1 = Copy the operation's generic text
Blank = Do not copy the operation's generic text
 - 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
 - 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
 - 3. Parts List Detail
1 = Print detail information
Blank = Do not print detail 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
 - 5. Consolidated Parts List (FUTURE)
1 = Consolidate the parts list
Blank = Do not consolidate the parts list
 - 6. Parts List Component Text
1 = Print component (generic) text
Blank = Do not print component 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

3. Routing Instructions Text

1 = Print routing instructions (generic) text
Blank = Do not print routing 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

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

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

5. Parts List Before Image

1 = Include before image

Blank = Do not include before image

6. Routing Instructions Before Image

1 = Include before image

Blank = Do not include before image

Working with Configured String History

You can generate an additional history of all of the 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.

Generating the Configured String History

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

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

- Retrieves the configured string from the Configured String History - OneWorld table (F32943)
- Separates the string
- Generates a record for each segment value
- Stores the information in the Configured String Detail table (F32942)

Note

The system does not generate the Configured String History - OneWorld table automatically. You run the Create Segment Value History program before you review the history.

Reviewing the Configured String History

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

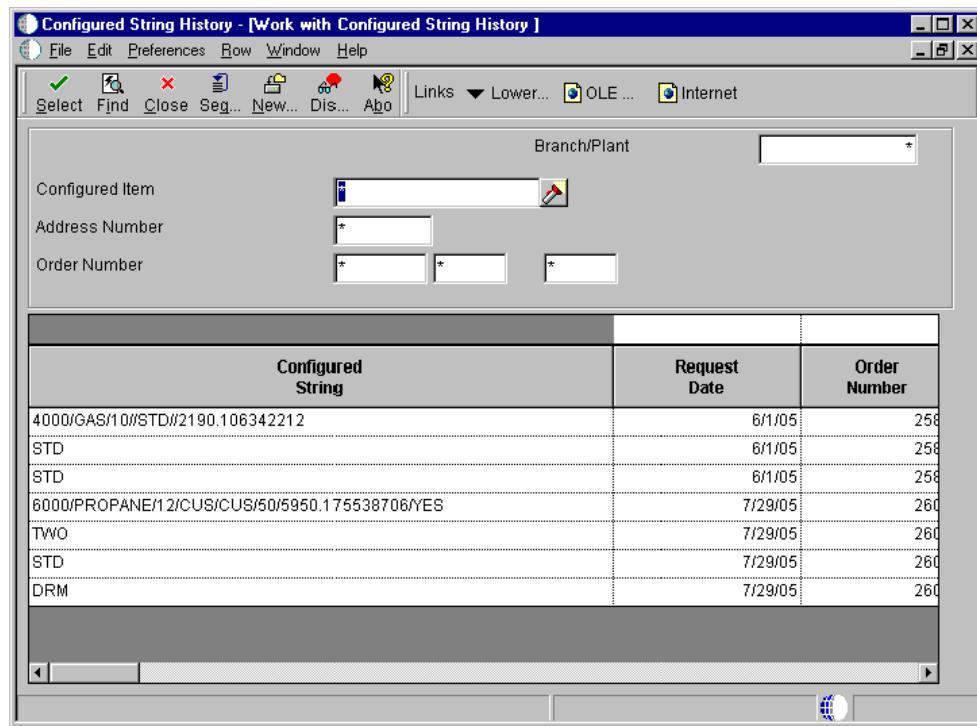
You can also view the configured string history during sales order entry, where you can select from previously-ordered configured items to enter on the current sales order.

See Also

Working with Configured Item Sales Orders

► To review the configured string history

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



1. On Work with Configured String History, complete the following fields:
 - Branch/Plant
 - Configured Item
2. Complete the following optional fields and click Find:
 - Address Number
 - Order Number
 - Order Co
 - Or Ty
3. Review price and cost information in the following fields:
 - Configured String Segment 01
 - Configured String Segment 02
 - String ID
 - Segment Configured Item Number
 - Entered Unit Prc

- Memo Cost 1
- Lot Serial Number
- Location
- Line Number
- Request Date
- 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.

Working With Product Costing and Manufacturing Accounting

From the 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 the configured item has no standard bill of material or routing.

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 standard costs for the components; 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 Production Cost 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 the F4105 table) in order to be factored into standard costs for work orders in the F3102 table.

Note

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

See Also

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

Working with Work Order Completions

From the Daily Order Reporting - Discrete 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 updates new locations with standard costs from the Work Order Variance table so that transactions in the Distribution system use the correct costs. The Work Order Completions program hard-commits the associated sales order and updates the lot and location information for the sales order.

See Also

- Completing Discrete Work Order 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 the work order for a configured item, you must record the hours spent on production and the number of items completed in that time. This procedure allows you to monitor progress and costs, and compare them to 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 the work order for a configured item, 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

- 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

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 do the following:

- Review configured strings.
- Review configuration-specific costing information.
- Determine availability of configured end-items. You can search for segments or 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. The Sales Configurator system supports adjustments for locations with existing inventory and adjustments from zero quantity as long as the configuration-specific string history is 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* in the *Inventory Management Guide*
- Transferring Inventory* in the *Inventory Management Guide*
- Adjusting Inventory* in the *Inventory Management Guide*

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 turn on the Check Availability option in Configurator Constants. If the system finds the exact item and string during sales order entry, all locations that contain 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.

Note

The system does not perform automatic line splitting if the quantity ordered differs from the quantity selected.

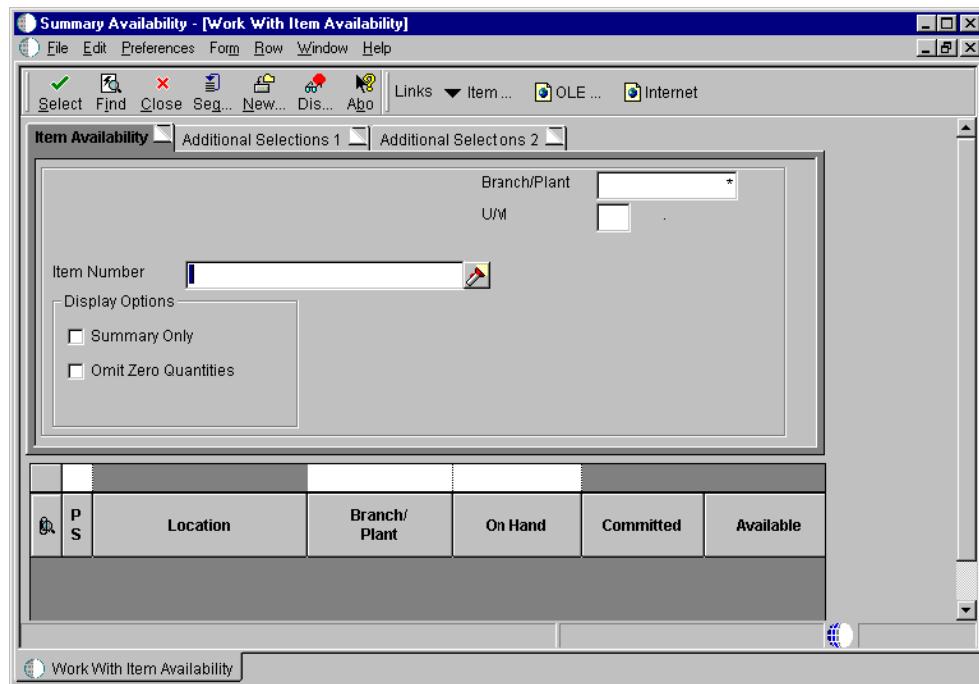
See Also

- ❑ [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*.

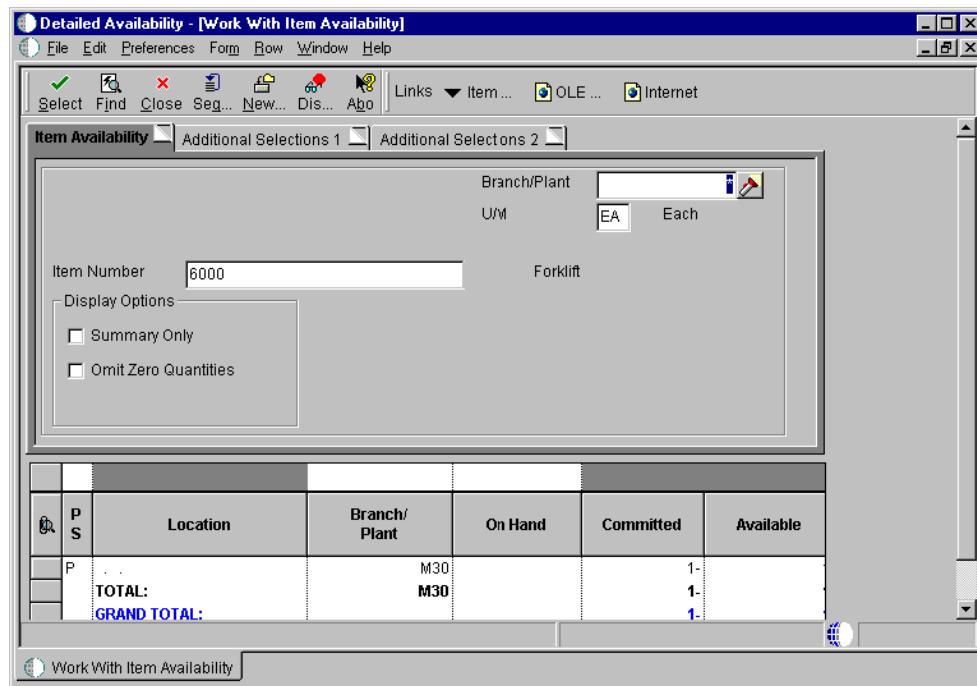
You can use Summary Availability to review inventory locations that contain stock for a configured item. Review information in the detail area, such as on-hand, committed, and available quantities for each location:



Example: Detailed Availability

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

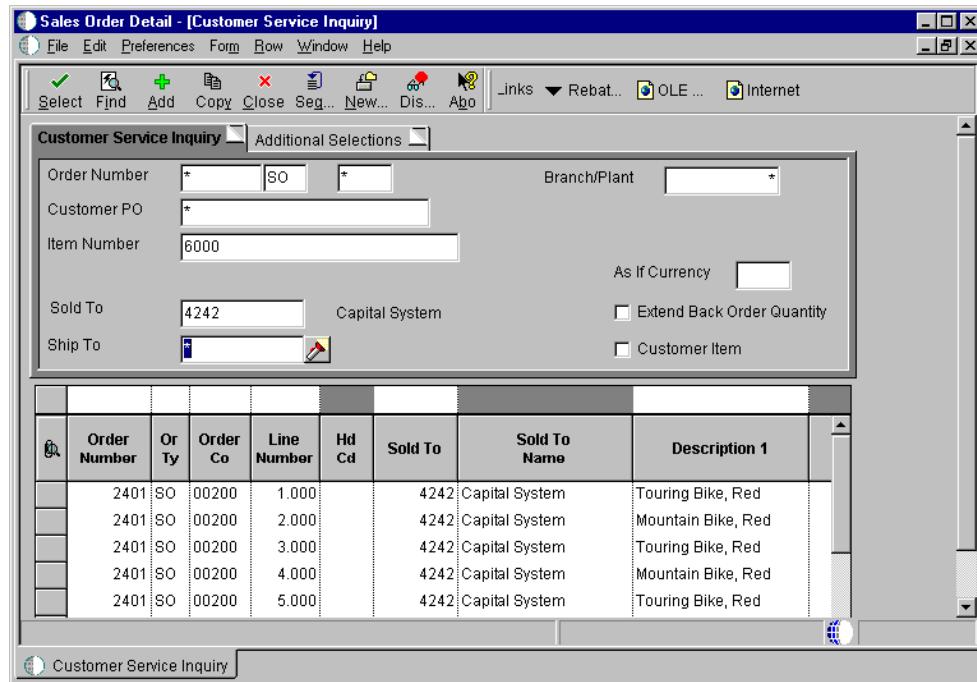
You can use Detailed Availability to review the status of configured items in a specific location. Review information in the detail area, such as on-hand quantity of a configured item and related commitments for that quantity:



Example: Reviewing Customer Service Information

Review customer service information to do the following:

- Locate current sales order information in the Sales Order Detail File and the Sales Order 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 generate 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 and for the order as a whole, which is useful for COD (cash on delivery) deliveries
- Driver signature line
- Customer signature line

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 do the following:

- 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 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 final 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*