

**Engineering
Fourth Shift Release 8.00**

Fourth Shift Help
Release 8.00

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Engineering Module

The Engineering (ENGM) Module is comprised of several applications that allow for communication and management of engineering information, including items and bills of material, from designing to manufacturing. This streamlined engineering management minimizes the number of new parts introduced into the system, reduces the cost of product changes, and also reduces the product time to market.

Engineering Module applications include the following:

- Item Master
- Bill of Material
- Bill of Material Analysis
- Engineering Administrative Tools
- Product Release Management
- Workflow Management

Module Prerequisites

The Engineering Module has the following prerequisites:

- SYSM (System Control)
- BILM (Bill of Material)

External Software

The Engineering Module is fully functional without the need for any external software. But, several types of external software requirements exist for the ENGM Module based on how you wish to use functionality available within the module.

Functionality	Software Requirement
Modify predefined report templates or create your own custom report templates	Crystal Reports Professional (32-bit technology)
Use E-mail to deliver the notifications generated when a workflow process is routed.	MAPI-compliant electronic mail system, such as Microsoft Exchange or Outlook

Setting Up the Engineering Module

Setting Up the Engineering Module provides an overview of how to implement the module. It covers:

- guidelines to consider before you implement the module
- how to prepare your data for loading
- suggested procedures for loading your data
- suggestions for using the module

Although this section provides key information about the Engineering Module, it does not explain manufacturing principles and concepts such as how to structure your bills of material or engineering principles such as implementing or managing workflow processes.

Before You Implement the Module

The item master and bills of material provide the framework for the entire manufacturing planning process. The Engineering Module (ENGM) extends this functionality by providing product definition, which includes separate item masters and bills of material for engineering items and production items and includes a managed release of engineering items into the production environment. The Engineering Module also provides for workflow management, including the creation, routing, and disposition of workflow processes.

Item Master Information

- Each item used to build your products should have a unique item number, and the information about each item should be accurate. An item must be defined as either an engineering item or production item.

If an item numbering scheme does not already exist, define a numbering scheme that uses as few characters as possible. For example, a company with up to 10,000 items needs a four-character item number.

- Collect item packaging information including standard package type, weight, volume and pieces per package. The unit of weight and volume used to enter item packaging information must be the same across all items. Be consistent in assigning packaging information for standard units of measure so that weight/volume accumulations are accurate.
- Procedures should be established for collecting item information and entering this data into the computer. As changes to item information are made, these changes must also be entered into the computer. Procedures should cover the different aspects of item information, such as engineering specifications, planning parameters and costing data.
- Guidelines and responsibility should be established for maintaining item information related to engineering specifications, such as assignment of the item number and item description.
- Guidelines and responsibility should be established for maintaining item information related to planning parameters, such as the determination of order policy, order modifiers and lead times.

Bills of Material Information

- Bills of material information can be maintained from both the Engineering Module and the Bills of Material Module (BILM), but it is recommended that only one of these is used for

maintaining bills. Procedures should be established for determining where a bill of material information is maintained.

- Verify that your bills of material accurately reflect how your products are built. A bill of material must be defined as either an engineering bill of material or production bill of material.
- As changes to your products are made, the bills of material are updated. Procedures should be established for additions, changes and deletions to your bills of material. Each planned change should be indicated by the date on which the change is scheduled to become effective.
- Procedures should be established for tracking revision history within the bills of material.
- Procedures should be established for determining unique reference designators associated with component lines on each bill of material.

Product Release Information

- Guidelines should be established for releasing products from one phase to the next phase.
- Procedures should be determined for establishing product release conditions and rules. Conditions, such as not allowing costs to equal zero for buy items or not allowing labor to equal zero for make items, should be assigned to rules.
- Procedures should be determined for establishing costs on the ITMC screen for engineering items that have been promoted into production. Engineering items promoted into production do not have a cost record assigned.

Workflow Information

- Procedures should be determined for establishing administrator responsibilities, such as setting up and maintaining routing templates and processes.
- Procedures should be established for collecting and entering approved process information, such as engineering change requests, into the system.
- Procedures and responsibilities should be established for maintaining and verifying workflow information associated with actual components on the bills of material.
- Procedures should be established for using the sample workflow data that is included in a sample database available with the Engineering Module. Sample data includes pre-defined users, groups, activities, documents and routing templates. The sample database also includes pre-defined workflow assignments, such as users assigned to groups, groups assigned to activities and activities assigned to routing templates.
- Develop a testing plan to verify the accuracy of entered information.

Preparing Your Data for Loading

Information about your bills of material and workflow processes may exist in a variety of forms. There is no "one best method" for preparing this data. The following suggestions will help minimize data entry time and effort when you enter the data during startup.

A suitable data entry form should have data in the same sequence as that of the fields used to enter the data into the computer. Check your source documents to see if they can be used for data entry purposes, and then decide whether or not to transcribe the information onto forms before entering it into the computer.

The following supplemental suggestions are tailored for the Engineering Module.

Item Master

Review item master information used by the Inventory Control Module.

- Items must be defined as either engineering or production items.
- Determine the production DEFAULT-ITEM information, including a planner and buyer. The default planner and buyer identifier can be used during the product release phase to remind the user that the default identifier must be replaced with a valid identifier when an item is promoted from pre-production to production.

Bills of Material

Review bills of material information used by the Bill of Material Module. A bill of material must be defined as either an engineering bill of material or a production bill of material.

You should ensure that your bills of material are accurate before preparing your engineering information for loading. A common method of evaluating bill of material accuracy is to compare your bill of material information with the way that products are actually manufactured for a selected subset of assemblies. As a target, bill of material accuracy should be maintained at a level of 99 percent or better. If your bills of material are not accurate, you should correct them in the process of preparing your data for loading.

Reference Designators

Reference designators are unique identifiers which allow engineers to assign control information, such as device callouts, to a component within the bill of material. Reference designator ranges can be used to organize multiple sequential reference designator identifiers for a component or subassembly.

For example, on a circuit board, a reference designator can be assigned to a specific location into which a component must be inserted. Processes and instructions involving the circuit boards refer to the reference designators, including the engineering design and assembly instructions as well as the manual and automated insertion processes. Reference designators are defined in lists and ranges. The Engineering Module does not allow reference designators to be duplicated within a bill of material for an effectivity date range.

Determine the reference designator identifiers and ranges needed to support your engineering control policies. See [Reference Designators](#) in Suggestions for Using the Module for additional information.

Product Release Information

Use the procedures established in [Before You Implement the Module](#) to prepare your product release information for loading.

- Determine the names of the three levels, or phases, of product release for your company.
- Define the product release conditions which identify the selection or edit criteria for selecting the item for promotion.
- Define the product release rules which identify the requirements needed for an item to be promoted to the next level.

Use the examples included in Product Release Management as a reference or starting point while preparing this release information.

Workflow Information

Use the procedures established in [Before You Implement the Module](#) to prepare your Workflow information for loading.

Routing Templates

Identify the routing template information for your system, including

- determine which users are involved in the workflow process
- identify groups and assign users to groups
- identify activities and assign groups to activities
- identify and assign activities and documents to routing templates

Use the sample database as a reference or starting point while preparing this routing template information. Routing template information includes:

Type	Information
Users	identifier, name, electronic mail identifier, and address and group assignments
Groups	titles, descriptions, and activity assignments
Activities	titles, descriptions, and routing assignments
Documents	titles, descriptions, and routing assignments
Routing templates	titles, descriptions, process prefix number, and starting process number

Process and Disposition

Identify the process and disposition information for your system, including

- determine view preferences for displaying processes and disposition information using various filters
- if you use an electronic mail system for routing a process, determine your electronic mail delivery requirements

Loading Your Data

Once your data has been prepared for entry, use this section to load your data into the Engineering module.

A **validation tool** is identified for each screen or task listed in this section. Use the validation tool to double-check the accuracy of the data you have entered. Validation tools include:

- **Screen reports.** Create these reports by choosing **Print** from the **File** menu. For more information, see "Screen Reports" in the Fourth Shift Basics manual.
- **Print screens.** When other report options are not available, you can capture an image of your screen and use it to validate your data entry. For more information, see "Using the Print Screen Key" in the Fourth Shift Basics manual.

Other validation tools, such as batch processes and data extracts, may also be listed.

1. Verify or Enter Item Master Information

Activity Location	Module	Description	Validation Tool
PITB	ENGM	production item master information	Quick Print
		production DEFAULT-ITEM information	Quick Print
Production tab	ENGM	production item master detail information	Quick Print
EITB	ENGM	engineering item master information	Quick Print
Engineering tab	ENGM	engineering item master detail information	Quick Print

2. Verify or Enter Bill of Material Information

Activity Location	Module	Description	Validation Tool
PBLL	ENGM	production bill of material information for each parent item	report
Production + Comp Detail	ENGM	production component text and detail information	report
EBLL	ENGM	engineering bill of material information for each parent item	report
Engineering + Comp Detail	ENGM	engineering component text and detail information	report

3. Check Security

Activity Location	Module	Description	Validation Tool
PASS and FCMT	SYSM	password and authorized access codes for each user for accessing Product Definition	Screen report
		password and authorized access codes for each user for accessing Product Release Management	Screen report
		password and authorized access codes for each user for accessing Workflow Management	Screen report

4. Set Up Product Definition Options

Activity Location	Module	Description	Validation Tool
Options from the View menu (from Bill of Material)	ENGM	general options, including record sorting and effectivity date filter- ing of components	print screen
		reference designator options	print screen
		lead time options	print screen

5. Enter Reference Designators

Activity Location	Module	Description	Validation Tool
PBLL or EBLL + Engineering + Ref Des	ENGM	reference designators and text for each component	report

6. Verify Reference Designators

Activity Location	Module	Description	Validation Tool
Components	ENGM	sort bill of material by Reference Designators	report
PBLL or EBLL + Engineering + Ref Des	ENGM	Single Level Bill with Reference Designators report	report

7. Set Up Product Release Phases

Activity Location	Module	Description	Validation Tool
Modify Phase Names from the Edit menu PRRD	ENGM	names of three product release phases	none

8. Enter Product Release Rules

Activity Location	Module	Description	Validation Tool
PRRD	ENGM	selection and edit conditions to promote items	none
		assign conditions to rules	none

9. Prepare Your Electronic Mail System

If you use an electronic mail system for workflow management, contact your electronic mail system administrator to complete the following.

Activity Location	Module	Description	Validation Tool
MAPI-compliant electronic mail system	n/a	create a personal folder for the workflow administrator	none
		set the delivery option to "personal folders" for the workflow administrator	none
		create a mail identifier for each user involved in workflow	

10. Define Workflow Users

Activity Location	Module	Description	Validation Tool
WKFL	ENGM	define users use the sample database, if desired	none
		if you use an electronic mail system for workflow, define a Mail Id , or alias, for each internal user involved in workflow.	none
		if you use an electronic mail system for workflow, define a fully qualified Mail Id and Mail Address for each external user involved in workflow.	none

11. Define Workflow Groups

Activity Location	Module	Description	Validation Tool
WKFL	ENGM	define groups use the sample database, if desired	none

12. Define Workflow Activities

Activity Location	Module	Description	Validation Tool
WKFL	ENGM	define activities use the sample database, if desired	none

13. Define Workflow Documents

Activity Location	Module	Description	Validation Tool
WKFL	ENGM	define documents use the sample database, if desired	none

14. Define Routing Templates

Activity Location	Module	Description	Validation Tool
WKFL	ENGM	determine process number prefix and starting process number	none
		define routing templates use the sample database, if desired	none
		determine startup message for electronic mail notifications	

15. Define Routing Assignments

Activity Location	Module	Description	Validation Tool
WKFL	ENGM	assign users to groups	none
		assign groups to activities	none
		assign activities to routing templates	none
		assign documents to routing templates	none

16. Customize Process Status and Disposition Views

Activity Location	Module	Description	Validation Tool
ECRA Process Status and Disposition	ENGM	customize views using filtering options	none

17. Test Workflow Process

Activity Location	Module	Description	Validation Tool
ECRA Process Status and Disposition	ENGM	test the workflow process from creation to disposition	none

Suggestions for Using the Module

The ways in which the Engineering Module is used vary from company to company. The following guidelines may be helpful for using the module in your company.

Access Methods

Several methods are available for accessing the features in the Engineering and Manufacturing Analysis modules. Access methods allow users to choose how to open the available features.

The Engineering and Manufacturing Analysis modules are designed as multi-user applications. They do not run in single-user mode.

Accessing from Fourth Shift

You can access the features from within Fourth Shift using the following function codes. Function codes in the ENGM Module differ based on whether the feature is engineering or production.

Feature	Function Code for ENGM	Function Code for MMAM
Bill of Material	EBLL/EBLI, PBLL/PBLI	ASBL
Comparison Bill	ECMP, PCMP	ASBC
Comparison of Summarized Bills	ECMS, PCMS	
Engineering Data Import	EIMP	
Engineering Database Administration	EDBA	
Item Master	EITB/EITI, PITB/PITI	
Multi-Level Bill	EMLB, PMLB	AMBL
Multi-Level Costed Bill	ECRL, PCRL	
Multi-Level Where Used	EMWU, PMWU	
Process Status and Disposition	ECRA/ECRD	
Product Release Rule Definitions	PRRD	
Routing Template Administration	WKFL	
Summarized Bill	ESMB, PSMB	SUMB
Where Used	EWUS, PWUS	

Accessing from the Module

You can navigate around the features from within the module using the following methods:

Method	Access	Description
Go To Frame	Accessed from the File menu or the toolbar.	Allows users to select and go to another feature.
Graphical Bill	Accessed by selecting an item within the graphical bill and then clicking the right mouse button.	Allows users to select a feature and then opens the feature using the selected item information.

Accessing from the Start Menu

You can access the features from the Start menu. Click the **Start** button, and then point to Programs. Point to the folder that contains the Fourth Shift group, then point to one of the following modules and select a group and/or feature:

Module	Group / Features
Engineering	Product Definition – Engineering
	Product Definition - Production
	Product Release Management
	Workflow Management
Manufacturing Analysis	Bill of Material
	Comparison Bill
	Multi-Level Bill of Material
	Summarized Bill

Accessing from the Desktop

You can access the features from the desktop by copying the shortcuts from the Start Menu. The shortcuts use the following executable files that are located in the MFGSYS\SYSTEM directory:

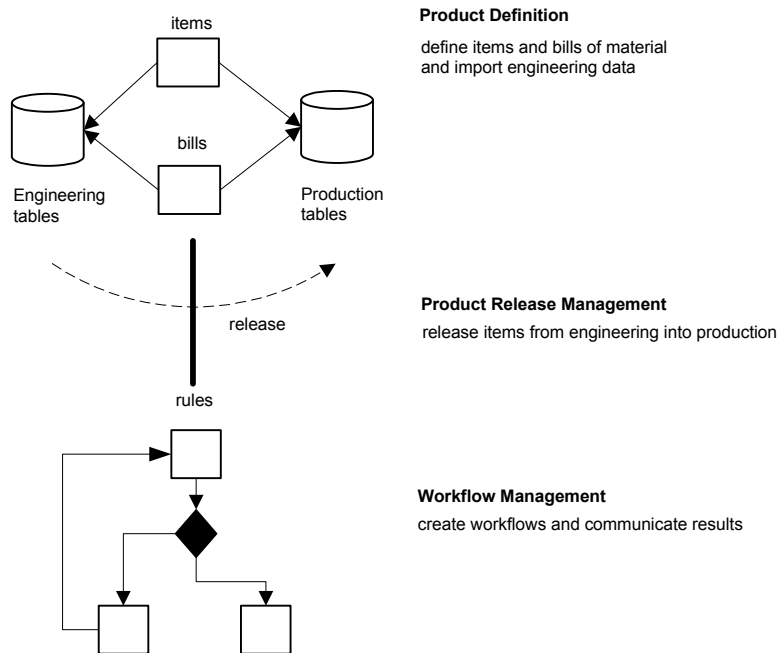
Module	Features
ENGM (Product Definition)	Product Definition
	Engineering Database Administration
	Engineering Data Import
ENGM (Product Release Management)	Product Release Rule Definitions
ENGM (Workflow Management)	Routing Template Administration
	Process Status and Disposition
MMAM	ALL

Engineering Module Processing Flows

The Engineering Module includes several processing flows.

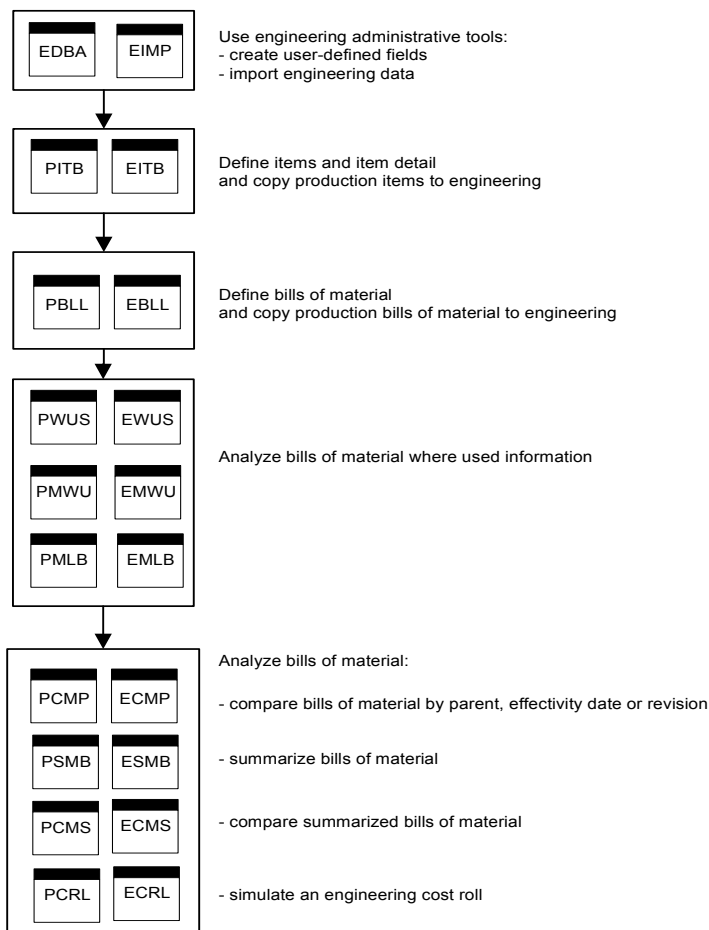
ENGM Module Flow

The ENGM Module general flow looks similar to the following:



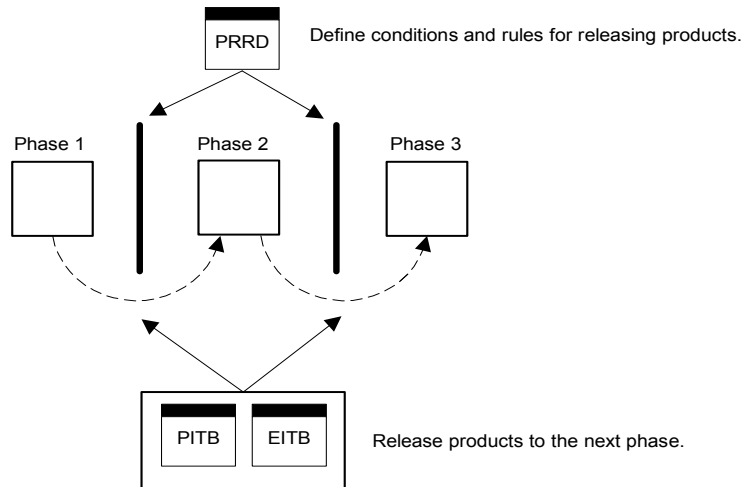
Product Definition Flow

The Production Definition flow looks similar to the following:



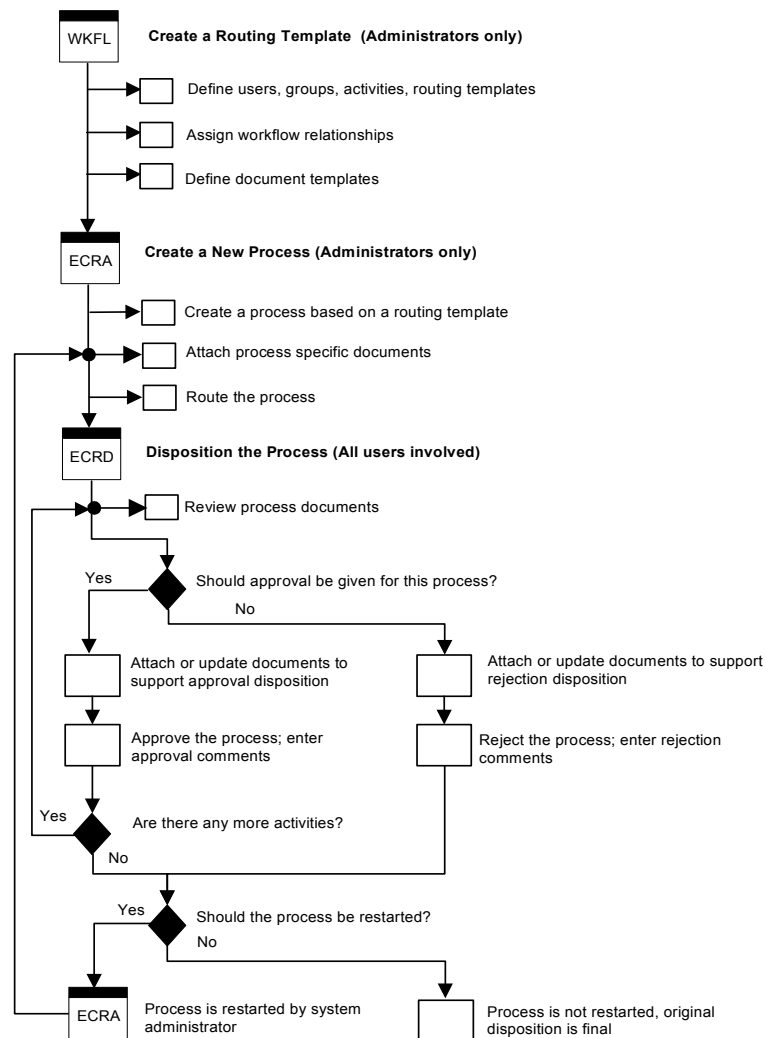
Product Release Management Flow

The Production Release Management flow looks similar to the following:



Workflow Management Flow

The Workflow Management flow looks similar to the following:



Product Definition Detail

Product Definition includes the following feature details:

Engineering and Production Environments

The Engineering Module includes items and bills of material for both engineering and production environments. Engineering item data can be linked to production item data, allowing design and manufacture engineers to view their data in the same bill of material and item structures. For example, components on engineering bills can be associated with engineering oriented item data, such as design specifications or inspection checklists.

Use the following information to review the different environments.

- **Engineering environments** involve item designs and item prototypes that are created to prove functional and structural design strategies. Engineering data, such as manufacturer's part numbers, generic part numbers, estimated costs and reference designators, are used to further define the item. Engineering environments are often rapidly changing in order to keep improving their designs and prototypes to ensure the future of their product.
- **Production environments** involve the stages of the manufacturing process, such as MRP planning. Production data, such as item numbers, standard costs, lead times and quantities, are used within the MRP planning process. Production environments are usually controlled and structured in order to provide their company with a consistent day-to-day working situation.

Field Label Prefixes

Engineering and production fields can be added to an item master or bill of material to provide additional information or for comparison purposes. For example, you can add the **Item** field from the production item master to the engineering item master in order to compare engineering and production item identifiers.

Prefixes are used in the field labels to distinguish item master fields. Field label prefixes include the following:

Field	Field Prefix Description
production	no prefix
engineering	* (one asterisk)
user-defined	** (two asterisks)

Text Messages

Text messages can be maintained and used in both the production and engineering environments. The following types of text are available from the Item Master, Bill of Material, Multi-Level Bill, Where Used and Multi-Level Where Used screens:

Text Type	Tabs that Include Text
Component Detail	Production + Comp Detail Engineering + Comp Detail
Item Detail	Production + References
Planning Detail	Production + Plng Dtl
Lot Trace (view only)	Lot Trace + Detail

Text messages are limited to four lines of 60 characters each. The Text dialog box includes a **Where Used Count** value which identifies the number of records to which the text is attached. To view this list of records, click **Where Used**.

In order to maintain text messages, users must be assigned security access to the TXWU (Text Where Used) screen. Use the FCMT (Function Code Maintenance) screen to assign security access.

Customized Column Layout

Column layout can be customized based on your company's requirements. From the Edit menu, select **Columns** to define column layout, including:

Option	Description
Available Columns	Review the list of engineering, production and user-defined fields available.
Show these Columns	Use arrows to specify which fields from "Available Columns" to include on the grid. - Columns are added where your cursor is positioned in "Show these Columns." - Columns are displayed in the grid based on the "Show these Columns" sort order. Use Move Up and Move Down to re-sort the order of the columns, if desired.
Show on row 2	Select which fields to display on the second header row, if a two-row header is desired.
Restore Defaults	Use Restore Defaults to revert back to the default column layout.

Sort Order

You can create a customized sort order of a table by double-clicking the heading for the column by which you want to sort records. The records are automatically sorted and redisplayed. A chevron in the upper right corner identifies the current sort column. A sort order is saved when the view is saved using the Save Current View icon.

Splitter Bar

You can create a non-scrolling area in the table using the splitter bar. Columns to the left of the splitter bar do not scroll when the user scrolls to the far right of the table. A splitter bar position is saved when the view is saved using the Save Current View icon. A splitter bar is not available on tables with a two-row header.

- **Add Splitter Bar.** Point to the vertical bar located immediately to the left of the first column heading. Drag and drop bar to the desired column location.
- **Remove Splitter Bar.** Any changes to the columns removes the splitter bar. Alternatively, from the **Edit** menu, choose **Columns**. Click **Restore Defaults** then click **OK** to remove the splitter bar.

Global and Local Views

Views can be defined to capture customized column layouts of the Product Definition features, such as the item master or bills of material. Several view types are available, including:

View type	Description
Default	View is displayed automatically when the feature is accessed
Global	View can be accessed by other users

Local	View can only be accessed from the machine on which it was created; neither default or global is selected
-------	---

Views are displayed in the toolbar View List under the appropriate heading, either Global and Local. Reports can also be associated with each view to capture the customized layout in a printable format.

Reference Designators

Reference designators are engineering "location tools" which allow engineering control information, such as location detail, to be added to a component or subassembly. For example, reference designators can be used to specify exact locations on assembly drawings, data packs or insertion machine sequencing programs.

Reference designator information is accessed from the Bill of Material on the Engineering tab. Reference designators can be entered, reviewed and validated for each component on a bill of material. Reference designators are defined using an identifier and sequence number.

Reference designators assigned to components are included when components from one bill of material are copied to another bill of material, using the File menu and selecting Copy Bill of Material. Additional reference designator selection and editing capabilities are available when using the Copy Buffer feature.

Reference Designator Text

User-defined engineering information can be associated with a specific reference designator for a component on a bill of material. Engineering information can include, for example, component location, orientation or detailed insertion instructions. Enter user-defined engineering information in the **Text** field.

Reference Designator Ranges

Reference designators can be entered in ranges in order to organize multiple reference designator identifiers for a component or subassembly. You should group similar types of reference designators in a range to provide a quick way of locating identifiers.

For example, to create a range of reference designators while positioned in the **Ref Des** field, from the Edit menu, choose Create Ref Des Range. The Create Ref Des Range dialog opens and you can enter reference designator ranges using From and Through identifiers.

- The **From** identifier includes a prefix that must include at least one non-numeric character. The last character must be numeric because it defines the first number in the range. The **From** identifier prefix is assumed in the **Through** identifier.
- The **Through** identifier is numeric and defines the last number in the range.

Examples of reference designator ranges include:

From Entry	Through Entry	Range Includes
R250	255	R250, R251, R252, R253, R254, R255
3*x1	4	3*x1, 3*x2, 3*x3, 3*x4

Reference Designator Options

You can customize the reference designator features by selecting Options from the View menu. Options include setting the single separator string, reference designator range details and reference designator display count values.

User-Defined Fields: Format Property (Access only)

The **Format** property is available in the Engineering Module when using the Engineering Database Administration feature to format user-definable fields. The Format property is supported by MS Access column properties and allows you to customize the way numbers, dates, times and text are displayed and printed. The Format property effects only how data is displayed and printed, and not how data is stored in the database. Data types are used to specify different methods of formatting.

The Format property is available only if you are using Engineering in a MS Access database configuration.

Predefined Formats in ENGM

The Engineering Database Administration feature provides predefined formats for the Date/Time and Number and Currency data types. The Engineering Module displays formats appropriate for the country specified in the Regional Settings dialog in the Control Panel. Custom formats inconsistent with the Regional Settings dialog are not used.

For example, the following displays for a Currency data type:

Country	Currency Value	Display Result
English (United States)	1234.56	\$1,234.56
English (British)	1234.56	£1,234.56

The Engineering Module allows the use of the following symbols to format any data type:

Symbol	Meaning
(space)	Display spaces as literal characters.
"ABC"	Display anything inside quotation marks as literal characters.
!	Force left alignment instead of right alignment.
*	Fill available space with the next character.
\	Display the next character as a literal character. Display literal characters by placing quotation marks around them.
[color]	Display the formatted data in the color specified between the brackets. Available colors: Black, Blue, Green, Cyan, Red, Magenta, Yellow, White. (not supported in ENGM)

Note: Formatting symbols for the Number and Currency data type cannot be combined or mixed with formatting symbols for Date/Time, Yes/No, or Text and Memo data types.

Date/Time Data Format

Use the following symbols for Date and Time formatting:

Symbol	Description
--------	-------------

:	(colon)	Time separator. Defined by Regional Settings Properties in the Control Panel
/		Date separator
c		Same as the General Date predefined format
d		Day of the month in one or two numeric digits, as needed (1 to 31)
dd		Day of the month in two numeric digits (01 to 31)
ddd		First three letters of the weekday (Sun to Sat)
dddd		Full name of the weekday (Sunday to Saturday)
dddddd		Same as the Short Date predefined format
ddddddd		Same as the Long Date predefined format
w		Day of the week (1 to 7)
ww		Week of the year (1 to 53)
m		Month of the year in one or two numeric digits (1 to 12)
mm		Month of the year in two numeric digits (01 to 12)
mmm		First three letters of the month (Jan to Dec)
mmmm		Full name of the month (January to December)
q		Date displayed as the quarter of the year (1 to 4)
y		Number of the day of the year (1 to 366)
yy		Last two digits of the year (01 to 99)
yyyy		Full year (0100 to 9999)
h		Hour in one or two digits (0 to 23)
hh		Hour in two digits (00 to 23)
n		Minute in one or two digits (0 to 59)
nn		Minute in two digits (00 to 59)
s		Second in one or two digits (0 to 59)
ss		Second in two digits (00 to 59)
tttt		Same as the Long Time predefined format
AM/PM		Twelve-hour clock with the uppercase letters "AM" or "PM"
am/pm		Twelve-hour clock with the lowercase letters "am" or "pm"
A/P		Twelve-hour clock with the uppercase letter "A" or "P"
a/p		Twelve-hour clock with the lowercase letter "a" or "p"
AMPM		Twelve-hour clock with the morning/afternoon designator as defined by Regional Settings Properties in the Control Panel

Note: To add a comma or other separator to your custom date format, enclose the separator in quotation marks, for example: mmm d", "yyyy.

Number and Currency Data Format

Use the following symbols to format Number and Currency fields:

Symbol	Description
.	Decimal separator. Defined by Regional Settings Properties in the Control Panel
,	Thousand separator
0	Digit placeholder. Display a digit or 0
#	Digit placeholder. Display a digit or nothing
\$	Display the literal character "\$"
%	Percentage. The value is multiplied by 100 and a percent sign is appended
E- or e-	Scientific notation with a minus sign (-) next to negative exponents and nothing next to positive exponents. This symbol must be used with other symbols, as in 0.00E-00 or 0.00E00.
E+ or e+	Scientific notation with a minus sign next to negative exponents and a plus sign (+) next to positive exponents. This symbol must be used with other symbols, as in 0.00E+00.

Note: Use the **DecimalPlaces** property to override the default number of decimal places for the predefined format specified for the Format property, if desired.

Custom number formats can have one to four sections with semicolons (;) as the list separator. Each section contains the format specification for a different type of number, including.

Section	Format Description
First	positive numbers
Second	negative numbers
Third	zero values
Fourth	null values

For example, you could use the following custom Currency format:

Format Setting	Description
\$#,##0.00[Green];(\$#,##0.00)[Red];"Zero";"Null"	contains four sections separated by semicolons and uses a different format for each section

Note: Using multiple sections without specifying a format for each section causes entries with no format to either display nothing or default to the formatting of the first section.

Text and Memo Data Format

Use the following symbols to format Text and Memo fields:

Symbol	Description
--------	-------------

@	Text character (either a character or a space) is required.
&	Text character is not required.
<	Force all characters to lowercase.
>	Force all characters to uppercase.

Customized Text and Memo fields can have up to two sections. Each section contains format specifications for different data in a field, including:

Section	Description
First	Format for fields with text.
Second	Format for fields with zero-length strings and Null values.

For example, if you have a text box control in which you want the word "None" to appear when there is no string in the field, you could type the custom format @;"None" as the Format property setting. The @ symbol causes the text from the field to be displayed; the second section causes the word "None" to appear when there is a zero-length string or Null value in the field. As a result:

Format Setting	Display Result
>;@;"<None>"	all data is uppercase and <None> where no data exists

Yes/No Data Format

Format options are not available with the Yes/No data type. The field is displayed as a checkbox.

Mass Change Functionality

Mass change functionality can be used to reduce data entry by making changes to multiple items or components on a bill of material based on specified mass change criteria.

While using the mass change functionality, you may want to add or change the Mass Change column layout. See the [Customized Column Layout](#) section for more information on column layout.

Mass Change Types

Mass change functionality allows the user to specify different types of mass change processing. Mass change types include the following:

Type	Description
change	changes item attributes or component detail
delete	deletes a component from a bill of material
add	adds a component to a bill of material
transition	changes a component's revision levels based on effectivity dates
skip	skips the record during processing

Example: Change Item Attributes

Example: The person assigned as Buyer AAA is no longer with the company. All items with Buyer AAA must be changed to Buyer BBB.

1. Go to the Production Item Master.
2. Click the **Filter By** option.
 - Enter **Buyer** = AAA to filter the Item Master.
 - Press ENTER.
3. Each item displayed has Buyer AAA assigned. Select all the item records.
4. From the **Edit** menu, select **Mass Change**. The Mass Change dialog opens and each item that has Buyer AAA assigned is listed.
5. Position your cursor on the first item in the list:
 - Enter **Change Type** = Change
 - Enter **Buyer** = BBB
 - Press ENTER.
6. From the Edit menu, select **Copy to all records** to copy the change information to each item in the Mass Change dialog.
7. Click **Apply** to start the mass change process.
8. Close the Mass Change dialog.
9. From the View menu, select Refresh to review the changes.

Example: Add Components

Example: It is determined by the engineering team that a capacitor component requires insulation, and therefore an additional insulation component must be added to every bill of material that includes the capacitor item.

1. Go to the Where Used or the Multi-Level Where Used.
2. Enter the capacitor component. Press ENTER.
3. Each item displayed includes the capacitor component. Select all the item records.
4. From the Edit menu, select Mass Change. The Mass Change dialog opens and the selected items are listed.
5. Position your cursor on the first item in the list:
 - Enter **Change Type** = Add.
 - Enter **Component** = Insulation
 - Enter **Pt Use** and **Seqn** = as desired
 - Enter **CT** (component type) = N (normal)
 - Enter **QT** (quantity type) = I (per item)
 - Enter **In Effect** and **Out Effect** as desired.
 - Press ENTER.

The change status is now Pending.

6. From the Edit menu, select **Copy to all records**.
7. Click **Apply** to start the mass change process.

8. Close the Mass Change dialog.
9. Go to the Bill of Material or Multi-Level Bill to view the changes.

Example: Change Components

Example: It is determined by the engineering team that Capacitor 1 and Capacitor 2 should both be replaced with Capacitor 3.

1. Go to the Where Used or the Multi-Level Where Used.
2. Enter the Capacitor 1 component. Press ENTER.
3. Each item displayed includes the Capacitor 1 component. Select all the item records.
4. From the Edit menu, select Mass Change. Each parent that includes Capacitor 1 is listed.
5. Click **Close** to close the Mass Change dialog.
6. Enter the Capacitor 2 component. Press ENTER.
7. Each item displayed includes the Capacitor 2 component. Select all the item records.
8. From the Edit menu, select Mass Change. The Mass Change dialog opens. The parent records that include Capacitor 2 are added to the list of parent records that include Capacitor 1.
9. Position your cursor on the first item in the list:
 - Enter **Change Type** = Change
 - Enter **Component** = Capacitor 3
 - Press ENTER.
10. From the Edit menu, select **Copy to all records** to copy the change information to each item in the Mass Change dialog.
11. Click **Apply** to start the mass change process.
12. Close the Mass Change dialog.
13. Go to the Bill of Material or the Multi-Level Bill to view the changes.

Example: Delete Components

Example: It is determined by the engineering team that the diode component must be deleted from every bill of material.

1. Go to the Where Used or Multi-Level Where Used.
2. Enter the diode component. Press ENTER.
3. Each item displayed includes the diode component. Select all the item records.
4. From the Edit menu, select Mass Change. The Mass Change dialog opens and the selected items are listed.
5. Position your cursor on the first item in the list:
 - Enter **Change Type** = Delete.
 - Enter **Component** = Diode
 - Press ENTER.
6. From the Edit menu, select **Copy to all records**.
7. Click **Apply** to start the mass change process.
8. Close the Mass Change dialog.

9. Go to the Bill of Material or Multi-Level Bill to view the changes.

Example: Transition Components

Example: It is determined by the engineering team that Capacitor 3 will be replaced with Capacitor 4 on July 1st, 2001.

1. Go to the Where Used or Multi-Level Where Used.
2. Enter the Capacitor 3 component. Press ENTER.
3. Each item displayed includes the Capacitor 3 component. Select all the item records.
4. From the Edit menu, select Mass Change. The Mass Change dialog opens and each parent that includes Capacitor 3 is listed.
5. Position your cursor on the first item in the list:
 - Enter **Change Type** = Transition.
 - Enter **Component** = Capacitor 4
 - Enter **In Effectivity** = July 1
 - Press ENTER.
6. From the Edit menu, select **Copy to all records**.
7. Click **Apply** to start the mass change process.
8. Close the Mass Change dialog.
9. Go to the Bill of Material or Multi-Level Bill to view the changes.

Revision History

Revision history functionality allows you to track revisions to bills of material by reviewing the sequence of changes, reviewing components at a revision level and printing the "in effect" revision level on the picklist. Revisions to bills of material are often called an ECR (Engineering Change Request) or ECN (Engineering Change Notice). See "Revision History" in the Manufacturing Analysis manual.

Using the Sample Product Release Rules

The Engineering Module includes sample product release rule definitions that are automatically installed and available with your system. Sample rule definitions are available for both levels of rules:

- Phase 1 to Phase 2 (engineering to pre-production)
- Phase 2 to Phase 3 (pre-production to production)

Sample data includes pre-defined selection and edit conditions and rule definitions, which are rules with assigned conditions.

Sample Rule Definitions

Product release managers can use the sample database as a reference or starting point when creating new conditions and rules.

For example, you could start with the following sample information to set up your own company-specific rule definitions:

Condition	Field	Relationship	Value
Cost is Greater than 50	Cost	is greater than	50

Cost is not null	Cost	is not null	
CT is equal to N	CT	is equal to	N
Description is not blank	Description	is not blank	

A condition becomes a rule when it is applied to a release level, such as Engineering to Pre-Production or Prep-Production to Production.

Using the Sample Workflow Database

The Engineering Module includes a sample workflow database that is automatically installed and available with your system. Sample data includes pre-defined users, groups, activities, documents and routings. The sample database also includes a set of pre-defined workflow assignments, such as users assigned to groups, groups assigned to activities, activities assigned to routings and documents assigned to routings.

Sample Database Examples

Workflow administrators can use the sample database as a reference or starting point when creating new workflow processes.

For example, administrators could start with the following sample database information to set up their own company-specific workflows:

User	Group	Activity	Routing Template
Manager, MAA	Operations Management	Impact Analysis	Safety Change
Lawyer, LAA	Legal	Legal Review	New Product Release

Document Template Examples

Template documents can be copied and edited to include company-specific impact analysis information. For example, workflow administrators could open a document template and save it into a different directory. Company-specific impact analysis information can then be entered into the document. The company-specific documents are then available to be attached to a process.

Document templates are located in the MFGSYS\ENGM\ECR_DOCS directory. Document templates are available for various impact analysis, including purchase orders, customer orders, WIP, process overview, inventory and fast tracks.

Workflow Using Electronic Mail

Workflow management takes advantage of electronic mail to communicate information and enable users to review as well as approve or reject processes. This electronic communication provides a quicker and easier method for completing a process. A MAPI-compliant electronic mail system is required.

Preparing Your Electronic Mail System

Your MAPI-compliant electronic mail system must be configured so that workflow administrators and users can send and receive electronic mail notifications. If you use an electronic mail system for workflow, contact your electronic mail system administrator to set up your workflow administrator and users. For example, in a Microsoft Exchange mail system, the following must be prepared:

- **Workflow Administrators.** Workflow administrators must be configured with the following:

- **Personal Folder.** A personal folder must be created.
- **Delivery Option.** The delivery option must be set to “personal folders.” The delivery option determines if the administrator can send electronic mail notifications.
- **Users.** Users involved in workflow must have a valid mail identifier defined in the company's electronic mail system.

Setting Up Mail Identifiers

The Engineering Module includes the ability to set up internal and external users with mail identifiers so that users can send and receive electronic mail notifications. Electronic mail identifiers must be set up for all users involved in workflow, including the following:

- **Internal Users.** Internal users are typically individuals who work within your company and have a mail identifier defined in your electronic mail system. Each internal user must have a **Mail Id** assigned in order to send or receive mail notifications. A Mail Id is your user identification, or alias, as defined in your electronic mail system. For example, in Microsoft Exchange, a Mail Id is your “display name”, such as John Smith.
- **External Users.** External users are typically individuals who work outside of your company and have a MAPI-compliant electronic mail post office address or an Internet address outside of your company's mail system. Each external user must have a **Mail Id** and **Mail Address** assigned in order to send or receive mail notifications. A Mail Id can be user-defined and is used as a display name. A Mail Address is your fully qualified mail post office address identification as defined in your mail system. For example, a mail address can look similar to SMTP:AAA@my_company.com.

A **Mail Id** must be defined in order for the user to send or receive electronic mail notifications. Electronic mail notifications are not sent to users with missing or invalid mail identifiers. If all users in a group being notified have missing or invalid mail identifiers, you are prompted to enter a valid **Mail Id**.

ENGM will process Mail ID and Mail Address as follows:

Fill WKFL		ECRA Action	
Mail ID	Mail Address	Send to:	Display as:
John Smith	John.Smith@Infor.com	John.Smith@Infor.com	John Smith
Null	John.Smith@Infor.com	John.Smith@Infor.com	John.Smith@Infor.com
John Smith	Null	Cannot send mail	
Null	Null	Cannot send mail	

Sending and Receiving Mail Notifications

The Engineering Module includes the ability to send and receive electronic mail notifications during the workflow process. The notification process includes the following:

- **Send Starting Notifications.** When a routing activity is ready to begin, the process can start. The workflow administrator uses the **Start Process** option to activate the process, which then sends electronic mail notifications to all users assigned to the groups that are associated with the activity.
- **Receive Starting Notifications.** Each user associated with the activity receives an electronic mail notification that the process has started. Notification information includes the process number, process title, activity title and a startup message. Startup message examples include

“This activity requires your disposition.” or “This activity has started but does not require your disposition.”

- **Notify Groups.** After the process has started, the administrator can use the **Notify Groups** option to send outstanding notifications to all users associated with the process activities. Outstanding notifications can include start process messages, final ending notifications or pending messages.
- **Receive Ending Notifications.** Each user associated with an activity receives an electronic mail notification when the process disposition, either approved or rejected, is final. Notification information includes the process Number, process title and an advisory message. Advisory message examples include “This process has been approved” or “This process has been rejected.”

Workflow Disposition Information

Workflow Management tracks various information during the disposition process, including the current status level and process comments.

Workflow Status Levels

Several types of statuses are tracked throughout the workflow process. Status types include the following:

User Status

Status	Description
not started	Disposition process has not yet begun for the activity.
in process	Disposition process has begun for the activity.
approved	User has approved the process.
rejected	User has not approved the process.

Group Status

Status	Description
not started	Disposition process has not yet begun for the activity.
in process	Disposition process has begun for the activity.
approved	All users associated with the group have approved the process.
rejected	At least one user associated with the group has rejected process.

Activity Status

Status	Description
not started	Disposition process has not yet begun for the activity.
in process	Disposition process has begun for the activity.

approved	All groups associated with the activity have approved the process.
rejected	At least one group associated with the activity has rejected the process.

Process Status

Status	Description
composition	The process has been created and the process number has been assigned, but the process has not been routed.
in process	The process is currently being routed to the appropriate reviewers for analysis and disposition.
Complete	Analysis on the process is complete and all dispositions, either approved or rejected, for the process have been entered.

Workflow Process Comments

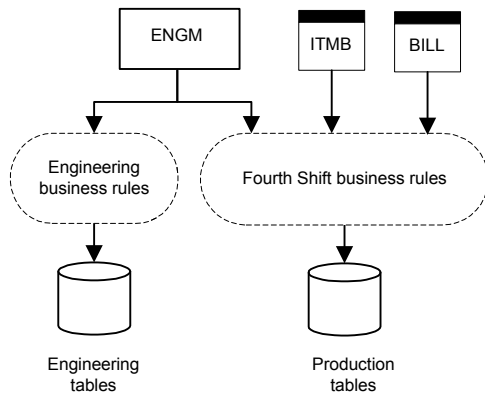
Several types of comments can be entered into the system during the routing and disposition of a process. Comments are part of processing history and cannot be deleted after they are entered.

- **General Process Comments.** General process comments can be entered anytime during the routing and disposition but they are not attached to a specific process and are not included in the comments summary. General process comments can be used to explain ideas or thoughts that are not directly related to a process.
 - To add a *general process* comment to a process, click the right mouse button and select the New Comment option.
- **Disposition Comments.** Disposition comments can only be entered during the disposition when the user is either approving or rejecting a process. Disposition comments are included in the process comments summary. Disposition comments can be used to explain why the user is approving or rejecting the process.
 - To add a *disposition comment*, click the right mouse button and select Set Disposition, then enter your comments.

Engineering Module Database Architecture

The Engineering Module updates both production and engineering information. Production information is subject to the same edits (or business rules) as when entering data through the traditional user interface.

The ENGM data is stored in tables in the production database. The Engineering Module database architecture looks similar to the following:



Navigation and Selection Options

Several methods are available for navigating and selecting within the Engineering Module. Navigational and selection methods include the following:

- **Menu Options.** Use the mouse to select an option from a menu. Click the menu title to view the options for each menu. Menu options may not always be available. If an option is unavailable, the text is grayed and the option cannot be selected. Click on the menu option to start the action listed.
- **Toolbar Buttons.** Use the mouse to select a button from the main toolbar. The toolbar provides a quick way to access some of the most frequently used features of the module.
- **Mouse Conventions.** Use the mouse to “drag and drop” components from one category to another. For example, to add a user to a group, simply select the user and then drag and drop the user into the specified group. Click the left or right mouse buttons to select open menus and options.
- **Keyboard Conventions.** You can use the standard keyboard keys to navigate within the system. Keyboard conventions are key or key combinations that allow you to carry out a command or action.

Menu Options

Item Master and Bills of Material

Menu	Option	Description
File	Open	Opens based on specified information.
	Copy Bill of Material	Opens the Copy Bill of Material dialog, where you set options for copying a bill of material.
	Go to Frame	Allows navigation to the frames available in the Product Definition application.
	Print Preview	Displays a report available for the specified parent item.
	Quick Print	Displays record selection options available to print an ad-hoc report.
	Save Settings	Saves all option settings for the application. If you close an application without saving the settings and you have not selected the Save Settings on Exit option on the Options menu, you lose all settings changes you did not save previously.

	Exit	Exits you from the application.
Edit	Find	Opens the Find application which allows you to search for a specific component or reference designator, based on search criteria.
	Find Next	Repeats the search using the criteria defined in the Find feature.
	Mass Change	Opens the Mass Change dialog which allows you to change items based on where used specifications.
	Select All Records	Selects all records for the current parent item.
	Copy Reference Designators	Copies selected text to the Clipboard. Text that you copy to the Clipboard replaces the previous contents.
	Paste Reference Designators	Inserts a copy of the Clipboard contents at the insertion point, replacing the selection (if any) with the text on the Clipboard. This command is not available if the Clipboard is empty or if the selected text cannot be replaced.
	Promote Item	Allows you to promote an item from one release level to the next release level.
	Delete	Removes the text from the field; the text is not available for future use.
	Add New Record	Creates a new record.
	Add Ref Des	Opens the Ref Des field from the Ref Des Entry tab which allows you to enter reference designators.
	Create Ref Des Range	Allows you to enter a range of reference designators.
	Zoom	Expands the viewing capacity of the selected information.
	Validate Exception Records	Validates any item on a bill of material which does not have an associated parent item.
	Set Exclusions	Allows you to enter a bill of material filter based on component type related criteria.
	Apply Exclusions	Applies any predefined filters and displays the filtered bill of material.
	Remove Exclusions	Removes any filters and displays the entire bill of material.
	Columns	Allows you to specify column layout
View	Refresh	Clears the active field.
	Graphical Bill of Material	Opens the Graphical Bill of Material dialog which allows you to view the bill of material in a graphical hierarchy.
	Shop Calendar	Opens the Shop Calendar, which allows you to calculate shop days based on specified criteria and view embedded revision information.
	Production Item Finder	Opens the Production Item Finder, which allows you to search for an item.
	Engineering Item Finder	Opens the Engineering Item Finder, which allows you to search for an item.
	Copy Buffer	Stores selected text.

	Clear Criteria	Clears data from the current field.
	Options	Allows you to specify general layout, reference designator and lead time options.
Help	Help Topics	Opens the help.
	Setting Up the Module	Opens the help manual at the Setting Up the Module section.
	About ENGM	Displays information about the release level and name of the application.
Pop-up	Cut	Removes the selected text and puts it on the Clipboard. Text that you place on the Clipboard remains there until you replace it with a new item.
	Expand All Levels	Expands the current bill of material level down to all lower levels of each component or subassembly.
	Undo	Reverses your previous action.

Engineering Database Administration

Menu	Option	Description
File	Open Data-base	Opens the engineering database.
	Close Data-base	Closes the engineering database.
	Repair/Compact Database	Displays options to select the engineering or Workflow database to begin the process of repairing or compacting.
	Analyze Eng/Prod Data-bases	Analyzes the integrity between the engineering and production databases and displays the results in a log file.
	Delete Data-base Maintenance Log	Deletes the log file that is produced during database maintenance tasks.
	Save all changes	Saves all changes made to the user-defined fields.
	Exit	Exits you from the application.
Edit	Copy	Copies selected text to the Clipboard. Text that you copy to the Clipboard replaces the previous contents.
	Paste	Inserts a copy of the Clipboard contents at the insertion point, replacing the selection (if any) with the text on the Clipboard. This command is not available if the Clipboard is empty or if the selected text cannot be replaced.
	Delete	Removes the text from the field; the text is not available for future use.
	New Field	Creates a new field.
	Rename Field	Renames a field.
	Undelete Field	Undeletes a field.
	Revert to Original Values	Restores original values into fields.

View	Toolbar	Toggles the display of the toolbar.
	Status bar	Toggles the display the status bar.
	User-Defined Fields	Moves to the User Defined Fields tab.
	Database Maintenance	Moves to the Database Maintenance tab.
	Arrange Icons	Displays sort options, such as by name, caption, type or required.
	Refresh	Clears the active field.
Help	Help Topics	Opens the help.
	Setting Up the Module	Opens the help at the Setting Up the Module section.
	About Engineering	Displays information about the release level and name of the application.

Product Release Rule Definitions

Menu	Option	Description
File	Open Data-base	Opens the engineering database.
	Close Data-base	Closes the engineering database.
	Exit	Exits you from the application.
Edit	Modify Phase Names	Allows you to customize the names of the release level phases.
	New	Creates a new condition or rule based on the area selected.
	Rename	Renames a condition or rule based on the area selected.
	Delete	Deletes a condition or rule based on the area selected.
	Properties	Displays the current properties.
View	Tool bar	Toggles the display of the toolbar.
	Status bar	Toggles the display of the status bar.
	Engineering to Pre-Production	Displays conditions and rules for this release level.
	Pre-Production to Production	Displays conditions and rules for this release level.
	Refresh	Redisplays the view based on changes, if any.
Help	Help Topics	Opens the help.
	Setting Up the Module	Opens the help at the Setting Up the Module section.

	About Product Release Management	Displays information about the release level and name of the application.
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Process Status and Disposition

You can use either ECRA or ECRD to view process status and disposition information, but the administrator tasks can only be done using ECRA. Several menu options vary between ECRA and ECRD.

Menu	Option	Description
File	New	Creates a new process.
	Delete	Deletes an existing process.
	Properties	Displays the current properties.
	Exit	Exits you from the application.
View	Processes Awaiting Action by xxx	Display all processes assigned to a specific user id using the id for the user currently logged onto the system.
	Show all Processes	Displays all processes that exist in the system.
	Edit Views	Allows view options to be specified and saved.
	Refresh View	Redisplays the view based on option changes, if any.
Admin	Processes Awaiting Notification	Display all processes awaiting notification.
	Late Processes	Display all processes in the system that are later than the Date Started + Allowed Days to Disposition.
	Notify Groups	Send notification to all the groups that the process has started.
	Start Process	Begin the routing of a process.
Help	Help Topics	Opens the help.
	Setting Up the Module	Opens the help at the Setting Up the Module section.
	About Process Status and Disposition	Displays information about the release level and name of the application.
Pop-up	New	Creates a new comment or document based on area selected.
	Display	Displays the selected comment or document based on area selected.
	Set Disposition	Allows you to approve or reject a process.
	Status	Displays the current status.

Routing Template Administration

Menu	Option	Description
File	New	Creates a new user, group, activity, document or routing template based on area selected.
	Delete	Deletes an existing user, group, activity, document or routing template based on area selected.
	Exit	Exits you from the application.
Edit	Include	Includes the selected user, group or activity into the selected topic.
	Remove	Removes the selected user, group or activity from the selected topic.
View	Refresh Data	Redisplays the view based on option changes, if any.
	Groups	View the Groups tab.
	Activities	View the Activities tab.
	Routing Templates	View the Routing Templates tab.
	Properties	Displays the current properties based on area selected.
Help	Help Topics	Opens the help.
	Setting Up the Module	Opens the help at the Setting Up the Module section.
	About Workflow Setup	Displays information about the release level and name of the application.
Pop-up	Move Down	Move the activity down one position in the list, which determines the order activities are performed.
	Move Up	Move the activity up one position in the list, which determines the order activities are performed.

Toolbar Buttons

The main toolbar is located below the menu bar at the top of the application window. The toolbar provides a quick way to access some of the most frequently used features. Toolbar buttons may vary based on available features and for inquiry-only features.

Item Master and Bills of Material

Toolbar Options	Description
Go to Frame	Allows navigation to the frames available in the Product Definition application
Open	Opens based on specified information.
Save Data	Saves the current data.
Print Preview	Generates a report based on the current column settings and displays report on screen for review. Print the generated reports using your standard Windows printing procedures.
Quick Print	Displays record selection options available to print an ad-hoc report.

Copy Reference Designators	Copies selected text to the Clipboard. Text that you copy to the Clipboard replaces the previous contents.
Paste Reference Designators	Inserts a copy of the Clipboard contents at the insertion point, replacing the selection (if any) with the text on the Clipboard. This command is not available if the Clipboard is empty or if the selected text cannot be replaced.
Promote Item	Allows you to promote an item from one release level to the next release level.
Find	Opens the Find application which allows you to search for specific information in the displayed list.
Graphical Bill of Material	Opens the Graphical Bill of Material dialog which allows you to view the bill of material in a graphical hierarchy.
Shop Calendar	Opens the Shop Calendar, which allows you to calculate shop days based on specified criteria and view embedded revision information.
View	Allows you to select a previously specified view using a drop menu
Save Current View	Saves the current layout of fields into a view.
Refresh	Clears the active field.
Set Exclusions	Allows you to enter a filter based on item type related criteria.
Apply Exclusions	Allows you to filter records based on specified criteria.
Last Message	Displays the previous message that was in the Status Bar, which is located at the bottom of the form.
Help	Displays the contents of the help.

Engineering Database Administration

Toolbar Options	Description
Save	Saves all changes made to the user-defined fields.
Copy	Copies selected text to the Clipboard. Text that you copy to the Clipboard replaces the previous contents.
Paste	Inserts a copy of the Clipboard contents at the insertion point, replacing the selection (if any) with the text on the Clipboard. This command is not available if the Clipboard is empty or if the selected text cannot be replaced.
Delete	Removes the text from the field; the text is not available for future use.
New Field	Creates a new field.
Help	Displays the contents of the manual.

Product Release Rule Definitions

Toolbar Options	Description
New Condition	Allows you to create a new condition.
New Rule	Allows you to create a new rule.
Properties	Displays the properties of the selected condition.

View	Allows you to select a previously specified view using a drop menu
Help	Displays the contents of the manual.

Process Status and Disposition

Toolbar Options	Description
All Processes	Display all processes that exist in the system.
Processes Awaiting Action by xxx	Display all processes assigned to a specific user id using the id for the user currently logged onto the system.
Late Processes	Display all processes in the system that are later than the Date Started + Allowed Days to Disposition.
Processes Awaiting Notification	Display all processes awaiting notification.
Approve/ Reject Process	Allows you to approve or reject a process.
Start Process	Begin the routing of the process.
Notify Groups	Send notification to all the groups that the process as started.
View	Allows you to select a previously specified view using a drop menu
Help	Displays the contents of the manual.

Keyboard Conventions

The Engineering Module has the ability to use the keyboard to transport you through the system. Keyboard conventions are a key or key combination that allows you to carry out a command or action. The Engineering Module uses the standard Microsoft Windows key conventions. For example, press CTRL + C to copy information to the Clipboard. See your Microsoft Windows User's Guide for more information on the standard Microsoft Windows key conventions.

Function Keys and Other Keyboard Options

The following function keys are defined for the Engineering Module:

Function Key	Description
F1	Displays the manual.
F3	Finds the next value that matches the criteria entered in the Find feature.
F5	Refreshes the screen data.
ESC	From the Parent field, restores previous parent item. From the Component Effectivity Date field, restores the current date. Cancels a view of information while it is being loaded.
CTRL+F	Opens the Find feature.
CTRL+END	Finds the last item in the list.
CTRL+HOME	Finds the first item in the list.
CTRL+ENTER	Creates a new line while entering engineering information in the Text field.

ALT+F4	Exits you from the application.
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Accelerator Keys

Accelerator keys are keyboard shortcuts that are available for menu options and buttons. The accelerator key available is the combination of the ALT key and:

- the underlined letter on the button
- the underlined letter in the menu title, then the underlined option from the menu. For example, press ALT+B, then press C to open the Customer application. This combination is represented by ALT+B, C when referenced in documentation.

Using the Finder

The Finder is used to locate records, such as items or components, in the database. The Finder displays all records that match the known search criteria you supply.

The Finder is made up of two grids: the **Search criteria** grid and the **Results list** grid.

Using the Search Criteria Grid

The Finder allows you to search for records or values that meet a set of defined **search criteria**. By entering known field values, you can locate a record and open it for review or modification.

You can:

- **Locate a record by a known value.** For example, you can use the Finder to locate an item by entering the item's id. In this case, the **Item** you enter is the search criteria.
- **Locate a record by an incomplete value.** If you know the first three characters of an **Item**, for example, you can enter them as the search criteria. The Finder displays a list of all of the available items whose **Item** begins with those three characters.
- **Locate a record using values for multiple fields.** If you know part of an item's description in addition to the first three characters of the **Item**, you can enter information for both the **Item** and **Description**. The Finder displays a list of all of the available items whose **Item** begins with those three characters and includes the partial description. It is important to note that the Finder locates records that meet **both** criteria, not either criteria.
- **Locate a record using a wildcard character.** If you know part of an item's description in addition to part of the **Item** identifier, you can enter a wildcard for both the **Item** and **Description**. Use the "*" wildcard character in addition to the partial item and description.

For example, if you want to search for components where the item identifier contains the word front and the description includes the word wheel, enter *front* for the partial **Item** and *wheel* for the partial **Description**. The Finder displays a list of all the available items whose **Item** and **Description** match the partial descriptions.

The Finder displays key fields, such as **Item**, in bold. Using key fields in search criteria significantly improves the searching performance. As a general rule, the more specific your search criteria, the easier it will be to locate the record you are looking for.

Query by Example

The Finder uses a method called **query by example**, or QBE. This method allows you to request information from a database in a natural and intuitive way.

When the Finder opens, the **Search criteria** grid contains columns that represent fields. The fields that are displayed depend on the type of record you are looking for. For example, if the Finder is helping you locate an item, you will see columns for fields like **Item Id**, **UM** and **Description**.

Using query by example, enter the information about the record you are searching for in the appropriate column or columns. When you press ENTER, the Finder displays a list of the records that meet all of the search criteria specified.

Using the Results List Grid

The **Results list** grid displays the records that match the search criteria. Each record appears in a row in the Results list grid.

The Results list grid contains the same columns that appear in the Search criteria grid. When it displays the records that meet the search criteria, it displays values in all of the available columns. The number of records displayed in the Results list depends on how specific the search criteria is.

Opening a Record

Once you have located the record you want to modify or review, you can open it in the appropriate application. Select the record by clicking anywhere on the row.

When the record is selected, the **row marker** appears to the left of the first column in the grid. To open the selected record in the application, simply double click the selected row into the **Parent** field of the application.

Keeping the Finder Open

When you open a record from the Finder, the Finder window remains open. You can toggle between the Finder and other applications at any time.

If you have used the Finder to locate a group of records that meet certain search criteria, the list remains available to you in the Results list. This is useful if you have modifications to make to a group of records. For example, you can change the reference designators for items within a range of Item Ids. Use the Finder to locate the list of items by Item Id, then open and modify each as needed.

You can close the Finder by choosing Close from the File menu. When you close the Finder, the information in the Results list is cleared and reset for the next use.

Using the Graphical Features

The Engineering Module includes graphical hierarchy displays to display information, such as multi-level bills of material or workflows and processes.

Standard Graphical Features

The standard graphical features include the following:

- uses the standard Microsoft Windows Explorer features, such as using the "+" and "-" keys to open or close a level
- the "*" key on the numeric keypad can also be used to expand all levels of the graphical display
- for the bills of material, unique icons are used to represent each component type, such as normal, phantom or resource
- for the workflows, unique icons are used to represent the different processes, such as user, group, activity or process

Color Coded Icons

In the Workflow Management application, icons are color coded to represent various levels of the process and disposition, such as:

Icon Color	Description
Black	process not started; contents can be changed

Yellow	process started; contents of activity cannot be changed
Red	process is rejected
Green	process is approved
Gray	information only, no action required

Generating Reports

Several reports are generated by the Engineering Module. These reports are based on Crystal Reports Professional predefined templates and use ODBC links to access item and bill of material information.

The Engineering Module also includes quick print reports and the ability to customize reports.

Quick Print Reports

Quick Print is provided to create printed reports for ad-hoc views of data such as for any user-defined table column sorting or layout customizations. Quick Print includes:

- available from the Bills of Material, Item Master, Item History, Item Finder, and Lead Time (graphical display) views
- accessed by choosing the Quick Print option from the File menu or by clicking the Quick Print toolbar button
- ability to select options for record selection and page setup
- ability to press ESC to interrupt or cancel the quick print

If you create custom views of data that are used repetitively, you may find it convenient to create custom reports and associate them with your views. It is recommended that you create your custom reports based on supplied report templates and then modifying them as necessary using Crystal Reports Professional. Crystal Reports Professional is the industry standard report writer and must be purchased separately.

Customized Reports

Customized reports can be associated with local or global views if one has previously been created using Crystal Reports. Customized reports are associated with a view using the Save Current View toolbar button. If a customized report is not assigned, the standard report is used.

To customize a standard report template provided with the Engineering Module, you need to use the Crystal Reports Professional software package, which must be purchased and installed separately. It is recommended that you do not modify the standard report template without renaming the file. Future updates to the Fourth Shift software overwrite the standard report template. Use the following steps to modify the report templates:

Modifying Report Templates

1. Copy the standard report template to another filename.
2. Use Crystal Reports Professional to customize the new report.
3. Save the new report.
4. Attach the customized report to a local or global view using the Save Current View toolbar button.

Tables Names

The Engineering module uses different table names.

Access Table Names	SQL Table Names
DBVersionInfo	n/a
DefinedConditions	FS_ItemPromotionCondition
DefinedPhases	FS_ItemPromotionPhase
DefinedRules	FS_ItemPromotionRule
ENG_BOM	FS_EngineeringBillOfMaterial
ENG_ITEM	FS_EngineeringItem
LinkedPhaseRules	FS_ItemPromotionPhaseRuleLink
LinkedRuleEdits	FS_ItemPromotionRuleEditLink
LinkedRuleSelections	FS_ItemPromotionRuleSelectionLink
REFDES	FS_ReferenceDesignator
USERITEMS	FS_EngineeringItemData
USERVIEWS1	FS_UserGrid
USERVIEWS2	FS_UserGridColumn
USERVIEWS3	FS_UserGridDefault
DefinedActivities	FS_WorkflowActivity
DefinedDocuments	FS_WorkflowDocumentTemplate
DefinedECRTypes	FS_WorkflowRoutingTemplate
DefinedGroups	FS_WorkflowGroup
DefinedUsers	FS_WorkflowUser
ECRActivityStatus	FS_WorkflowProcessData
ECRComments	FS_WorkflowComment
ECRDescriptions	FS_WorkflowProcess
ECRDocuments	FS_WorkflowDocument
ECRGroupStatus	FS_WorkflowGroupData
ECRUserStatus	FS_WorkflowUserData
LinkedActivityGroups	FS_WorkflowActivityGroupLink
LinkedECRTypeActivities	FS_WorkflowRoutingTemplateActivityLink
LinkedECRTypeDocuments	FS_WorkflowRoutingTemplateDocumentLink
LinkedGroupUsers	FS_WorkflowGroupUserLink
UserViews	FS_WorkflowProcessFilter

System Administration

The System Administration manual outlines the tasks involved in maintaining the Fourth Shift system. The Engineering Module includes special considerations in the area of daily backups and security.

Configuration Variables

The following configuration variables are used in the Engineering Module and can be customized, if desired:

Variable	Description
EngmDir	Engineering database location
EngmDocDir	Document template location
EngmPromoteOption1	Automatically assigns the Engineering item number as the target production number when the engineering items are promoted into the Pre-Production phase. Set variable to "True" to enable the capability or "False" to disable the capability.
EngmPromoteToExisting	Allows an engineering item to be promoted to an existing production item, provided that the production item does not have a bill of material. Set variable to "True" to enable the capability or "False" to disable the capability.
EmbeddedRevPrefix	Bill of material embedded revision level prefix. Default is "Rev" or value defined in the FS.CFG file.
WorkCenterDelimiter	Delimiter used for workcenters. Default is "[" (bracket). Valid delimiters include: [- * . / + %

Daily Backups

The document template files in the MFGSYS\ENGM\ECR_DOCS directory and the process-specific document files in the related subdirectories should be included in your daily backup. See Database Backups in the *System Administration* manual for more information on system backups.

Workflow Document Files

In a standard installation, the workflow document template files are located in the MFGSYS\ENGM\ECR_DOCS directory. The document template location is identified using the **EngmDocDir** configuration variable in the FS.CFG file.

These document template files are used as "placeholder" documents and can be attached to a process and then updated with company-specific information. When a document template file is attached to a process, the template file is copied to the process-specific location. The process-specific directories are system-defined 8-numeric character names, similar to the following:

Directory	Process-specific subdirectory
MFGSYS\ENGM\ECR_DOCS	00000001
	00000002
	00000003
	00000004

	00000005
--	----------

Security

Security rules for accessing the Engineering features should be assigned based on the requirements for each user. Use the PASS (Password Maintenance) screen to assign each user identifier a password and access code. Use the FCMT (Function Code Maintenance) screen to associate function codes with access codes.

Security Access Levels

Security access levels give system administrators the ability to allow or limit access to certain Engineering features, or function codes, based on the job requirements of the user. Security is based on the following access levels:

Level	Description	PASS Screen Examples
none	user has no access	none
inquiry	user can only access in inquiry mode	PBLI, PITI, PMLB, PCMP, PWUS, PCMS, PSMB, PMWU, PCRL, EBLI, EITI, EMLB, ECMP, EWUS, ECMS, ESMB, EMWU, ECRL, ECRD
update	user can access in update mode	PITB, PBLL, EITB, EBLL, EIMP, EDBA, WKFL, ECRA

Security for the Engineering module is cumulative. When a user is assigned different access levels to the same feature, cumulative security provides the higher level (update) access even when the user is trying to use the feature with a lower level (inquiry) access.

For example, if a user is assigned both inquiry (PBLI) and update (PBLL) access to the production bill of material, the user is allowed the update (PBLL) access, even when trying to use the production bill of material with inquiry (PBLI) access.

Security by Function Code

Security is assigned to a user by function code on the PASS and FCMT screens.

Product Definition - Engineering

FCMT for Inquiry	FCMT for Update	Security Description
EITI	EITB	Item Master
	EITB	Allows user to manually promote an item (Item Status E to A) or manually add, change or delete linkages between engineering and production items. Default does not allow access.
EBLI	EBLL	Bill of Material
	EBLL	Allows use of the Copy Production Bill to Engineering Bill feature
	ECP1	Allows use of the Copy Engineering Bill to Engineering Bill feature

	ELT1	Allows use of the Lead Time Analysis feature
ECMP		Comparison Bill
EWUS		Where Used
ECMS		Comparison of Summarized Bills
ESMB		Summarized Bill
EMLB		Multi-Level Bill
EMWU		Multi-Level Where Used
ECRL		Multi-Level Costed Bill
	EDBA	Engineering Database Administration
	EIMP	Engineering Data Import

Product Definition - Production

FCMT for Inquiry	FCMT for Update	Security Description
PITI	PITB	Item Master
PBLI	PBLL	Bill of Material
	PCP1	Allows use of the Copy Production Bill to Production Bill feature
	PLT1	Allows use of the Lead Time Analysis feature
PCMP		Comparison Bill
PWUS		Where Used
PCMS		Comparison of Summarized Bills
PSMB		Summarized Bill
PMLB		Multi-Level Bill
PMWU		Multi-Level Where Used
PCRL		Multi-Level Costed Bill

Product Release Management

FCMT for Inquiry	FCMT for Update	Security Description
	PRRD	Product Release Rule Definitions
	EPR1	Allows user to promote items from Phase 1 to Phase 2.
	EPR2	Allows user to promote items from Phase 1 to Phase 2 or from Phase 2 to Phase 3 without following any promotion rules.
	PPR1	Allows user to promote items from Phase 2 to Phase 3.

Workflow Management

FCMT for Inquiry	FCMT for Update	Description
	ECRA	Process Status and Disposition - Admin
ECRD		Process Status and Disposition (allows updates to user-specific processes and inquiry of other processes)
	WKFL	Routing Template Administration

Security to Disable Screens

We recommend that you use the FCMT screen to disable the following screens if you are using bills of material that include reference designators:

- ITMB (Item Master)
- BILL (Single Level Bill of Material)
- BILI (Single Level Bill of Material Inquiry)
- CBIL (Copy Bill of Material)
- MBIL (Multi-level Bill Inquiry)
- WUSE (Single Level Where Used Inquiry)
- MUSE (Multi-Level Where Used Inquiry)

Bills of material that include reference designators should only be maintained using the features available in the Engineering Module.

Engineering Data Import Setup

The Engineering Module includes data import functionality which is used to import data from external sources into the Engineering Module. For example, you may want to import engineering bills of material, reference designators or the linkages between engineering and production items. Manually entering this information can be time-consuming, but importing this information using the data import capability is quick and efficient.

These import transactions allow you to quickly add engineering information, for example when adding information about a new product line or during implementation. Import transactions for item maintenance are not available using this feature.

The data from external sources is imported into the Engineering Module using an import file that is created by the user. The import file must conform to certain standards and rules in order for the data import process to be successful.

If you wish to import data other than for the Engineering Module, see the Data Import Dictionary for detail on additional transactions.

Selecting an Editor to Create the File

The data file may be created with various editor programs, including the following:

- a file editor, such as Microsoft Word or Notepad, where you enter in the data and then save the data as "text only"
- a program such as Microsoft Excel or Access, where you enter the data into columns and then save the data as text with comma-separated values

If your system uses commas within field values, such as within the item or item description, you may want to verify that your data file includes double quotation marks around the strings. For example, the item description "19-inch frame, red" would need to be enclosed in double quotation marks in order to be successfully imported.

Import File Format Rules

The engineering data import file must be created using a specified format which includes a header record and data records in one of several available file layouts.

Import File Header Record

The data file that is imported into the engineering data base must include a header record that conforms to the following standards and rules:

- **First Record.** The header record must be the first non-blank or non-comment record in the file.
- **Column Headings.** The column headings must be entered exactly as documented in the **Field Name** column in the File Layout sections. For example, the Point of Use field must be entered into the header record as Pt_Use.

If the column headings are not entered correctly into the data import file, the headings will be displayed in lower case in the Import Results area when the import data file is opened.

Import File Data Records

The data records that are imported into the engineering data base must conform to the following standards and rules:

- **Field position.** Column headings may be listed in any order in the header record. The fields in the subsequent records must be ordered according to the column heading order in the header record.
- **Separator Values.** Commas must be used to separate all field values in the data import file. It is recommended that strings be enclosed using double quotes in order to avoid errors during the import process. For example, the item description "19-inch frame, red" would not be successfully imported unless it was entered into the data file enclosed in double quotes.
- **Ignored Records.** Blank lines or comment records beginning with “#” or “;” are ignored by the import process.

Engineering Import File Layouts

Several file layouts are available for importing engineering data into the ENGM Module. Regardless of the file layout, each record in the import file must identify the complete set of fields required for the transaction to process. All empty fields listed must be included for the layout to be accepted by the import process. File layouts include the following:

Heading	Description
Screen Name	Field as it appears on the screen. Throughout the ENGM Module, engineering items have an asterisk (*) prefix in the field label.
Field Name	Required title in the header record
Max Length	Maximum length accepted for field
Type	Data field type: A = alphanumeric D = date N = numeric
Notes	Lists if field is required and also includes default values

Add Engineering Item

To add an engineering item to the engineering data base, it is recommended that the following field information be included in the import data file.

Example Data Record Layout

"Item","Item_Desc","UM","MB","Drwg","Rev",DPC,Price,Cost,"Prod_Item","Item_Type",Fixed_Lead_Time

File Layout Fields

Screen Name	Field Name	Max Length	Type	Notes
*Item	Item	30	A	Required
*Item Description	Item_Desc	70	A	Default: *

*UM	UM	4	A	
*MB	MB	1	A	Default: B
*Drwg	Drwg	15	A	
*Rev	Rev	15	A	
*Dec Pre Cd	Dpc	1	N	Default: 0 No decimal allowed.
*Price	Price	10	N	Default: 0 One decimal allowed.
*Cost	Cost	10	N	Default: 0 One decimal allowed.
Item	Prod_Item ⁽¹⁾	15	A	
*Item Type	Item_Type	1	A	Default: N
Fixed LT	Fixed_Lead_Time	3	N	Default: 0 No decimal allowed.

(1) The Prod_Item field is used to associate the engineering item to a production item.

Add Components to an Engineering Bill

The following import information is required to add engineering or production components to an engineering bill.

Example Data Record Layout

"Parent", "Component", "Prod_Component", "Pt_Use", "Seqn", "Com_Typ", "Quantity", "Qty_Typ", "In_Effect", "Out_Effect",
"In_Rev", "Out_Rev", "LT_Offset", "Scrap_Pcnt", "Component_Source"

File Layout Fields

Screen Name	Field Name	Max Length	Type	Notes
*Parent	Parent	30	A	Required
*Component or Component	Component or Prod_Component ⁽¹⁾	30	A	Required
*Pt Use	Pt_Use	5	A	Default: 00000
*Seqn	Seqn	3	A	Default: 0 No decimal allowed.
*CT	Com_Typ	1	A	Required Default: N
*Quantity	Quantity	10	N	Default: 1 One decimal allowed.
*Qty Type	Qty_Type	1	A	Default: I
*In Effect	In_Effect		D	Default: 01/01/1980

*Out_Effect	Out_Effect		D	Default: 12/31/2079
*In_Rev	In_Rev	2	A	
*Out Rev	Out_Rev	2	A	
*LT Offset	LT_Offset	3	N	Default: 0 No decimal allowed.
*Scrap Pcnt	Scrap_Pcnt	3	N	Default: 0 One decimal allowed.
(none)	Component_Source (2)	1	A	Values include: 0 – Production 1 – Engineering Default: 1

(1) Each record may import either an engineering component (*Component) or production component (Component) but not both.

(2) Include this field if you are adding a production component to an engineering bill. When the Component_Source field is specified, the Prod_Component field is ignored and therefore it is not required to be in the incoming data file.

Add Reference Designators to a Component

The following import information is required to add reference designators to an engineering or production component. Reference designators can be added to a component at the same time that the component is being added to the bill of material. In order to import both sets of information using one data import file, use the file layout for adding components to an engineering bill of material, and be sure to include the fields for adding the reference designators to the component.

Example Data Record Layout

"Parent", "Component", "Prod_Component", "Pt_Use", "Seqn", "Com_Typ", "Quantity", "Qty_Typ", "In_Effect", "Out_Effect",

"In_Rev", "Out_Rev", "LT_Offset", "Scrap_Pcnt", "Parent_Source", "Component_Source", "RefDes", "RD_Tag"

File Layout Fields

Screen Name	Field Name	Max Length	Type	Notes
*Parent	Parent	30	A	Required
*Component or Component	Component or Prod_Component (1)	30	A	Required
*Pt_Use	Pt_Use	5	A	Required Default: 00000
*Seqn	Seqn	3	A	Required Default: 0 No decimal allowed.
*CT	Com_Typ	1	A	Required Default: N

*Quantity	Quantity	10	N	Default: 1 One decimal allowed
*Qty Type	Qty_Type	1	A	Default: I
*In Effect	In_Effect		D	Default: 01/01/1980
*Out_Effect	Out_Effect		D	Default: 12/31/2079
*In_Rev	In_Rev	2	A	
*Out Rev	Out_Rev	2	A	
*LT Offset	LT_Offset	3	N	Default: 0 No decimal allowed.
*Scrap Pcnt	Scrap_Pcnt	3	N	Default: 0 Decimal allowed.
(none)	Parent_Source ⁽²⁾	1	A	Values include: 0 – Production 1 – Engineering Default: 1
(none)	Component_Source ⁽³⁾	1	A	Values include: 0 – Production 1 – Engineering Default: 1
Reference Designators	RefDes ⁽⁴⁾	10	A	Required
Reference Designator Text	RD_Tag ⁽⁵⁾	255	A	

(1) Each record may import either an engineering component (*Component) or production component (Component) but not both.

(2) Include Parent_Source = 0 if you are adding reference designators to a production parent.

(3) If the Component_Source field is not in the import file, the Prod_Component field is assumed to contain a production component and the Component field is assumed to contain an engineering component. When Component_Source = 0 is specified in the import file, the Prod_Component field is ignored and therefore it is not required to be in the incoming data file.

(4) This field may include multiple reference designators, which must be comma-delimited. Ranges are also supported, which must use a hyphen (-) as the range separator.

(5) The reference designator text included in this field will be applied to every reference designator entered in the RefDes field. To import unique text, a separate record must be created for each reference designator and its unique text entered into the RD_Tag field.

File Layout Examples

Use the following file layout examples to help understand import file format and layout structures.

Add Engineering Item 19-REDe to Engineering database

```
"Item", "Item_Desc", "UM", "MB", "Drwg", "Rev", DPC, Price, Cost, "Prod_Item", "Item_Type", Fixed_Lead_Time
```

"19-REDe","19-inch frame, red","EA","M","A12","A",0,55.25,30,"19-RED","N",3

Add Engineering Component AT-100e to an Engineering Bill

"Parent","Component","Pt_Use","Seqn","Com_Typ",Quantity,"Qty_Typ","In_Effect","Out_Effect","In_Rev",
 "Out_Rev",LT_Offset,Scrap_Pcnt
 "19-REDe","AT-100e","0010","001","N",2,"I","10/10/1999","12/31/2079","A","B",1,2

Add Production Component AT-100 to an Engineering Bill

"Parent","Component","Pt_Use","Seqn","Com_Typ",Quantity,"Qty_Typ","In_Effect","Out_Effect","In_Rev",
 "Out_Rev",LT_Offset,Scrap_Pcnt,"Component_Source"
 "19-REDe","AT-100","0010","001","N",2,"I","10/10/1999","12/31/2079","A","B",1,2,"0"

Add Reference Designators R1-R3 to an Engineering Component

"Parent","Component","Pt_Use","Seqn","Com_Typ",Quantity,"Qty_Typ","In_Effect","Out_Effect","In_Rev",
 "Out_Rev",LT_Offset,Scrap_Pcnt,"Parent_Source","RefDes","RD_Tag"
 "19-REDe","AT-100e","0010","001","N",2,"I","10/10/1999","12/31/2079","A","B",1,2,"1","R1-R3",""

Add Reference Designators R1-R3 to a Production Component

"Parent","Component","Pt_Use","Seqn","Com_Typ",Quantity,"Qty_Typ","In_Effect","Out_Effect","In_Rev",
 "Out_Rev",LT_Offset,Scrap_Pcnt,"Parent_Source","Component_Source","RefDes","RD_Tag"
 "19-REDe","AT-100","0010","001","N",2,"I","10/10/1999","12/31/2079","A","B",1,2,"0","0","R1-R3",""

Add Reference Designators R4-R6 to a Production Component using Prod_Component Field

"Parent","Prod_Component","Pt_Use","Seqn","Com_Typ",Quantity,"Qty_Typ","In_Effect","Out_Effect","In_Rev",
 "Out_Rev",LT_Offset,Scrap_Pcnt,"RefDes","RD_Tag"
 "19-REDe","AT-100","0010","001","N",2,"I","10/10/1999","12/31/2079","A","B",1,2,"R4-R6",""

Add Component with Unique Reference Designator Text

"Parent","Component","Pt_Use","Seqn","Com_Typ",Quantity,"Qty_Typ","In_Effect","Out_Effect","In_Rev",
 "Out_Rev",LT_Offset,Scrap_Pcnt,"Parent_Source","RefDes","RD_Tag"
 "19-REDe","AT-100e","0010","001","N",2,"I","10/10/1999","12/31/2079","A","B",1,2,"1","R1","R1 must be fitted first."
 "19-REDe","AT-100e","0010","001","N",2,"I","10/10/1999","12/31/2079","A","B",1,2,"1","R2","R2 requires R1 placed."
 "19-REDe","AT-100e","0010","001","N",2,"I","10/10/1999","12/31/2079","A","B",1,2,"1","R3","R3 requires R1 and R2 placed."

Using the Engineering Module

The Engineering Module includes the following applications:

- [Product Definition](#)
- [Product Release Management](#)
- [Workflow Management](#)

Product Definition

Production Definition integrates the item master and bills of material functionality for both engineering and production environments. Product Definition includes the following:

- **Item Master.** Used as the master record that identifies each engineering or production unique end-product, assembly, component, material, tool, reference item or resource center used in your system. See Item Master for feature information.
- **Bills of Material.** Used to set up and maintain single level bills of material. See Bill of Material for feature information.
- **Bills of Material Analysis.** Used to review and analyze the single and multi-level bills of material.
 - See Multi-Level Bill for information on viewing multi-level bills of material.
 - See Where Used or Multi-Level Where Used for information on analyzing parents and component relationships in bills of material in a “where used” format.
 - See Comparison Bill for information on comparing bills of material by effectivity date or revision level.
 - See Summarized Bill for information on comparing bills of material based on summarized data.
 - See Comparison of Summarized Bills for information on comparing summarized bills of material.
 - See Multi-Level Costed Bill for information on simulating bill of material cost roll information.
- **Product Structure Detail.** From the item master and bills of material features, you can add and review product structure detail. Product structure detail includes reference designators, component detail, lot trace detail, item history and lead time detail. See [Product Structure Detail](#) for more information.
- **Engineering Database Administration.** Used to perform engineering system administration functions such as setting up user-defined fields and maintaining the supplemental databases. See [Engineering Database Administration](#) for feature information.
- **Engineering Data Import.** Used to import engineering item and bills of material data into the Engineering database. See [Engineering Data Import](#) for feature information.

Item Master

Item Master is used to record each of your company's unique engineering end-product, assembly, component, material, tool, reference item or resource center. It is the master record for each of your items. Item Master contains information that identifies and describes each item used in your engineering and production processes.

Item Master displays parent and component item information in both a graphical hierarchy and in a table (row by column) format. The table format can be customized, for example, to add a second row of column headings, add or remove columns or change the column width.

See also [Access Methods](#) for more information on accessing this feature.

Bill of Material

Bills of material are constructed one level at a time by entering a parent item and its first-level components. As you progress through your product structure entering parent-component information, you automatically build the multi-level bill of material for an end-item. While building your bill of material, you can view related item detail, such as packaging, planning and stock status information.

Bill of Material displays parent and component item information in both a graphical hierarchy and in a table (row by column) format. The table format can be customized, for example, to add a second row of column headings, add or remove columns or change the column width.

Features available are based on user job functions:

Access from	Features
ENGM Module	Set up and maintain the single level bills of material, assign reference designators and enter component detail information
MMAM Module	View the single level bills of material

See also [Access Methods](#) for more information on accessing this feature.

Multi-Level Bill

Multi-Level Bill is used to view a parent items' multi-level product structure as of a user-specified effectivity date. You can view a flattened bill format by exploding phantom components. Multi-Level Bill also allows you to view the complete item change history as of a specific revision level or effectivity date.

Multi-Level Bill displays component item information in a table (row by column) format based on the information entered in the **Parent** and **Component Effectivity Date** fields.

The Multi-Level Bill functionality is the same regardless of how it is accessed. See also [Access Methods](#) for more information on accessing this feature.

Item History

The Item History tab allows you to view an item's inventory history and activity information.

The Item History tab displays beginning, receipt, issue, shipping and adjustment quantities.

Where Used

Where Used is used to list all parent items that directly use a specific component. The list displays the single level relationship between a component and all parent items at the next highest level. You can also view Item Master detail, such as packaging, planning and stock status information.

Where Used is useful in making mass engineering changes using the Mass Change ability, because it shows where a given component is used throughout your company's bills of material.

Where Used displays parent and component item information in both a graphical hierarchy and in a table (row by column) format. The table format can be customized, for example, to add a second row of column headings, add or remove columns or change the column width.

See also [Access Methods](#) for more information on accessing this feature.

Multi-Level Where Used

The Multi-Level Where Used is used to list all parent items that directly use a specific component. The list displays the single level relationship between a component and all parent items at the next highest level. You can also view Item Master detail, such as packaging, planning and stock status information.

Multi-Level Where Used is useful to view end item pegging information, since only the top level, or end items, are displayed. Multi-Level Where Used is also useful in making mass engineering changes using the Mass Change ability, because it shows where a given component is used throughout your company's bills of material.

The Multi-Level Where Used displays parent and component item information in both a graphical hierarchy and in a table (row by column) format. The table format can be customized, for example, to add a second row of column headings, add or remove columns or change the column width.

See also [Access Methods](#) for more information on accessing this feature.

Comparison Bill

Comparison Bill is used to compare bills of material based on parent items or by component effectivity date. For example, you can compare **Parent 1** to itself, based on different revisions (component effectivity dates) or you can compare **Parent 1** and **Parent 2** from different bills of material.

Comparison Bill compares parent, point of use, sequence and component item information in a table (row by column) format based on the information entered in the **Parent 1**, **Parent 2** and **Component Effectivity Dates** fields. Use the Hide All Matching Records and Hide All Unmatching Records options to easily compare the bills of material information.

The Comparison Bill functionality is the same regardless of how it is accessed. See also [Access Methods](#) for more information on accessing this feature.

Summarized Bill

Summarized Bill allows you to perform "what if" cost and inventory impact analysis by comparing multi-level bills of material where each of the components is listed once with an aggregated quantity. Summarized Bill is used to:

- plan for optimal material usage during product phase-out
- assess cost/inventory implications of unplanned impact orders
- generate prioritized material expedite lists

Summarized Bill displays component item information in a table (row by column) format based on the information entered in the **Parent** and **Component Effectivity Date** fields.

Features available are based on user job functions:

Access From	Features
-------------	----------

ENGM Module	Present a multi-level bill where each of the components is listed once with an aggregated quantity. Quantities are aggregated based on make buy (MB), quantity type (QT) and component type (CT). For example, you may need a purchase requisition for materials still in the engineering phase that means the materials are not in the Fourth Shift inventory. You can use the summarized bill of material with aggregated quantities to show your material requirements in order to get a purchase requisition.
MMAM Module	Present a multi-level bill by specifying a product quantity and an item type to consume. Choose to view data from several pre-defined views, such as Summarized Bill by Lead Time or Required Quantity.

When accessed from the MMAM Module, Summarized Bill analysis calculates summarized, consumed and required quantity and cost information based on a specified **Prod Qty** (production quantity) value. Information calculated includes:

Information calculated	Description
Summarized	total quantity/cost needed to produce the Prod Qty specified, taking scrap and yield into account.
Consumed	quantity/cost taken from Available inventory to fulfill the production of the Prod Qty specified
Required	quantity/cost, in addition to the consumed amount, needed to fulfill the production of the Prod Qty specified

The Summarized Bill of Material reports available can be sorted in a variety of ways. See [Generating Reports](#) in the [Setting Up the Engineering Module](#) section of the *Engineering Analysis* manual for more information.

See also [Access Methods](#) for more information on accessing this feature.

Comparison of Summarized Bills

Comparison of Summarized Bills is used to compare summarized bills in order to identify differences between two multi-level bills. Users are able to validate the items and quantities of two bills independent of the bill structure. Multi-level bill structures may differ, but the components and quantities included may be the same.

Comparison of Summarized Bills compares parent items in a table (row by column) format based on the information entered in the **Parent 1**, **Parent 2** and **Component Effectivity Dates** fields. Comparisons are based on component, quantity type (order or item) and component type. Use the Hide All Matching Records and Hide All Unmatching Records options to easily compare the bills of material information.

See also [Access Methods](#) for more information on accessing this feature.

Multi-Level Costed Bill

Multi-Level Costed Bill is used to simulate a cost roll for component items based on cost type or component effectivity date. Cost rolls can be simulated for either production costs or engineering costs for any cost type (0-9, B) that has been defined on the CNFC (Cost Type Setup) screen. A simulated cost roll is a snapshot of an item cost for a specific cost type at a specific point in time.

Multi-Level Costed Bill displays parent and component item cost information in both a graphical hierarchy and in a table (row by column) format. The table format can be customized, for example, to add a second row of column headings, add or remove columns or change the column width.

See also [Access Methods](#) for more information on accessing this feature.

Engineering Database Administration

Engineering Database Administration is used to perform engineering system administration functions, such as setting up and defining fields based on user preferences, maintaining the supplemental databases associated with the Engineering Module and analyzing the integrity of the engineering and Fourth Shift databases.

Engineering Database Administration is divided into sections that include:

Tab Title	Description
User Defined Fields	Allows you to set up and define fields based on user preferences. Includes a header section for defining field values and a table section where fields are displayed and can be sorted by field name, caption, data type or whether or not the field is required.
Database Maintenance	Allows you to analyze the integrity of the engineering and Fourth Shift databases. A log file (Analyze.LOG) is created during any database maintenance process.

See also [Access Methods](#) for more information on accessing this feature.

Log file is empty!

An informational message to inform you that the database repair/compact log file does not have any processing information. The log file has either recently been deleted or no repair/compacting processes have been run yet. Rerun a repair/compact process to regenerate the log file information.

Log file has been deleted!

An informational message to inform you that, as requested, the database repair/compact log file has been deleted. Rerun the repair/compact process to regenerate the log file information.

Engineering Data Import

Engineering Data Import is used to import data from external sources into the Engineering Module. Data, such as engineering items, engineering bills of material, engineering and production reference designators and the linkages between engineering and production items can be imported into the Engineering database.

The data from external sources is imported into the Engineering Module using an import file that is created by the user. See the [Engineering Data Import](#) section for more information on the engineering data import file, including the required file format and layouts available when using the engineering data import functionality.

Engineering Data Import is divided into sections that include:

Section	Description
Import File	Allows you to select the file to import.

Import Results	Allows you to review the sample data before it is imported and review the results of the import.
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See also [Access Methods](#) for more information on accessing this feature.

Product Structure Detail

From the item master and bills of material features, you can add and review product structure detail. Product structure detail includes engineering component information such as reference designators, production component detail, item history, lot trace detail, lead time detail and exceptions for bills of materials.

The following tabs are available from the Product Definition screens:

- **Engineering.** Includes item detail, such as drawing identifiers, cost, price and revision levels and the decimal precision associated with the item.
- **Production.** Includes component detail, references, planning detail, planning fence and stock status.
- **Item History.** Includes an item's inventory history and activity information.
- **Lot Trace.** Includes an item's lot trace and serialization details.
- **Lead Time.** Includes cumulative and individual lead times for an item's multi-level product structure.
- **Exceptions.** Notifies you that a reference designator record has become separated from the associated parent item.

Engineering

The Engineering tab allows you to enter item detail, such as drawing identifiers, cost, price and revision levels associated with the item. You can also enter the DPC (decimal precision) value.

The Engineering tab is divided into sections that include:

Tab Title	Description
Comp Detail	Allows you to enter engineering or production component detail such as in and out revision dates. Component specific notes may also be entered. Available only from the Engineering Bill of Material or Engineering Where Used features.
Detail	Allows you to view engineering item detail, such as engineering drawing identifiers, cost, price and revision levels associated with the item. You can also review the DPC (decimal precision) value.
Reference Designator	Allows you to enter reference designators and reference designator text for each component item on the bill of material. Reference designators can be entered individually or in ranges.

Production

The Production tab allows you to enter component detail, references, planning detail, planning fence and view stock status.

The Production tab is divided into sections that include:

Tab Title	Description
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Comp Detail	Allows you to enter engineering or production component detail such as in and out revision dates. Component specific notes may also be entered. Available only from the Production Bill of Material or Production Where Used features.
References	Allows you to view classification information, such as item class codes and family grouping, to further define the item. All entries are optional and should be used if your company requires a detailed record for the item
Packaging	Allows you to view specific shipping and packaging information, such as shipping weight or package type, to further define the item. All entries are optional and should be used if your company requires a detailed record for the item.
Planning Detail	Allows you to view planning information, such as preferred location and lead time. Used as key references by the system to make planning calculations.
Planning Fence	Allows you to view planning information, such as forecast codes and lot size quantities. Used as key references by the system to make planning calculations.
Stock Status	Allows you to view an item's current inventory status. Provides information on the quantity for each inventory classification (on hand, in-inspection, shipping, on-hold and internal and external WIP) and inventory value based upon ITMC Cost Type 0.

Lot Trace

The Lot Trace tab allows you to view an item's lot trace and serialization detail information.

The Lot Trace tab is divided into sections that include:

Tab Title	Description
Detail	Allows you to view an item's lot trace and serialization detail information. Provides information such as policies, calendar days and text messages.
Lot / SN	Allows you to view an item's lot trace and serialization number detail. Provides information such as lot and serial mask, default and last number used.

Lead Time

The Lead Time tab allows you to view cumulative and individual lead times for an item's multi-level product structure in effect as of a user-specified date. You can also simulate lead time changes, including changes to the start times as specified by a component's lead time offset.

The Lead Time tab also allows critical path analysis. You can interactively walk the critical path adjusting lead times and lead time offsets while monitoring the impact of simulated changes on the cumulative lead time of the parent.

The Lead Time tab displays parent and component item information in a graphical hierarchy on the left side and the related lead time information in a Gantt chart on the right side.

The Lead Time tab is only available from the Multi-Level Bill of Material and its functionality is the same regardless of how it is accessed. See also [Access Methods](#) for more information on accessing this feature.

The **Gantt Chart** has several display features:

- Daily time increments are displayed by the horizontal axis. Chart scaling is displayed along the top of the chart.

- Each component is displayed by one line:

Line Type	Description
Solid single	buy item
Solid double	make item with a normal component type (CT = N)
Dashed double	a make item with a phantom component type (CT = P)
Line length	Component's lead time

- The starting point of a line, represented by the right vertical line, indicates when the component is needed. This date is based on lead times of higher-level items to determine when a component's parent item should be started.
- The critical path of components to manufacture the parent item is displayed with red lines by default. When more than one critical path exists, only the last one (nearest the bottom of the Gantt chart) is displayed in red. Critical paths are marked with an asterisk (*) in the graphical hierarchy.
- The normal, highlighted and critical path line colors can be customized by selecting Options from the View menu.
- The cumulative lead time for the parent item, based on the critical path of components, is displayed in the **Cum LT** field.

Exceptions

The Exceptions tab notifies you that a reference designator record in the engineering database has become separated, or "orphaned" from the associated parent item in the bill of material in the manufacturing database.

The Exceptions tab displays the "orphaned" reference designator records and is active only when reference designator exceptions exist. The Exceptions tab is only available from the Bill of Material.

Product Release Management

Product Release Management allows administrators to set up conditions and define the rules that are considered when an item is being released to the next phase, such as from engineering to pre-production or from pre-production to production. To aid the product release manager, sample rule definitions are included which can be customized for your specific release requirements.

- Set Up Rule Definitions.** Setting up rule definitions involves setting up selection and edit conditions and assigning the conditions to rules. See [Product Release Rule Definitions](#) for feature information.
- Release Items.** Once conditions and rules have been defined, the rule definitions are used as criteria for releasing items between the three specified release levels.

Example

- Make Items Only.** You can create a rule that will check only the make items. The rule selection criteria would look similar to "MB is equal to M". When an item is being released from one phase to the next, only items that meet the selection criteria (MB = M) will be considered.
- Inspection Based on Cost.** You can create a rule that all items over a specified cost must be inspected. The rule selection criteria would look similar to "Cost >> \$250" and "Inspection

Instructions is not blank or null". When an item that costs more than \$250 is selected for promotion, it will only be promoted if the item has been inspected.

Product Release Rule Definitions

Product Release Rule Definitions is used by product release managers to set up the conditions and define the rules that are considered when an item is being released to the next release phase.

- **Set Up Conditions.** Users set up selection and edit condition criteria which is used to evaluate the item prior to release.
- **Define Rules.** Users create rules and then assign conditions to the rules based upon your company's specifications. Two sets of rules are defined for releasing items: rules to release from Phase 1 to Phase 2 and rules to release from Phase 2 to Phase 3. Rule severity, warning, or failure must be assigned to each rule.

Product Release Rule Definitions is divided into sections that include:

Tab Title	Description
Selection/Edit Conditions (left side)	Used to set up and define the selection and edit condition criteria which is used to evaluate the item prior to release.
Rules (right side)	Used to create rules and then assign selection and edit conditions. Also used to determine the rule severity (warning or failure).

See also [Access Methods](#) for more information on accessing this feature.

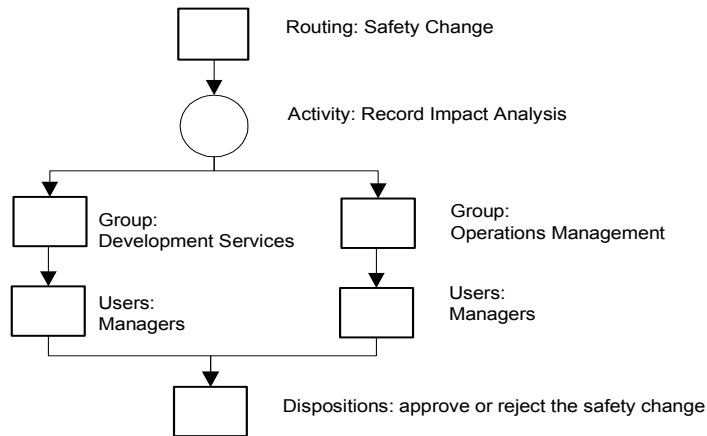
Workflow Management

Workflow Management provides the ability to set up and manage a workflow process based on the way your business operates. To aid the workflow administrator, document and routing templates are included which can be used as a starting point and then customized with your specific requirements.

- **Setting Up a Workflow.** Setting up a workflow process includes defining users, groups, activities and routing templates. See [Routing Template Administration](#) for feature information.
- **Managing a Workflow.** Managing a workflow process includes starting a process, tracking the status and analyzing the disposition results. See [Process Status and Disposition](#) for feature information.

Example

For example, you may want to set up a process for recording impact analysis of safety changes made within your company. Approvals from the managers of the Operations Management and Development Services departments could be required for the safety change to be approved. This process would look similar to the following:



Routing Template Administration

Routing Template Administration is used by workflow administrators to define and set up the areas of a workflow process. The workflow areas that must be defined include users, groups, activities and routing templates. A workflow process can be any procedure used within your company that involves several levels of steps or instructions.

Routing Template Administration is divided into sections that include:

Tab Title	Description
Groups	Users. Used to create users who are involved in the workflow process. Groups. Used to create groups or project responsibilities that are involved in the workflow process. Users are assigned to groups which represent how your company operates. Groups are notified in parallel within an activity, which means that once an activity has started, all groups within that activity are notified at the same time.
Activities	Used to define the set of activities required to complete the workflow process. Activity definitions are then used to communicate information among members of the groups. Activities are performed serially within a process, which means that one activity must be completed before the next activity can start.
Routing Templates	Used to define the routing sequence for each activity. Because activities are performed serially within a process, it is important to define the sequence of when you want the activities to be performed.

See also [Access Methods](#) for more information on accessing this feature.

Process Status and Disposition

Process Status and Disposition is used by workflow administrators or individual users to manage a workflow process. Workflow administrators can access all processes, but individual users can access only the processes that are assigned to the individual's user identifier. Managing a process includes the following:

- **Select Routing.** Select a routing template as the base of your process.
- **Customize.** Customize the process with your company's requirements, such as adding groups or documents.

- **Route.** Route to the appropriate reviewers via electronic mail to notify them that a process has been started.
- **Review Dispositions.** Review the dispositions, either approve or reject, which are entered by all users in the groups that are assigned to the process. **Users can change their disposition as long as it is not the final disposition in an activity. Reviewing dispositions allows you to monitor the** progress of each process and allows you to see if a process is being held up by a certain activity or group.
- **Restart.** A process can be restarted if the workflow administrator does not accept the final process disposition. The process is restarted by changing the process status from “completed” back to “in process.”

Process Status and Disposition is divided into sections that include:

Section	Description
Process (left side)	Used to maintain workflow processes. Administrators can review the entire list of processes. Users can only review processes assigned to them.
Disposition (right side)	Used to maintain dispositions on a process which has been routed to you. Disposition actions can include adding comments, and then either an approval or a rejection.

See also [Access Methods](#) for more information on accessing this feature.

ECRD – Process Status and Disposition

Process Status and Disposition is used by workflow administrators or individual users to manage a workflow process. Workflow administrators can access all processes, but individual users can access only the processes that are assigned to the individual's user identifier. Managing a process includes the following:

- **Select Routing.** Select a routing template as the base of your process.
- **Customize.** Customize the process with your company's requirements, such as adding groups or documents.
- **Route.** Route to the appropriate reviewers via electronic mail to notify them that a process has been started.
- **Review Dispositions.** Review the dispositions, either approve or reject, which are entered by all users in the groups that are assigned to the process. Users can change their disposition as long as it is not the final disposition in an activity. Reviewing dispositions allows you to monitor the progress of each process and allows you to see if a process is being held up by a certain activity or group.
- **Restart.** A process can be restarted if the workflow administrator does not accept the final process disposition. The process is restarted by changing the process status from "completed" back to "in process."

Process Status and Disposition is divided into sections which include:

Section	Description
Process (left side)	Used to maintain workflow processes. Administrators can review the entire list of processes. Users can only review processes assigned to them.
Disposition (right side)	Used to maintain dispositions on a process which has been routed to you. Disposition actions can include adding comments, and then either an approval or a rejection.

Fields

Activity Status

Activity Status indicates the activity's current position on the process disposition. **Activity Status** options include:

Not Started. Disposition process has not yet begun for the activity.

In Process. Disposition process has begun for the activity.

Approved. All groups associated with the activity have approved the process.

Rejected. At least one group associated with the activity has rejected the process.

Where Used: Process Status and Disposition

Activity Title

Activity Title is the title, or short description, of the activity which is pre-defined by the workflow management administrator during the workflow setup process. The **Activity Title** is

displayed throughout the application to identify the activity associated with the group and **Process Number** . Entry is any alphanumeric combination of up to 50 characters.

Where Used: Process Status and Disposition; Routing Template Administration

Additional Notes

Additional Notes is an explanation of, or any additional information pertaining to, the process disposition. **Additional Notes** can only be added during the process disposition process.

Additional Notes are stored as historical entries in the **Disposition Notes** field for the specific process for which they were entered. Entry is any alphanumeric combination of up to 10,000 characters.

Where Used: Process Status and Disposition

Allow Days

Allowed Days to Disposition specifies the number of days given to the disposition process, either to approve or reject, for a specified process. **Allowed Days** is based on calendar days and is determined by the workflow management administrator during the activity setup process.

Where Used: Process Status and Disposition; Routing Template Administration

Comments

Comments includes additional general information pertaining to the process. Comments can entered any time during the routing of the process. Entry is any alphanumeric combination of up to 10,000 characters.

Where Used: Process Status and Disposition

Date

Date and Time is the day, month and year by which system transactions are identified. Often displayed after the date is the time, in hours, minutes and seconds, that the transaction took place.

Where Used: Process Status and Disposition

Date Completed

Date Completed is the day, month and year that the routing activity is approved for a specific process. The **Date Completed** is when all users within all groups within a specific activity have approved the process. Often displayed after the date is the time, in hours, minutes and seconds, that the activity was completed.

Where Used: Process Status and Disposition

Date Completed Range

Date Completed Range is the beginning and ending of a date range which identifies when the routing activity was completed for a specific process. **Date Completed Range** is used as selection criteria when defining views for reviewing processes.

Where Used: Process Status and Disposition

Date Started

Date Started is the day, month and year that the routing activity started for a specific process. Often displayed after the date is the time, in hours, minutes and seconds, that the activity started.

Where Used: Process Status and Disposition

Date Started Range

Date Started Range is the beginning and ending of a date range which identifies when the routing activity started for a specific engineering process. **Date Started Range** is used as selection criteria when defining views for reviewing processes.

Where Used: Process Status and Disposition

Description

Routing Template Description is the description of the routing template that is pre-defined by the workflow management administrator during the workflow setup process. Entry is any alphanumeric combination of up to 10,000 characters.

Where Used: Process Status and Disposition

Directory

Directory identifies the system-generated directory location where any documents, or attachments, are stored for a specific process. The directory location is created as a sub-directory off the Mfgsys\Engm\Ecr_Docs directory. Directories are created and named sequentially, starting with a number sequence predefined by the workflow management administrator during the workflow setup process.

Where Used: Process Status and Disposition; Routing Template Administration

Disposition

Disposition is the action you wish to take for a specific process after reviewing the process routing package. Disposition options include:

Approve. You approve the process, which is then routed to the next group or activity for review and disposition.

Reject. You do not approve the process.

In Process. The workflow management administrator determines that an approved or rejected process must be sent back into the disposition process.

Where Used: Process Status and Disposition

Disposition Notes

Disposition Notes is a historical summary of any disposition comments or additional notes that were entered for the specific process. **Disposition Notes** can also include automatically generated messages based on process disposition activity, such as process status changes.

Where Used: Process Status and Disposition

Document Description

Document Description is the user-defined description of the document, or attachment, which is included in the routing package for the related process. Entry is any alphanumeric combination of up to 10,000 characters.

Where Used: Process Status and Disposition; Routing Template Administration

Document Title

Document Title is the user-defined title, or short description, of the document, or attachment, which is included in the routing package for the related process. The **Document Title** is displayed throughout the application to identify the document related to the process. Entry is any alphanumeric combination of up to 50 characters.

Where Used: Process Status and Disposition; Routing Template Administration

File Name

Attachment File Name identifies the source directory path and file name of the document, or attachment, which is included in the routing package for the related process.

Where Used: Process Status and Disposition; Routing Template Administration

Group Status

Group Status indicates the group's current position on the process disposition. **Group Status** options include:

Not Started. Disposition process has not yet begun for the activity.

In Process. Disposition process has begun for the activity.

Approved. All users associated with the group have approved the process.

Rejected. At least one user associated with the group has rejected the process.

Where Used: Process Status and Disposition

Group Title

Group Title is the title, or short description, of the group that is pre-defined by the workflow management administrator during the workflow setup process. The **Group Title** is displayed throughout the application to identify the group associated with the **User Name** and **Process Number**. Entry is any alphanumeric combination of up to 50 characters.

Where Used: Process Status and Disposition; Routing Template Administration

Initiated By

Initiated By is the identification of the individual who created the process.

Where Used: Process Status and Disposition

Process Initiated By

Process Initiated By is the identification of the individual who started the process.

Where Used: Process Status and Disposition

Process Number

Process Number is the unique identifier for a workflow process. The **Process Number** consists of an optional prefix identifier and a system-generated number. The prefix identifier and starting number are pre-defined by the workflow management administrator during the workflow setup process. The **Process Number** cannot be changed once the process has been entered into the system.

Where Used: Process Status and Disposition

Process Title

Process Title is the title, or short description, of the process that is pre-defined by the workflow management administrator during the workflow setup process. The **Process Title** is displayed throughout the application to identify the process represented by the **Process Number**. Entry is any alphanumeric combination of up to 50 characters.

Where Used: Process Status and Disposition

Routing Template

Routing Template identifies the type of routing selected for the related process. **Routing Templates** are pre-defined by the workflow management administrator during the workflow setup process. A routing template must be assigned for each process created.

Where Used: Process Status and Disposition; Routing Template Administration

Status

Workflow Process Status indicates the current position of the process. Options include:

Composition. The process has been created and the process number has been assigned. The process has not been routed.

In Process. The process is currently being routed to the appropriate reviewers for analysis and disposition.

Complete. Analysis on the process is complete and all dispositions, either approved or rejected, for the process have been entered.

Where Used: Process Status and Disposition

Target Completion

Target Completion Date identifies the system-generated date when all dispositions should be completed. The **Target Completion Date** is calculated using **Date Started + Allowed Days to Disposition**. The **Target Completion Date** field highlights if the current system date is later than the target completion data specified.

Where Used: Process Status and Disposition

User Name

User Name identifies the individual associated with the **User Id**. **User Name** is the combination of the **First Name** and **Last Name** identified for the user.

Where Used: Process Status and Disposition

User Status

User Status indicates the user's current position on the process disposition. **User Status** options include:

Not Started. Disposition process has not yet begun for the activity.

In Process. Disposition process has begun for the activity.

Approved. User has approved the process.

Rejected. User has not approved the process.

Where Used: Process Status and Disposition

View

View is the user-defined name which is associated with the view filtering properties specified by the user. Entry is any alphanumeric combination of up to 50 characters.

Where Used: Process Status and Disposition

WKFL – Routing Template Administration

Routing Template Administration is used by workflow administrators to define and set up the areas of a workflow process. The workflow areas that must be defined include users, groups, activities and routing templates. A workflow process can be any procedure used within your company that involves several levels of steps or instructions.

Routing Template Administration is divided into sections that include:

Tab Title	Description
Groups	Users. Used to create users who are involved in the workflow process. Groups. Used to create groups or project responsibilities that are involved in the workflow process. Users are assigned to groups which represent how your company operates. Groups are notified in parallel within an activity, which means that once an activity has started, all groups within that activity are notified at the same time.
Activities	Used to define the set of activities required to complete the workflow process. Activity definitions are then used to communicate information among members of the groups. Activities are performed serially within a process, which means that one activity must be completed before the next activity can start.
Routing Templates	Used to define the routing sequence for each activity. Since activities are performed serially within a process, it is important to define the sequence of when you want the activities to be performed.

Fields

Activities

Activities is an alphabetical list of the activities that are available to be assigned to processes by the workflow management administrator during the workflow setup process. Activity hierarchy can be expanded to view the groups and users assigned to each activity. Each activity is defined by activity title. Optionally, each activity can be defined by activity description, electronic mail default message and the number of days allowed for the disposition of the activity.

Where Used: Routing Template Administration

Activity Description

Activity Description is the description of the activity which is pre-defined by the workflow management administrator. Entry is any alphanumeric combination of up to 10,000 characters.

Where Used: Routing Template Administration

Activity title

Activity Title is the title, or short description, of the activity which is pre-defined by the workflow management administrator during the workflow setup process. The **Activity Title** is

displayed throughout the application to identify the activity associated with the group and **Process Number**. Entry is any alphanumeric combination of up to 50 characters.

Where Used: Process Status and Disposition; Routing Template Administration

Allowed Days

Allowed Days to Disposition specifies the number of days given to the disposition process, either to approve or reject, for a specified process. **Allowed Days** is based on calendar days and is determined by the workflow management administrator during the activity setup process.

Where Used: Process Status and Disposition; Routing Template Administration

Directory

Directory identifies the system-generated directory location where any documents, or attachments, are stored for a specific process. The directory location is created as a sub-directory off the Mfgsys\Engm\Ecr_Docs directory. Directories are created and named sequentially, starting with a number sequence predefined by the workflow management administrator during the workflow setup process.

Where Used: Process Status and Disposition; Routing Template Administration

Document Description

Document Description is the user-defined description of the document, or attachment, which is included in the routing package for the related process. Entry is any alphanumeric combination of up to 10,000 characters.

Where Used: Process Status and Disposition; Routing Template Administration

Document Title

Document Title is the user-defined title, or short description, of the document, or attachment, which is included in the routing package for the related process. The **Document Title** is displayed throughout the application to identify the document related to the process. Entry is any alphanumeric combination of up to 50 characters.

Where Used: Process Status and Disposition; Routing Template Administration

Documents

Documents is an alphabetical list of the documents that are available to be assigned to processes by the workflow management administrator during the workflow setup process. Each document is defined by document title, document description and file name. A directory for the document is assigned when the document is assigned to a process.

Where Used: Routing Template Administration

File Name

Attachment File Name identifies the source directory path and file name of the document, or attachment, which is included in the routing package for the related process.

Where Used: Process Status and Disposition; Routing Template Administration

First Name

First Name identifies the first name, or given name, of the user. Entry is up to 25 alphanumeric characters.

Where Used: Routing Template Administration

Group Description

Group Description is the description of the group that is pre-defined by the workflow management administrator during the workflow setup process. Entry is any alphanumeric combination of up to 10,000 characters.

Where Used: Routing Template Administration

Group Title

Group Title is the title, or short description, of the group that is pre-defined by the workflow management administrator during the workflow setup process. The **Group Title** is displayed throughout the application to identify the group associated with the **User Name** and **Process Number**. Entry is any alphanumeric combination of up to 50 characters.

Where Used: Process Status and Disposition; Routing Template Administration

Groups

Groups is an alphabetical list of the groups that are available to be assigned to activities by the workflow management administrator during the workflow setup process. Group hierarchy can be expanded to view the users assigned to each group. Each group is defined by group title. Optionally, a group can also be defined by group description.

Where Used: Routing Template Administration

Last Name

Last Name identifies the last name, or surname, of the user. Entry is up to 25 alphanumeric characters.

Where Used: Routing Template Administration

Login Id

User Identification is your identification as entered to sign onto the system. Entry is any alphanumeric combination of up to 4 characters.

Where Used: BEXE; Fourth Shift Sign-On; G/L Batch Detail; G/L Recurring/Template Trans Detail; G/L Transaction Detail; GLAU; GLJL; GLPC; PASS; Routing Template Administration; TRUD

Mail Id

Mail Id is user's display name that is displayed in the mail "To". If a **Mail Id** is not specified, Mail Address will be used as display name. The Mail server will (if possible) resolve the mail address and use the internal user name as the display name in the mail even if the **Mail Id** is specified.

Where Used: Routing Template Administration

Note: See [Setting Up Mail Identifiers](#) in the [Workflow Using Electronic Mail](#) section for more information.

Mail Address

Mail Address is your address identification as defined in your electronic mail system. A **Mail Address** allows you to enter additional electronic mail information for each mail recipient. For example, you can specify an electronic mail post office address or an Internet address of a mail recipient outside of your company's mail system. A **Mail Address** should be specified for all users who are involved in the routing process, including those who review and give dispositions and those who are notified of pending changes.

Where Used: Routing Template Administration

Note: See [Setting Up Mail Identifiers](#) in the [Workflow Using Electronic Mail](#) section for more information.

Routing Templates

Routing Template identifies the type of routing selected for the related process. **Routing Templates** are pre-defined by the workflow management administrator during the workflow setup process. A routing template must be assigned for each process created.

Where Used: Process Status and Disposition; Routing Template Administration

Starting Number

Starting Number identifies the initial sequential number to use with the **Template Prefix** when the system generates the number. A starting process number can be optionally determined for each template prefix defined. Entry for the initial sequential number is up to 6

numeric characters. If a **Starting Number** is not defined, the initial sequential number is 000001.

Where Used: Routing Template Administration

Startup Message

Startup Message identifies the user-defined message that is displayed in the electronic mail message which is sent to the users when the activity is started. Entry is any alphanumeric combination of up to 50 characters.

Where Used: Routing Template Administration

Template Description

Template Description is the description of the routing template that is pre-defined by the workflow management administrator during the workflow setup process. Entry is any alphanumeric combination of up to 10,000 characters.

Where Used: Routing Template Administration

Template Name

Routing Template identifies the type of routing selected for the related process. **Routing Templates** are pre-defined by the workflow management administrator during the workflow setup process. A routing template must be assigned for each process created.

Where Used: Process Status and Disposition; Routing Template Administration

Template Prefix

Template Prefix identifies a pattern to use as a prefix when generating a template routing. **Template Prefix** is optionally pre-defined by the workflow management administrator during the workflow setup process. Entry for the prefix is any alphanumeric combination up to 20 characters.

Where Used: Routing Template Administration

Users

Users is an alphabetical list of the individuals who are available to be assigned to groups by the workflow management administrator during the workflow setup process. Each user is defined by user id and last name. Optionally, each user can be defined by first name, electronic mail identifier and electronic mail address. Users can be assigned to more than one group.

Where Used: Routing Template Administration

EBLL – Bill of Material

Bills of material are constructed one level at a time by entering a parent item and its first-level components. As you progress through your product structure entering parent-component information, you automatically build the multi-level bill of material for an end-item. While building your bill of material, you can view related item detail, such as packaging, planning and stock status information.

Bill of Material displays parent and component item information in both a graphical hierarchy and in a table (row by column) format. The table format can be customized, for example, to add a second row of column headings, add or remove columns or change the column width.

Features available are based on user job functions:

Access from	Features
ENGM Module	Set up and maintain the single level bills of material, assign reference designators and enter component detail information
MMAM Module	View the single level bills of material

Reports

Bill of Material Reports

To generate the report, choose **Print Preview** from the **File** menu.

Report Title
Engineering Single Level Bill with Reference Designator Text Lists components and reference designator text for an engineering bill.
Engineering Single Level Bill with Reference Designators Lists components and reference designators for an engineering bill.
Production Single Level Bill with Reference Designator Text Lists components and reference designator text for a production bill.
Production Single Level Bill with Reference Designators Lists components and reference designators for a production bill.

Fields

Buyr

Buyer code is used to identify the person responsible for handling the purchase of the item. The suggested entry is the buyer's initials. Entry is any alphanumeric combination of up to 3 characters.

Where Used: A/P Receiving Detail; ABCR; APIE; APII; APIR; APPI; APPO; APPV; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Buyer/Planner Code Maintenance; Contract Header Detail; Contract Purchase Orders; Contract Summary; Custom Product Detail; CWIP; Demand Peg Detail; IORD; IPPD; Item Browse Detail; Item Master; Item Master

Planning Detail; Item Responsibility Assigned Results; ITHC; Lead Times Assigned Results; Line Item Details + Custom Product; Material Shortages Detail; MBIL; MPSR; MSCF; MSMT; Multi-Level Bill; Multi-Level Where Used; ORST; OVAR; PCST; PICI; PICK; Picklist Detail; POAN; POAS; POCL; POCP; POCR; POCT; POMI; POMT; PORI; PORV; Production; Purchase Order Header Detail; Purchase Order Line Item Detail (CPMT); Purchased Component Detail; QUOI; QUOT; SDAB; SSII; Standard Costs Assigned Results; Summarized Bill; VDSC; VPFR; Where Used; WIPR; Workcenter Master

Component

Component is a term that describes the structural relationship between an item and its parent assembly in a bill of material. A **Component** is used in the manufacture of a parent, and it may be a part, raw material or a subassembly. Entry is any alphanumeric combination of up to 30 characters.

Where Used: Backflush Issue Reconciliation Report; BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Demand Peg Detail; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; Material Exposure; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; OPSL; OVAR; PCST; PICI; PICK; Picklist Detail; Production; Router/Traveler; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

Component Effectivity Date

Component Effectivity Date is the date used to determine which components on the bill of material to display for the specified parent. If the **Component Effectivity Date** is blank, all components on the bill of material, regardless of their in and out effectivity dates, are displayed for the specified parent. The **Component Effectivity Date** display format is workstation specific, which is defined as the Short Date setting in the Regional Settings within the Control Panel. Default is the current date.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

Component Effectivity Date

In Effectivity is the date that the use of a component becomes effective in a bill of material. The default value is today's date or the date you entered when you signed onto the system.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

CT

Component Type distinguishes various types of relationships between a component and its parent assembly in a bill of material. The **Component Type** indicates how a component is used in the manufacture of a parent. The **Component Types** are:

N = Normal.

Component is consumed in the manufacture of its parent.

P = Phantom.

Component is used for structure purposes only (e.g., a transient subassembly consumed in the manufacture of its parent).

R = Resource or Workcenter.

Component is used in the planning process of the manufacture of its parent (e.g., labor hours).

X = Reference.

Component is for information purposes. Reference items are included on the picklist. Reference items are not included in the parent's rolled costs and are typically not required for issue in the manufacturing of the parent.

D = Document.

Component is used for information purposes only. It is not included on the picklist.

B = By-product.

The manufacture of the parent results in the creation of this component.

C = Co-product.

Component is derived from the manufacture of the parent. The manufacture of the co-product, in turn, produces the parent.

T = Tool.

Component is used in the manufacture of the parent.

U = Tool return.

Component is used in, and returned after, the manufacture of the parent.

M = Module.

Component represents a group of components for which requirements are generated for custom product orders. A module component is used for structure purposes only, such as a transient subassembly consumed in the manufacture of its parent. Module components explode requirements for the child components; the module component itself is never required.

V = Purchased material.

Component not defined on the Item Master is required for a custom product customer order.

W = Outside operation or service.

Component, such as heat treating or plating, is required for a custom product customer order.

Y = Phantom parent.

Requirements have been exploded to the next level to meet requirements.

Z = Phantom child.

Component is used in the manufacture of the phantom's parent.

An item's use as a component is limited by its **Item Type**. The Component Types available are based on the information displayed on the screen and not all types are available on all screens.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; COCP; Comparison Bill; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; CWIP; Demand Peg Detail; Engineering; Job Estimates and Performance Report; Location Index; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; OPSL; Order Cost Variance Status; OVAR; PCST; Production; Purchased Component Detail; Single-Level Configuration Bill of Material Report; Summarized Bill; WIPL; WIPR

Desc

Item Description identifies the item in terms of its characteristics. When space is limited, a partial description is displayed. Entry is any alphanumeric combination of up to 70 characters.

Where Used: A/P Received Item List; ABCR; Advance Ship Notice Line; APPI; APPV; Available Pricing; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Browse Setup (item); Capacity Planning; CCAN; CCAT; CMLB; COBK; COCP; COMP; Comparison Bill; Comparison of Summarized Bills; Contract Item Detail; Contract Item Detail/Pricing; CORV; Cost Estimate by Lot Size; Costed Bill Detail; CSLB; Custom Product Component Detail; Customer Item + General; Customer Order; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Dispatch List; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; Inventory History List; Inventory Transaction History Report; INVR; IORD; IPPD; ISVI; ITBI; ITCB; ITCI; Item + Alternates; Item + Quantity; Item Availability; Item Availability + Quantity; Item Browse; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; ITMB; ITMC; ITMI; ITPB; ITPI; Job Estimates and Performance Report; Lead Time; Lead Time Analysis; Lead Times Assigned Results; LEXP; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Inventory Transaction History Report; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Package Content; Packaging Detail; Partner Item Detail; PBCI; PBCT; PBII; PICI; PICK; Picklist Detail; POAN; POAS; POI; POCT; POCT; POMI; POMT; PORI; PORR; PORV; POYE; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QSRC; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VITI; Where Used; WIPR; WUSE

Drwg

Drawing number identifies an engineering document that provides design specifications for an item. Entry is any alphanumeric combination of up to 30 characters.

Where Used: AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; Engineering; Item Browse Detail; Item Master; Item Master Detail; MBIL; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Router/Traveler; Shortages by Order; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used

Effective Rev

Effective Revision Level identifies the revision level of a bill of material. Revision level identifiers are embedded in bills of material using items with a predefined **Pt Use** prefix, such as "Rev", and are displayed based on the selected Effectivity Date of the parent item.

Effective Revision Level = Multiple if more than one revision of the bill of material is displayed or if the effective in and out dates overlap.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

Fixed LT

Fixed Lead Time is the number of working days required for setup and queue time used in planning an order. It is added to run lead time and inspection lead time to estimate planned lead time for an order. Entry is up to 3 numbers.

Where Used: AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; IPPD; Item Availability; Item Browse Detail; Item Master; Item Master Planning Detail; MBIL; MSMT; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Single-Level Configuration Bill of Material Report; Where Used; Workcenter Master

In Effectivity

In Effectivity is the date that the use of a component becomes effective in a bill of material. The default value is today's date or the date you entered when you signed onto the system.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

LT

Lot Trace indicates whether lot number control is used throughout the manufacturing process to track the use of the item.

Y = Yes.

The item is lot-controlled.

N = No.

The item is not lot-controlled.

Where Used: BILI; BILL; Bill of Material; Bill of Material Detail; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master

Planning Detail; ITMB; ITMI; Lot Trace; MPSR; MPSS; Multi-Level Bill; Multi-Level Where Used; Production; SSII; Summarized Bill; Where Used; WUSE

MB

Make-Buy Code indicates if a part is normally purchased or manufactured. **Make-Buy Code** also directs appropriate action messages to the **Buyr** (B or S) or **Plnr** (M). **Make-Buy Codes** are:

M = Make.

Manufactured in-house.

B = Buy.

Purchased; no parts supplied to vendor.

S = Supplied.

Purchased; parts supplied to vendor.

Where Used: ABCR; AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; COMP; Costed Bill Detail; CSLB; Demand Peg Detail; Engineering; FCST; IHIR; IORD; IPPD; Item Availability; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; Item Shortages; ITHC; ITHR; ITMB; ITMI; Lead Time Analysis; Lead Times Assigned Results; Lot Size Multiple Detail; Lot Trace; LSDA; LVAL; Material Exposure; Material Shortages Detail; MBIL; MPSR; MPSS; MSMT; Multi-Level Bill; PBCI; PBCT; Production; QUOI; QUOT; SDAB; SDAL; Shortages by Order; Single-Level Configuration Bill of Material Report; SSII; Standard Costs Assigned Results; Summarized Bill; Supply Peg Detail

Out Effectivity

Out Effectivity is the first date that a component is not effective in a bill of material. The default value is 12/31/2079.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Where Used; WUSE

Parent

Parent is a term that describes the structural relationship between an item and its components in a bill of material. A **Parent** item is the higher level item in the parent-component relationship. A parent cannot be used in itself. Entry is any alphanumeric combination of up to 30 characters.

Where Used: BILI; BILL; Bill of Material; Bill of Material Detail; CMLB; Comparison Bill; Comparison of Summarized Bills; Cost Estimate by Lot Size; CSLB; Dispatch List; Engineering; Lead Time; Lead Time Analysis; Location Index; Material Exposure; MBIL; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Summarized Bill; Where Used; WUSE

Pln Pol

Planning Policy is used to determine the type of demand an item generates for its components based on planned orders. The codes are:

N = Normal.

Planned and released orders for this item produce "normal" dependent demand for its components.

P = Production Plan.

Planned orders for this item produce a "production forecast" for its components. Orders cannot be released for this item.

F = Final Assembly.

Planned and released orders for this item create "final assembly" demand for its components. This policy is reserved for future use and is treated like a **Planning Policy = N** by the system.

D = Distribution.

Planned and released orders for this item produce "distribution" demand for its components. This policy is reserved for future use and is treated like a **Planning Policy = N** by the system.

M = Master Scheduled.

Planned and released orders for this item produce "normal" dependent demand for its components. Planned orders must be manually scheduled within the item's **Plng Fnc** (planning fence).

It is recommended that you only use the "N" code until the master planning capability is installed in your system.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; IORD; IPPD; Item Browse Detail; Item Master Planning Detail; MBIL; MSMT; Multi-Level Bill; Multi-Level Where Used; Production; Summarized Bill; Where Used

Plnr

Planner code is used to identify the person responsible for planning the production or usage of an item. The suggested entry is the planner's initials. Entry is any alphanumeric combination of up to 3 characters.

Where Used: ABCR; AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; Buyer/Planner Code Maintenance; Custom Product Detail; CWIP; Demand Peg Detail; IORD; IPPD; Item Browse Detail; Item Master; Item Master Planning Detail; Item Responsibility Assigned Results; ITHC; Lead Times Assigned Results; Line Item Details + Custom Product; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Shortages Detail; MBIL; MCST; MOAN; MOMI; MOMT; MORI; MORV; MPSR; MSCF; MSMT; Multi-Level Bill; Multi-Level Where Used; ORST; OVAR; PICI; PICK; Picklist Detail; Production; Purchase Order Line Item Detail; QUOI; QUOT; Router/Traveler; SDAB; Shortages by Order; Single-Level Configuration Bill of Material Report; SSII; Standard Costs Assigned Results; Summarized Bill; Where Used; WIPR; Workcenter Master

Pt Use

Point of Use is a key field that, along with the **Seqn** field, defines the sort sequence of components in a bill of material. The **Point of Use** field accepts any information you choose to enter, but the intended use is to identify the "work center" where the component should be delivered when assembling the parent, the "find number" of the component referenced on the drawing for the parent, or the "component reference designator" of the component on a printed circuit board. If the **Point of Use** field is not applicable in your company, you may enter 0 (zero). Entry is any alphanumeric combination of up to 5 characters.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; Capacity Planning; Comparison Bill; Custom Product Component Detail; Demand Peg Detail; Dispatch List; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; LRRP; Material Shortages Detail; MBIL; Multi-Level Bill; Multi-Level Where Used; MUSE; Order Cost Variance Status; OVAR; PICI; PICK; Picklist Detail; Pricing Maintenance + Test Order; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Router/Traveler; Schedule Board; Single-Level Configuration Bill of Material Report; TRUD; Where Used; WUSE

Pt Use Defines Embedded Revision

Pt Use Defines Embedded Revision specifies the three key characters in the **Pt Use** field that uniquely identify revision history components in a bill of material. The recommended value is REV. If REV has previously been used to define a workcenter, another identification prefix must be used.

Where Used: Bill of Material; Summarized Bill

QT

Quantity Type code defines the nature of the parent- component relationship when placing an order for the parent. It affects how the **Quantity** field is used in calculating component requirements. **Quantity Types** are:

I = Per Item.

Quantity per item is the number of components needed to manufacture one parent item. For a given order, the gross number of components required equals **Quantity** times order size.

O = Per Order.

Quantity per order is the number of components required per order to manufacture one or more parent items. For a given order, the gross number of components required equals **Quantity**.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Demand Peg Detail; Engineering; Job Estimates and Performance Report; Location Index; Material Exposure; MBIL; MCST; Multi-Level Bill; Multi-Level Where Used; MUSE; OVAR; PCST; Picklist Detail; Production; Purchased Component Detail; Summarized Bill; WUSE

Quantity

Quantity Required specifies how many or how much of a particular component is required to manufacture a parent. Entry is up to 10 numbers. Decimal places are allowed.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; CWIP; Engineering; Job Estimates and Performance Report; Material Exposure; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; PCST; Production; Purchased Component Detail; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WIPL; WIPR; WUSE

Ref Des Count

Reference Designator Count is the total number of unique reference designator identifiers entered as **Reference Designators** associated with a component. For example, the **Reference Designator Count** = 3 for reference designators entered as a range of D1-D3 for a specified component.

Where Used: Bill of Material; Comparison Bill; Multi-Level Bill; Where Used

Reference Designators

Reference Designators are unique identifiers which allow engineers to assign control information such as device callouts to a component within a Bill of Material. Ranges can be used to organize multiple sequential reference designator identifiers. Entry is up to 10 characters.

Where Used: Bill of Material; Comparison Bill; Engineering; Exceptions; Multi-Level Bill; Where Used

Run LT

Run Lead Time is the average number of shop days required for a manufacturing run or vendor lead time and is used in planning an order. **Run Lead Time** is added to fixed lead time and inspection lead time to estimate planned lead time which serves to time order release. Decimal places for fractional days allowed. MRP Planning uses fractional days as reference and plans using the next whole day increment. For example, if you specify **Run LT** = 2.1, MRP Planning assumes **Run LT** = 3 for calculation purposes. Entry is up to 8 numbers.

Note: Lead times established for an item are considered to be 0 when the item is used as a phantom (**CT** = P) in a bill of material.

Where Used: AVII; AVIT; BILL; BILL; Bill of Material; IPPD; Item Availability; Item Browse Detail; Item Master; Item Master Planning Detail; MBIL; MSMT; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Single-Level Configuration Bill of Material Report; Where Used; Workcenter Master

Rv

Revision Level identifies a level of documentation which specifies the item's design. It should be incremented for each change in the item's design specifications. Entry is any alphanumeric combination of up to 2 characters.

Where Used: AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; Costed Bill Detail; Demand Peg Detail; Engineering; FCST; ICCR; IORD; IPPD; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITMB; ITMI; LMSI; LMST; Lot Detail; Lot Trace; MBIL; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Where Used; PBCI; PBCT; Production; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shortages by Order; Single-Level Configuration Bill of Material Report; Summarized Bill; Supply Peg Detail; Where Used

Seqn

Sequence Number is a key field that, along with the **Pt Use** field, defines the sort sequence of components in a bill of material. The field accepts any information you choose to enter, but the intended purpose is to identify the operation sequence number on the parent's routing that calls out the component. If the **Sequence Number** is not applicable in your company, you may enter 0 (zero). Entry is up to 3 numbers.

Where Used: Backflush Issue Reconciliation Report; BILI; BILL; Bill of Material; Bill of Material Detail; Capacity Planning; CINV; COCP; Comparison Bill; CPMT; Custom Product Component Detail; CWIP; Demand Peg Detail; Dispatch List; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; LRRP; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; Multi-Level Where Used; MUSE; OPSL; Order Cost Variance Status; OVAR; PCST; PICI; PICK; Picklist Detail; PORI; PORV; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchased Component Detail; Router/Traveler; Schedule Board; Single-Level Configuration Bill of Material Report; TRUD; Where Used; WIPL; WIPR; WUSE

Total LT

Total Lead Time is the sum of **Run LT**, **Fixed LT** and **Insp LT** as expressed in shop days.

Where Used: Bill of Material; Lead Time; Lead Time Analysis; Multi-Level Bill; Multi-Level Where Used; Summarized Bill; Where Used

UM

Unit of Measure identifies the standard unit for an item used in the manufacturing process. Entry is up to 4 alphanumeric characters.

Where Used: A/P PO/Inv Variance by Invoice; A/P Receiving Detail; APEX; APPI; APPV; APUV; Available for Shipping Allocation Batch; AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; CCAT; CINV; CMLB; COBK; COCP; COMI; COMT; Contract Header Detail; Contract Item Detail; Contract Item Detail/Pricing; CORV; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Custom Product Detail; Customer Order; Customer Order Line Price Adjustment; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail;

Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; INVR; IORD; IPPD; ITBI; ITCB; ITCI; Item + Quantity; Item Availability + Quantity; Item Browse Detail; Item History; Item Lot Receipt; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; Item Shortages; ITHC; ITHR; ITMB; ITMC; ITMI; ITPB; ITPI; IVPR; IVRR; JEST; Job Estimates and Performance Report; Lead Times Assigned Results; LEXP; LHS; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPIT; MPSR; MPSS; MSMT; Multi-Currency; Multi-Level Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Packaging Detail; Packing List; Partner Item Detail; PBCI; PBCT; PCST; PICI; PICK; Picklist Detail; POCI; POCR; POCT; POMI; POMT; PORI; PORR; PORV; POSR; POVD; Pricing Maintenance + Action Detail; Pricing Maintenance + Action List; Pricing Maintenance + Test Order; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Allocation Batch; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VEIT; Vendor/Item Detail; VETI; VPFR; Where Used; WIPR; Workcenter Master; WUSE

ECMP – Comparison Bill

Comparison Bill is used to compare bills of material based on parent items or by component effectivity date. For example, you can compare Parent 1 to itself, based on different revisions (component effectivity dates) or you can compare Parent 1 and Parent 2 from different bills of material.

Comparison Bill compares parent, point of use, sequence and component item information in a table (row by column) format based on the information entered in the Parent 1, Parent 2 and Component Effectivity Dates fields. Use the Hide All Matching Records and Hide All Unmatching Records options to easily compare the bills of material information.

The Comparison Bill functionality is the same regardless of how it is accessed.

Reports

Comparison Bill Reports

To generate the report, choose **Print Preview** from the **File** menu.

Report Title
Engineering Comparison Bill of Material Lists comparisons of engineering parent items.
Production Comparison Bill of Material Lists comparisons of production parent items.

Report Description

Lists comparisons of engineering parent items.

Access Method

To generate the report, choose Print Preview from the File menu.

Report Template

For more information on report templates, see "Reporting for SQL Server Systems" in the System Help topics.

Available From

Comparison Bill

Fields

Component

Component is a term that describes the structural relationship between an item and its parent assembly in a bill of material. A **Component** is used in the manufacture of a parent, and it may be a part, raw material or a subassembly. Entry is any alphanumeric combination of up to 30 characters.

Where Used: Backflush Issue Reconciliation Report; BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill

Detail; CPMT; CSLB; Custom Product Component Detail; Demand Peg Detail; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; Material Exposure; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; OPSL; OVAR; PCST; PICI; PICK; Picklist Detail; Production; Router/Traveler; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

Component Desc

Item Description identifies the item in terms of its characteristics. When space is limited, a partial description is displayed. Entry is any alphanumeric combination of up to 70 characters.

Where Used: A/P Received Item List; ABCR; Advance Ship Notice Line; APPI; APPV; Available Pricing; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Browse Setup (item); Capacity Planning; CCAN; CCAT; CMLB; COBK; COCP; COMP; Comparison Bill; Comparison of Summarized Bills; Contract Item Detail; Contract Item Detail/Pricing; CORV; Cost Estimate by Lot Size; Costed Bill Detail; CSLB; Custom Product Component Detail; Customer Item + General; Customer Order; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Dispatch List; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; Inventory History List; Inventory Transaction History Report; INVR; IORD; IPPD; ISVI; ITBI; ITCB; ITCI; Item + Alternates; Item + Quantity; Item Availability; Item Availability + Quantity; Item Browse; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; ITMB; ITMC; ITMI; ITPB; ITPI; Job Estimates and Performance Report; Lead Time; Lead Time Analysis; Lead Times Assigned Results; LEXP; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Inventory Transaction History Report; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Package Content; Packaging Detail; Partner Item Detail; PBCI; PBCT; PBII; PICI; PICK; Picklist Detail; POAN; POAS; POCI; POCR; POCT; POMI; POMT; PORI; PORR; PORV; POYE; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QSRC; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VITI; Where Used; WIPR; WUSE

Component Effectivity Date

Component Effectivity Date is the date used to determine which components on the bill of material to display for the specified parent. If the **Component Effectivity Date** is blank, all components on the bill of material, regardless of their in and out effectivity dates, are displayed for the specified parent. The **Component Effectivity Date** display format is workstation specific, which is defined as the Short Date setting in the Regional Settings within the Control Panel. Default is the current date.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

Component Effectivity Date

In Effectivity is the date that the use of a component becomes effective in a bill of material. The default value is today's date or the date you entered when you signed onto the system.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

CT

Component Type distinguishes various types of relationships between a component and its parent assembly in a bill of material. The **Component Type** indicates how a component is used in the manufacture of a parent. The **Component Types** are:

N = Normal.

Component is consumed in the manufacture of its parent.

P = Phantom.

Component is used for structure purposes only (e.g., a transient subassembly consumed in the manufacture of its parent).

R = Resource or Workcenter.

Component is used in the planning process of the manufacture of its parent (e.g., labor hours).

X = Reference.

Component is for information purposes. Reference items are included on the picklist. Reference items are not included in the parent's rolled costs and are typically not required for issue in the manufacturing of the parent.

D = Document.

Component is used for information purposes only. It is not included on the picklist.

B = By-product.

The manufacture of the parent results in the creation of this component.

C = Co-product.

Component is derived from the manufacture of the parent. The manufacture of the co-product, in turn, produces the parent.

T = Tool.

Component is used in the manufacture of the parent.

U = Tool return.

Component is used in, and returned after, the manufacture of the parent.

M = Module.

Component represents a group of components for which requirements are generated for custom product orders. A module component is used for structure purposes only, such as a transient subassembly consumed in the manufacture of its parent. Module components explode requirements for the child components; the module component itself is never required.

V = Purchased material.

Component not defined on the Item Master is required for a custom product customer order.

W = Outside operation or service.

Component, such as heat treating or plating, is required for a custom product customer order.

Y = Phantom parent.

Requirements have been exploded to the next level to meet requirements.

Z = Phantom child.

Component is used in the manufacture of the phantoms parent.

An item's use as a component is limited by its **Item Type**. The Component Types available are based on the information displayed on the screen and not all types are available on all screens.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; COCP; Comparison Bill; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; CWIP; Demand Peg Detail; Engineering; Job Estimates and Performance Report; Location Index; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; OPSL; Order Cost Variance Status; OVAR; PCST; Production; Purchased Component Detail; Single-Level Configuration Bill of Material Report; Summarized Bill; WIPL; WIPR

Desc

Item Description identifies the item in terms of its characteristics. When space is limited, a partial description is displayed. Entry is any alphanumeric combination of up to 70 characters.

Where Used: A/P Received Item List; ABCR; Advance Ship Notice Line; APPI; APPV; Available Pricing; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Browse Setup (item); Capacity Planning; CCAN; CCAT; CMLB; COBK; COCP; COMP; Comparison Bill; Comparison of Summarized Bills; Contract Item Detail; Contract Item Detail/Pricing; CORV; Cost Estimate by Lot Size; Costed Bill Detail; CSLB; Custom Product Component Detail; Customer Item + General; Customer Order; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Dispatch List; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; Inventory History List; Inventory Transaction History Report; INVR; IORD; IPPD; ISVI; ITBI; ITCB; ITCI; Item + Alternates; Item + Quantity; Item Availability; Item Availability + Quantity; Item Browse; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; ITMB; ITMC; ITMI; ITPB; ITPI; Job Estimates and Performance Report; Lead Time; Lead Time Analysis; Lead Times Assigned Results; LEXP; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Inventory Transaction History Report; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Package Content; Packaging Detail; Partner Item Detail; PBCI; PBCT; PBII; PICI; PICK; Picklist Detail; POAN; POAS; POCI; POCT; POCT; POMI; POMT; PORI; PORR; PORV; POYE; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QSRC; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Detail;

Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VITI; Where Used; WIPR; WUSE

Effective Rev

Effective Revision Level identifies the revision level of a bill of material. Revision level identifiers are embedded in bills of material using items with a predefined **Pt Use** prefix, such as "Rev", and are displayed based on the selected Effectivity Date of the parent item.

Effective Revision Level = Multiple if more than one revision of the bill of material is displayed or if the effective in and out dates overlap.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

In Effect

In Effectivity is the first In Effectivity date, which should be considered valid to display for this bill of material. Entry is 6 numbers in the system date format. Default is 010180.

Where Used: BILL; BILL; Comparison Bill

In Effectivity

In Effectivity is the date that the use of a component becomes effective in a bill of material. The default value is today's date or the date you entered when you signed onto the system.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

In Rev

In Revision Level indicates the level of documentation for which the parent-component relationship becomes effective. It is for information purposes only and is not used by the system. Entry is any alphanumeric combination of up to 2 characters.

Where Used: Bill of Material Detail; Comparison Bill; Engineering; Multi-Level Bill; Multi-Level Where Used; Production

Out Effect

Out Effectivity is the last Out Effectivity date which should be considered valid to display for this bill of material. Entry is 6 numbers in the system date format. Default is 123179 when U.S. date format is used.

Where Used: BILL; BILL; Comparison Bill

Out Effectivity

Out Effectivity is the first date that a component is not effective in a bill of material. The default value is 12/31/2079.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Where Used; WUSE

Out Rev

Out Revision Level indicates the level of documentation for which the parent-component relationship is no longer in effect. It is for information purposes only and is not used by the system. Entry is any alphanumeric combination of up to 2 characters.

Where Used: Bill of Material Detail; Comparison Bill; Engineering; Multi-Level Bill; Multi-Level Where Used; Production

Parent

Parent is a term that describes the structural relationship between an item and its components in a bill of material. A **Parent** item is the higher level item in the parent-component relationship. A parent cannot be used in itself. Entry is any alphanumeric combination of up to 30 characters.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; Comparison Bill; Comparison of Summarized Bills; Cost Estimate by Lot Size; CSLB; Dispatch List; Engineering; Lead Time; Lead Time Analysis; Location Index; Material Exposure; MBIL; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Summarized Bill; Where Used; WUSE

Parent Item

Parent is a term that describes the structural relationship between an item and its components in a bill of material. A **Parent** item is the higher level item in the parent-component relationship. A parent cannot be used in itself. Entry is any alphanumeric combination of up to 30 characters.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; Comparison Bill; Comparison of Summarized Bills; Cost Estimate by Lot Size; CSLB; Dispatch List; Engineering; Lead Time; Lead Time Analysis; Location Index; Material Exposure; MBIL; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Summarized Bill; Where Used; WUSE

Production Item

Item is the unique identifier for a part, whether it be a piece part, tool, raw material, an assembly or finished product. All items are set up using the ITMB screen. Within a product

structure, an item can be a component as well as a parent. Entry is any alphanumeric combination of up to 30 characters.

Where Used: A/P Received Item List; ABCR; Advance Ship Notice Line; Allowance/Charge Detail (Detail); APPI; APPV; AUDT; Available for Shipping Allocation Batch; AVII; AVIT; Bill of Material Accuracy Results; Browse Setup (item); Capacity Planning; CBIL; CCAN; CCAT; CIMT; CINV; COAN; COBK; COCD; COMI; COMP; Comparison Bill; Comparison of Summarized Bills; COMT; Contract Item Detail; Contract Item Detail/Pricing; Contract Summary; CORV; CSTU; Cumulative Detail; Customer Item + General; Customer Order; Customer Order Line Price Adjustment; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Engineering; FCST; GASN; ICCR; IHIR; IMTR; INVA; Inventory Adjustment Application; Inventory Allocation; Inventory History List; Inventory Transaction History Report; INVR; IORD; IPPD; ISVI; ITBI; ITCB; ITCL; Item + Quantity; Item Availability; Item Availability + Quantity; Item Browse; Item Browse Detail; Item History; Item Lot Receipt; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; Item Shortages; ITHC; ITHR; ITMB; ITMC; ITMI; ITPB; ITPI; Lead Times Assigned Results; LEXP; LHSI; Line Item Details + Item; LMSI; LMST; Lot Detail; Lot Inventory Transaction History Report; Lot Selection; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Shortages Detail; MCST; MOAN; MOFR; MOMI; MOMT; MORI; MORV; MPIT; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Open Order Detail; Order Completion Status; Order Cost Variance Status; Order Detail; OVAR; Package Content; Packaging Detail; Packing List; Partner Item Detail; PBCI; PBCT; PBII; PICI; PICK; Picklist Detail; POCI; POCR; POCT; PORI; PORV; POYE; Pricing Maintenance + Action Detail; Pricing Maintenance + Action List; Pricing Maintenance + Items/Customers; Pricing Maintenance + Test Order; Production; Purchase Order Receipt History; Purchased Component Detail; QSRC; QUOI; QUOT; Router/Traveler; Schedule Board; SDAB; SDAL; Selection Setup; Serial Number List; Serial Numbers Shipped; SHIP; Shipment Allocation Detail; Shipment Allocation List; Shipments by Line Item; Shipping Allocation Batch; Shortages by Order; SHPL; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIR; VDSC; VEIT; Vendor/Item Detail; VETI; VITI; VPFR; WIPL; WIPR; WIPS; WUSE

Pt Use

Point of Use is a key field that, along with the **Seqn** field, defines the sort sequence of components in a bill of material. The **Point of Use** field accepts any information you choose to enter, but the intended use is to identify the "work center" where the component should be delivered when assembling the parent, the "find number" of the component referenced on the drawing for the parent, or the "component reference designator" of the component on a printed circuit board. If the **Point of Use** field is not applicable in your company, you may enter 0 (zero). Entry is any alphanumeric combination of up to 5 characters.

Where Used: BILI; BILL; Bill of Material; Bill of Material Detail; Capacity Planning; Comparison Bill; Custom Product Component Detail; Demand Peg Detail; Dispatch List; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; LRRP; Material Shortages Detail; MBIL; Multi-Level Bill; Multi-Level Where Used; MUSE; Order Cost Variance Status; OVAR; PICI; PICK; Picklist Detail; Pricing Maintenance + Test Order; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Router/Traveler; Schedule Board; Single-Level Configuration Bill of Material Report; TRUD; Where Used; WUSE

QT

Quantity Type code defines the nature of the parent- component relationship when placing an order for the parent. It affects how the **Quantity** field is used in calculating component requirements. **Quantity Types** are:

I = Per Item.

Quantity per item is the number of components needed to manufacture one parent item. For a given order, the gross number of components required equals **Quantity** times order size.

O = Per Order.

Quantity per order is the number of components required per order to manufacture one or more parent items. For a given order, the gross number of components required equals **Quantity**.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Demand Peg Detail; Engineering; Job Estimates and Performance Report; Location Index; Material Exposure; MBIL; MCST; Multi-Level Bill; Multi-Level Where Used; MUSE; OVAR; PCST; Picklist Detail; Production; Purchased Component Detail; Summarized Bill; WUSE

Quantity

Quantity Required specifies how many or how much of a particular component is required to manufacture a parent. Entry is up to 10 numbers. Decimal places are allowed.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; CWIP; Engineering; Job Estimates and Performance Report; Material Exposure; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; PCST; Production; Purchased Component Detail; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WIPL; WIPR; WUSE

Ref Des Count

Reference Designator Count is the total number of unique reference designator identifiers entered as **Reference Designators** associated with a component. For example, the **Reference Designator Count** = 3 for reference designators entered as a range of D1-D3 for a specified component.

Where Used: Engineering; Exceptions

Reference Designators

Reference Designators are unique identifiers which allow engineers to assign control information such as device callouts to a component within a Bill of Material. Ranges can be used to organize multiple sequential reference designator identifiers. Entry is up to 10 characters.

Where Used: Bill of Material; Comparison Bill; Engineering; Exceptions; Multi-Level Bill; Where Used

Seqn

Sequence Number is a key field that, along with the **Pt Use** field, defines the sort sequence of components in a bill of material. The field accepts any information you choose to enter, but the intended purpose is to identify the operation sequence number on the parent's routing that calls out the component. If the **Sequence Number** is not applicable in your company, you may enter 0 (zero). Entry is up to 3 numbers.

Where Used: Backflush Issue Reconciliation Report; BILL; BILL; Bill of Material; Bill of Material Detail; Capacity Planning; CINV; COCP; Comparison Bill; CPMT; Custom Product Component Detail; CWIP; Demand Peg Detail; Dispatch List; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; LRRP; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; Multi-Level Where Used; MUSE; OPSL; Order Cost Variance Status; OVAR; PCST; PICI; PICK; Picklist Detail; PORI; PORV; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchased Component Detail; Router/Traveler; Schedule Board; Single-Level Configuration Bill of Material Report; TRUD; Where Used; WIPL; WIPR; WUSE

ECMS – Comparison of Summarized Bills

Comparison of Summarized Bills is used to compare summarized bills in order to identify differences between two multi-level bills. Users are able to validate the items and quantities of two bills independent of the bill structure. Multi-level bill structures may differ, but the components and quantities included may be the same.

Comparison of Summarized Bills compares parent items in a table (row by column) format based on the information entered in the Parent 1, Parent 2 and Component Effectivity Dates fields. Comparisons are based on component, quantity type (order or item) and component type. Use the Hide All Matching Records and Hide All Unmatching Records options to easily compare the bills of material information.

Reports

Comparison of Summarized Bills Reports

To generate the report, choose **Print Preview** from the **File** menu.

Report Title
Engineering Comparison of Summarized Bills Lists comparisons of summarized engineering parent items.
Production Comparison of Summarized Bills Lists comparisons of summarized production parent items.

Report Description

Lists comparisons of summarized engineering parent items.

Access Method

To generate the report, choose Print Preview from the File menu.

Report Template

For more information on report templates, see "Reporting for SQL Server Systems" in the System Help topics.

Available From

Comparison of Summarized Bills

Fields

Component

Component is a term that describes the structural relationship between an item and its parent assembly in a bill of material. A **Component** is used in the manufacture of a parent, and it may be a part, raw material or a subassembly. Entry is any alphanumeric combination of up to 30 characters.

Where Used: Backflush Issue Reconciliation Report; BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Demand Peg Detail; Engineering;

Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; Material Exposure; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; OPSL; OVAR; PCST; PICl; PICK; Picklist Detail; Production; Router/Traveler; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

Component Desc

Item Description identifies the item in terms of its characteristics. When space is limited, a partial description is displayed. Entry is any alphanumeric combination of up to 70 characters.

Where Used: A/P Received Item List; ABCR; Advance Ship Notice Line; APPI; APPV; Available Pricing; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Browse Setup (item); Capacity Planning; CCAN; CCAT; CMLB; COBK; COCP; COMP; Comparison Bill; Comparison of Summarized Bills; Contract Item Detail; Contract Item Detail/Pricing; CORV; Cost Estimate by Lot Size; Costed Bill Detail; CSLB; Custom Product Component Detail; Customer Item + General; Customer Order; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Dispatch List; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; Inventory History List; Inventory Transaction History Report; INVR; IORD; IPPD; ISVI; ITBI; ITCB; ITCI; Item + Alternates; Item + Quantity; Item Availability; Item Availability + Quantity; Item Browse; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; ITMB; ITMC; ITMI; ITPB; ITPI; Job Estimates and Performance Report; Lead Time; Lead Time Analysis; Lead Times Assigned Results; LEXP; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Inventory Transaction History Report; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Package Content; Packaging Detail; Partner Item Detail; PBCI; PBCT; PBII; PICI; PICK; Picklist Detail; POAN; POAS; POCl; POCR; POCT; POMI; POMT; PORI; PORR; PORV; POYE; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QSRC; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VITI; Where Used; WIPR; WUSE

Component Effectivity Date

Component Effectivity Date is the date used to determine which components on the bill of material to display for the specified parent. If the **Component Effectivity Date** is blank, all components on the bill of material, regardless of their in and out effectivity dates, are displayed for the specified parent. The **Component Effectivity Date** display format is workstation specific, which is defined as the Short Date setting in the Regional Settings within the Control Panel. Default is the current date.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

Component Effectivity Date

In Effectivity is the date that the use of a component becomes effective in a bill of material. The default value is today's date or the date you entered when you signed onto the system.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

Desc

Item Description identifies the item in terms of its characteristics. When space is limited, a partial description is displayed. Entry is any alphanumeric combination of up to 70 characters.

Where Used: A/P Received Item List; ABCR; Advance Ship Notice Line; APPI; APPV; Available Pricing; AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; Browse Setup (item); Capacity Planning; CCAN; CCAT; CMLB; COBK; COCP; COMP; Comparison Bill; Comparison of Summarized Bills; Contract Item Detail; Contract Item Detail/Pricing; CORV; Cost Estimate by Lot Size; Costed Bill Detail; CSLB; Custom Product Component Detail; Customer Item + General; Customer Order; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Dispatch List; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; Inventory History List; Inventory Transaction History Report; INVR; IORD; IPPD; ISVI; ITBI; ITCB; ITCI; Item + Alternates; Item + Quantity; Item Availability; Item Availability + Quantity; Item Browse; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; ITMB; ITMC; ITMI; ITPB; ITPI; Job Estimates and Performance Report; Lead Time; Lead Time Analysis; Lead Times Assigned Results; LEXP; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Inventory Transaction History Report; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Package Content; Packaging Detail; Partner Item Detail; PBCI; PBCT; PBII; PICI; PICK; Picklist Detail; POAN; POAS; POCI; POCR; POCT; POMI; POMT; PORI; PORR; PORV; POYE; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QSRC; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VITI; Where Used; WIPR; WUSE

Effective Rev

Effective Revision Level identifies the revision level of a bill of material. Revision level identifiers are embedded in bills of material using items with a predefined **Pt Use** prefix, such as "Rev", and are displayed based on the selected Effectivity Date of the parent item.

Effective Revision Level = Multiple if more than one revision of the bill of material is displayed or if the effective in and out dates overlap.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

Item

Item is the unique identifier for a part used in the Engineering module, whether it be a piece part, tool, raw material, an assembly, or finished product. Within a product structure, an item can be a component as well as a parent. Entry is any alphanumeric combination of up to 30 characters.

Where Used: EITB; ECMS; ECRL; EMLB; EMWU; ESMB

Parent

Parent is a term that describes the structural relationship between an item and its components in a bill of material. A **Parent** item is the higher level item in the parent-component relationship. A parent cannot be used in itself. Entry is any alphanumeric combination of up to 30 characters.

Where Used: BILI; BILL; Bill of Material; Bill of Material Detail; CMLB; Comparison Bill; Comparison of Summarized Bills; Cost Estimate by Lot Size; CSLB; Dispatch List; Engineering; Lead Time; Lead Time Analysis; Location Index; Material Exposure; MBIL; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Summarized Bill; Where Used; WUSE

Parent Item

Parent is a term that describes the structural relationship between an item and its components in a bill of material. A **Parent** item is the higher level item in the parent-component relationship. A parent cannot be used in itself. Entry is any alphanumeric combination of up to 30 characters.

Where Used: BILI; BILL; Bill of Material; Bill of Material Detail; CMLB; Comparison Bill; Comparison of Summarized Bills; Cost Estimate by Lot Size; CSLB; Dispatch List; Engineering; Lead Time; Lead Time Analysis; Location Index; Material Exposure; MBIL; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Summarized Bill; Where Used; WUSE

Production Item

Item is the unique identifier for a part, whether it be a piece part, tool, raw material, an assembly or finished product. All items are set up using the ITMB screen. Within a product structure, an item can be a component as well as a parent. Entry is any alphanumeric combination of up to 30 characters.

Where Used: A/P Received Item List; ABCR; Advance Ship Notice Line; Allowance/Charge Detail (Detail); APPI; APPV; AUDT; Available for Shipping Allocation Batch; AVII; AVIT; Bill of Material Accuracy Results; Browse Setup (item); Capacity Planning; CBIL; CCAN; CCAT; CIMT; CINV; COAN; COBK; COCD; COMI; COMP; Comparison Bill; Comparison of Summarized Bills; COMT; Contract Item Detail; Contract Item Detail/Pricing; Contract

Summary; CORV; CSTU; Cumulative Detail; Customer Item + General; Customer Order; Customer Order Line Price Adjustment; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Engineering; FCST; GASN; ICCR; IHIR; IMTR; INVA; Inventory Adjustment Application; Inventory Allocation; Inventory History List; Inventory Transaction History Report; INVR; IORD; IPPD; ISVI; ITBI; ITCB; ITCL; Item + Quantity; Item Availability; Item Availability + Quantity; Item Browse; Item Browse Detail; Item History; Item Lot Receipt; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; Item Shortages; ITHC; ITHR; ITMB; ITMC; ITMI; ITPB; ITPI; Lead Times Assigned Results; LEXP; LHS; Line Item Details + Item; LMSI; LMST; Lot Detail; Lot Inventory Transaction History Report; Lot Selection; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Shortages Detail; MCST; MOAN; MOFR; MOMI; MOMT; MORI; MORV; MPIT; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Open Order Detail; Order Completion Status; Order Cost Variance Status; Order Detail; OVAR; Package Content; Packaging Detail; Packing List; Partner Item Detail; PBCI; PBCT; PBII; PICI; PICK; Picklist Detail; POCI; POCR; POCT; PORI; PORV; POYE; Pricing Maintenance + Action Detail; Pricing Maintenance + Action List; Pricing Maintenance + Items/Customers; Pricing Maintenance + Test Order; Production; Purchase Order Receipt History; Purchased Component Detail; QSRC; QUOI; QUOT; Router/Traveler; Schedule Board; SDAB; SDAL; Selection Setup; Serial Number List; Serial Numbers Shipped; SHIP; Shipment Allocation Detail; Shipment Allocation List; Shipments by Line Item; Shipping Allocation Batch; Shortages by Order; SHPL; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDI; VDSC; VEIT; Vendor/Item Detail; VETI; VITI; VPFR; WIPL; WIPR; WIPS; WUSE

QT

Quantity Type code defines the nature of the parent- component relationship when placing an order for the parent. It affects how the **Quantity** field is used in calculating component requirements. **Quantity Types** are:

I = Per Item.

Quantity per item is the number of components needed to manufacture one parent item. For a given order, the gross number of components required equals **Quantity** times order size.

O = Per Order.

Quantity per order is the number of components required per order to manufacture one or more parent items. For a given order, the gross number of components required equals **Quantity**.

Where Used: BILI; BILL; Bill of Material; Bill of Material Detail; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Demand Peg Detail; Engineering; Job Estimates and Performance Report; Location Index; Material Exposure; MBIL; MCST; Multi-Level Bill; Multi-Level Where Used; MUSE; OVAR; PCST; Picklist Detail; Production; Purchased Component Detail; Summarized Bill; WUSE

Quantity

Quantity Required specifies how many or how much of a particular component is required to manufacture a parent. Entry is up to 10 numbers. Decimal places are allowed.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; CWIP; Engineering; Job Estimates and Performance Report; Material Exposure; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; PCST; Production; Purchased Component Detail; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WIPL; WIPR; WUSE

ECRL – Multi-Level Costed Bill

Multi-Level Costed Bill is used to simulate a cost roll for component items based on cost type or component effectivity date. Cost rolls can be simulated for either production costs or engineering costs for any cost type (0-9, B) that has been defined on the CNFC (Cost Type Setup) screen. A simulated cost roll is a snapshot of an item cost for a specific cost type at a specific point in time.

Multi-Level Costed Bill displays parent and component item cost information in both a graphical hierarchy and in a table (row by column) format. The table format can be customized, for example, to add a second row of column headings, add or remove columns or change the column width.

Reports

Multi-Level Costed Bill Reports

To generate the report, choose **Print Preview** from the **File** menu.

Report Title
Engineering Multi-Level Costed Bill Lists costing information for a multi-level engineering bill.
Production Multi-Level Costed Bill Lists costing information for a multi-level production bill.

Report Description

Lists costing information for a multi-level engineering bill.

Access Method

To generate the report, choose Print Preview from the File menu.

Report Template

For more information on report templates, see "Reporting for SQL Server Systems" in the System Help topics.

Available From

Multi-Level Costed Bill

Fields

Added at This Level

Added at This Level is the value-added cost to manufacture the item in terms of material, labor, fixed overhead and variable overhead costs. **Added at This Level** costs and rolled costs of the item's components are used to calculate the item's **Total Rolled Cost**. Entry is any alphanumeric combination of up to 15 characters.

Where Used: CMLB; Costed Bill Detail; CSLB; Multi-Level Costed Bill

Component

Component is a term that describes the structural relationship between an item and its parent assembly in a bill of material. A **Component** is used in the manufacture of a parent, and it may be a part, raw material or a subassembly. Entry is any alphanumeric combination of up to 30 characters.

Where Used: Backflush Issue Reconciliation Report; BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Demand Peg Detail; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; Material Exposure; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; OPSL; OVAR; PCST; PICI; PICK; Picklist Detail; Production; Router/Traveler; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

Component Effectivity Date

Component Effectivity Date is the date used to determine which components on the bill of material to display for the specified parent. If the **Component Effectivity Date** is blank, all components on the bill of material, regardless of their in and out effectivity dates, are displayed for the specified parent. The **Component Effectivity Date** display format is workstation specific, which is defined as the Short Date setting in the Regional Settings within the Control Panel. Default is the current date.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

Component Effectivity Date

In Effectivity is the date that the use of a component becomes effective in a bill of material. The default value is today's date or the date you entered when you signed onto the system.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

Cost Code

Cost Code specifies the approach for calculating the rolled cost for an item. Item costs are calculated manually or automatically by totaling the component costs and may include scrap and/or yield. Entry options include:

- 0 = Manual**
- 1 = Automatic (scrap and yield)**
- 2 = Automatic (scrap)**
- 3 = Automatic (yield)**
- 4 = Automatic (not scrap or yield)**
- 5 = Automatic (not in parent rolled cost)**

6 = Manual (not in parent rolled cost)

Where Used: CMLB; Cost Selection; Cost Update Selection (from MCST); Cost Update Selection (from PCST); Costed Bill Detail; CSLB; ITCI; ITHC; ITMC; Multi-Level Costed Bill

Cost Type

Cost Type specifies the basis for item cost. You can define up to 11 **Cost Types** using the CNFC screen. **Cost Type 0** is always used for inventory valuation. Entry options include:

- 0 = Cost Type 0**
- 1 = Cost Type 1**
- 2 = Cost Type 2**
- 3 = Cost Type 3**
- 4 = Cost Type 4**
- 5 = Cost Type 5**
- 6 = Cost Type 6**
- 7 = Cost Type 7**
- 8 = Cost Type 8**
- 9 = Cost Type 9**
- B = Cost Type B (budget)**

Where Used: CMLB; CNFC; COMP; Cost Estimate by Lot Size; Cost Selection; Costed Bill Detail; CSLB; ITBI; ITCB; ITCI; ITHC; ITMC; Multi-Level Costed Bill; QUOI; QUOT

Desc

Item Description identifies the item in terms of its characteristics. When space is limited, a partial description is displayed. Entry is any alphanumeric combination of up to 70 characters.

Where Used: A/P Received Item List; ABCR; Advance Ship Notice Line; APPI; APPV; Available Pricing; AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; Browse Setup (item); Capacity Planning; CCAN; CCAT; CMLB; COBK; COCP; COMP; Comparison Bill; Comparison of Summarized Bills; Contract Item Detail; Contract Item Detail/Pricing; CORV; Cost Estimate by Lot Size; Costed Bill Detail; CSLB; Custom Product Component Detail; Customer Item + General; Customer Order; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Dispatch List; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; Inventory History List; Inventory Transaction History Report; INVR; IORD; IPPD; ISVI; ITBI; ITCB; ITCI; Item + Alternates; Item + Quantity; Item Availability; Item Availability + Quantity; Item Browse; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; ITMB; ITMC; ITMI; ITPB; ITPI; Job Estimates and Performance Report; Lead Time; Lead Time Analysis; Lead Times Assigned Results; LEXP; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Inventory Transaction History Report; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Package Content; Packaging

Detail; Partner Item Detail; PBCI; PBCT; PBII; PICI; PICK; Picklist Detail; POAN; POAS; POI; POIR; POCT; POMI; POMT; PORI; PORR; PORV; POYE; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QSRC; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VITI; Where Used; WIPR; WUSE

Effective Rev

Effective Revision Level identifies the revision level of a bill of material. Revision level identifiers are embedded in bills of material using items with a predefined **Pt Use** prefix, such as "Rev", and are displayed based on the selected Effectivity Date of the parent item.

Effective Revision Level = Multiple if more than one revision of the bill of material is displayed or if the effective in and out dates overlap.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

Fixed OH

Fixed Overhead Cost is the amount of allocated fixed cost to build an item with the item's first-level components. It normally includes costs such as occupancy and equipment which do not change as the production level goes up or down. **Fixed Overhead Cost** can be specified for each **Cost Type** established for an item. Entry is up to 16 numbers.

Where Used: ITCI; ITHC; ITMC; Multi-Level Costed Bill; QUOI; QUOT

Item

Item is the unique identifier for a part used in the Engineering module, whether it be a piece part, tool, raw material, an assembly, or finished product. Within a product structure, an item can be a component as well as a parent. Entry is any alphanumeric combination of up to 30 characters.

Where Used: Engineering; EITB; ECMS; ECRL; EMLB; EMWU; ESMB

Labor

Labor Cost is the amount of labor needed to build an item with the item's first-level components. **Labor Cost** can be specified for each Cost Type established for an item. Entry is up to 16 numbers.

Where Used: ITCI; ITHC; ITMC; Multi-Level Costed Bill; QUOI; QUOT

Level

Item Level indicates the position of an item within a product structure. **Level** is used to show the relative position of an item in relationship to its higher-level parent or lower-level components. Entry is any alphanumeric combination.

Where Used: CMLB; Location Index; LOTR; MBIL; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE

Matl

Material Cost is the cost for the engineering item entered when that item is defined. It is not a calculated field.

Where Used: EITB; ECRL; ESMB; Engineering

Parent

Parent is a term that describes the structural relationship between an item and its components in a bill of material. A **Parent** item is the higher level item in the parent-component relationship. A parent cannot be used in itself. Entry is any alphanumeric combination of up to 30 characters.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; Comparison Bill; Comparison of Summarized Bills; Cost Estimate by Lot Size; CSLB; Dispatch List; Engineering; Lead Time; Lead Time Analysis; Location Index; Material Exposure; MBIL; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Summarized Bill; Where Used; WUSE

Quantity

Quantity Required specifies how many or how much of a particular component is required to manufacture a parent. Entry is up to 10 numbers. Decimal places are allowed.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; CWIP; Engineering; Job Estimates and Performance Report; Material Exposure; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; PCST; Production; Purchased Component Detail; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WIPL; WIPR; WUSE

Rolled Fixed OH

Rolled Fixed Overhead Cost is the total fixed overhead cost to manufacture an item. It is the sum of the fixed overhead costs of the item's components and the **Fixed Overhead Cost** of the item itself. Displays are based on the specified Cost Type. Entry is up to 16 numbers. Decimal places are allowed.

Where Used: Cost Update Selection (from MCST); Cost Update Selection (from PCST);
ITCI; ITMC; Multi-Level Costed Bill

Rolled Labor

Rolled Labor Cost represents the total labor cost to manufacture an item. It is the sum of the labor costs of the item's components and the **Labor Cost** of the item itself. Displays are based on the specified Cost Type. Entry is up to 16 numbers. Decimal places are allowed.

Where Used: Cost Update Selection (from MCST); Cost Update Selection (from PCST);
ITCI; ITMC; Multi-Level Costed Bill

Rolled Matl

Rolled Material Cost represents the total material cost to manufacture an item and is the sum of the material costs of the item's components. Displays are based on the specified Cost Type. Entry is up to 16 numbers. Decimal places are allowed.

Where Used: Cost Update Selection (from MCST); Cost Update Selection (from PCST);
ITCI; ITMC; Multi-Level Costed Bill

Rolled Variable OH

Rolled Variable Overhead Cost represents the total variable overhead cost to manufacture an item. It is the sum of the variable overhead costs of the item's components and the **Variable Overhead Cost** of the item itself. Displays are based on the specified Cost Type. Entry is up to 16 numbers. Decimal places are allowed.

Where Used: Cost Update Selection (from MCST); Cost Update Selection (from PCST);
ITCI; ITMC; Multi-Level Costed Bill

Variable OH

Variable Overhead Cost is the amount of allocated variable cost to build an item with the item's first-level components. It normally includes costs such as employee benefits and machine power, which change as the production level goes up or down. **Variable Overhead Cost** can be specified for each **Cost Type** established for an item. Entry is up to 16 numbers. Decimal places are allowed.

Where Used: ITCI; ITHC; ITMC; Multi-Level Costed Bill; QUOI; QUOT

EDBA – Engineering Database Administration

Engineering Database Administration is used to perform engineering system administration functions, such as setting up and defining fields based on user preferences, maintaining the supplemental databases associated with the Engineering Module and analyzing the integrity of the engineering and Fourth Shift databases.

Engineering Database Administration is divided into sections that include:

Tab Title	Description
User Defined Fields	Allows you to set up and define fields based on user preferences. Includes a header section for defining field values and a table section where fields are displayed and can be sorted by field name, caption, data type or whether or not the field is required. To create a user-defined field, right-click on New or go to File > New. Then go to Expression Builder to enter the new user-defined fields. See User-Defined Fields: Format Property (Access only) in the Setting Up the Engineering Module section for more information.
Database Maintenance	Allows you to analyze the integrity of the engineering and Fourth Shift databases. A log file (Analyze.LOG) is created during any database maintenance process.

Fields

Caption Lines 1-2

Caption Lines 1-2 identifies the label for the user defined field when used in a table column heading, such as in the Item Master or Bill of Material. **Caption Lines 1-2** also define how the field label is separated if more than one line is available when displayed. The field label entered for Line 1 displays in the top line of the column heading. The field label entered for Line 2 displays below the bottom line of the column heading. The width of the column heading for user-defined fields is based on the caption lines entered.

Where Used: Engineering Database Admin

Data Type

Data Type identifies the format of the data that is stored in the user-defined field. Data types include the following:

- Text
- Memo
- Date / Time
- Currency
- Yes / No
- OLE Object
- Number - Integer

- Number - Long Integer
- Number - Single Precision
- Number - Double Precision
- Byte (8-bit)

A data type must be defined for each user-defined field.

Where Used: Engineering Database Admin

Decimals

Decimals identifies the number of digits to the right of the separator. Decimal precision options include 1-15 and automatic. A decimal precision option must be specified for each user-defined field if the field has a **Data Type** = any type of number.

Where Used: Engineering Database Admin - (Access only)

Default Value

Default Value identifies the value that is automatically entered into the user-defined field when a new record is created in the Product Definition application. Default values are optional.

Where Used: Engineering Database Admin

Field Name

Field Name identifies the name of the user-defined field. The first character of the field name must be an alpha character. Spaces are not allowed.

Note: A field name that you create cannot be a duplicate of system-defined column name or the same as the user-defined fields already in the system.

Where Used: Engineering Database Admin

Log File

Log File displays the contents of the log file that is created when the databases are repaired or compacted. Log file information can be deleted when necessary.

Where Used: Engineering Database Admin

Required

Required identifies if the user-defined field is a required or optional field.

- Select if the specified field is a required field.
- Do not select if the specified field is optional.

Where Used: Engineering Database Admin

Size

Size identifies the maximum number of characters you can enter into the user-defined field. Size defaults to <automatic> and can only be changed for fields with a **Data Type** = Text. The maximum is 255 characters.

Where Used: Engineering Database Admin

Validation Message

Validation Message identifies the error message that appears when data is added or maintained in the user-defined field that is prohibited by the **Validation Rule**. Validation messages are optional.

Where Used: Engineering Database Admin

Validation Rule

Validation Rule is an expression that identifies the limits that are enforced when data is added or maintained in the user-defined field. Validation rules are used for calculations or to specify criteria or filters. If you are using Engineering with Access, you can use the Expression Builder to create expressions. If you are using Engineering with SQL, you must define the rule using the correct SQL syntax.

Where Used: Engineering Database Admin

EIMP – Engineering Data Import

Engineering Data Import is used to import data from external sources into the Engineering Module. Data, such as engineering items, engineering bills of material, engineering and production reference designators and the linkages between engineering and production items can be imported into the Engineering database.

The data from external sources is imported into the Engineering Module using an import file that is created by the user. See [Engineering Data Import Setup](#) for more information on the engineering data import file, including the required file format and layouts available when using the engineering data import functionality.

Engineering Data Import is divided into sections that include:

Section	Description
Import File	Allows you to select the file to import.
Import Results	Allows you to review the sample data before it is imported and review the results of the import.

Fields

Import File

Import File identifies the source directory path and file name of the file which is being imported into the engineering database. The import filename must have a CSV file extension.

Where Used: Engineering Data Import

Import File Type

Import File Type identifies the type of data included in the file that is being imported into the engineering database. The import file type is automatically determined by the system when the file is opened.

Where Used: Engineering Data Import

Import Results

Import Results identifies the outcome of the engineering data import.

- **Accepted.** Identifies the number of records imported into the engineering database.
- **Rejected.** Identifies the number of records in the file that were not imported into the engineering database.

The import data header and the data that was imported into the engineering database is displayed in the table.

Where Used: Engineering Data Import

EITB – Item Master

Item Master is used to record each of your company's unique engineering end-product, assembly, component, material, tool, reference item or resource center. It is the master record for each of your items. Item Master contains information that identifies and describes each item used in your engineering and production processes.

Item Master displays parent and component item information in both a graphical hierarchy and in a table (row by column) format. The table format can be customized, for example, to add a second row of column headings, add or remove columns or change the column width.

The asterisk (*) before the field names on the Engineering Item Master indicate that the field is used in the Engineering module only.

Fields

Buyr

Buyer code is used to identify the person responsible for handling the purchase of the item. The suggested entry is the buyer's initials. Entry is any alphanumeric combination of up to 3 characters.

Where Used: A/P Receiving Detail; ABCR; APIE; APII; APIR; APPI; APPO; APPV; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Buyer/Planner Code Maintenance; Contract Header Detail; Contract Purchase Orders; Contract Summary; Custom Product Detail; CWIP; Demand Peg Detail; IORD; IPPD; Item Browse Detail; Item Master; Item Master Planning Detail; Item Responsibility Assigned Results; ITHC; Lead Times Assigned Results; Line Item Details + Custom Product; Material Shortages Detail; MBIL; MPSR; MSCF; MSMT; Multi-Level Bill; Multi-Level Where Used; ORST; OVAR; PCST; PICI; PICK; Picklist Detail; POAN; POAS; POCI; POCP; POCR; POCT; POMI; POMT; PORI; PORV; Production; Purchase Order Header Detail; Purchase Order Line Item Detail (CPMT); Purchased Component Detail; QUOI; QUOT; SDAB; SSII; Standard Costs Assigned Results; Summarized Bill; VDSC; VPFR; Where Used; WIPR; Workcenter Master

*Cost

Material Cost is the cost for the engineering item entered when that item is defined. It is not a calculated field.

Where Used: EITB; ECRL; ESMB; Engineering

Desc / *Description

Item Description identifies the item in terms of its characteristics. When space is limited, a partial description is displayed. Entry is any alphanumeric combination of up to 70 characters.

Where Used: A/P Received Item List; ABCR; Advance Ship Notice Line; APPI; APPV; Available Pricing; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Browse Setup (item); Capacity Planning; CCAN; CCAT; CMLB; COBK; COCP; COMP; Comparison Bill; Comparison of Summarized Bills; Contract Item Detail; Contract Item Detail/Pricing; CORV;

Cost Estimate by Lot Size; Costed Bill Detail; CSLB; Custom Product Component Detail; Customer Item + General; Customer Order; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Dispatch List; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; Inventory History List; Inventory Transaction History Report; INVR; IORD; IPPD; ISVI; ITBI; ITCB; ITCI; Item + Alternates; Item + Quantity; Item Availability; Item Availability + Quantity; Item Browse; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; ITMB; ITMC; ITMI; ITPB; ITPI; Job Estimates and Performance Report; Lead Time; Lead Time Analysis; Lead Times Assigned Results; LEXP; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Inventory Transaction History Report; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Package Content; Packaging Detail; Partner Item Detail; PBCI; PBCT; PBII; PICI; PICK; Picklist Detail; POAN; POAS; POCI; POCR; POCT; POMI; POMT; PORI; PORR; PORV; POYE; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QSRC; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VITI; Where Used; WIPR; WUSE

*Dec Pre Cd

Decimal Precision Code represents the number of decimal places displayed and printed for inventory-related quantities for an item. **Decimal Precision Code** = 0 displays quantities rounded to whole numbers. However, the actual quantity is stored with all decimal places in the database. Entry options include:

- 0 = Zero positions**
- 1 = One position**
- 2 = Two positions**
- 3 = Three positions**
- 4 = Four positions**
- 5 = Five positions**
- 6 = Six positions**
- 7 = Seven positions**
- 8 = Eight positions**
- 9 = Nine positions**

Where Used: Engineering; Item Master; Item Master Planning Detail; Production; Workcenter Master

*Drwg

Drawing number identifies an engineering document that provides design specifications for an item. Entry is any alphanumeric combination of up to 30 characters.

Where Used: AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; Engineering; Item Browse Detail; Item Master; Item Master Detail; MBIL; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Router/Traveler; Shortages by Order; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used

Filter By

Filter By is used to request the Item Master list, where the entered criteria is used to search the Item Master and selects all records that match the criteria. The asterisk (*) is the only wild card character allowed and it must be entered in the first position. For example, entering "**1" in the Item field lists all items that have a "1" somewhere in the item identifier, such as 19-RED or AT-100.

For best results, enter complete values for filtering. For example, to filter for items with a unit of measure of "each", enter UM = EA. Filtering would not have been successful in this example if you entered UM = E or UM = E* because the entered values were incomplete.

Where Used: Item Master

Fixed LT

Fixed Lead Time is the number of working days required for setup and queue time used in planning an order. It is added to run lead time and inspection lead time to estimate planned lead time for an order. Entry is up to 3 numbers.

Where Used: AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; IPPD; Item Availability; Item Browse Detail; Item Master; Item Master Planning Detail; MBIL; MSMT; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Single-Level Configuration Bill of Material Report; Where Used; Workcenter Master

Insp LT

Inspection Lead Time is the number of working days normally required for inspection of an item. It is added to run lead time and fixed lead time to estimate total planned lead time for an order. For purchased items, **Inspection Lead Time** is used to determine the required dock date based on the date needed in stock. Entry is up to 3 numbers.

Where Used: AVII; AVIT; IPPD; Item Availability; Item Browse Detail; Item Master; Item Master Planning Detail; MSMT; Production; QUOI; QUOT; Single-Level Configuration Bill of Material Report; Workcenter Master

Insp Reqcd

Inspection Required code specifies whether incoming inspection is required for this item before receiving to an on-hand location. **Inspection Required** codes are:

Y = Yes.

Incoming inspection is required.

N = No.

Incoming inspection is not required.

Where Used: AVII; AVIT; Customer Order Receipt/Reverse; Demand Peg Detail; IPPD; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITMB; ITMI; Lot Trace; Manufacturing Order Receipt/Reverse; MPSR; MPSS; PORI; PORV; Production; QUOI; QUOT; SDAB; SDAL; Supply Peg Detail

*Item

Item is the unique identifier for a part used in the Engineering module, whether it be a piece part, tool, raw material, an assembly, or finished product. Within a product structure, an item can be a component as well as a parent. Entry is any alphanumeric combination of up to 30 characters.

Where Used: EITB; Engineering; ECMS; EMLB, EMWU; ESMB, ECRL

Item Status

Item Status indicates whether an item is not released for production, or is released for production and is active, being phased out or is obsolete. **Item Status** codes are:

E = Engineering.

Indicates the item is not released for production. A warning message is displayed when an order for the item is added or updated.

A = Active.

Indicates the item is released for production. The item is actively used and can be made or purchased.

P = Being phased out.

Indicates the item is released for production but it will no longer be used in the manufacture of products after the current supply runs out. A warning message is displayed when a new order for the item is placed.

O = Obsolete.

Indicates the item is released for production but is no longer used in the manufacture of products. Remaining inventory cannot be considered in any production plans but can be moved to another storage location and be adjusted for accounting purposes.

Where Used: ABCR; AVII; AVIT; Bill of Material Detail; CINV; Demand Peg Detail; FCST; IHIR; INVR; IORD; IPPD; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITHC; ITHR; ITMB; ITMI; Lot Trace; MPSR; MPSS; MSMT; MUSE; Production; QUOI; QUOT; SDAB; SDAL; Single-Level Configuration Bill of Material Report; SSII; Supply Peg Detail; WUSE

*Item Type

Item Type is used to indicate whether an item is material, reference, tool or resource. You can enter one of four codes and **Item Type** can only be changed or added on the Item Master. The **Item Types** are:

N = Normal.

The item is material consumed in the manufacture of products.

X = Reference.

The item appears on the bill, but is not consumed in the manufacture of its parent, such as a drawing.

T = Tool.

A tool is used to manufacture its parent.

R = Resource.

This item is used in the planning process of the manufacture of its parent, such as labor hours.

Where Used: AVII; AVIT; Bill of Material Detail; Demand Peg Detail; FCST; IHIR; INVR; IORD; IPPD; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITHC; ITHR; ITMB; ITMI; Lot Trace; MPSR; MPSS; MSMT; MUSE; PBCI; PBCT; Picklist Detail; Production; QUOI; QUOT; SDAB; SDAL; Single-Level Configuration Bill of Material Report; SSII; Supply Peg Detail; WUSE

LT

Lot Trace indicates whether lot number control is used throughout the manufacturing process to track the use of the item.

Y = Yes.

The item is lot-controlled.

N = No.

The item is not lot-controlled.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITMB; ITMI; Lot Trace; MPSR; MPSS; Multi-Level Bill; Multi-Level Where Used; Production; SSII; Summarized Bill; Where Used; WUSE

***Matl Cost**

Material Cost is the cost for the engineering item entered when that item is defined. It is not a calculated field.

Where Used: EITB, Engineering

***MB**

Make-Buy Code indicates if a part is normally purchased or manufactured. **Make-Buy Code** also directs appropriate action messages to the **Buyr** (B or S) or **Plnr** (M). **Make-Buy Codes** are:

M = Make.

Manufactured in-house.

B = Buy.

Purchased; no parts supplied to vendor.

S = Supplied.

Purchased; parts supplied to vendor.

Where Used: ABCR; AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; COMP; Costed Bill Detail; CSLB; Demand Peg Detail; Engineering; FCST; IHIR; IORD; IPPD; Item Availability; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; Item Shortages; ITHC; ITHR; ITMB; ITMI; Lead Time Analysis; Lead Times Assigned Results; Lot Size Multiple Detail; Lot Trace; LSDA; LVAL; Material Exposure; Material Shortages Detail; MBIL; MPSR; MPSS; MSMT; Multi-Level Bill; PBCI; PBCT; Production; QUOI; QUOT; SDAB; SDAL; Shortages by Order; Single-Level Configuration Bill of Material Report; SSII; Standard Costs Assigned Results; Summarized Bill; Supply Peg Detail

Ord Pol

Order Policy is established for each item based on how planned orders for the item are handled. **Order Policy** provides replenishment order information used by the planner or buyer. **Order Policy** codes are:

0 = No Planning.

No planning requirements are generated for this item.

1 = Order Point.

When an item's supply falls below the **Order Point** quantity, the system recommends placing an order. The recommended order quantity is the **Lot Size Qty**.

2 = Order-Up-to.

When an item's supply falls below the **Order Point** quantity, the system recommends placing an order. The recommended order quantity is

$$(\text{Order Up to}) - (\text{On Hand Inv}) - (\text{Insp Qty}) - (\text{On Order Quantity}) + (\text{Allocations}),$$

as modified by **Lot Size Min** and **Lot Size Mult**.

3 = Period Order.

When the demands generated by MRP exceed supply, the system recommends placing an order. Recommended order quantity covers all demands within the period indicated by **Lot Size Day**, as modified by **Lot Size Min** and **Lot Size Mult**.

4 = Fixed Order.

When the demands generated by MRP exceed supply, the system recommends placing an order. The recommended order quantity is the **Lot Size**.

5 = Manual Planning.

When the demands generated by MRP exceed the supply, the system notifies the planner/buyer. The lot size quantity is used to recommend an order quantity.

Order Policy affects how the system uses lot size specifications, order points, on hand inventory, on order inventory and safety stock.

Where Used: ABCR; Bill of Material Detail; Demand Peg Detail; IORD; IPPD; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITMB; ITMI; Lot Trace; MPSR; MPSS; MSMT; Production; SDAB; SDAL; Single-Level Configuration Bill of Material Report; SSII; Supply Peg Detail

Phase

Phase Name is the name assigned to each of the product release levels. Default phase names which are installed with the system include:

0 = Engineering.

Item is in the engineering database but not in the production database.

1 = Pre-Production.

Item is in the production database with an **Item Status** = E (engineering, not released for production).

2 = Production.

Item is in the production database with an **Item Status** = A (active).

On the Item Master, an item can have a **Phase Name** = -1 (Error) if it was selected for promotion but it did not pass the promotion rule conditions. After resolving the errors, the item can be promoted to the next release level.

Default phase names can be customized using the PRRD functionality. Entry is any alphanumeric combination up to 30 characters.

Where Used: Item Master; Product Release Rule Definitions

Phase Date

Phase Date is the day, month and year that an item changed release status, for example the date an item was promoted to the next level phase.

Where Used: Item Master

Plnr

Planner code is used to identify the person responsible for planning the production or usage of an item. The suggested entry is the planner's initials. Entry is any alphanumeric combination of up to 3 characters.

Where Used: ABCR; AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; Buyer/Planner Code Maintenance; Custom Product Detail; CWIP; Demand Peg Detail; IORD; IPPD; Item Browse Detail; Item Master; Item Master Planning Detail; Item Responsibility Assigned Results; ITHC; Lead Times Assigned Results; Line Item Details + Custom Product; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Shortages Detail; MBIL; MCST; MOAN; MOMI; MOMT; MORI; MORV; MPSR; MSCF; MSMT; Multi-Level Bill; Multi-Level Where Used; ORST; OVAR; PICI; PICK; Picklist Detail; Production; Purchase Order Line Item Detail; QUOI; QUOT; Router/Traveler; SDAB; Shortages by Order; Single-Level Configuration Bill of Material Report; SSII; Standard Costs Assigned Results; Summarized Bill; Where Used; WIPR; Workcenter Master

*Price

Price is the price for the engineering item entered when that item is defined. It is not a calculated field.

Where Used: EITB, Engineering

*Rev

Revision Level identifies a level of documentation which specifies the item's design. It should be incremented for each change in the item's design specifications. Entry is any alphanumeric combination of up to 2 characters.

Where Used: AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; Costed Bill Detail; Demand Peg Detail; Engineering; FCST; ICCR; IORD; IPPD; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITMB; ITMI; LMSI; LMST; Lot Detail; Lot Trace; MBIL; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Where Used; PBCI; PBCT; Production; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shortages by Order; Single-Level Configuration Bill of Material Report; Summarized Bill; Supply Peg Detail; Where Used

Run LT

Run Lead Time is the average number of shop days required for a manufacturing run or vendor lead time and is used in planning an order. **Run Lead Time** is added to fixed lead time and inspection lead time to estimate planned lead time which serves to time order release. Decimal places for fractional days allowed. MRP Planning uses fractional days as reference and plans using the next whole day increment. For example, if you specify **Run LT** = 2.1, MRP Planning assumes **Run LT** = 3 for calculation purposes. Entry is up to 8 numbers.

Note: Lead times established for an item are considered to be 0 when the item is used as a phantom (**CT** = P) in a bill of material.

Where Used: AVII; AVIT; BILI; BILL; Bill of Material; IPPD; Item Availability; Item Browse Detail; Item Master; Item Master Planning Detail; MBIL; MSMT; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Single-Level Configuration Bill of Material Report; Where Used; Workcenter Master

SI

Saleable Indicator is used for reference and extract purposes to indicate whether an item is available for forecasting. Saleable items may include end-items, spare parts or repair items. Entry options include:

Y = Yes.

Item is available for forecasting.

N = No.

Item is not available for forecasting.

blank = No.

Item is not available for forecasting.

Default is blank. **Saleable Indicator** is only available if the Forecast Management Module is installed.

Where Used: Item Master; Item Master Detail

Sr

Serialization indicates whether serial numbers should be recorded at the time of shipment.

Y = Yes.

Serial numbers are recorded.

N = No.

Serial numbers are not recorded.

Where Used: Bill of Material Detail; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITMB; ITMI; Lot Trace; MPSR; MPSS; Production; SSII

Starting At

The **Starting** field is used to request a list where the specified information appears first on the list. **Starting** entries may consist of a partial entry and if the entry is not in the list, the next highest entry appears first on the list. The **Starting** field can include one or more field combinations, each with its own entry requirements.

Where Used: A/P 1099 Distribution; A/P Payment Application Detail; A/P Payment Void Detail; A/P Received Item List; A/P Receiving Detail; A/R Payment Application Detail; APAH; APDS; APEX; APID; APIE; APII; APIR; APIV; APPA; APPD; APPI; APPO; APTX; ARAH; ARCD; AREX; ARIC; ARIH; ARPD; ARPH; ARSR; BAMT; Bank Payment Approval; BILL; BILL; BKMT; Browse Setup (customer); Browse Setup (item); Browse Setup (vendor); CACF; CCAN; CCAT; CCEX; CCMT; CIMT; CMCF; CMTA; CMTI; CNFA; COAN; COMI; COMT; Contract Item Detail/Pricing; CORV; CPMT; CUID; CUII; CUSI; CUST; FCMT; FCST; G/L Account Group/No List; G/L Account No List; G/L Batch Detail; G/L Journal Entry List; G/L Master Account Recap; G/L Org No List; G/L Org/Acct Group List; G/L Organization Group/No List; G/L Report List; G/L Source Code List; GLAG; GLAV; GLBD; GLCA; GLCI; GLDQ; GLEX; GLGQ; GLJD; GLJE; GLJI; GLJP; GLJR; GLMA; Global Extended Text Selection; GLOS; GLRD; GLRL; GLSC; GLSI; GLSS; ITBI; ITCB; Item Master; Item Shortages; ITMB; ITMI; ITPB; ITPI; IVCO; IVIA; IVIE; IVII; IVRV; LMMT; Location Selection Setup; MCST; MOAN; MOMI; MOMT; MORI; MORV; MPED; MPIT; MSMT; NMTA; OPSL; Orders on Shipment; ORST; Packaging Detail; PASS; PBCI; PBCT; PBMI; PBMT; PCMT; PCST; PICI; PICK; POAN; POAS; POCI; POCT; POMI; POMT; PORI; PORV; REDI; RTMT; RVED; SBOL; Selection Setup; Serial Number List; Serial Numbers Shipped; SHIP; Shipments by Line Item; SHPI; SSII; STAD; SUND; SUNR; SUPD; SUPR; TEXT; TTXA; VAT Summary (APSM Module); VATT; VEDI; VEID; VEND; VENI; Workcenter Master

*UM

Unit of Measure identifies the standard unit for an item used in the manufacturing process. Entry is up to 4 alphanumeric characters.

Where Used: A/P PO/Inv Variance by Invoice; A/P Receiving Detail; APEX; APPI; APPV; APUV; Available for Shipping Allocation Batch; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; CCAT; CINV; CMLB; COBK; COCP; COMI; COMT; Contract Header Detail;

Contract Item Detail; Contract Item Detail/Pricing; CORV; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Custom Product Detail; Customer Order; Customer Order Line Price Adjustment; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; INVR; IORD; IPPD; ITBI; ITCB; ITCI; Item + Quantity; Item Availability + Quantity; Item Browse Detail; Item History; Item Lot Receipt; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; Item Shortages; ITHC; ITHR; ITMB; ITMC; ITMI; ITPB; ITPI; IVPR; IVRR; JEST; Job Estimates and Performance Report; Lead Times Assigned Results; LEXP; LHIS; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPIT; MPSR; MPSS; MSMT; Multi-Currency; Multi-Level Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Packaging Detail; Packing List; Partner Item Detail; PBCI; PBCT; PCST; PICI; PICK; Picklist Detail; POCI; POCR; POCT; POMI; POMT; PORI; PORR; PORV; POSR; POVD; Pricing Maintenance + Action Detail; Pricing Maintenance + Action List; Pricing Maintenance + Test Order; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Allocation Batch; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VEIT; Vendor/Item Detail; VETI; VPFR; Where Used; WIPR; Workcenter Master; WUSE

EMLB – Multi-Level Bill

Multi-Level Bill is used to view a parent items' multi-level product structure as of a user-specified effectivity date. You can view a flattened bill format by exploding phantom components. Multi-Level Bill also allows you to view the complete item change history as of a specific revision level or effectivity date.

Multi-Level Bill displays component item information in a table (row by column) format based on the information entered in the Parent and Component Effectivity Date fields.

The Multi-Level Bill functionality is the same regardless of how it is accessed.

Reports

Multi-Level Bill Reports

To generate the report, choose **Print Preview** from the **File** menu.

Report Title
Engineering Multi-Level Bill Lists components by level for a multi-level engineering bill.
Production Multi-Level Bill Lists components by level for a multi-level production bill.

Report Description

Lists components by level for a multi-level engineering bill.

Access Method

To generate the report, choose Print Preview from the File menu.

Report Template

For more information on report templates, see "Reporting for SQL Server Systems" in the System Help topics.

Available From

Multi-Level Bill

Fields

Buyr

Buyer code is used to identify the person responsible for handling the purchase of the item. The suggested entry is the buyer's initials. Entry is any alphanumeric combination of up to 3 characters.

Where Used: A/P Receiving Detail; ABCR; APIE; APII; APIR; APPI; APPO; APPV; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Buyer/Planner Code Maintenance; Contract Header Detail; Contract Purchase Orders; Contract Summary; Custom Product Detail; CWIP; Demand Peg Detail; IORD; IPPD; Item Browse Detail; Item Master; Item Master Planning Detail; Item Responsibility Assigned Results; ITHC; Lead Times Assigned Results;

Line Item Details + Custom Product; Material Shortages Detail; MBIL; MPSR; MSCF; MSMT; Multi-Level Bill; Multi-Level Where Used; ORST; OVAR; PCST; PICI; PICK; Picklist Detail; POAN; POAS; POCI; POCP; POCR; POCT; POMI; POMT; PORI; PORV; Production; Purchase Order Header Detail; Purchase Order Line Item Detail (CPMT); Purchased Component Detail; QUOI; QUOT; SDAB; SSII; Standard Costs Assigned Results; Summarized Bill; VDSC; VPFR; Where Used; WIPR; Workcenter Master

Component

Component is a term that describes the structural relationship between an item and its parent assembly in a bill of material. A **Component** is used in the manufacture of a parent, and it may be a part, raw material or a subassembly. Entry is any alphanumeric combination of up to 30 characters.

Where Used: Backflush Issue Reconciliation Report; BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Demand Peg Detail; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; Material Exposure; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; OPSL; OVAR; PCST; PICI; PICK; Picklist Detail; Production; Router/Traveler; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

Component Desc

Item Description identifies the item in terms of its characteristics. When space is limited, a partial description is displayed. Entry is any alphanumeric combination of up to 70 characters.

Where Used: A/P Received Item List; ABCR; Advance Ship Notice Line; APPI; APPV; Available Pricing; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Browse Setup (item); Capacity Planning; CCAN; CCAT; CMLB; COBK; COCP; COMP; Comparison Bill; Comparison of Summarized Bills; Contract Item Detail; Contract Item Detail/Pricing; CORV; Cost Estimate by Lot Size; Costed Bill Detail; CSLB; Custom Product Component Detail; Customer Item + General; Customer Order; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Dispatch List; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; Inventory History List; Inventory Transaction History Report; INVR; IORD; IPPD; ISVI; ITBI; ITCB; ITCI; Item + Alternates; Item + Quantity; Item Availability; Item Availability + Quantity; Item Browse; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; ITMB; ITMC; ITMI; ITPB; ITPI; Job Estimates and Performance Report; Lead Time; Lead Time Analysis; Lead Times Assigned Results; LEXP; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Inventory Transaction History Report; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Package Content; Packaging Detail; Partner Item Detail; PBCI; PBCT; PBII; PICI; PICK; Picklist Detail; POAN; POAS; POCI; POCP; POCT; POMI; POMT; PORI; PORR; PORV; POYE; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QSRC; QUOI; QUOT; Router/

Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VITI; Where Used; WIPR; WUSE

Component Effectivity Date

Component Effectivity Date is the date used to determine which components on the bill of material to display for the specified parent. If the **Component Effectivity Date** is blank, all components on the bill of material, regardless of their in and out effectivity dates, are displayed for the specified parent. The **Component Effectivity Date** display format is workstation specific, which is defined as the Short Date setting in the Regional Settings within the Control Panel. Default is the current date.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

Component Effectivity Date

In Effectivity is the date that the use of a component becomes effective in a bill of material. The default value is today's date or the date you entered when you signed onto the system.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

CT

Component Type distinguishes various types of relationships between a component and its parent assembly in a bill of material. The **Component Type** indicates how a component is used in the manufacture of a parent. The **Component Types** are:

N = Normal.

Component is consumed in the manufacture of its parent.

P = Phantom.

Component is used for structure purposes only (e.g., a transient subassembly consumed in the manufacture of its parent).

R = Resource or Workcenter.

Component is used in the planning process of the manufacture of its parent (e.g., labor hours).

X = Reference.

Component is for information purposes. Reference items are included on the picklist. Reference items are not included in the parent's rolled costs and are typically not required for issue in the manufacturing of the parent.

D = Document.

Component is used for information purposes only. It is not included on the picklist.

B = By-product.

The manufacture of the parent results in the creation of this component.

C = Co-product.

Component is derived from the manufacture of the parent. The manufacture of the co-product, in turn, produces the parent.

T = Tool.

Component is used in the manufacture of the parent.

U = Tool return.

Component is used in, and returned after, the manufacture of the parent.

M = Module.

Component represents a group of components for which requirements are generated for custom product orders. A module component is used for structure purposes only, such as a transient subassembly consumed in the manufacture of its parent. Module components explode requirements for the child components; the module component itself is never required.

V = Purchased material.

Component not defined on the Item Master is required for a custom product customer order.

W = Outside operation or service.

Component, such as heat treating or plating, is required for a custom product customer order.

Y = Phantom parent.

Requirements have been exploded to the next level to meet requirements.

Z = Phantom child.

Component is used in the manufacture of the phantom's parent.

An item's use as a component is limited by its **Item Type**. The Component Types available are based on the information displayed on the screen and not all types are available on all screens.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; COCP; Comparison Bill; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; CWIP; Demand Peg Detail; Engineering; Job Estimates and Performance Report; Location Index; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; OPSL; Order Cost Variance Status; OVAR; PCST; Production; Purchased Component Detail; Single-Level Configuration Bill of Material Report; Summarized Bill; WIPL; WIPR

Cum LT

Cumulative Lead Time is the number of shop days to manufacture an item from start to finish—from initially placing a purchase order for raw material through each level in the product structure to completion of the item. **Cumulative Lead Time** is based on the critical path of components in the item's multi-level bills of material and the component lead times.

Where Used: Multi-Level Bill

Desc

Item Description identifies the item in terms of its characteristics. When space is limited, a partial description is displayed. Entry is any alphanumeric combination of up to 70 characters.

Where Used: A/P Received Item List; ABCR; Advance Ship Notice Line; APPI; APPV; Available Pricing; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Browse Setup (item); Capacity Planning; CCAN; CCAT; CMLB; COBK; COCP; COMP; Comparison Bill; Comparison of Summarized Bills; Contract Item Detail; Contract Item Detail/Pricing; CORV; Cost Estimate by Lot Size; Costed Bill Detail; CSLB; Custom Product Component Detail; Customer Item + General; Customer Order; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Dispatch List; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; Inventory History List; Inventory Transaction History Report; INVR; IORD; IPPD; ISVI; ITBI; ITCB; ITCI; Item + Alternates; Item + Quantity; Item Availability; Item Availability + Quantity; Item Browse; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; ITMB; ITMC; ITMI; ITPB; ITPI; Job Estimates and Performance Report; Lead Time; Lead Time Analysis; Lead Times Assigned Results; LEXP; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Inventory Transaction History Report; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Package Content; Packaging Detail; Partner Item Detail; PBCI; PBCT; PBII; PICI; PICK; Picklist Detail; POAN; POAS; POCI; POCR; POCT; POMI; POMT; PORI; PORR; PORV; POYE; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QSRC; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VITI; Where Used; WIPR; WUSE

Drwg

Drawing number identifies an engineering document that provides design specifications for an item. Entry is any alphanumeric combination of up to 30 characters.

Where Used: AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Engineering; Item Browse Detail; Item Master; Item Master Detail; MBIL; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Router/Traveler; Shortages by Order; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used

Effective Rev

Effective Revision Level identifies the revision level of a bill of material. Revision level identifiers are embedded in bills of material using items with a predefined **Pt Use** prefix, such as "Rev", and are displayed based on the selected Effectivity Date of the parent item.

Effective Revision Level = Multiple if more than one revision of the bill of material is displayed or if the effective in and out dates overlap.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

Fixed LT

Fixed Lead Time is the number of working days required for setup and queue time used in planning an order. It is added to run lead time and inspection lead time to estimate planned lead time for an order. Entry is up to 3 numbers.

Where Used: AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; IPPD; Item Availability; Item Browse Detail; Item Master; Item Master Planning Detail; MBIL; MSMT; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Single-Level Configuration Bill of Material Report; Where Used; Workcenter Master

In Effectivity

In Effectivity is the date that the use of a component becomes effective in a bill of material. The default value is today's date or the date you entered when you signed onto the system.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

In Rev

In Revision Level indicates the level of documentation for which the parent-component relationship becomes effective. It is for information purposes only and is not used by the system. Entry is any alphanumeric combination of up to 2 characters.

Where Used: Bill of Material Detail; Comparison Bill; Engineering; Multi-Level Bill; Multi-Level Where Used; Production

Item

Item is the unique identifier for a part used in the Engineering module, whether it be a piece part, tool, raw material, an assembly, or finished product. Within a product structure, an item can be a component as well as a parent. Entry is any alphanumeric combination of up to 30 characters.

Where Used: EITB; Engineering; ECMS; EMLB, EMWU; ESMB; ECRL

Level

Item Level indicates the position of an item within a product structure. **Level** is used to show the relative position of an item in relationship to its higher-level parent or lower-level components. Entry is any alphanumeric combination.

Where Used: CMLB; Location Index; LOTR; MBIL; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE

LT

Lot Trace indicates whether lot number control is used throughout the manufacturing process to track the use of the item.

Y = Yes.

The item is lot-controlled.

N = No.

The item is not lot-controlled.

Where Used: BIL; BILL; Bill of Material; Bill of Material Detail; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITMB; ITMI; Lot Trace; MPSR; MPSS; Multi-Level Bill; Multi-Level Where Used; Production; SSII; Summarized Bill; Where Used; WUSE

LT Offset

Lead Time Offset is the number of days after the order start date that a component is needed in the manufacturing process. Entry is up to 3 numbers. Default value is 0.

Where Used: BILL; Bill of Material Detail; Demand Peg Detail; Lead Time; Lead Time Analysis; Material Exposure; MBIL; Multi-Level Bill; Multi-Level Where Used; Production; Single-Level Configuration Bill of Material Report

MB

Make-Buy Code indicates if a part is normally purchased or manufactured. **Make-Buy Code** also directs appropriate action messages to the **Buyl** (B or S) or **Plnr** (M). **Make-Buy Codes** are:

M = Make.

Manufactured in-house.

B = Buy.

Purchased; no parts supplied to vendor.

S = Supplied.

Purchased; parts supplied to vendor.

Where Used: ABCR; AVII; AVIT; BIL; BILL; Bill of Material; Bill of Material Detail; COMP; Costed Bill Detail; CSLB; Demand Peg Detail; Engineering; FCST; IHIR; IORD; IPPD; Item Availability; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; Item Shortages; ITHC; ITHR; ITMB; ITMI; Lead Time Analysis; Lead Times Assigned Results; Lot Size Multiple Detail; Lot Trace; LSDA; LVAL; Material Exposure; Material Shortages Detail; MBIL; MPSR; MPSS; MSMT; Multi-Level Bill; PBCI; PBCT; Production;

QUOI; QUOT; SDAB; SDAL; Shortages by Order; Single-Level Configuration Bill of Material Report; SSII; Standard Costs Assigned Results; Summarized Bill; Supply Peg Detail

Out Effectivity

Out Effectivity is the first date that a component is not effective in a bill of material. The default value is 12/31/2079.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Where Used; WUSE

Out Rev

Out Revision Level indicates the level of documentation for which the parent-component relationship is no longer in effect. It is for information purposes only and is not used by the system. Entry is any alphanumeric combination of up to 2 characters.

Where Used: Bill of Material Detail; Comparison Bill; Engineering; Multi-Level Bill; Multi-Level Where Used; Production

Parent

Parent is a term that describes the structural relationship between an item and its components in a bill of material. A **Parent** item is the higher level item in the parent-component relationship. A parent cannot be used in itself. Entry is any alphanumeric combination of up to 30 characters.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; Comparison Bill; Comparison of Summarized Bills; Cost Estimate by Lot Size; CSLB; Dispatch List; Engineering; Lead Time; Lead Time Analysis; Location Index; Material Exposure; MBIL; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Summarized Bill; Where Used; WUSE

PIn Pol

Planning Policy is used to determine the type of demand an item generates for its components based on planned orders. The codes are:

N = Normal.

Planned and released orders for this item produce "normal" dependent demand for its components.

P = Production Plan.

Planned orders for this item produce a "production forecast" for its components. Orders cannot be released for this item.

F = Final Assembly.

Planned and released orders for this item create "final assembly" demand for its components. This policy is reserved for future use and is treated like a **Planning Policy** = N by the system.

D = Distribution.

Planned and released orders for this item produce "distribution" demand for its components. This policy is reserved for future use and is treated like a **Planning Policy** = N by the system.

M = Master Scheduled.

Planned and released orders for this item produce "normal" dependent demand for its components. Planned orders must be manually scheduled within the item's **Plng Fnc** (planning fence).

It is recommended that you only use the "N" code until the master planning capability is installed in your system.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; IORD; IPPD; Item Browse Detail; Item Master Planning Detail; MBIL; MSMT; Multi-Level Bill; Multi-Level Where Used; Production; Summarized Bill; Where Used

Plnr

Planner code is used to identify the person responsible for planning the production or usage of an item. The suggested entry is the planner's initials. Entry is any alphanumeric combination of up to 3 characters.

Where Used: ABCR; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Buyer/Planner Code Maintenance; Custom Product Detail; CWIP; Demand Peg Detail; IORD; IPPD; Item Browse Detail; Item Master; Item Master Planning Detail; Item Responsibility Assigned Results; ITHC; Lead Times Assigned Results; Line Item Details + Custom Product; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Shortages Detail; MBIL; MCST; MOAN; MOMI; MOMT; MORI; MORV; MPSR; MSCF; MSMT; Multi-Level Bill; Multi-Level Where Used; ORST; OVAR; PICI; PICK; Picklist Detail; Production; Purchase Order Line Item Detail; QUOI; QUOT; Router/Traveler; SDAB; Shortages by Order; Single-Level Configuration Bill of Material Report; SSII; Standard Costs Assigned Results; Summarized Bill; Where Used; WIPR; Workcenter Master

Pt Use

Point of Use is a key field that, along with the **Seqn** field, defines the sort sequence of components in a bill of material. The **Point of Use** field accepts any information you choose to enter, but the intended use is to identify the "work center" where the component should be delivered when assembling the parent, the "find number" of the component referenced on the drawing for the parent, or the "component reference designator" of the component on a printed circuit board. If the **Point of Use** field is not applicable in your company, you may enter 0 (zero). Entry is any alphanumeric combination of up to 5 characters.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; Capacity Planning; Comparison Bill; Custom Product Component Detail; Demand Peg Detail; Dispatch List; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index;

LRRP; Material Shortages Detail; MBIL; Multi-Level Bill; Multi-Level Where Used; MUSE; Order Cost Variance Status; OVAR; PICI; PICK; Picklist Detail; Pricing Maintenance + Test Order; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Router/Traveler; Schedule Board; Single-Level Configuration Bill of Material Report; TRUD; Where Used; WUSE

QT

Quantity Type code defines the nature of the parent- component relationship when placing an order for the parent. It affects how the **Quantity** field is used in calculating component requirements. **Quantity Types** are:

I = Per Item.

Quantity per item is the number of components needed to manufacture one parent item. For a given order, the gross number of components required equals **Quantity** times order size.

O = Per Order.

Quantity per order is the number of components required per order to manufacture one or more parent items. For a given order, the gross number of components required equals **Quantity**.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Demand Peg Detail; Engineering; Job Estimates and Performance Report; Location Index; Material Exposure; MBIL; MCST; Multi-Level Bill; Multi-Level Where Used; MUSE; OVAR; PCST; Picklist Detail; Production; Purchased Component Detail; Summarized Bill; WUSE

Quantity

Quantity Required specifies how many or how much of a particular component is required to manufacture a parent. Entry is up to 10 numbers. Decimal places are allowed.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; CWIP; Engineering; Job Estimates and Performance Report; Material Exposure; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; PCST; Production; Purchased Component Detail; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WIPL; WIPR; WUSE

Ref Des Count

Reference Designator Count is the total number of unique reference designator identifiers entered as **Reference Designators** associated with a component. For example, the **Reference Designator Count** = 3 for reference designators entered as a range of D1-D3 for a specified component.

Where Used: Bill of Material; Comparison Bill; Multi-Level Bill; Where Used

Reference Designators

Reference Designators are unique identifiers which allow engineers to assign control information such as device callouts to a component within a Bill of Material. Ranges can be used to organize multiple sequential reference designator identifiers. Entry is up to 10 characters.

Where Used: Bill of Material; Comparison Bill; Engineering; Exceptions; Multi-Level Bill; Where Used

Rev

Revision Level identifies a level of documentation which specifies the item's design. It should be incremented for each change in the item's design specifications. Entry is any alphanumeric combination of up to 2 characters.

Where Used: AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; Costed Bill Detail; Demand Peg Detail; Engineering; FCST; ICCR; IORD; IPPD; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITMB; ITMI; LMSI; LMST; Lot Detail; Lot Trace; MBIL; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Where Used; PBCI; PBCT; Production; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shortages by Order; Single-Level Configuration Bill of Material Report; Summarized Bill; Supply Peg Detail; Where Used

Run LT

Run Lead Time is the average number of shop days required for a manufacturing run or vendor lead time and is used in planning an order. **Run Lead Time** is added to fixed lead time and inspection lead time to estimate planned lead time which serves to time order release. Decimal places for fractional days allowed. MRP Planning uses fractional days as reference and plans using the next whole day increment. For example, if you specify **Run LT** = 2.1, MRP Planning assumes **Run LT** = 3 for calculation purposes. Entry is up to 8 numbers.

Note: Lead times established for an item are considered to be 0 when the item is used as a phantom (**CT** = P) in a bill of material.

Where Used: AVII; AVIT; BILI; BILL; Bill of Material; IPPD; Item Availability; Item Browse Detail; Item Master; Item Master Planning Detail; MBIL; MSMT; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Single-Level Configuration Bill of Material Report; Where Used; Workcenter Master

Seqn

Sequence Number is a key field that, along with the **Pt Use** field, defines the sort sequence of components in a bill of material. The field accepts any information you choose to enter, but the intended purpose is to identify the operation sequence number on the parent's routing that calls out the component. If the **Sequence Number** is not applicable in your company, you may enter 0 (zero). Entry is up to 3 numbers.

Where Used: Backflush Issue Reconciliation Report; BILL; BILL; Bill of Material; Bill of Material Detail; Capacity Planning; CINV; COCP; Comparison Bill; CPMT; Custom Product Component Detail; CWIP; Demand Peg Detail; Dispatch List; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; LRRP; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; Multi-Level Where Used; MUSE; OPSL; Order Cost Variance Status; OVAR; PCST; PICI; PICK; Picklist Detail; PORI; PORV; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchased Component Detail; Router/Traveler; Schedule Board; Single-Level Configuration Bill of Material Report; TRUD; Where Used; WIPL; WIPR; WUSE

Total LT

Total Lead Time is the sum of **Run LT**, **Fixed LT** and **Insp LT** as expressed in shop days.

Where Used: Bill of Material; Lead Time; Lead Time Analysis; Multi-Level Bill; Multi-Level Where Used; Summarized Bill; Where Used

UM

Unit of Measure identifies the standard unit for an item used in the manufacturing process. Entry is up to 4 alphanumeric characters.

Where Used: A/P PO/Inv Variance by Invoice; A/P Receiving Detail; APEX; APPI; APPV; APUV; Available for Shipping Allocation Batch; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; CCAT; CINV; CMLB; COBK; COCP; COMI; COMT; Contract Header Detail; Contract Item Detail; Contract Item Detail/Pricing; CORV; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Custom Product Detail; Customer Order; Customer Order Line Price Adjustment; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; INVR; IORD; IPPD; ITBI; ITCB; ITCI; Item + Quantity; Item Availability + Quantity; Item Browse Detail; Item History; Item Lot Receipt; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; Item Shortages; ITHC; ITHR; ITMB; ITMC; ITMI; ITPB; ITPI; IVPR; IVRR; JEST; Job Estimates and Performance Report; Lead Times Assigned Results; LEXP; LHS; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPIT; MPSR; MPSS; MSMT; Multi-Currency; Multi-Level Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Packaging Detail; Packing List; Partner Item Detail; PBCI; PBCT; PCST; PICI; PICK; Picklist Detail; POCL; POCL; POCT; POMI; POMT; PORI; PORR; PORV; POSR; POVD; Pricing Maintenance + Action Detail; Pricing Maintenance + Action List; Pricing Maintenance + Test Order; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Allocation Batch; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VEIT; Vendor/Item Detail; VETI; VPFR; Where Used; WIPR; Workcenter Master; WUSE

EMWU – Multi-Level Where Used

The Multi-Level Where Used is used to list all parent items that directly use a specific component. The list displays the single level relationship between a component and all parent items at the next highest level. You can also view Item Master detail, such as packaging, planning and stock status information.

Multi-Level Where Used is useful to view end item pegging information, since only the top level, or end items, are displayed. Multi-Level Where Used is also useful in making mass engineering changes using the Mass Change ability, because it shows where a given component is used throughout your company's bills of material.

The Multi-Level Where Used displays parent and component item information in both a graphical hierarchy and in a table (row by column) format. The table format can be customized, for example, to add a second row of column headings, add or remove columns or change the column width.

Reports

Multi-Level Where Used Reports

To generate the report, choose **Print Preview** from the **File** menu.

Report Title
Engineering Multi-Level Where Used Lists parents by level where an engineering component is used.
Production Multi-Level Where Used Lists parents by level where an production component is used.

Report Description

Lists parents by level where an engineering component is used.

Access Method

To generate the report, choose Print Preview from the File menu.

Report Template

For more information on report templates, see "Reporting for SQL Server Systems" in the System Help topics.

Available From

Multi-Level Where Used

Fields

Buyr

Buyer code is used to identify the person responsible for handling the purchase of the item. The suggested entry is the buyer's initials. Entry is any alphanumeric combination of up to 3 characters.

Where Used: A/P Receiving Detail; ABCR; APIE; APII; APIR; APPI; APPO; APPV; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Buyer/Planner Code Maintenance; Contract Header Detail; Contract Purchase Orders; Contract Summary; Custom Product Detail; CWIP; Demand Peg Detail; IORD; IPPD; Item Browse Detail; Item Master; Item Master Planning Detail; Item Responsibility Assigned Results; ITHC; Lead Times Assigned Results; Line Item Details + Custom Product; Material Shortages Detail; MBIL; MPSR; MSCF; MSMT; Multi-Level Bill; Multi-Level Where Used; ORST; OVAR; PCST; PICI; PICK; Picklist Detail; POAN; POAS; POCI; POCP; POCR; POCT; POMI; POMT; PORI; PORV; Production; Purchase Order Header Detail; Purchase Order Line Item Detail (CPMT); Purchased Component Detail; QUOI; QUOT; SDAB; SSII; Standard Costs Assigned Results; Summarized Bill; VDSC; VPFR; Where Used; WIPR; Workcenter Master

Component

Component is a term that describes the structural relationship between an item and its parent assembly in a bill of material. A **Component** is used in the manufacture of a parent, and it may be a part, raw material or a subassembly. Entry is any alphanumeric combination of up to 30 characters.

Where Used: Backflush Issue Reconciliation Report; BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Demand Peg Detail; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; Material Exposure; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; OPSL; OVAR; PCST; PICI; PICK; Picklist Detail; Production; Router/Traveler; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

Component Effectivity Date

Component Effectivity Date is the date used to determine which components on the bill of material to display for the specified parent. If the **Component Effectivity Date** is blank, all components on the bill of material, regardless of their in and out effectivity dates, are displayed for the specified parent. The **Component Effectivity Date** display format is workstation specific, which is defined as the Short Date setting in the Regional Settings within the Control Panel. Default is the current date.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

Component Effectivity Date

In Effectivity is the date that the use of a component becomes effective in a bill of material. The default value is today's date or the date you entered when you signed onto the system.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

Desc

Item Description identifies the item in terms of its characteristics. When space is limited, a partial description is displayed. Entry is any alphanumeric combination of up to 70 characters.

Where Used: A/P Received Item List; ABCR; Advance Ship Notice Line; APPI; APPV; Available Pricing; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Browse Setup (item); Capacity Planning; CCAN; CCAT; CMLB; COBK; COCP; COMP; Comparison Bill; Comparison of Summarized Bills; Contract Item Detail; Contract Item Detail/Pricing; CORV; Cost Estimate by Lot Size; Costed Bill Detail; CSLB; Custom Product Component Detail; Customer Item + General; Customer Order; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Dispatch List; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; Inventory History List; Inventory Transaction History Report; INVR; IORD; IPPD; ISVI; ITBI; ITCB; ITCI; Item + Alternates; Item + Quantity; Item Availability; Item Availability + Quantity; Item Browse; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; ITMB; ITMC; ITMI; ITPB; ITPI; Job Estimates and Performance Report; Lead Time; Lead Time Analysis; Lead Times Assigned Results; LEXP; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Inventory Transaction History Report; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Package Content; Packaging Detail; Partner Item Detail; PBCI; PBCT; PBIL; PICI; PICK; Picklist Detail; POAN; POAS; POCI; POCR; POCT; POMI; POMT; PORI; PORR; PORV; POYE; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QSRC; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VITI; Where Used; WIPR; WUSE

Drwg

Drawing number identifies an engineering document that provides design specifications for an item. Entry is any alphanumeric combination of up to 30 characters.

Where Used: AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Engineering; Item Browse Detail; Item Master; Item Master Detail; MBIL; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Router/Traveler; Shortages by Order; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used

Effective Rev

Effective Revision Level identifies the revision level of a bill of material. Revision level identifiers are embedded in bills of material using items with a predefined **Pt Use** prefix, such as "Rev", and are displayed based on the selected Effectivity Date of the parent item.

Effective Revision Level = Multiple if more than one revision of the bill of material is displayed or if the effective in and out dates overlap.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

Fixed LT

Fixed Lead Time is the number of working days required for setup and queue time used in planning an order. It is added to run lead time and inspection lead time to estimate planned lead time for an order. Entry is up to 3 numbers.

Where Used: AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; IPPD; Item Availability; Item Browse Detail; Item Master; Item Master Planning Detail; MBIL; MSMT; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Single-Level Configuration Bill of Material Report; Where Used; Workcenter Master

In Effect

In Effectivity is the date that the use of a component becomes effective in a bill of material. The default value is today's date or the date you entered when you signed onto the system.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

In Rev

In Revision Level indicates the level of documentation for which the parent-component relationship becomes effective. It is for information purposes only and is not used by the system. Entry is any alphanumeric combination of up to 2 characters.

Where Used: Bill of Material Detail; Comparison Bill; Engineering; Multi-Level Bill; Multi-Level Where Used; Production

Item

Item is the unique identifier for a part used in the Engineering module, whether it be a piece part, tool, raw material, an assembly, or finished product. Within a product structure, an item can be a component as well as a parent. Entry is any alphanumeric combination of up to 30 characters.

Where Used: EITB; Engineering; ECMS; EMLB, EMWU; ESMB; ECRL

Level

Item Level indicates the position of an item within a product structure. **Level** is used to show the relative position of an item in relationship to its higher-level parent or lower-level components. Entry is any alphanumeric combination.

Where Used: CMLB; Location Index; LOTR; MBIL; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE

LT

Lot Trace indicates whether lot number control is used throughout the manufacturing process to track the use of the item.

Y = Yes.

The item is lot-controlled.

N = No.

The item is not lot-controlled.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITMB; ITMI; Lot Trace; MPSR; MPSS; Multi-Level Bill; Multi-Level Where Used; Production; SSII; Summarized Bill; Where Used; WUSE

LT Offset

Lead Time Offset is the number of days after the order start date that a component is needed in the manufacturing process. Entry is up to 3 numbers. Default value is 0.

Where Used: BILL; Bill of Material Detail; Demand Peg Detail; Lead Time; Lead Time Analysis; Material Exposure; MBIL; Multi-Level Bill; Multi-Level Where Used; Production; Single-Level Configuration Bill of Material Report

Out Effect

Out Effectivity is the first date that a component is not effective in a bill of material. The default value is 12/31/2079.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Where Used; WUSE

Out Rev

Out Revision Level indicates the level of documentation for which the parent-component relationship is no longer in effect. It is for information purposes only and is not used by the system. Entry is any alphanumeric combination of up to 2 characters.

Where Used: Bill of Material Detail; Comparison Bill; Engineering; Multi-Level Bill; Multi-Level Where Used; Production

Parent

Parent is a term that describes the structural relationship between an item and its components in a bill of material. A **Parent** item is the higher level item in the parent-component relationship. A parent cannot be used in itself. Entry is any alphanumeric combination of up to 30 characters.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; Comparison Bill; Comparison of Summarized Bills; Cost Estimate by Lot Size; CSLB; Dispatch List; Engineering; Lead Time; Lead Time Analysis; Location Index; Material Exposure; MBIL; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Summarized Bill; Where Used; WUSE

Pln Pol

Planning Policy is used to determine the type of demand an item generates for its components based on planned orders. The codes are:

N = Normal.

Planned and released orders for this item produce "normal" dependent demand for its components.

P = Production Plan.

Planned orders for this item produce a "production forecast" for its components. Orders cannot be released for this item.

F = Final Assembly.

Planned and released orders for this item create "final assembly" demand for its components. This policy is reserved for future use and is treated like a **Planning Policy = N** by the system.

D = Distribution.

Planned and released orders for this item produce "distribution" demand for its components. This policy is reserved for future use and is treated like a **Planning Policy = N** by the system.

M = Master Scheduled.

Planned and released orders for this item produce "normal" dependent demand for its components. Planned orders must be manually scheduled within the item's **Plng Fnc** (planning fence).

It is recommended that you only use the "N" code until the master planning capability is installed in your system.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; IORD; IPPD; Item Browse Detail; Item Master Planning Detail; MBIL; MSMT; Multi-Level Bill; Multi-Level Where Used; Production; Summarized Bill; Where Used

Plnr

Planner code is used to identify the person responsible for planning the production or usage of an item. The suggested entry is the planner's initials. Entry is any alphanumeric combination of up to 3 characters.

Where Used: ABCR; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Buyer/Planner Code Maintenance; Custom Product Detail; CWIP; Demand Peg Detail; IORD; IPPD; Item Browse Detail; Item Master; Item Master Planning Detail; Item Responsibility Assigned Results; ITHC; Lead Times Assigned Results; Line Item Details + Custom Product; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material

Shortages Detail; MBIL; MCST; MOAN; MOMI; MOMT; MORI; MORV; MPSR; MSCF; MSMT; Multi-Level Bill; Multi-Level Where Used; ORST; OVAR; PICI; PICK; Picklist Detail; Production; Purchase Order Line Item Detail; QUOI; QUOT; Router/Traveler; SDAB; Shortages by Order; Single-Level Configuration Bill of Material Report; SSII; Standard Costs Assigned Results; Summarized Bill; Where Used; WIPR; Workcenter Master

Pt Use

Point of Use is a key field that, along with the **Seqn** field, defines the sort sequence of components in a bill of material. The **Point of Use** field accepts any information you choose to enter, but the intended use is to identify the "work center" where the component should be delivered when assembling the parent, the "find number" of the component referenced on the drawing for the parent, or the "component reference designator" of the component on a printed circuit board. If the **Point of Use** field is not applicable in your company, you may enter 0 (zero). Entry is any alphanumeric combination of up to 5 characters.

Where Used: BILI; BILL; Bill of Material; Bill of Material Detail; Capacity Planning; Comparison Bill; Custom Product Component Detail; Demand Peg Detail; Dispatch List; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; LRRP; Material Shortages Detail; MBIL; Multi-Level Bill; Multi-Level Where Used; MUSE; Order Cost Variance Status; OVAR; PICI; PICK; Picklist Detail; Pricing Maintenance + Test Order; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Router/Traveler; Schedule Board; Single-Level Configuration Bill of Material Report; TRUD; Where Used; WUSE

QT

Quantity Type code defines the nature of the parent- component relationship when placing an order for the parent. It affects how the **Quantity** field is used in calculating component requirements. **Quantity Types** are:

I = Per Item.

Quantity per item is the number of components needed to manufacture one parent item. For a given order, the gross number of components required equals **Quantity** times order size.

O = Per Order.

Quantity per order is the number of components required per order to manufacture one or more parent items. For a given order, the gross number of components required equals **Quantity**.

Where Used: BILI; BILL; Bill of Material; Bill of Material Detail; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Demand Peg Detail; Engineering; Job Estimates and Performance Report; Location Index; Material Exposure; MBIL; MCST; Multi-Level Bill; Multi-Level Where Used; MUSE; OVAR; PCST; Picklist Detail; Production; Purchased Component Detail; Summarized Bill; WUSE

Quantity

Quantity Required specifies how many or how much of a particular component is required to manufacture a parent. Entry is up to 10 numbers. Decimal places are allowed.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; CWIP; Engineering; Job Estimates and Performance Report; Material Exposure; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; PCST; Production; Purchased Component Detail; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WIPL; WIPR; WUSE

Rev

Revision Level identifies a level of documentation which specifies the item's design. It should be incremented for each change in the item's design specifications. Entry is any alphanumeric combination of up to 2 characters.

Where Used: AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Costed Bill Detail; Demand Peg Detail; Engineering; FCST; ICCR; IORD; IPPD; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITMB; ITMI; LMSI; LMST; Lot Detail; Lot Trace; MBIL; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Where Used; PBCI; PBCT; Production; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shortages by Order; Single-Level Configuration Bill of Material Report; Summarized Bill; Supply Peg Detail; Where Used

Run LT

Run Lead Time is the average number of shop days required for a manufacturing run or vendor lead time and is used in planning an order. **Run Lead Time** is added to fixed lead time and inspection lead time to estimate planned lead time which serves to time order release. Decimal places for fractional days allowed. MRP Planning uses fractional days as reference and plans using the next whole day increment. For example, if you specify **Run LT** = 2.1, MRP Planning assumes **Run LT** = 3 for calculation purposes. Entry is up to 8 numbers.

Note: Lead times established for an item are considered to be 0 when the item is used as a phantom (**CT** = P) in a bill of material.

Where Used: AVII; AVIT; BILL; BILL; Bill of Material; IPPD; Item Availability; Item Browse Detail; Item Master; Item Master Planning Detail; MBIL; MSMT; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Single-Level Configuration Bill of Material Report; Where Used; Workcenter Master

Seqn

Sequence Number is a key field that, along with the **Pt Use** field, defines the sort sequence of components in a bill of material. The field accepts any information you choose to enter, but the intended purpose is to identify the operation sequence number on the parent's routing that calls out the component. If the **Sequence Number** is not applicable in your company, you may enter 0 (zero). Entry is up to 3 numbers.

Where Used: Backflush Issue Reconciliation Report; BILL; BILL; Bill of Material; Bill of Material Detail; Capacity Planning; CINV; COCP; Comparison Bill; CPMT; Custom Product Component Detail; CWIP; Demand Peg Detail; Dispatch List; Engineering; Exceptions; Job

Estimates and Performance Report; Lead Time; Location Index; LRRP; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; Multi-Level Where Used; MUSE; OPSL; Order Cost Variance Status; OVAR; PCST; PICL; PICK; Picklist Detail; PORI; PORV; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchased Component Detail; Router/Traveler; Schedule Board; Single-Level Configuration Bill of Material Report; TRUD; Where Used; WIPL; WIPR; WUSE

Total LT

Total Lead Time is the sum of **Run LT**, **Fixed LT** and **Insp LT** as expressed in shop days.

Where Used: Bill of Material; Lead Time; Lead Time Analysis; Multi-Level Bill; Multi-Level Where Used; Summarized Bill; Where Used

UM

Unit of Measure identifies the standard unit for an item used in the manufacturing process. Entry is up to 4 alphanumeric characters.

Where Used: A/P PO/Inv Variance by Invoice; A/P Receiving Detail; APEX; APPI; APPV; APUV; Available for Shipping Allocation Batch; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; CCAT; CINV; CMLB; COBK; COCP; COMI; COMT; Contract Header Detail; Contract Item Detail; Contract Item Detail/Pricing; CORV; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Custom Product Detail; Customer Order; Customer Order Line Price Adjustment; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; INVR; IORD; IPPD; ITBI; ITCB; ITCL; Item + Quantity; Item Availability + Quantity; Item Browse Detail; Item History; Item Lot Receipt; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; Item Shortages; ITHC; ITHR; ITMB; ITMC; ITMI; ITPB; ITPI; IVPR; IVRR; JEST; Job Estimates and Performance Report; Lead Times Assigned Results; LEXP; LHS; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPIT; MPSR; MPSS; MSMT; Multi-Currency; Multi-Level Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Packaging Detail; Packing List; Partner Item Detail; PBCI; PBCT; PCST; PICL; PICK; Picklist Detail; POCL; POCL; POCT; POMI; POMT; PORI; PORR; PORV; POSR; POVD; Pricing Maintenance + Action Detail; Pricing Maintenance + Action List; Pricing Maintenance + Test Order; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Allocation Batch; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VEIT; Vendor/Item Detail; VETI; VPFR; Where Used; WIPR; Workcenter Master; WUSE

ESMB – Summarized Bill

Summarized Bill allows you to perform "what if" cost and inventory impact analysis by comparing multi-level bills of material where each of the components is listed once with an aggregated quantity.

Summarized Bill is used to:

- plan for optimal material usage during product phase-out
- assess cost/inventory implications of unplanned impact orders
- generate prioritized material expedite lists

Summarized Bill displays component item information in a table (row by column) format based on the information entered in the **Parent** and **Component Effectivity Date** fields.

Features available are based on user job functions:

Access From	Features
ENGM Module	Present a multi-level bill where each of the components is listed once with an aggregated quantity. Quantities are aggregated based on make buy (MB), quantity type (QT) and component type (CT). For example, you may need a purchase requisition for materials still in the engineering phase that means the materials are not in the Fourth Shift inventory. You can use the summarized bill of material with aggregated quantities to show your material requirements in order to get a purchase requisition.
MMAM Module	Present a multi-level bill by specifying a product quantity and an item type to consume. Choose to view data from several pre-defined views, such as Summarized Bill by Lead Time or Required Quantity.

When accessed from the MMAM Module, Summarized Bill analysis calculates summarized, consumed and required quantity and cost information based on a specified **Prod Qty** (production quantity) value. Information calculated includes:

Information calculated	Description
Summarized	total quantity/cost needed to produce the Prod Qty specified, taking scrap and yield into account.
Consumed	quantity/cost taken from Available inventory to fulfill the production of the Prod Qty specified
Required	quantity/cost, in addition to the consumed amount, needed to fulfill the production of the Prod Qty specified

The Summarized Bill of Material reports available can be sorted in a variety of ways. See "Generating Reports" in the **Setting Up the Module** section of the Manufacturing Analysis manual for more information.

Reports

Summarized Bill Reports

To generate the report, choose **Print Preview** from the **File** menu.

Report Title
Engineering Summarized Bill Lists aggregated quantities for summarized engineering components.
Production Summarized Bill Lists aggregated quantities for summarized production components.

Report Description

Lists aggregated quantities for summarized engineering components.

Access Method

To generate the report, choose Print Preview from the File menu.

Report Template

For more information on report templates, see "Reporting for SQL Server Systems" in the System Help topics.

Available From

Summarized Bill

Fields

Allocations

Allocated is the number of units committed to released customer orders.

Where Used: Inventory Status; Item + Quantity; Item Availability + Quantity; Summarized Bill

Available

Available is the calculated amount of item inventory that may be applied to satisfy the **Summarized Quantity** of a component necessary to build the **Prod Qty** of a parent assembly. Available inventory types include: On-Hand, On-Hold, In-Inspection, In Shipping.

Where Used: Summarized Bill

Available Qty

Available Quantity is the user-defined formula used to calculate the quantity available for the purpose of fulfilling the simulated **Prod Qty**. **Available Quantity** is increased when the following are selected:

- On-hand (O)**
- In-Inspection (adjusted for yield) (I)**
- On-Hold (H)**
- In WIP (W)**

In shipping (S)**On-Order (R)**

Available Quantity is decreased when the following is selected:

Allocations from other orders (A)

The Available Quantity definition is displayed using the abbreviations in parenthesis. The default calculation is:

$$[\text{On-Hand} + (\text{In-Inspection} * \text{Yield})] - (\text{Allocations from other orders})$$

Where Used: Material Exposure; Summarized Bill

Average Cost Consumed

Average Cost Consumed is the average calculated value of the **Consumed Quantity** in order to fulfill the simulated **Prod Qty**. The calculation is:

$$\text{Extended Cost Consumed} / \text{Prod Qty}$$

Where Used: Summarized Bill

Average Cost Required

Average Cost Required is the average calculated value of components needed in addition to the **Consumed Quantity** in order to fulfill the simulated **Prod Qty**. The calculation is:

$$\text{Extended Cost Required} / \text{Prod Qty}$$

Where Used: Summarized Bill

Average Cost Total

Average Cost Total is the average total calculated value of components needed to fulfill the simulated **Prod Qty**. The calculation is:

$$\text{Average Cost Required} + \text{Average Cost Consumed}$$

Where Used: Summarized Bill

Buyr

Buyer code is used to identify the person responsible for handling the purchase of the item. The suggested entry is the buyer's initials. Entry is any alphanumeric combination of up to 3 characters.

Where Used: A/P Receiving Detail; ABCR; APIE; APII; APIR; APPI; APPO; APPV; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Buyer/Planner Code Maintenance; Contract Header Detail; Contract Purchase Orders; Contract Summary; Custom Product Detail; CWIP; Demand Peg Detail; IORD; IPPD; Item Browse Detail; Item Master; Item Master Planning Detail; Item Responsibility Assigned Results; ITHC; Lead Times Assigned Results; Line Item Details + Custom Product; Material Shortages Detail; MBIL; MPSR; MSCF; MSMT; Multi-Level Bill; Multi-Level Where Used; ORST; OVAR; PCST; PICI; PICK; Picklist Detail;

POAN; POAS; POCI; POCP; POCR; POCT; POMI; POMT; PORI; PORV; Production; Purchase Order Header Detail; Purchase Order Line Item Detail (CPMT); Purchased Component Detail; QUOI; QUOT; SDAB; SSII; Standard Costs Assigned Results; Summarized Bill; VDSC; VPFR; Where Used; WIPR; Workcenter Master

Component

Component is a term that describes the structural relationship between an item and its parent assembly in a bill of material. A **Component** is used in the manufacture of a parent, and it may be a part, raw material or a subassembly. Entry is any alphanumeric combination of up to 30 characters.

Where Used: Backflush Issue Reconciliation Report; BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Demand Peg Detail; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; Material Exposure; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; OPSL; OVAR; PCST; PICI; PICK; Picklist Detail; Production; Router/Traveler; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

Component Desc

Item Description identifies the item in terms of its characteristics. When space is limited, a partial description is displayed. Entry is any alphanumeric combination of up to 70 characters.

Where Used: A/P Received Item List; ABCR; Advance Ship Notice Line; APPI; APPV; Available Pricing; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Browse Setup (item); Capacity Planning; CCAN; CCAT; CMLB; COBK; COCP; COMP; Comparison Bill; Comparison of Summarized Bills; Contract Item Detail; Contract Item Detail/Pricing; CORV; Cost Estimate by Lot Size; Costed Bill Detail; CSLB; Custom Product Component Detail; Customer Item + General; Customer Order; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Dispatch List; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; Inventory History List; Inventory Transaction History Report; INVR; IORD; IPPD; ISVI; ITBI; ITCB; ITCI; Item + Alternates; Item + Quantity; Item Availability; Item Availability + Quantity; Item Browse; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; ITMB; ITMC; ITMI; ITPB; ITPI; Job Estimates and Performance Report; Lead Time; Lead Time Analysis; Lead Times Assigned Results; LEXP; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Inventory Transaction History Report; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Package Content; Packaging Detail; Partner Item Detail; PBCI; PBCT; PBII; PICI; PICK; Picklist Detail; POAN; POAS; POCI; POCR; POCT; POMI; POMT; PORI; PORR; PORV; POYE; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QSRC; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VITI; Where Used; WIPR; WUSE

Component Effectivity Date

Component Effectivity Date is the date used to determine which components on the bill of material to display for the specified parent. If the **Component Effectivity Date** is blank, all components on the bill of material, regardless of their in and out effectivity dates, are displayed for the specified parent. The **Component Effectivity Date** display format is workstation specific, which is defined as the Short Date setting in the Regional Settings within the Control Panel. Default is the current date.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

Component Effectivity Date

In Effectivity is the date that the use of a component becomes effective in a bill of material. The default value is today's date or the date you entered when you signed onto the system.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

Consume Avail

Consume Avail defines what types of items are obtained from the **Available Quantity** to fulfill the simulated **Prod Qty**.

- 0 = Buy items only**
- 1 = Make/Buy items (no phantoms)**
- 2 = All items**
- 3 = No items**

Where Used: Summarized Bill

Consumed Item Cost

Consumed Item Cost is the per unit total rolled cost of an item as displayed on the ITMC (Item/Work Center Cost Data) screen at the time it is displayed. The consumed item cost answers the "what if" question of how much did it cost to produce an item currently available to be consumed.

Where Used: Summarized Bill

Consumed Quantity

Consumed Quantity is the number of components taken from **Available Quantity** to fulfill the simulated **Prod Qty**.

Where Used: Summarized Bill

CT

Component Type distinguishes various types of relationships between a component and its parent assembly in a bill of material. The **Component Type** indicates how a component is used in the manufacture of a parent. The **Component Types** are:

N = Normal.

Component is consumed in the manufacture of its parent.

P = Phantom.

Component is used for structure purposes only (e.g., a transient subassembly consumed in the manufacture of its parent).

R = Resource or Workcenter.

Component is used in the planning process of the manufacture of its parent (e.g., labor hours).

X = Reference.

Component is for information purposes. Reference items are included on the picklist. Reference items are not included in the parent's rolled costs and are typically not required for issue in the manufacturing of the parent.

D = Document.

Component is used for information purposes only. It is not included on the picklist.

B = By-product.

The manufacture of the parent results in the creation of this component.

C = Co-product.

Component is derived from the manufacture of the parent. The manufacture of the co-product, in turn, produces the parent.

T = Tool.

Component is used in the manufacture of the parent.

U = Tool return.

Component is used in, and returned after, the manufacture of the parent.

M = Module.

Component represents a group of components for which requirements are generated for custom product orders. A module component is used for structure purposes only, such as a transient subassembly consumed in the manufacture of its parent. Module components explode requirements for the child components; the module component itself is never required.

V = Purchased material.

Component not defined on the Item Master is required for a custom product customer order.

W = Outside operation or service.

Component, such as heat treating or plating, is required for a custom product customer order.

Y = Phantom parent.

Requirements have been exploded to the next level to meet requirements.

Z = Phantom child.

Component is used in the manufacture of the phantoms parent.

An item's use as a component is limited by its **Item Type**. The Component Types available are based on the information displayed on the screen and not all types are available on all screens.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; COCP; Comparison Bill; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; CWIP; Demand Peg Detail; Engineering; Job Estimates and Performance Report; Location Index; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; OPSL; Order Cost Variance Status; OVAR; PCST; Production; Purchased Component Detail; Single-Level Configuration Bill of Material Report; Summarized Bill; WIPL; WIPR

Desc

Item Description identifies the item in terms of its characteristics. When space is limited, a partial description is displayed. Entry is any alphanumeric combination of up to 70 characters.

Where Used: A/P Received Item List; ABCR; Advance Ship Notice Line; APPI; APPV; Available Pricing; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Browse Setup (item); Capacity Planning; CCAN; CCAT; CMLB; COBK; COCP; COMP; Comparison Bill; Comparison of Summarized Bills; Contract Item Detail; Contract Item Detail/Pricing; CORV; Cost Estimate by Lot Size; Costed Bill Detail; CSLB; Custom Product Component Detail; Customer Item + General; Customer Order; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Dispatch List; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; Inventory History List; Inventory Transaction History Report; INVR; IORD; IPPD; ISVI; ITBI; ITCB; ITCI; Item + Alternates; Item + Quantity; Item Availability; Item Availability + Quantity; Item Browse; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; ITMB; ITMC; ITMI; ITPB; ITPI; Job Estimates and Performance Report; Lead Time; Lead Time Analysis; Lead Times Assigned Results; LEXP; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Inventory Transaction History Report; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Package Content; Packaging Detail; Partner Item Detail; PBCI; PBCT; PBII; PICI; PICK; Picklist Detail; POAN; POAS; POCI; POCR; POCT; POMI; POMT; PORI; PORR; PORV; POYE; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QSRC; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VITI; Where Used; WIPR; WUSE

Drwg

Drawing number identifies an engineering document that provides design specifications for an item. Entry is any alphanumeric combination of up to 30 characters.

Where Used: AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Engineering; Item Browse Detail; Item Master; Item Master Detail; MBIL; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Router/Traveler; Shortages by Order; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used

Effective Rev

Effective Revision Level identifies the revision level of a bill of material. Revision level identifiers are embedded in bills of material using items with a predefined **Pt Use** prefix, such as "Rev", and are displayed based on the selected Effectivity Date of the parent item.

Effective Revision Level = Multiple if more than one revision of the bill of material is displayed or if the effective in and out dates overlap.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

Effectivity Date

Effectivity Date is the effectivity date specified the last time the CROL task was run.

Where Used: CMLB; CSLB; Summarized Bill

Extended Cost Consumed

Extended Cost Consumed is the calculated value of all components taken from **Available Quantity** in order to fulfill the simulated **Prod Qty**. The calculation is:

`Consumed Quantity * Cost Definition of Standard Cost`

Where Used: Summarized Bill

Extended Cost Required

Extended Cost Required is the calculated value of all components needed in addition to those taken from **Available Quantity** to fulfill the simulated **Prod Qty**. The calculation is:

`Required Quantity * Cost Definition of At This Level Cost`

Where Used: Summarized Bill

Extended Cost Total

Extended Cost Total is the total calculated value of the items needed to fulfill the simulated **Prod Qty**. The calculation is:

`Extended Cost Consumed + Extended Cost Required`

Where Used: Summarized Bill

Inventory

Inventory identifies the quantity of inventory stored in a stock and bin location. Inventory types includes allocated, in-inspection, in shipping, internal WIP, external WIP, on hand, on hold and on order.

Where Used: Summarized Bill

Item

Item is the unique identifier for a part used in the Engineering module, whether it be a piece part, tool, raw material, an assembly, or finished product. Within a product structure, an item can be a component as well as a parent. Entry is any alphanumeric combination of up to 30 characters.

Where Used: EITB; Engineering; ECMS; EMLB, EMWU; ESMB; ECRL

LT

Lot Trace indicates whether lot number control is used throughout the manufacturing process to track the use of the item.

Y = Yes.

The item is lot-controlled.

N = No.

The item is not lot-controlled.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITMB; ITMI; Lot Trace; MPSR; MPSS; Multi-Level Bill; Multi-Level Where Used; Production; SSII; Summarized Bill; Where Used; WUSE

Make / Buy Cost

Make / Buy Cost is the user-defined formula used to calculate the **Total Cost** for make and buy items. Cost definitions for make and buy items can include the following costs:

Material (M)

Labor (L)

Variable overhead (V)

Fixed overhead (F)

The **Make / Buy Cost** definition is displayed using the abbreviations in parenthesis.

Where Used: Material Exposure; Summarized Bill

Matl Cost

Material Cost is the cost for the engineering item entered when that item is defined. It is not a calculated field.

Where Used: EITB; ECRL; ESMB; Engineering

MB

Make-Buy Code indicates if a part is normally purchased or manufactured. **Make-Buy Code** also directs appropriate action messages to the **Buyr** (B or S) or **Plnr** (M). **Make-Buy Codes** are:

M = Make.

Manufactured in-house.

B = Buy.

Purchased; no parts supplied to vendor.

S = Supplied.

Purchased; parts supplied to vendor.

Where Used: ABCR; AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; COMP; Costed Bill Detail; CSLB; Demand Peg Detail; Engineering; FCST; IHIR; IORD; IPPD; Item Availability; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; Item Shortages; ITHC; ITHR; ITMB; ITMI; Lead Time Analysis; Lead Times Assigned Results; Lot Size Multiple Detail; Lot Trace; LSDA; LVAL; Material Exposure; Material Shortages Detail; MBIL; MPSR; MPSS; MSMT; Multi-Level Bill; PBCI; PBCT; Production; QUOI; QUOT; SDAB; SDAL; Shortages by Order; Single-Level Configuration Bill of Material Report; SSII; Standard Costs Assigned Results; Summarized Bill; Supply Peg Detail

On Order

On Order Quantity is the total number of items on open or released manufacturing and purchase orders (**Ln# Sta** = 3 or 4).

Where Used: Inventory Status; Item + Quantity; Item Availability; Item Availability + Quantity; Item Shortages; Location Index; Material Shortages Detail; Production; Shortages by Order; SSII; Summarized Bill

Order Related Total

Order Related Total is the total cost of all components (**Quantity Type** = O) and their subordinates. The **Order Related Total** cost is included in the **Extended Cost** and in the **Average Cost** and is amortized over the parent **Prod Qty**.

Where Used: Summarized Bill

Parent

Parent is a term that describes the structural relationship between an item and its components in a bill of material. A **Parent** item is the higher level item in the parent-component relationship. A parent cannot be used in itself. Entry is any alphanumeric combination of up to 30 characters.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; Comparison Bill; Comparison of Summarized Bills; Cost Estimate by Lot Size; CSLB; Dispatch List; Engineering; Lead Time; Lead Time Analysis; Location Index; Material Exposure; MBIL; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Summarized Bill; Where Used; WUSE

Pln Pol

Planning Policy is used to determine the type of demand an item generates for its components based on planned orders. The codes are:

N = Normal.

Planned and released orders for this item produce "normal" dependent demand for its components.

P = Production Plan.

Planned orders for this item produce a "production forecast" for its components. Orders cannot be released for this item.

F = Final Assembly.

Planned and released orders for this item create "final assembly" demand for its components. This policy is reserved for future use and is treated like a **Planning Policy = N** by the system.

D = Distribution.

Planned and released orders for this item produce "distribution" demand for its components. This policy is reserved for future use and is treated like a **Planning Policy = N** by the system.

M = Master Scheduled.

Planned and released orders for this item produce "normal" dependent demand for its components. Planned orders must be manually scheduled within the item's **Plng Fnc** (planning fence).

It is recommended that you only use the "N" code until the master planning capability is installed in your system.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; IORD; IPPD; Item Browse Detail; Item Master Planning Detail; MBIL; MSMT; Multi-Level Bill; Multi-Level Where Used; Production; Summarized Bill; Where Used

Plnr

Planner code is used to identify the person responsible for planning the production or usage of an item. The suggested entry is the planner's initials. Entry is any alphanumeric combination of up to 3 characters.

Where Used: ABCR; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Buyer/Planner Code Maintenance; Custom Product Detail; CWIP; Demand Peg Detail; IORD; IPPD; Item Browse Detail; Item Master; Item Master Planning Detail; Item Responsibility Assigned Results; ITHC; Lead Times Assigned Results; Line Item Details + Custom Product; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material

Shortages Detail; MBIL; MCST; MOAN; MOMI; MOMT; MORI; MORV; MPSR; MSCF; MSMT; Multi-Level Bill; Multi-Level Where Used; ORST; OVAR; PICI; PICK; Picklist Detail; Production; Purchase Order Line Item Detail; QUOI; QUOT; Router/Traveler; SDAB; Shortages by Order; Single-Level Configuration Bill of Material Report; SSII; Standard Costs Assigned Results; Summarized Bill; Where Used; WIPR; Workcenter Master

Prod Qty

Production Quantity is the number of parent items for which you want to analyze component impact. Entry is 1 - 9999999999.

Where Used: Summarized Bill

Pt Use Defines Embedded Revision

Pt Use Defines Embedded Revision specifies the three key characters in the **Pt Use** field that uniquely identify revision history components in a bill of material. The recommended value is REV. If REV has previously been used to define a workcenter, another identification prefix must be used.

Where Used: Bill of Material; Summarized Bill

QT

Quantity Type code defines the nature of the parent- component relationship when placing an order for the parent. It affects how the **Quantity** field is used in calculating component requirements. **Quantity Types** are:

I = Per Item.

Quantity per item is the number of components needed to manufacture one parent item. For a given order, the gross number of components required equals **Quantity** times order size.

O = Per Order.

Quantity per order is the number of components required per order to manufacture one or more parent items. For a given order, the gross number of components required equals **Quantity**.

Where Used: BILI; BILL; Bill of Material; Bill of Material Detail; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Demand Peg Detail; Engineering; Job Estimates and Performance Report; Location Index; Material Exposure; MBIL; MCST; Multi-Level Bill; Multi-Level Where Used; MUSE; OVAR; PCST; Picklist Detail; Production; Purchased Component Detail; Summarized Bill; WUSE

Quantity

Quantity Required specifies how many or how much of a particular component is required to manufacture a parent. Entry is up to 10 numbers. Decimal places are allowed.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; CWIP; Engineering; Job Estimates and Performance Report; Material Exposure; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; PCST; Production; Purchased Component Detail; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WIPL; WIPR; WUSE

Required Item Cost

Required Item Cost is the per unit cost calculated at the time it is displayed based on the multi-level bill content and the At This Level Costs defined at the time of the simulated cost roll. The required item cost answers the "what if" question of how much will it cost if the required item had to be built.

Where Used: Summarized Bill

Required Quantity

Required Quantity is the number of components needed in addition to the **Consumed Quantity** to fulfill the simulated **Prod Qty**.

Where Used: Summarized Bill

Rev

Revision Level identifies a level of documentation which specifies the item's design. It should be incremented for each change in the item's design specifications. Entry is any alphanumeric combination of up to 2 characters.

Where Used: AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Costed Bill Detail; Demand Peg Detail; Engineering; FCST; ICCR; IORD; IPPD; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITMB; ITMI; LMSI; LMST; Lot Detail; Lot Trace; MBIL; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Where Used; PBCI; PBCT; Production; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shortages by Order; Single-Level Configuration Bill of Material Report; Summarized Bill; Supply Peg Detail; Where Used

Stock/Bin Locations

Available Stock/Bin Locations is the user-defined formula to specify which stock and bin locations are calculated in **Available Quantity**. You can specify to include the following:

all stock / bin locations

include only specific stock / bin locations

exclude specific stock / bin locations

Default is to include all stock / bin locations in the available quantity.

Where Used: Summarized Bill

Summarized Quantity

Summarized Quantity is the total number of components needed to fulfill the simulated **Prod Qty**.

Where Used: Summarized Bill

Total LT

Total Lead Time is the sum of **Run LT**, **Fixed LT** and **Insp LT** as expressed in shop days.

Where Used: Bill of Material; Lead Time; Lead Time Analysis; Multi-Level Bill; Multi-Level Where Used; Summarized Bill; Where Used

UM

Unit of Measure identifies the standard unit for an item used in the manufacturing process. Entry is up to 4 alphanumeric characters.

Where Used: A/P PO/Inv Variance by Invoice; A/P Receiving Detail; APEX; APPI; APPV; APUV; Available for Shipping Allocation Batch; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; CCAT; CINV; CMLB; COBK; COCP; COMI; COMT; Contract Header Detail; Contract Item Detail; Contract Item Detail/Pricing; CORV; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Custom Product Detail; Customer Order; Customer Order Line Price Adjustment; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; INVR; IORD; IPPD; ITBI; ITCB; ITCI; Item + Quantity; Item Availability + Quantity; Item Browse Detail; Item History; Item Lot Receipt; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; Item Shortages; ITHC; ITHR; ITMB; ITMC; ITMI; ITPB; ITPI; IVPR; IVRR; JEST; Job Estimates and Performance Report; Lead Times Assigned Results; LEXP; LHIS; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPIT; MPSR; MPSS; MSMT; Multi-Currency; Multi-Level Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Packaging Detail; Packing List; Partner Item Detail; PBCI; PBCT; PCST; PICI; PICK; Picklist Detail; POCI; POCR; POCT; POMI; POMT; PORI; PORR; PORV; POSR; POVD; Pricing Maintenance + Action Detail; Pricing Maintenance + Action List; Pricing Maintenance + Test Order; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Allocation Batch; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VEIT; Vendor/Item Detail; VETI; VPRF; Where Used; WIPR; Workcenter Master; WUSE

EWUS – Where Used

Where Used is used to list all parent items that directly use a specific component. The list displays the single level relationship between a component and all parent items at the next highest level. You can also view Item Master detail, such as packaging, planning and stock status information.

Where Used is useful in making mass engineering changes using the Mass Change ability, because it shows where a given component is used throughout your company's bills of material.

Where Used displays parent and component item information in both a graphical hierarchy and in a table (row by column) format. The table format can be customized, for example, to add a second row of column headings, add or remove columns, or change the column width.

Reports

Where Used Reports

To generate the report, choose **Print Preview** from the **File** menu.

Report Title
Engineering Where Used Bill of Material Lists parents where an engineering component is used.
Production Where Used Bill of Material Lists parents where a production component is used.

Report Description

Lists parents where an engineering component is used.

Access Method

To generate the report, choose Print Preview from the File menu.

Report Template

For more information on report templates, see "Reporting for SQL Server Systems" in the System Help topics.

Available From

Where Used

Fields

Buyr

Buyer code is used to identify the person responsible for handling the purchase of the item. The suggested entry is the buyer's initials. Entry is any alphanumeric combination of up to 3 characters.

Where Used: A/P Receiving Detail; ABCR; APIE; APII; APIR; APPI; APPO; APPV; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Buyer/Planner Code Maintenance; Contract Header Detail; Contract Purchase Orders; Contract Summary; Custom Product

Detail; CWIP; Demand Peg Detail; IORD; IPPD; Item Browse Detail; Item Master; Item Master Planning Detail; Item Responsibility Assigned Results; ITHC; Lead Times Assigned Results; Line Item Details + Custom Product; Material Shortages Detail; MBIL; MPSR; MSCF; MSMT; Multi-Level Bill; Multi-Level Where Used; ORST; OVAR; PCST; PICI; PICK; Picklist Detail; POAN; POAS; POCL; POCP; POCR; POCT; POMI; POMT; PORI; PORV; Production; Purchase Order Header Detail; Purchase Order Line Item Detail (CPMT); Purchased Component Detail; QUOI; QUOT; SDAB; SSII; Standard Costs Assigned Results; Summarized Bill; VDSC; VPFR; Where Used; WIPR; Workcenter Master

Component

Component is a term that describes the structural relationship between an item and its parent assembly in a bill of material. A **Component** is used in the manufacture of a parent, and it may be a part, raw material or a subassembly. Entry is any alphanumeric combination of up to 30 characters.

Where Used: Backflush Issue Reconciliation Report; BILL; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Demand Peg Detail; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; Material Exposure; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; OPSL; OVAR; PCST; PICI; PICK; Picklist Detail; Production; Router/Traveler; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

Component Effectivity Date

Component Effectivity Date is the date used to determine which components on the bill of material to display for the specified parent. If the **Component Effectivity Date** is blank, all components on the bill of material, regardless of their in and out effectivity dates, are displayed for the specified parent. The **Component Effectivity Date** display format is workstation specific, which is defined as the Short Date setting in the Regional Settings within the Control Panel. Default is the current date.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

Component Effectivity Date

In Effectivity is the date that the use of a component becomes effective in a bill of material. The default value is today's date or the date you entered when you signed onto the system.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

Desc

Item Description identifies the item in terms of its characteristics. When space is limited, a partial description is displayed. Entry is any alphanumeric combination of up to 70 characters.

Where Used: A/P Received Item List; ABCR; Advance Ship Notice Line; APPI; APPV; Available Pricing; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Browse Setup (item); Capacity Planning; CCAN; CCAT; CMLB; COBK; COCP; COMP; Comparison Bill; Comparison of Summarized Bills; Contract Item Detail; Contract Item Detail/Pricing; CORV; Cost Estimate by Lot Size; Costed Bill Detail; CSLB; Custom Product Component Detail; Customer Item + General; Customer Order; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Dispatch List; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; Inventory History List; Inventory Transaction History Report; INVR; IORD; IPPD; ISVI; ITBI; ITCB; ITCI; Item + Alternates; Item + Quantity; Item Availability; Item Availability + Quantity; Item Browse; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; ITMB; ITMC; ITMI; ITPB; ITPI; Job Estimates and Performance Report; Lead Time; Lead Time Analysis; Lead Times Assigned Results; LEXP; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Inventory Transaction History Report; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Package Content; Packaging Detail; Partner Item Detail; PBCI; PBCT; PBII; PICI; PICK; Picklist Detail; POAN; POAS; POCI; POCR; POCT; POMI; POMT; PORI; PORR; PORV; POYE; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QSRC; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VITI; Where Used; WIPR; WUSE

Drwg

Drawing number identifies an engineering document that provides design specifications for an item. Entry is any alphanumeric combination of up to 30 characters.

Where Used: AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; Engineering; Item Browse Detail; Item Master; Item Master Detail; MBIL; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Router/Traveler; Shortages by Order; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used

Effective Rev

Effective Revision Level identifies the revision level of a bill of material. Revision level identifiers are embedded in bills of material using items with a predefined **Pt Use** prefix, such as "Rev", and are displayed based on the selected Effectivity Date of the parent item.

Effective Revision Level = Multiple if more than one revision of the bill of material is displayed or if the effective in and out dates overlap.

Where Used: Bill of Material; Comparison Bill; Comparison of Summarized Bills; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; Summarized Bill; Where Used

Fixed LT

Fixed Lead Time is the number of working days required for setup and queue time used in planning an order. It is added to run lead time and inspection lead time to estimate planned lead time for an order. Entry is up to 3 numbers.

Where Used: AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; IPPD; Item Availability; Item Browse Detail; Item Master; Item Master Planning Detail; MBIL; MSMT; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Single-Level Configuration Bill of Material Report; Where Used; Workcenter Master

In Effectivity

In Effectivity is the date that the use of a component becomes effective in a bill of material. The default value is today's date or the date you entered when you signed onto the system.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WUSE

LT

Lot Trace indicates whether lot number control is used throughout the manufacturing process to track the use of the item.

Y = Yes.

The item is lot-controlled.

N = No.

The item is not lot-controlled.

Where Used: BILL; BILL; Bill of Material; Bill of Material Detail; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITMB; ITMI; Lot Trace; MPSR; MPSS; Multi-Level Bill; Multi-Level Where Used; Production; SSII; Summarized Bill; Where Used; WUSE

Out Effectivity

Out Effectivity is the first date that a component is not effective in a bill of material. The default value is 12/31/2079.

Where Used: BILL; Bill of Material; Bill of Material Detail; Comparison Bill; Costed Bill Detail; Demand Peg Detail; Engineering; Exceptions; Location Index; Multi-Level Bill; Multi-Level Where Used; MUSE; Production; Single-Level Configuration Bill of Material Report; Where Used; WUSE

Parent

Parent is a term that describes the structural relationship between an item and its components in a bill of material. A **Parent** item is the higher level item in the parent-component relationship. A parent cannot be used in itself. Entry is any alphanumeric combination of up to 30 characters.

Where Used: BILI; BILL; Bill of Material; Bill of Material Detail; CMLB; Comparison Bill; Comparison of Summarized Bills; Cost Estimate by Lot Size; CSLB; Dispatch List; Engineering; Lead Time; Lead Time Analysis; Location Index; Material Exposure; MBIL; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; Production; Summarized Bill; Where Used; WUSE

Pln Pol

Planning Policy is used to determine the type of demand an item generates for its components based on planned orders. The codes are:

N = Normal.

Planned and released orders for this item produce "normal" dependent demand for its components.

P = Production Plan.

Planned orders for this item produce a "production forecast" for its components. Orders cannot be released for this item.

F = Final Assembly.

Planned and released orders for this item create "final assembly" demand for its components. This policy is reserved for future use and is treated like a **Planning Policy** = N by the system.

D = Distribution.

Planned and released orders for this item produce "distribution" demand for its components. This policy is reserved for future use and is treated like a **Planning Policy** = N by the system.

M = Master Scheduled.

Planned and released orders for this item produce "normal" dependent demand for its components. Planned orders must be manually scheduled within the item's **Plng Fnc** (planning fence).

It is recommended that you only use the "N" code until the master planning capability is installed in your system.

Where Used: BILI; BILL; Bill of Material; Bill of Material Detail; IORD; IPPD; Item Browse Detail; Item Master Planning Detail; MBIL; MSMT; Multi-Level Bill; Multi-Level Where Used; Production; Summarized Bill; Where Used

Plnr

Planner code is used to identify the person responsible for planning the production or usage of an item. The suggested entry is the planner's initials. Entry is any alphanumeric combination of up to 3 characters.

Where Used: ABCR; AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; Buyer/Planner Code Maintenance; Custom Product Detail; CWIP; Demand Peg Detail; IORD; IPPD; Item Browse Detail; Item Master; Item Master Planning Detail; Item Responsibility Assigned Results; ITHC; Lead Times Assigned Results; Line Item Details + Custom Product; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Shortages Detail; MBIL; MCST; MOAN; MOMI; MOMT; MORI; MORV; MPSR; MSCF; MSMT; Multi-Level Bill; Multi-Level Where Used; ORST; OVAR; PICI; PICK; Picklist Detail; Production; Purchase Order Line Item Detail; QUOI; QUOT; Router/Traveler; SDAB; Shortages by Order; Single-Level Configuration Bill of Material Report; SSII; Standard Costs Assigned Results; Summarized Bill; Where Used; WIPR; Workcenter Master

Pt Use

Point of Use is a key field that, along with the **Seqn** field, defines the sort sequence of components in a bill of material. The **Point of Use** field accepts any information you choose to enter, but the intended use is to identify the "work center" where the component should be delivered when assembling the parent, the "find number" of the component referenced on the drawing for the parent, or the "component reference designator" of the component on a printed circuit board. If the **Point of Use** field is not applicable in your company, you may enter 0 (zero). Entry is any alphanumeric combination of up to 5 characters.

Where Used: BILI; BILL; Bill of Material; Bill of Material Detail; Capacity Planning; Comparison Bill; Custom Product Component Detail; Demand Peg Detail; Dispatch List; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; LRRP; Material Shortages Detail; MBIL; Multi-Level Bill; Multi-Level Where Used; MUSE; Order Cost Variance Status; OVAR; PICI; PICK; Picklist Detail; Pricing Maintenance + Test Order; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Router/Traveler; Schedule Board; Single-Level Configuration Bill of Material Report; TRUD; Where Used; WUSE

Quantity

Quantity Required specifies how many or how much of a particular component is required to manufacture a parent. Entry is up to 10 numbers. Decimal places are allowed.

Where Used: BILI; BILL; Bill of Material; Bill of Material Detail; CMLB; COCP; Comparison Bill; Comparison of Summarized Bills; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; CWIP; Engineering; Job Estimates and Performance Report; Material Exposure; MBIL; MCST; Multi-Level Bill; Multi-Level Costed Bill; Multi-Level Where Used; MUSE; PCST; Production; Purchased Component Detail; Single-Level Configuration Bill of Material Report; Summarized Bill; Where Used; WIPL; WIPR; WUSE

Ref Des

Reference Designators are unique identifiers which allow engineers to assign control information such as device callouts to a component within a Bill of Material. Ranges can be used to organize multiple sequential reference designator identifiers. Entry is up to 10 characters.

Where Used: Bill of Material; Comparison Bill; Engineering; Exceptions; Multi-Level Bill; Where Used

Ref Des Count

Reference Designator Count is the total number of unique reference designator identifiers entered as **Reference Designators** associated with a component. For example, the **Reference Designator Count** = 3 for reference designators entered as a range of D1-D3 for a specified component.

Where Used: Bill of Material; Comparison Bill; Multi-Level Bill; Where Used

Run LT

Run Lead Time is the average number of shop days required for a manufacturing run or vendor lead time and is used in planning an order. **Run Lead Time** is added to fixed lead time and inspection lead time to estimate planned lead time which serves to time order release. Decimal places for fractional days allowed. MRP Planning uses fractional days as reference and plans using the next whole day increment. For example, if you specify **Run LT** = 2.1, MRP Planning assumes **Run LT** = 3 for calculation purposes. Entry is up to 8 numbers.

Note: Lead times established for an item are considered to be 0 when the item is used as a phantom (CT = P) in a bill of material.

Where Used: AVII; AVIT; BILI; BILL; Bill of Material; IPPD; Item Availability; Item Browse Detail; Item Master; Item Master Planning Detail; MBIL; MSMT; Multi-Level Bill; Multi-Level Where Used; Production; QUOI; QUOT; Single-Level Configuration Bill of Material Report; Where Used; Workcenter Master

Rv

Revision Level identifies a level of documentation which specifies the item's design. It should be incremented for each change in the item's design specifications. Entry is any alphanumeric combination of up to 2 characters.

Where Used: AVII; AVIT; BILI; BILL; Bill of Material; Bill of Material Detail; Costed Bill Detail; Demand Peg Detail; Engineering; FCST; ICCR; IORD; IPPD; Item Browse Detail; Item History; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; ITMB; ITMI; LMSI; LMST; Lot Detail; Lot Trace; MBIL; MPSR; MPSS; MSMT; Multi-Level Bill; Multi-Level Where Used; PBCI; PBCT; Production; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shortages by Order; Single-Level Configuration Bill of Material Report; Summarized Bill; Supply Peg Detail; Where Used

Seqn

Sequence Number is a key field that, along with the **Pt Use** field, defines the sort sequence of components in a bill of material. The field accepts any information you choose to enter, but the intended purpose is to identify the operation sequence number on the parent's routing that calls out the component. If the **Sequence Number** is not applicable in your company, you may enter 0 (zero). Entry is up to 3 numbers.

Where Used: Backflush Issue Reconciliation Report; BILL; BILL; Bill of Material; Bill of Material Detail; Capacity Planning; CINV; COCP; Comparison Bill; CPMT; Custom Product Component Detail; CWIP; Demand Peg Detail; Dispatch List; Engineering; Exceptions; Job Estimates and Performance Report; Lead Time; Location Index; LRRP; Material Shortages Detail; MBIL; MCST; Multi-Level Bill; Multi-Level Where Used; MUSE; OPSL; Order Cost Variance Status; OVAR; PCST; PICL; PICK; Picklist Detail; PORI; PORV; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchased Component Detail; Router/Traveler; Schedule Board; Single-Level Configuration Bill of Material Report; TRUD; Where Used; WIPL; WIPR; WUSE

Total LT

Total Lead Time is the sum of **Run LT**, **Fixed LT** and **Insp LT** as expressed in shop days.

Where Used: Bill of Material; Lead Time; Lead Time Analysis; Multi-Level Bill; Multi-Level Where Used; Summarized Bill; Where Used

UM

Unit of Measure identifies the standard unit for an item used in the manufacturing process. Entry is up to 4 alphanumeric characters.

Where Used: A/P PO/Inv Variance by Invoice; A/P Receiving Detail; APEX; APPI; APPV; APUV; Available for Shipping Allocation Batch; AVII; AVIT; BILL; BILL; Bill of Material; Bill of Material Detail; CCAT; CINV; CMLB; COBK; COCP; COMI; COMT; Contract Header Detail; Contract Item Detail; Contract Item Detail/Pricing; CORV; Costed Bill Detail; CPMT; CSLB; Custom Product Component Detail; Custom Product Detail; Customer Order; Customer Order Line Price Adjustment; Customer Order Receipt/Reverse; CWIP; Demand Peg Detail; Engineering; FCST; ICCR; IHIR; INVA; Inventory Allocation; INVR; IORD; IPPD; ITBI; ITCB; ITCI; Item + Quantity; Item Availability + Quantity; Item Browse Detail; Item History; Item Lot Receipt; Item Lot Trace and Serialization Detail; Item Master; Item Master Detail; Item Master Planning Detail; Item Responsibility Assigned Results; Item Shortages; ITHC; ITHR; ITMB; ITMC; ITMI; ITPB; ITPI; IVPR; IVRR; JEST; Job Estimates and Performance Report; Lead Times Assigned Results; LEXP; LHS; Line Item Details + Item; LMSI; LMST; Location Index; Lot Detail; Lot Trace; Lot Trace Issue Detail; Lot Trace Receipt Detail; LOTR; LVAL; Manufacturing Order Line Item Detail; Manufacturing Order Receipt/Reverse; Material Exposure; MBIL; MCST; MOMI; MOMT; MORI; MORV; MPIT; MPSR; MPSS; MSMT; Multi-Currency; Multi-Level Bill; Multi-Level Where Used; MUSE; Open Order Detail; OPSL; Order Completion Status; Order Cost Variance Status; Order Detail; Order Line Items; OVAR; Packaging Detail; Packing List; Partner Item Detail; PBCI; PBCT; PCST; PICI; PICK; Picklist Detail; POCL; POCL; POCT; POMI; POMT; PORI; PORR; PORV; POSR; POVD; Pricing Maintenance + Action Detail; Pricing Maintenance + Action List; Pricing Maintenance + Test Order; Production; Purchase Order Line Item Detail; Purchase Order Line Item Detail (CPMT); Purchase Order Line Items; Purchase Order Receipt History; Purchased Component Detail; QUOI; QUOT; Router/Traveler; SDAB; SDAL; Shipment Allocation Detail; Shipments by Line Item; Shipping Allocation Batch; Shipping Detail; Shortages by Order; SHPL; Single-Level Configuration Bill of Material Report; SSII; SSIL; Standard Costs Assigned Results; Standard Product Detail; Summarized Bill; Supply Peg Detail; Transaction Detail; VDII; VDIT; VDSC; VEIT; Vendor/Item Detail; VETI; VPFR; Where Used; WIPR; Workcenter Master; WUSE

PRRD – Product Release Rule Definitions

Product Release Rule Definitions is used by product release managers to set up the conditions and define the rules that are considered when an item is being released to the next release phase.

- **Set Up Conditions.** Users set up selection and edit condition criteria which is used to evaluate the item prior to release.
- **Define Rules.** Users create rules and then assign conditions to the rules based upon your company's specifications. Two sets of rules are defined for releasing items: rules to release from Phase 1 to Phase 2 and rules to release from Phase 2 to Phase 3. Rule severity, warning or failure must be assigned to each rule.

Product Release Rule Definitions is divided into sections which include:

Tab Title	Description
Selection/Edit Conditions (left side)	Used to set up and define the selection and edit condition criteria which is used to evaluate the item prior to release.
Rules (right side)	Used to create rules and then assign selection and edit conditions. Also used to determine the rule severity (warning or failure).

Fields

Phase Name

Phase Name is the name assigned to each of the product release levels. Default phase names which are installed with the system include:

0 = Engineering.

Item is in the engineering database but not in the production database.

1 = Pre-Production.

Item is in the production database with an **Item Status** = E (engineering, not released for production).

2 = Production.

Item is in the production database with an **Item Status** = A (active).

On the Item Master, an item can have a **Phase Name** = -1 (Error) if it was selected for promotion but it did not pass the promotion rule conditions. After resolving the errors, the item can be promoted to the next release level.

Default phase names can be customized using the PRRD functionality. Entry is any alphanumeric combination up to 30 characters.

Where Used: Item Master; Product Release Rule Definitions

Rule

Product Release Rule is the definition used as criteria for promoting items between the three specified release levels, or phases. Rules are assigned selection and edit conditions. To aid the product release manager, sample rule definitions are included which can be customized

for your specific release requirements. Entry is any alphanumeric combination up to 50 characters.

Where Used: Product Release Rule Definitions

Selection/Edit Condition

Product Release Condition identifies the selection and edit criteria which is used to evaluate the item prior to promotion. Selection criteria determines which items are selected for promotion. Edit criteria determines specific field relationships and values. To aid the product release manager, sample selection and edit conditions are included which can be customized for your specific release requirements.

Where Used: Product Release Rule Definitions