

Maintenance Bills of Material (CS-BD/PM-EQM-BM)



HELP.PMEQMBM

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Icons

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

Typographic Conventions

Type Style	Description
<i>Example text</i>	Words or characters that appear on the screen. These include field names, screen titles, pushbuttons as well as menu names, paths and options. Cross-references to other documentation
Example text	Emphasized words or phrases in body text, titles of graphics and tables
EXAMPLE TEXT	Names of elements in the system. These include report names, program names, transaction codes, table names, and individual key words of a programming language, when surrounded by body text, for example, SELECT and INCLUDE.
Example text	Screen output. This includes file and directory names and their paths, messages, names of variables and parameters, source code as well as names of installation, upgrade and database tools.
Example text	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example text>	Variable user entry. Pointed brackets indicate that you replace these words and characters with appropriate entries.
EXAMPLE TEXT	Keys on the keyboard, for example, function keys (such as F2) or the ENTER key

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Maintenance Bills of Material (CS-BD/PM-EQM-BM)

Purpose

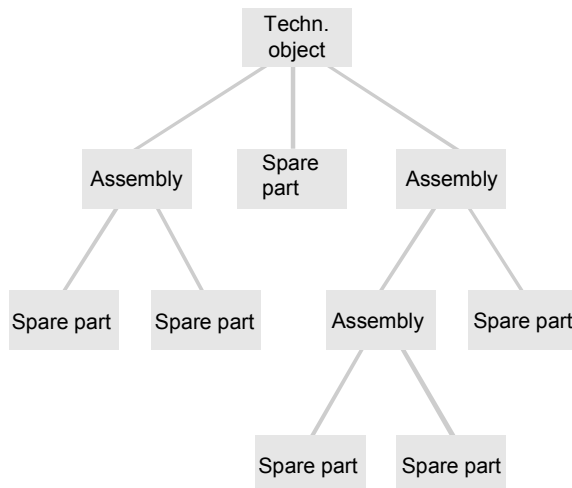
A maintenance bill of material (BOM) is a complete, formally structured list of the components making up a technical object or an assembly. The list contains the object numbers of the individual components together with their quantity and unit of measure. The components can be stock or non-stock spares or assemblies, which in turn can be described using maintenance BOMs.

Maintenance BOMs are primarily used for the following purposes:

- Structure description

A maintenance BOM describes the structure of a technical object or material. Using maintenance BOMs you can specify exactly where maintenance tasks are to be performed on a technical object.
- Assignment of spare parts

A maintenance BOM is used in plant maintenance to assign spares for a technical object or material. This is shown in the figure below:



Implementation Considerations

Using maintenance bills of material presents the following advantages:

- **Materials planning** (when using maintenance task lists)

The use of maintenance BOMs is advantageous for material planning, because you can perform material planning when creating a maintenance task list. The link between the task list and the maintenance BOM is created as follows:

 - Using the technical object BOM for maintenance task lists for technical objects
 - Using the assembly in the header for general task lists

Maintenance Bills of Material (CS-BD/PM-EQM-BM)

The link to a maintenance BOM enables you to assign materials that have already been planned for the technical object or the assembly to the individual operations in the task list. You can use the structure list or the structure graphic to do this. As both display options provide a detailed overview of all the materials of the BOM, material planning is simplified considerably.

For more information on maintenance task lists, refer to the document *PM - Maintenance Task Lists*.

- **Materials/spares planning** (when using maintenance orders)

Maintenance bills of material support you during materials or spares planning by providing you with an overview of all materials/spare parts that could be required in the maintenance order. This enables you to assign to the order all the materials you require and makes materials/spares planning considerably easier.

For more information on maintenance orders, refer to the document *PM - Maintenance Orders*.

- **Locating malfunctions** (when using maintenance notifications)

Maintenance bills of material support you when locating malfunctions by providing you with an overview of all components that make up a technical object. From this overview you can easily select the object for which you want to create a malfunction report. This enables you to locate the malfunction in the technical object more precisely.

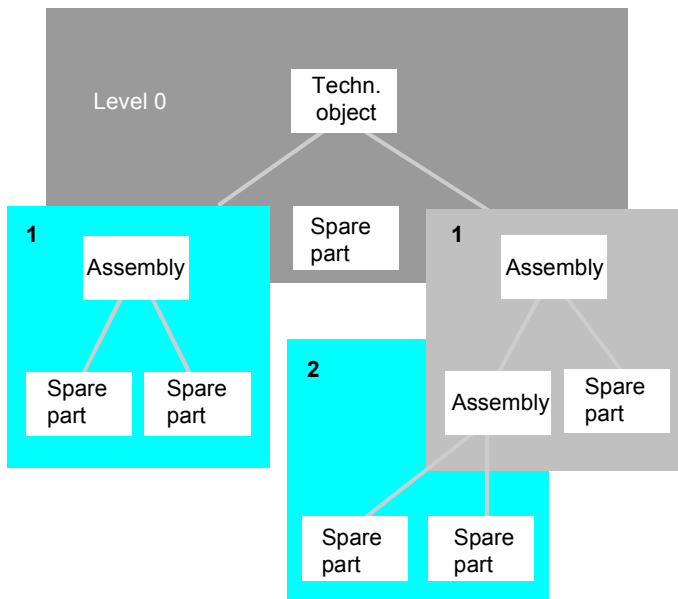
For more information on maintenance notifications, read the document *PM - Maintenance Notifications*.

Integration

BOMs contain important master data, which is used in many organizational areas, such as production, materials planning, product costing and maintenance.

Features

In Plant Maintenance, multi-level bills of material (BOMs) are usually used. They can have as many levels as required. The highest level in a multi-level BOM (Level 0 in the figure below) represents a piece of equipment or a complete technical object. The lower levels of the BOM (Levels 1 and 2 in the figure below) represent the components making up the technical object, and their components:



The BOM structure is reflected in the different technical categories of BOM provided in the PM system:

- Simple BOM

The first BOM that you create for a technical object or material has no defined technical category and a simple structure. It is described as a “simple BOM”.
- Variant BOM

Variant BOMs have a more complex structure. They are used to group together several BOMs to describe different objects that have a high proportion of identical parts.
- Multiple BOM

Multiple BOMs have the most complex structure. They are used to group together several BOMs to describe one object, for which different combinations of materials are used for different production methods. Multiple BOMs are usually used in production planning and have little or no use for plant maintenance.

For more information on multiple bills of material, refer to the document *PP - Bills of Material Guide*.

Bill of Material (BOM) Categories in Plant Maintenance

Bill of Material (BOM) Categories in Plant Maintenance

The **bill of material type** is defined by the type of master record that you assign to the bill of material. The following types of BOM are found in Plant Maintenance:

- Material BOMs
- Equipment BOMs
- Functional location BOMs

The following additional BOM types are available in Plant Maintenance:

- Simple bills of material
- Variant bills of material
- Multiple bills of material

The technical BOM category for each newly-defined BOM is the *simple BOM*. This is normally sufficient for work in Plant Maintenance.

If you maintain a number of technical objects composed of similar or identical parts, you can extend the simple BOM to a [Variant BOM \[Ext.\]](#) or [Multiple BOM \[Ext.\]](#).

Use

Material BOM

It is created with a direct link to a material master record. The material master record contains, among other items, descriptive data (for example, weight and dimensions) and control data (for example, material type and industry sector).

Material BOMs are used in a company to map the structure of assemblies to be maintained.

Bills of Material for Technical Objects

Bills of material are used to describe the structure of a technical object and to allocate spare parts for maintenance purposes. BOMs for technical objects can be created individually for a specific technical object or for a group of technical objects.

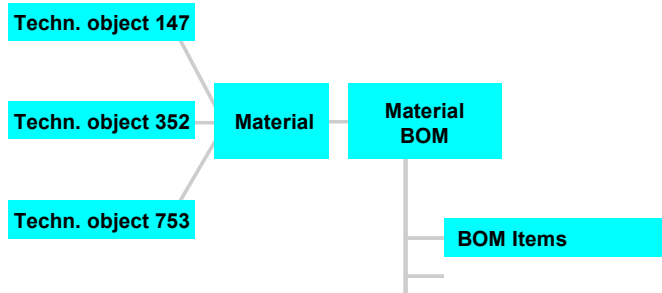
A BOM can be linked to a technical object in two ways:

- Direct allocation

If you create a bill of material directly for a technical object, it is assigned **directly**. If all the technical objects are identical in terms of structure, the BOM items are valid for all the allocated technical objects.
- Indirect allocation

For technical objects that have a material BOM - if you enter a material number in the *Construction type* field of a master record, the material BOM is **indirectly** assigned to the object. This is a good idea when a company has several identical technical objects grouped under one material number (see map).

Bill of Material (BOM) Categories in Plant Maintenance



Indirectly assigned BOMs are **not** shown for the structural display of a technical object, *if*:

- the equipment has a directly assigned BOM.
- there is a directly assigned BOM for a functional location, or if equipment installation is permitted there.



The following rules apply to functional locations:

If a [Construction type \[Ext.\]](#) is entered for a functional location *and*

- equipment **can** be installed, this means that only equipment of this construction type should be installed at the functional location. A BOM assigned to the construction type is **not** shown in the structural display.
- equipment **cannot** be installed, this means that this functional location is one of several functional locations of the same type that have been grouped together. The bill of material for the construction type **is** shown in the structural display.

See also:

[BOMs \(PP-BD-BOM\) \[Ext.\]](#)

[BOM Categories \[Ext.\]](#)

[Which Technical Types Exist? \[Ext.\]](#)

Bill of Material Usage

Bill of Material Usage

Use

You use the bill of material usage to define for what purpose a bill of material can be used (for example, in production, sales and maintenance).

You have the following options for doing this:

- You use **only one**, universally applicable standard bill of material structure for all different usage purposes.
- You manage **parallel** bills of material for the same material for its different usage purposes.

The **item status** specifies the usages for which a certain bill of material (BOM) item is relevant.



The following table shows how you can define the item status for bill of material usage “maintenance”:

Item relevant for:	Processing
Production	Not authorized (Status: inactive)
Engineering	Not authorized (Status: inactive)
Maintenance	Obligatory (Status: active)
Sales	Not authorized (Status: inactive)
Costing	Optional (Status: modifiable)

The system uses the **bill of material** application to select BOMs. The BOM application controls the sequence in which BOMs with different usages are displayed.

The bill of material usage determines which item statuses you can change. The remaining item statuses are automatically inactive and cannot be changed.



There are two BOMs for material XYZ, one for production and one for maintenance.

Bill of Material Usage

Using the BOM application you can define that the maintenance BOM has priority 1, so that in the maintenance system (for example, when displaying the structure) the maintenance BOM is automatically displayed by the system. If there is no maintenance BOM, the system will display the production BOM which in this case has priority 2.

Activities

You define:

- The bill of material usage
- The valid item status for each usage as well as
- The bill of material usage and the corresponding selection term

in *Plant Maintenance Customizing*, under *Equipment and Technical Objects* → *Bills of Material*.

Validity of Bills of Material

Validity of Bills of Material

Use

From an organizational perspective BOMs are valid for a particular maintenance planning plant. The planning plant is therefore the area of validity.

You can extend this area of validity by assigning the same BOM to a different maintenance planning plant or further plants.



If a piece of equipment is moved from its original plant, you can assign the equipment bill of material to another plant.

If a piece of equipment is moved dynamically from one plant to the next, you can assign its bill of material to several plants.

Prerequisites

Before you assign a BOM to a different or further plants, the following prerequisites must be met:

- Material master records must exist for the materials in the BOM at each of the different plants.
- If a unit of issue has been maintained for a BOM item, this unit of measure must be identical for each of the different plants.
- You must have the necessary authorization in your user master record to assign the BOM to different plants.

For more information on how to extend the area of validity for a BOM, see [Allocating Bills of Material to a Plant \[Page 38\]](#).

Features

In addition to spatial validity from an organizational perspective, you can also assign a **temporal validity** to the BOM. When you change a BOM item, for example, when you replace one material with another, you can specify precisely when the change becomes effective by defining a period of validity.

The period of validity for a bill of material (BOM) is restricted by the following entries in the BOM header and BOM item:

- **Valid-from Date**

When you create a BOM, the point at which it becomes effective is determined by this date. If you create or change a BOM using a change number, the system takes the valid-from date from the change master record.
- **Valid-to Date**

This date determines the end of the validity period for the BOM. The system enters this automatically. The default value in the system is 31.12.9999. If you change the BOM using a change number with a valid-from date, the validity period for the object (BOM header or BOM item) before the change ends at exactly 0.00 o'clock on this date.

Bill of Material Header

Definition

The data which is maintained in the BOM header is valid for the entire BOM and its components (BOM items and sub-items respectively).

Structure

The header data is composed of:

- Texts
- Quantity Specifications
- Administrative Data
- General Data

Texts

- BOM text

This text applies to the entire BOM group. It applies to all the alternatives of a multiple BOM or all the BOMs making up a variant BOM.
- Alternative text

This text applies to a particular alternative of a multiple BOM or to one of the BOMs making up a variant BOM.

Quantity Specifications

The quantity specifications are the basis for all quantities entered in a bill of material (BOM). Quantity data is only relevant for production planning.

Administrative Data

The administrative data retained by the system tell you,

- Who created the BOM and when
- Who changed the BOM and when
- The validity of the BOM
- The change number used to make changes to the BOM

General Data

The remaining data in the bill of material (BOM) header can be classified as “general data”. It contains

- **Validity data**

This data provides information on the change master record in which the changes are logged, and the area of validity in which the BOM is being maintained.
- **BOM status**

Bill of Material Header

This data provides information on the way a BOM is controlled in different application areas. For example, if the key in the BOM status field is set as 1, the BOM can be exploded in material requirements planning and released for planning orders. However, if the key is set as 2, the BOM cannot be processed in this way. You can define BOM status in Customizing.

- **Authorization group**

This key is an authorization value which you can use to control access to a BOM. This ensures that only users whose user profile contains the specified authorization group can maintain the BOM.

- **Deletion indicator**

The deletion indicator does not hinder processing of the BOM. However, it shows that the BOM will be deleted at the next reorganization run.

- **Laboratory/Office**

This data provides information on the laboratory or office responsible for the technical object.

- **Material data** (material BOMs only)

This data provides information on the size and dimensions of a material.

- **Technical Object data**

In **equipment BOMs** this data section contains

- Information about the size and dimensions of the piece of equipment
- Serial number
- Manufacturer's drawing number

In **functional location BOMs** this data section contains

- Maintenance planner group
- Material

Bill of Material Item

Definition

The components of a technical object are located in the items of the BOM. Item data is only valid for a particular item within the BOM.

Structure

Items are differentiated by their category (). The item categories are differentiated by an item category key.

Further important item indicators are

- Item Status
- Data relevant to Plant Maintenance

Item Category

- **Stock item**

This item category applies to components which are kept as stock. Any components entered with this category in the BOM must have a valid master record in the system.

When you use this item category, stock item components are automatically reserved for the maintenance order.

- **Non-stock item**

This item category is used for components which are not kept in stock if they are used in a bill of material (BOM). Non-stock items can be entered in the BOM with or without a master record. To enter a non-stock item without a master record, you must simply enter a descriptive text.

When you use this item category, the system automatically creates a purchase requisition for these components, when they are used for maintenance purposes. This leads to order-specific materials procurement via the purchasing department.

- **Variable-size item**

This item category enables you to specify different sized sections of a component with one material number. Variable-size items are distinguished by the fact that format entries, such as length and width, are taken and converted into the quantity required for warehouse management purposes.

When you use this item category, variable data, such as the size of a steel sheet required to repair some planking, can be entered directly by the user during order processing. You do not have to create new material master records with fixed dimensions in the system each time.

- **Document item**

This item category is for components which contain information stored as documents. A document can be a design drawing, program, photograph and so on.

When you use this item category, the bill of material (BOM) is connected to the document management system.

Bill of Material Item

- **Text item**

When you use this item category, the system stores your text in a text file using the long text processing function.

- **PM structure element**

This item category is for components in plant maintenance which are **only** used for structuring a technical object (PM assembly). No plant data is necessary for this item.

This item category is only used in plant maintenance for equipment and material bills of material relevant to plant maintenance.

- **Class Items**

The class item enables you to create a class as the components in a configurable bill of material (BOM for a standard product). Several objects can be allocated to this class, and differentiated by different characteristics.

You can find further information relevant to variant configuration in the SAP documentation *PP- Variant Configuration*.

Item Category Key

The different item categories are represented by a letter key in the standard SAP System:

L stock item

N non-stock item

R variable-size item

D document item

T text item

I PM structure element

K class item

As the letters of an item category key are defined in Customizing, you can adapt the letters accordingly.

Item Status

For a BOM item, you must specify whether it is relevant in a construction or plant maintenance context, for example. In other words, you must specify in the item detail screen whether it is relevant to construction or to plant maintenance. For a BOM of application type *Plant Maintenance*, the status "Plant Maintenance" is automatically set by the system in this screen. This cannot be modified. Depending on how the BOM usage was set, you can change - among other things - the entries in the following two item status fields:

- Costing relevance
- Spare Part Indicator



Bill of Material Item

Indicator	Meaning
A	spares relating to safety, must always be at least two available
B	spare part widely used in the company
C	spare part rarely used

Data relevant to Plant Maintenance

The indicator “PM assembly” is maintained in the data section *maintenance relevant data*. This indicator can only be maintained when the BOM usage allows the item status “maintenance”.

If an item is indicated as a PM assembly, then it will be displayed as a component of a technical system when maintenance tasks are processed. You can use an item which is indicated as a PM assembly to describe an item in more detail. For example, because the maintenance work has to be carried out just on this assembly in a technical object. The assembly can also be used to locate damage more precisely.

Bill of Material Sub-Items

Bill of material (BOM) items can be divided into sub-items for better data management. Sub-items can be used, for example, to divide an item if partial quantities of an item have different installation points. The sub-items can be used to depict these different installation points. You can maintain a short text and a quantity for each sub-item in addition to the installation point.

Creating Bills of Material

Creating Bills of Material

1. Choose *Logistics* → *Plant maintenance* → *Technical objects*. In the *Technical objects* screen choose *BOM* → *<BOM type>* → *Create*.

The initial screen for creating new BOMs is displayed.

2. Enter the required data and choose *Continue*.

You can then:

- Save the BOM
- Create the BOM items you require

Creating BOM Items

1. Enter the components that comprise the object. One entry line is available for each component. The table below shows the item categories that you can use in the standard system.



You must enter a quantity and the item category for each BOM item.

Item category:	Enter this, and then choose <i>Continue</i> :	The following screen is displayed:	Enter the following:
Document item	d	Item: <i>General data</i>	Document information
PM structure element	i		
Stock item	l		
Non-stock item	n	Item: <i>Purchasing data</i>	Material group
Variable-size item	r	Item: <i>Variable-size data</i>	Size and formula key
Text item	t	Item: <i>Status/Long text</i>	Item text

2. When you have entered all your BOM items, you can:
 - Save the BOM
 - Enter item detail data

Entering BOM Item Detail Data

1. Select the items for which you want to enter detail data.
2. Call up the detail data screen by choosing *Goto → Item*.
3. When you have finished entering all required detail data for the BOM items, you can:
 - Save the BOM and exit the function
 - Create sub-items for the BOM

Creating Sub-items

1. Select the BOM items for which you want to create sub-items.
2. Then choose *Edit → New sub-items*.
3. You are now on the *New Sub-items* screen.
4. In the section *BOM sub-items*, enter your sub-items in the entry lines provided.
If you require additional entry lines, choose *Edit → Other → New sub-items*.
5. When you have finished making your entries, you can:
 - Save the BOM and exit the function
 - Enter the header data for the BOM

Entering Header Data

- If you want to enter all header data for the BOM, choose *Goto → Header → Full* in the *Item Overview* screen.
- If you just want to enter selected header data for the BOM, choose *Goto → Header → <Detail data screen>* in the *Item Overview* screen.

Creating a BOM Using a Reference

Creating a BOM Using a Reference

Use

You can create a maintenance bill of material (BOM) using another maintenance BOM as a reference.

To create a	You can reference a
Material BOM	Material BOM
Equipment BOM	Material BOM Equipment BOM Functional location BOM
Functional location BOM	Material BOM Equipment BOM Functional location BOM

Procedure

1. In the *Technical objects* screen choose *BOM* → <BOM type> → *Create*.

You are now on the initial screen for creating BOMs.

2. Make all the necessary entries.



Do **not** choose *Continue*. First enter the reference.

3. Select the reference BOM you require.

To create a	use the menu bar sequence
Material BOM	<i>Material BOM</i> → <i>Copy from</i>
<i>Equipment BOM</i>	<i>Equipment BOM</i> → <i>Copy from</i> → <i>BOM category</i> → <i>Copy</i>
<i>Functional location BOM</i>	<i>Functional location BOM</i> → <i>Copy from</i> → <i>BOM category</i> → <i>Copy</i>

You will see a dialog box.

4. Make all the necessary entries.
5. Choose *Continue*.

You are now on the *Create <BOM category>:Copy from reference* screen.

Creating a BOM Using a Reference

6. Select all the items you want to copy into the new BOM and use the menu bar sequence *Edit* → *Copy*.
7. Save the BOM.

Creating Variant Bills of Material

Creating Variant Bills of Material

1. Create a BOM for the technical object that is to be used as a basis for the variant. To do this, perform the steps described in one of the following two topics:
 - [Creating a Bill of Material \[Page 18\]](#)
 - [Creating a BOM Using a Reference \[Page 20\]](#)

2. Once you have created the BOM that is to act as the basis, you can create variant BOMs. To do this, select the menu bar sequence *Bill of Material* → *BOM category* → *Create*.

You are now on the initial screen for creating maintenance BOMs.

2. Enter the number of the functional location, piece of equipment or material, for which you want to create a variant. A BOM cannot already exist for it.

Enter the required data.



Do **not** choose *Continue*. First enter the variant.

3. Select the menu bar sequence *BOM category* → *Create variant*
4. In the dialog box, enter the number of the piece of equipment, functional location or material, from the BOM you want to use as a basis for the variant BOM. Then choose *Continue*.

You are now on the *Copy from* screen, which shows the items of the BOM you have chosen as a basis.

5. Select the BOM items that are to be valid for the variant BOM. Use the menu bar sequence *Edit* → *Copy*

The system ascertains that you are creating a variant BOM and goes to the screen
Header: Quantities/Long text

6. Enter a name in the field *BOM group*. This name will be used for the BOM you are using as a basis as well as all the variants.

Make all further necessary entries in the *Header: Quantities /Long text* and select *Continue*.

The *Material Item Overview* screen is displayed.

7. Now create the BOM items, that are only valid for the variant BOM.
8. Save the BOM.

Changes to the Bill of Material

Use

Changes to pieces of equipment or materials are sometimes necessary for technical or economic reasons. Technical changes may be necessary, for example, to remove technical errors or to enforce new environmental regulations or safety requirements. Economic reasons for a change to a bill of material could be, for example, when cheaper material is introduced or customer requirements are taken into account.

Features

Changes are possible with and without a history.

- If you want to change a maintenance bill of material **without a history**, do not enter a change number in the initial screen of the function “Change”. The changes are not recorded by the system in change master records, but in change documents instead. They are valid from the last specified validity date for the bill of material.

For more information on how to see the changes that have been made, see [Displaying Change Documents \[Page 24\]](#).

- If you make changes to your maintenance bill of material **using a history**, the system records the changes. This documentation provides you with the following information:
 - What the BOM looked like before the changes
 - Who made the changes
 - When the changes were made
 - Which fields were changed

If you want to change a BOM using a history, you must first enter a change number before doing so. Both the changes and the change number are documented by the system. They are valid from the date that has been specified for the change number. By entering the change number you are identifying the change master record stored under this number. The change master record is managed in the Plant Maintenance (PM) System by the **Engineering Change Management** function.

For more information on how to see the changes that have been made, see [Displaying Changes Using Change Master Records \[Page 25\]](#).

For more information on Engineering Change Management, refer to the SAP documentation *PP - Engineering Change Management*.

Displaying Change Documents

Displaying Change Documents

Use

Change documents are automatically created by the system for all the changes you make to your BOMs. Unlike changes made with a history, change documents cannot display BOM data for a specific period or point in time. They simply serve as a control tool to show who changed what and when.

Procedure

1. In the *Technical Objects* screen, choose *BOM → Change documents → BOM category*.
You are now on the initial screen for displaying change documents.
2. Enter the required data and choose *Continue*.
3. In the next screen, you have the choice of the following three activities:
 - You can display an **Overview** of all the change documents created.
Use the menu bar sequence *Goto → Document overview*.
You will see a list of all the change documents the system has created for your maintenance BOM. You can view each document in further detail, by using the menu bar sequence *Goto → Display documents*.
 - You can display all the created change documents **in full**.
Use the menu bar sequence *Goto → Display documents → Full*.
You will see a detailed list of all the change documents the system has created for your maintenance BOM.
 - You can display a **detailed screen** for all the change documents created.
Use the menu bar sequence *Goto → Display documents → Detail screen*.
4. To leave the change documents display, use the menu bar sequence *Documents → Exit*.

Displaying Changes Using the Change Master Record

Use

Proceed in the following manner if you want to view the change master record whose number you have specified while changing the BOM.

Procedure

1. In the screen *Technical Objects* select the menu bar sequence *Environment* → *Engineering change management* → *Change master record* → *Display*.
2. Enter the change number and choose *Continue*.
3. To display changes to your BOM listed in the change master record, use the menu bar sequence *Environment* → *Evaluation* → *BOM changes*.

The system shows you a list of all the changes made to the specified BOM.

The individual changes are listed in a 2-line format with the state of the data before and after the change. Choose *Edit* → *Item*. Use the *General Data* button to display the lines in the list in the detail screen.

Changing Bills of Material

Changing Bills of Material

Use

You use this method of changing bills of material when you just want to change a single BOM.

As a result of a general change, it may be necessary to replace a certain component in all or several bills of material (BOMs). This type of change is referred to as a **mass change**. For more information on how to perform mass changes, see [Mass Changes \[Page 30\]](#).

Procedure

1. Choose *Logistics* → *Plant maintenance* → *Technical objects*. In the *Technical Objects* screen, choose *BOM* → *<BOM type> Change*.
The initial screen for changing a BOM is displayed.
2. Enter the number of the material, piece of equipment or functional location whose BOM you want to change. Decide which option you want to use:
 - a) Changing a BOM **without a history**.
To do this, choose *Continue*.
 - b) Changing a BOM **with a history**.
To do this, enter the change number in the *Change number* field. The System copies the validity date from the change master record. Choose *Continue*.
3. The *Material Item Overview* screen is displayed. In this screen you can:
 - Save the changes
 - Add Further BOM Items
 - Delete BOM items
 - Add BOM sub-items
 - Delete BOM sub-items
 - Extend the BOM to include items from other BOMs

Add Further BOM Items

1. In the *Material Item Overview* screen, use one of the following menu bar sequences:
 - *Edit* → *New Items* → *Document*
 - *Edit* → *New Items* → *Material* → *1-lines*
 - *Edit* → *New Items* → *Material* → *2-lines*
2. Enter the required data. The system offers new entry lines under the last item in the list.
3. Save the changes to the BOM.

Delete BOM items

1. In the *Material Item Overview* screen, select the item(s) that you want to delete from the BOM.

2. Choose *Edit* → *Delete item*.

The system displays the dialog box *Delete item(s)*.

3. Confirm that you want to delete the item(s) selected.

The system then deletes the BOM items.

4. Save the changes to the BOM.

Add BOM sub-items

1. In the *Material Item Overview* screen, select the item(s), for which you want to add sub-items.

2. Choose *Edit* → *New sub-items*.

You are now on the *New Sub-items* screen.

3. Enter all the sub-items in the *BOM sub-items* section of the screen.

4. Save the changes to the BOM.

Delete BOM sub-items

1. In the *Material Item Overview* screen, select the BOM items whose sub-items you want to delete.

2. Choose *Goto* → *Sub-item overview*.

The *Sub-items* screen is displayed.

3. Select the sub-item(s) that you want to delete.

4. Choose *Edit* → *Delete sub-item*.

The *Delete sub-item(s)* dialog box is displayed.

5. Confirm that you want to delete the selected sub-item(s).

The system then deletes the sub-item(s) and issues a message informing you how many sub-items it has deleted.

6. Use the *Item +* button to call up further BOM items whose sub-items you want to delete.

7. Save the changes to the BOM.

Extend the BOM to include items from other BOMs

You can extend a bill of material by copying all or specified items from another maintenance BOM.

1. In the *Material Item Overview* screen, use one of the following menu bar sequences:

- *Edit* → *Extend* → *From material BOM*
- *Edit* → *Extend* → *From equipment BOM*
- *Edit* → *Extend* → *Extend material BOM*

The dialog box *Extend from <Object>BOM...* is displayed.

2. Enter the number of the material, piece of equipment or functional location whose BOM you want to use, and press *Continue*.

The *Copy From* screen is displayed.

Changing Bills of Material

3. Select the BOM item(s) that you want to use to extend your maintenance BOM.
4. Choose *Edit* → *Copy*.

The system copies the item(s) you selected to the end of the list in the *Material Item Overview* screen.

5. Save the changes to the BOM.

Changing Variant Bills of Material

Use

Proceed in the following manner if you want to make changes in a task operation which applies to **all** variants in a BOM group.

If you want to change an individual BOM variant, proceed as for [Changing Bills of Material \[Page 26\]](#).

Procedure

1. In the *Technical Objects* screen, choose *BOM* → *<BOM category>* → *BOM group* → *Display*.
You are now on the initial screen for making changes to a BOM group.
2. Enter the BOM group and all other necessary data and choose *Continue*.
You are now on the *Summarized BOM* screen, in which all items used in the BOM group are listed. To the right of the individual items you can see the variant in which the item occurs.
3. Using the menu bar *Goto*, you can display different data for the items and variants. For example, detailed data for the items or an overview of all the variants in the BOM group.
4. Make all the necessary changes. To do this select the items required in the *Summarized BOM* screen and change the item data.
5. Save the changes to the BOM group.

Performing Mass Changes

Performing Mass Changes

Use

As a result of a general change, it may be necessary to replace a certain component in all or several bills of material (BOMs).

Procedure

1. In the *Technical Objects* menu, use the menu bar sequence *BOM → Mass Change*.
2. Select an object and choose *Continue*.
3. Enter the item category of the item you want to change.
4. Use the menu bar sequence *Edit → Select*.
5. You are now on the initial request screen for mass changes to the item category required.
6. Enter the old item to be replaced, the new item with which it is to be replaced and any other necessary or desired data.
7. Check the entries and choose *Continue*.
8. You will see a list of all the bills of material (BOMs) containing the old item.
9. Select the BOMs in which you want to replace the old item with the new item.
10. Use the menu bar sequence *Edit → Replace*.
11. The system replaces the old item with the new item in all the BOMs selected.

Displaying Bills of Material and Variant BOMs

Prerequisites

The display transaction for bills of material (BOMs) displays a BOM for a specified period of validity. You should answer the following questions before you call up the display function:

- What do you want to display?
 - A simple BOM
 - An individual BOM variant
- For what period of validity do you want to display the BOM?

Procedure

1. In the *Technical Objects* screen, choose *BOM* → <BOM category> *Display*.
 You are now on the initial screen for displaying BOMs.
2. Enter the required data. The following table is intended as a guide:

To display a:	Enter:
BOM	<ul style="list-style-type: none"> - BOM usage - Technical Object number - Plant
BOM, valid for a particular change number	<ul style="list-style-type: none"> - BOM usage - Technical Object number - Plant - Change master record number
BOM, valid on a particular day	<ul style="list-style-type: none"> - BOM usage - Technical Object number - Plant - Date in the <i>Valid from</i> field - Same date in the <i>Valid to</i> field

Displaying Bills of Material and Variant BOMs

BOM, valid from a particular date	- BOM usage - Technical Object number - Plant - Date in the <i>Valid from</i> field
BOM, valid to a particular date	- BOM usage - Technical Object number - Plant - Date in the <i>Valid to</i> field

3. Choose *Continue*.

The *Material Item Overview* screen is displayed.

4. Use the *Goto* and *Extras* menu bars to page through the various screens of the BOM.
5. To leave the transaction, use the menu bar sequence *BOM category* → *Exit*.

Displaying Variant Bills of Material

Prerequisites

The display transaction for bills of material (BOMs) displays a BOM for a specified period of validity. The relevant period of validity must therefore first be defined.

Procedure

1. In the *Technical Objects* screen, choose *BOM* → *<BOM category>* → *BOM group* → *Display*.
You are now on the initial screen for displaying BOM groups.
2. Enter the required data. The following table is intended as a guide:

To display a:	Enter:
BOM group	- Plant and - either BOM group - or usage and technical object
BOM group, valid for a particular change number	- Plant - Change master record number and - either BOM group - or usage and technical object
BOM group, valid on a particular date	- Plant - Date in the <i>Valid from</i> field - Same date in the <i>Valid to</i> field and - either BOM group - or usage and technical object

Displaying Variant Bills of Material

BOM group, valid from a particular date	- Plant - Date in the <i>Valid from</i> field and - either BOM group - or usage and technical object
BOM group, valid to a particular date	- Plant - Date in the <i>Valid to</i> field and - either BOM group - or usage and technical object

3. Choose *Continue*.

You are now on the screen *Summarized BOM*.

4. Use the *Goto* and *Extras* menu bar to page through from one screen in the overview to another.
5. To leave the transaction, use the menu bar sequence *BOM group* → *Exit*.

Displaying a BOM Using the Structural Display

Use

A structure display is available for all types of bills of material (BOM). Using this display, you can present the BOM structure in two different ways on the screen:

- As a structure graphic
- As a structure list

Procedure

1. In the *Technical Objects* screen, choose *BOM* → <BOM category> *Structural display*.
2. Enter the object for which you want to display the BOM, and the valid date and plant required.

The system proposes all the other entries. You can change these if required.

If you want the graphical display of the BOM, select this in the section *Presentation*.

3. Use the menu bar sequence *Program* → *Execute*.

You will now see the structure display corresponding to your entries for the BOM you required.

Changing Display Fields

You can also individually change the **Display fields** that you want to see for the technical object or material and the components.

1. Use the menu bar sequence *Settings* → *Field selection* → <Object required>.

The system produces a pop-up window with the fields currently displayed.

2. Press the button *Selection list...*

The system produces a second pop-up window with all the fields that can be displayed.

3. Select the fields you require.



- In the structural graphic, the system can only display up to six fields.
- In the structure list, any number of fields can be displayed

4. Press the button *Copy*.

The system copies the selected fields into the first pop-up window.

5. Close the second pop-up window and in the first pop-up window press the button *Copy*.

The system displays the fields selected in the BOM structure display.

Evaluation of Bills of Material

Evaluation of Bills of Material

Use

The following analysis options are useful for maintenance BOMs:

- **Where-used list**

You can generate where-used lists to determine in which bills of material certain components are used.

You can create where-used lists for materials, documents or classes.

- **BOM comparison**

By using a bill of material comparison you can compare two different bills of material with each other.

For information on how to perform a BOM comparison, refer to the SAP documentation, *PP - Bills of Material*.

Activities

You can call up the **BOM comparison** function in Plant Maintenance using the following menu sequence:

Logistics → *Plant maintenance* → *Technical objects* → *BOM* → *BOM comparison*.

Creating Where-Used Lists

1. In the *Technical Objects* menu, use one of the following menu bar sequences:
 - *BOM → Use → Single-level material*
 - *BOM → Use → Single-level document*
 - *BOM → Use → Single-level class*

You are now on the initial screen for displaying single-level where-used lists.
2. Enter the number of the object for which you want to create a where-used list. Enter the required data.

You can restrict the period of time in which the where-used list is to be created by filling the fields in the section *Selection*.

You can also define further selection data using the different views. To do this, use the menu bar sequence *Edit → View →* and select one of the objects in the *Use in* block.
3. Start the selection by choosing the menu bar sequence *Edit → Execute*

The system produces a where-used list corresponding to your specifications. The different object types (for example material, piece of equipment) are displayed on different pages.
4. From the where-used list you can display further details for the
 - BOM item
Position your cursor on a valid line in the list and use the menu bar sequence *Environment → Item data*.
 - technical object
Position your cursor on a valid line in the where-used list and use the menu bar sequence *Goto → Detail*.
5. To leave the where-used list, use the menu bar sequence *<Object> → Exit*.

Allocating a Bill of Material to a Plant

Allocating a Bill of Material to a Plant

Use

From an organizational perspective, all maintenance bills of material (BOMs) are valid for a particular maintenance planning plant. The planning plant is therefore the area of validity. All the maintenance tasks required are organized in this planning plant.

However, it is possible to allocate a BOM to another maintenance planning plant or several maintenance planning plants, provided that the components in the BOM are also managed in the other plants.



Master records for equipment and functional locations are created in a planning plant. Therefore when you allocate a bill of material (BOM) for a technical object to a plant other than this planning plant, the system will issue a warning.

This is just a warning. Provided that the components in the BOM are also managed in the other plant, plant allocation can take place.

Procedure

1. In the *Technical objects* screen choose *BOM* → *<BOM type>* → *Plant allocation* → *Create*.
You are now on the initial screen for plant allocation.
2. Make all the necessary entries and enter the plant to which you want to allocate your BOM in the *Plant* field in the *Allocate to* section of the screen.
3. Choose *Continue*.
You are now in the *Current Allocations* screen. There you will see the allocation you have specified.
4. Check the allocation using the menu bar sequence *Edit* → *Check allocations*.
The system notes any allocations which cannot be made in a log. This may be the case, for example, when the components in the BOM are not managed in the new plant.
To view the log, use the menu bar sequence *Extras* → *Log*.
5. Save the plant allocation.

Changing the Plant Allocation

1. In the *Technical objects* screen choose *BOM* → *<BOM type>* → *Plant allocation* → *Change*.

You are now on the initial screen for changing the allocation of a BOM to a plant.

2. Enter the required data and choose *Continue*.

You are now on the *Current Allocations* screen and will see a list of the plants to which the BOM is allocated.

3. Make all the necessary changes. For example, you can

- Allocate the BOM to **further plants**

To do this, use the menu bar sequence *Edit* → *New allocations*.

The system opens further entry fields for allocating plants to the BOM and you can make all the entries you require.

- **Delete** existing plant allocations

To do this select all the allocations you want to delete in the *All allocations to BOM* screen. Use the menu bar sequence *Edit* → *Delete allocations*.

The system produces a dialog box with a confirmation prompt. Confirm that you want to delete the allocation by pressing Yes.

4. When you have finished making all your changes, save them.

Displaying the Plant Allocation

Displaying the Plant Allocation

1. In the *Technical objects* screen choose *BOM* → *<BOM type>* → *Plant allocation* → *Display*.
You are now on the initial screen for displaying the allocation of a BOM to a plant.
2. Enter the required data and choose *Continue*.
You are now on the *Current Allocations* screen and will see a list of the plants to which the BOM is allocated.
3. To view other screens on plant allocation, use the menu bar *Goto*, for example *Goto* → *All allocations to BOM*.
4. To leave the transaction, use the menu bar sequence *Allocation to Plant* → *Exit*.