

# Maintenance Task Lists



HELP.PMPRMTL

**Release 4.6B**



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# Maintenance Task Lists

## Purpose

Maintenance task lists describe a sequence of individual maintenance activities which must be performed repeatedly within a company. Task lists are used to standardize these recurring work sequences and to plan them more effectively. Many manufacturers deliver their technical objects together with maintenance task lists; these task lists are, however, frequently created within the company itself.

Activities for a technical object include for example

- Inspections
- Maintenance
- Repairs

Task lists help to reduce the maintenance effort when standardized work sequences change, for example as a result of new legal regulations. You must carry out the changes at exactly one place in the corresponding maintenance task list. All maintenance orders and maintenance items that refer to the maintenance task list automatically receive the actual status of the work sequences.

## Integration

Using maintenance task lists, you can reduce the time required to create maintenance orders and maintenance items as you can refer back to the operations and sequences already entered in the maintenance task list.

Moreover, you can include inspection characteristics from the Quality Management module in maintenance task lists and if necessary, include the task lists in the test equipment management function. This is advisable, for example, if you want to keep individual data for each piece of test equipment or if you want to have a record of the results history. For more information, see [Test Equipment Management \[Ext.\]](#).

## Features

You can use maintenance task lists in the following areas of Plant Maintenance:

- Planned maintenance
- Ongoing maintenance

Maintenance task lists contain important information such as the spares and tools required for the work steps or the time required to perform the work.

## Planned Maintenance

The term “Planned maintenance” includes all the maintenance work you can plan for the scope of work and deadlines, that is, inspection, maintenance and planned repairs.

In the PM application component, you can also define the intervals at which individual work steps should be executed in the task list for planned maintenance. You assign these task lists to a maintenance plan in maintenance planning. This ensures that only operations in the maintenance order that have been assigned to the maintenance package due can be copied when scheduling work. The system creates maintenance orders when a maintenance plan is due.

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**Maintenance Task Lists**

For more information, see [Maintenance Planning \[Ext.\]](#)

**Ongoing Maintenance**

All maintenance work that does not come under planned maintenance is classed under ongoing maintenance.

Task lists for ongoing maintenance serve as the basis for a maintenance order and can be used based on the results of the current inspection.

You can also use maintenance task lists as a model and aid for capturing data when processing maintenance orders by assigning a task list to an order. This considerably reduces the amount of work preparation for maintenance activities.

If, for example, you are creating a maintenance order for a task whose operations have already been described in detail in a maintenance task list, enter only this task list and the performance deadlines in the order. The system will copy the individual operations from the maintenance task list.

For further information, [see Work Scheduling with Maintenance Task Lists \[Ext.\]](#)

**Configurable Maintenance Task Lists**

It is also possible to create super task lists in which you describe all possible operations for maintenance activities for different object types. According to requirements, you can configure a suitable variant for a technical object from the super task list which means that you do not have to create your own task list every time.

For further information, see [Configurable General Maintenance Task Lists \[Page 140\]](#)

# Maintenance Task Lists

## Definition

Maintenance task lists describe a sequence of individual maintenance activities which must be performed repeatedly within a company.

There are three types of maintenance task lists that can be distinguished from one another using indicators:

- [Equipment Task List \[Page 12\]](#)
- [Functional Location Task List \[Page 13\]](#)
- [General Maintenance Task List \[Page 14\]](#)

## Use

You can use all three task list types for ongoing and planned maintenance.

If you want to use the general maintenance task list for planned maintenance you must assign the task list to a maintenance plan or one or more maintenance items. The operations described in the general maintenance task list are performed for all technical objects that you have assigned to the maintenance item. The operations fall due at the times calculated by the system while scheduling the maintenance plan.

For more information on maintenance plans, see the documentation [PM - Maintenance Planning \[Ext.\]](#).

## Structure

You can group together all similar maintenance task lists for groups. The [Task list group \[Page 10\]](#) contains a series of maintenance task lists that describe similar maintenance tasks, for example, oil changes for cars and trucks.

You describe the maintenance tasks to be performed in the individual elements of the maintenance task list. The most important elements are:

- [Operations \[Page 64\]](#)
- [Sub-operations \[Page 76\]](#)
- [Material Components \[Page 84\]](#)
- [Maintenance Packages \[Ext.\]](#)
- [Production Resources/Tools \[Page 93\]](#)
- [Relationships \[Page 123\]](#)

## Task List Group

## Task List Group

### Definition

Maintenance task lists (PM task lists) are grouped into task list groups. A task list group includes all maintenance task lists with similar maintenance flows (for example, oil changes for cars and trucks). Task lists within a task list group are identified by a group counter.

If you create a maintenance task list ([Equipment Task List \[Page 12\]](#), [Task List for Functional Location \[Page 13\]](#) or [General Maintenance Task List \[Page 14\]](#)) for the first time, the system will automatically assign a new group and the counter 01 to your task list.

### Use

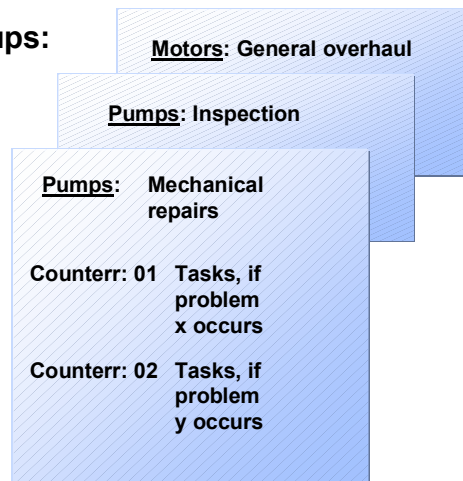
The task list group has more significance for general task lists, as they are called up using the task list group number. Group numbers for general task lists can be assigned either internally or externally. Group numbers for equipment task lists and task lists for functional locations can only be assigned internally.

The SAP System treats all maintenance task lists within a group as one unit. It is therefore recommended that you assign general maintenance task lists to several small groups. This considerably reduces the volume of data that must be processed when the group is accessed and has a positive effect on the system response time.



In your company you have created two groups for "Inspection" and "Mechanical Repairs". The individual maintenance task lists within the group "Mechanical Repairs" are identified by the task list counter numbers 01 and 02.

#### Task list groups:





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**Equipment Task List**

## Equipment Task List

### Definition

Equipment task lists have a specific link to a piece of equipment. Using equipment task lists, you can centrally define and manage maintenance tasks for your pieces of equipment. Equipment task lists can also help you to prepare maintenance plans and orders.

Within a task list group, each equipment task list is identified by a group counter. This enables you, for example, to combine several equipment task lists in one group. Within the group, the system allocates a sequential number - the group counter - to each individual equipment task list.

## Task List for Functional Location

### Definition

A functional location task list is assigned to a specific functional location. Using a functional location task list, you can centrally define and manage maintenance tasks for your functional location. Functional location task lists can also help you to prepare maintenance plans and maintenance orders for functional locations.

Within a task list group, each functional location task list is identified by a group counter. This enables you, for example, to combine several functional location task lists in one group. Within the task list group, the system assigns a sequential number - the group counter - to each individual functional location task list.

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**General Maintenance Task List**

## General Maintenance Task List

### Definition

General maintenance task lists are task lists that are used for general maintenance tasks. They do not refer to a specific technical object. Using general maintenance task lists, you can define and manage sequences of maintenance tasks centrally, and use them for work scheduling.

Within a group, you can create several individual general maintenance task lists. The system automatically assigns a sequential number, the group counter, to each general maintenance task list. This clearly identifies each general maintenance task list within the group.

### Use

General maintenance task lists help you to prepare maintenance plans and orders. Furthermore, you can use these task lists to reduce the time spent creating equipment task lists.

## Operation

### Definition

You can describe the individual maintenance tasks to be performed in the operations. An operation specifies the time, work center and other control information required for the maintenance task. You can describe how the task is to be performed in the operation text.

### Use

Operations have the following tasks in the PM component:

- Determination of capacity requirements
- Specification of whether a task should be carried out internally (internal processing) or externally (external processing)
- Maintenance of status
- Determination of deadlines on the operational level
- Specification of the required spare parts and resources (for example, special tools)
- Determination of flow in task completion through relationships between operations

You can assign service packages to both kinds of operations if this is allowed by the control key you have entered. Using service packages enables you to

- Plan services in all dimensions
- Jointly plan services to be performed in different dimensions
- Define services uniformly
- Structure services in an unlimited number of levels
- Make basic agreements
- Agree on conditions
- Use service catalogs
- Better describe work content

### Control Key

The control key specifies which operations should be performed. You can specify the following, for example:

- Scheduling
- Confirmation
- Settlement
- External processing
- Printing
- Costing

## Operation

- Service specifications maintenance

You define the operation type using a control key. The control key specifies:

- Operation type, that is, whether internally or externally processed
- The business functions to be performed in the operation, for example, whether a purchase order will be created for the operation
- How the operation is handled while it is being processed, for example, whether it will be taken into account in costing or whether it should be printed and confirmed

For each operation it is possible to create data for both internal and external processing.

You must first assign a control key to be able to decide whether the operation should be processed internally or externally. You can enter the control key in the *Operation overview* screen and the detail screens for the individual operations.

## Integration

It is possible that you are not able to overwrite certain values that the system copies into the task list. These values originate from the master record of the work center you have entered in the task list, and are marked with a reference indicator. This indicator shows that these values are obligatory and cannot be overwritten at any point (for example, in a task list or maintenance order) where they refer to the work center.

## Sub-Operations

### Definition

In the PM component, you can create sub-operations for all the operations in a maintenance task list. Sub-operations represent an additional level of detail for an operation and are situated hierarchically below an operation. You can assign several sub-operations to one operation. This can be an advantage in the following scenarios:

- Several work centers are required in one operation.
- Employees with varying qualifications and skills are working simultaneously on the same operation.

Sub-operations may contain some of the same information as operations, for example,

- Work center assignment
- Control key
- Start and end dates

### Structure

There are two types of operations for maintenance task lists in the PM component:

- Internal processing
- External processing



You can divide the operation “Inspection” into two sub-operations:

- Motor inspection
- Building inspection

You can also add a sub-operation to your operation if part of the task is to be processed externally. For example, the sub-operation “motor inspection” could be performed by a third party. In this case, the sub-operation will contain a purchase requisition for the external labor.

You can create different types of sub-operation for one operation. For example, you can create externally processed sub-operations for an **internally** processed operation and vice versa.

For more information on sub-operation, see [Features of the Sub-Operation \[Page 77\]](#).

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**Internally Processed Operations**

## Internally Processed Operations

### Definition

Internally processed operations are operations that are performed in your own company by internal personnel.

### Structure

The detailed data you can enter in internally processed operations can be divided into two basic groups:

- Internally processed data: for example, work, activity type, duration.
- Wage data: for example, wage group, wage type, qualifications.

## External Processing Operations

### Definition

Operations that are performed by a third party are called external processing operations.



You send out a machine construction order to a company. The construction of the machine is therefore an external processing operation. The system automatically creates a purchase requisition from the operation data entered. This purchase requisition contains the quantity and dates. The purchasing department creates a purchase order based on this purchase requisition.

### Structure

The detailed data you can enter in external processing operations can be divided into two basic groups:

- External processing data
- Procurement option data

External processing data contains information from the supplier on net price and planned delivery time. The procurement option data contains vendor account and purchasing information, such as the purchasing info record, purchasing group and organization.

## Control Key

## Control Key

### Definition

The control key is a default value which defines how an operation should be processed.

It is entered in the operation overview or on the detail screen for the operation.



If a default value for the control key was specified in your system using the Customizing function, the system proposes this as the entry. You can overwrite it, if necessary.

### Use

You can define control keys in the Customizing of Plant Maintenance under *Functions and Settings for Order Types* and under *Task List Data*.

You can enter the following information for each control key:

Control Key/Indicator	Use
Schedule	Controls whether an operation is scheduled or determines the time position of a sub-operation.  If you do <b>not</b> set the indicator, the operation or sub-operation is not scheduled.
Determine capacity requirements	Controls whether capacity requirements records are generated for an operation or sub-operation.  If you set this indicator, you must also set the indicator <i>Scheduling</i> .  The system only generates capacity requirements records if you maintain the relevant formulae.
Estimate costs	Controls whether the system considers an operation or sub-operation in costing.
Print	Controls whether you can print shop papers for an operation or sub-operation.
Print time ticket	Controls whether you can print time tickets for an operation or sub-operation.
Completion confirmation	Controls whether and how you confirm an operation or sub-operation.
Print confirmation tickets	Controls whether you can print confirmation tickets for an operation or sub-operation.
External processing	Controls whether an operation or sub-operation is processed externally.
Service	Controls whether you can plan services for an operation.

**Control Key**

<p>Scheduling of an external operation with standard values</p>	<p>Controls whether the system also schedules an operation using its standard values if it is processed externally.</p> <p>This setting is only considered by the system if you also mark the control key as externally processed (field <i>External processing</i>).</p>
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**Maintenance Task Lists for Planned Maintenance**

## Maintenance Task Lists for Planned Maintenance

### Use

You can use maintenance task lists for both recurring and planned maintenance. This includes inspections, preventive maintenance and planned repairs.

Using maintenance task lists for planned maintenance has the following advantages:

- **Improved resources planning**  
Improved planning results in better control over resources, such as manpower and material.
- **Improved production planning**  
Better co-ordination between Plant Maintenance and Production results in more information about planned shutdowns.
- **Improved machine availability**  
Planned preventive maintenance reduces unplanned downtime.

### Integration

In the PM component you can create all three types of maintenance task lists for planned maintenance tasks:

- Equipment task lists
- Functional location task lists
- General task lists

You can find additional information on planned maintenance under [Maintenance Planning in the PM Component \[Ext.\]](#)

### Prerequisites

The prerequisites for creating a maintenance task list are different and depend on the type of maintenance plan for planned maintenance that you use for the task list.

- **Single cycle plans, multiple counter plans**  
You do not have to take any prerequisites into account if you want to use a maintenance task list for single cycle plans or multiple counter plans. The assignment of a maintenance strategy is not necessary.  
  
If a maintenance strategy has been assigned to a maintenance task list, you can also use it for single cycle and multiple counter plans.
- **Strategy plans**  
You must assign a maintenance strategy to a task list if you want to the task list for strategy plans. You can then allocate the maintenance packages from this strategy to the operations within the task list.  
  
A maintenance strategy represents the scheduling rules for preventive maintenance tasks. It contains general scheduling data and describes which maintenance packages

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**Maintenance Task Lists for Planned Maintenance**

are valid for a technical object. A maintenance package is a series of tasks that are to be performed at a given point in time or once a specified counter reading is reached.

By allocating maintenance packages to the individual operations in your task list, you define the frequency in which the operations are to be performed. For example, every two months, every 1000 km, every 500 operating hours.

**Activities**

1. Call up the maintenance task list in the create or change mode, and choose *Operation* → *Overviews* → *Maintenance packages*.

The *Maintenance package overview* screen is displayed.

2. You assign the maintenance packages to the selected operations in the *Maintenance package overview* screen.

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**Number Assignment for Maintenance Task Lists**

## Number Assignment for Maintenance Task Lists

### Use

When you create your first maintenance task list, it will be posted with a group number and a group counter number. The system saves each further task list you create for the same piece of equipment or within the same group will be assigned a counter.

### Number Assignment for Equipment Task Lists and Functional Location Task Lists

Numbers for equipment and functional location task lists are assigned internally. When you have created an equipment or functional location task list, the system issues a message with the number it has assigned to the task list. The first task list you create for a specified piece of equipment or functional location will be identified by a group number and a counter number. Further task lists for the same piece of equipment or functional location will simply be identified by a counter number within the group.

### Number Assignment for General Maintenance Task Lists

Number assignment for general maintenance task lists works on the same principle as for equipment task lists. However, you can assign internal and external numbers to general task lists. The group number is more important for general maintenance task lists as it is used to access the task list.

If you use external number assignment for the general task lists in your company, you must specify an alphanumeric or numeric group identification for the general task list. This number must not have been previously assigned and it must be within the number range defined for your company. The number range for general maintenance task lists in your company is defined using the customizing function. If you want to know which numbers are valid for your maintenance task list type, contact your SAP Systems Administrator.

## Copying Data in Technical Objects

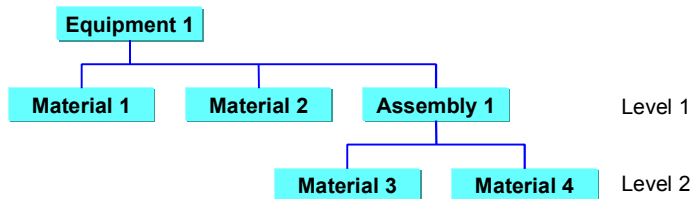
### Use

If you create a maintenance task list for a piece of equipment, or a functional location with a bill of material (BOM), you can use an existing maintenance task list for a piece of equipment or functional location with an identical structure, but its own BOM number, as a reference. The system will only copy certain objects from the reference.

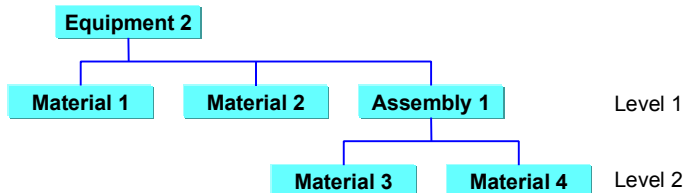
### Features

The following example clearly explains how the system copies data:

**Equipment 1** has the following structure:



**Equipment 2** is bought at a later date. Its structure is identical to that of Equipment 1 and you therefore copy the bill of material from Equipment 1. This means that the bill of material for Equipment 2 has a different number from that of Equipment 1.



The maintenance task list 1 already exists in the *Plant Maintenance* application component for Equipment 1. Materials 1 through 4 from the equipment BOM are assigned to this task list.

## Copying Data in Technical Objects

For Equipment 2, you can create the maintenance task list *task list 2* using the maintenance task list *task list 1* as a reference.

### Result

Maintenance task list *task list 2* contains only materials 3 and 4.

### Reason

When you create a maintenance task list using a reference, the system **only copies parts with an identical bill of material reference**. Only materials 3 and 4 have the same reference in both equipment task lists, that is, *Assembly 1*. In contrast, materials 1 and 2 refer to *Equipment 1* and *Equipment 2* respectively.

### Recommended Change

To ensure that the system copies all the materials assigned to the reference, when you create a maintenance task list using a reference, you must create one bill of material that is valid for all the identically structured pieces of equipment. To do this you must specify a construction type for each piece of equipment and create a bill of material for this construction type. This bill of material is identical to the bill of material for *Equipment 1* from the example. However, as it has an individual number and as this number is included in the master record for each identical bill of material, the identical bill of material reference is produced. When you create a maintenance task list using a reference, the system can therefore copy all the materials assigned in the reference.

## Creation of a Profile

### Use

Often certain fields in different maintenance task lists contain the same values or data. To reduce the entry time required, you can create a profile. A profile contains standard information which you require in the same or similar combinations when processing maintenance task lists.

### Function

**When you create a maintenance task list, you can enter the key for the profile containing the data you require in the initial screen.** The system automatically enters this data in the maintenance task list. You can overwrite the data if necessary. For further information, see [Creating a Maintenance Task List: Initial Screen \[Page 30\]](#).

You can specify the following in a profile:

- The fields in which data will be entered when you create a maintenance task list
- Data to enter in these fields

### Activities

To create a profile in a maintenance task list, choose *Settings* → *Profile*.

## Determination of Validity

## Determination of Validity

### Use

Each element in a maintenance task list (for example, operation, sub-operation, material component) is valid for a certain period of time. You can specify validity by entering the **key date** when creating or changing a task list.

### Features

If you change a task list or an object within a task list using a **change number**, the system overwrites the key date with the “Valid from” date specified for the change number.

The validity of an object depends on

- Processing type, and
- Change number entries

The following table clearly explains the dependencies:

Processing type	Change number	Validity
Create	Yes	Unlimited from the change number date
Create	Yes	Unlimited from the change number date
Change	No	From the last valid date <b>Example:</b> From the date the task list was created or from the change number date if the task list was previously changed using a change number
Change	Yes	From the change number date

## Creation of a Maintenance Task List

### Purpose

**Maintenance task lists describe a sequence of individual maintenance activities which must be performed repeatedly within a company.** The functions for creating data in equipment task lists, functional location task lists and general maintenance task lists are very similar and will therefore be dealt with jointly in this section.

### Process Flow

1. You create a maintenance task list with or without reference and enter the header data (for example, short text, maintenance planner group, status).
2. You create operations and, where necessary, sub-operations and enter detail data for internal or external processing.
3. You can include user data in the operations or sub-operations, as required.
4. You can enter dates for sub-operations if the start or end of the sub-operations affects the operations.
5. You can assign the following objects to the operations:
  - Material components
  - Production resources/tools
  - Maintenance packages
  - Inspection characteristics
6. You can arrange the operations according to time by defining relationships.
7. You can perform a cost analysis.

**See also:**

[Configurable General Maintenance Task List \[Page 140\]](#)

## Creating Maintenance Task Lists

## Creating Maintenance Task Lists

### Use

If you want to describe a sequence of individual maintenance activities that must be performed at continuous intervals, create a maintenance task list. The functions for creating data in equipment task lists, functional location task lists and general maintenance task lists are very similar and will therefore be dealt with jointly in this section.

If you want to create a maintenance task list in which, for example, you describe all possible operations for a particular object type and from which you would later like to configure the necessary operation, create a configurable general maintenance task list. For further information see [Configurable General Maintenance Task Lists \[Page 140\]](#)

### Procedure

1. Use the menu bar sequence *Logistics → Plant maintenance → Maintenance task lists*.

You are now on the *Maintenance Task Lists* menu.

2. Use one of the following menu paths:

Function	Menu path
Create equipment task list	<i>Task lists → For equipment → Create</i>
Create functional location task list	<i>Task lists → For functional location → Create</i>
General maintenance task list	<i>Task lists → General task lists → Create</i>

The initial screen for creating general maintenance task lists is displayed.

3. The data you enter in the initial screen (for example [Creation of a Profile \[Page 27\]](#) as an aid for capturing data) and the features of the [Number Assignment \[Page 24\]](#) are independent of the maintenance task list type you want to create.

Enter the required data as described in the table:

Function	Data entry	Screen
Create equipment task list	Enter the <b>equipment number</b> and if necessary the existing <b>profile number</b> and choose <i>Continue</i> .	If an equipment task list already exists, the <i>Task list overview</i> screen is displayed.  If no equipments task list exists, the <i>General overview</i> screen is displayed.
Create functional location task list	Enter the <b>identification</b> of the functional location and if necessary the existing <b>profile number</b> and choose <i>Continue</i> .	If a functional location task list already exists, the <i>Task list overview</i> screen is displayed.  If no functional location task list exists, the <i>General overview</i> screen is displayed.

Creating Maintenance Task Lists

<p>Create general maintenance task list</p>	<p>Enter <b>no data</b> and choose <i>Continue</i>.</p> <p><b>or:</b></p> <p>Enter the existing <b>group number</b> and choose <i>Continue</i>.</p>	<p>If a general maintenance task list exists, the <i>Operations overview</i> screen is displayed.</p> <p>If no general maintenance task list exists, the <i>General overview</i> screen is displayed.</p>
	<p>Enter the existing <b>external alphanumerical group number</b> and choose <i>Continue</i>.</p> <p><b>or:</b></p> <p>Enter the existing <b>profile number</b> and choose <i>Continue</i>.</p>	<p>The <i>General overview</i> screen is displayed.</p>

4. Depending on the screen displayed, continue as described below:
  - Screen *Task list overview*

To create a new maintenance task list from this screen, use the menu bar sequence *Edit → New entries*.

You are now on the *Header General View* screen where you can process all the relevant data (see [Entering Header Data \[Page 32\]](#)).
  - Screen *Header General View*

To create a new maintenance task list from this screen, enter the task list header data (see [Entering Header Data \[Page 32\]](#)).
5. Save the maintenance task list.

## Entering Header Data

# Entering Header Data

## Use

In the PM component, the maintenance task list header contains data that is valid for the entire maintenance task list. Typical header data is:

- Short text
- Maintenance planner group
- Status
- Maintenance strategy



The system automatically copies the short text from the piece of equipment or functional location as a short text to the maintenance task list. You can overwrite this if necessary.

It is possible that you are not able to overwrite certain values that the system copies into the task list. These values originate from the master record of the work center you have entered in the task list, and are marked with a reference indicator. This indicator shows that these values are obligatory and cannot be overwritten at any point (for example, in a task list or maintenance order) where they refer to the work center.

## Procedure

1. Call up the Header data screen of the maintenance task list (see [Creating Maintenance Task Lists \[Page 30\]](#)).
2. Enter the necessary data.
3. To enter a long text for the task list header, use the menu bar sequence *Task list header* → *Edit long text*.
4. Enter an assembly if necessary. In this way, you can:
  - Create the general maintenance task list for a specific **assembly**  
To do this, enter the number of the required assembly.
  - Create the general maintenance task list for a specific **object type**  
To do this, enter the number of the required construction type.

If you specify a construction type number here, the system selects all task lists that are valid for the reference object **and** all task lists that are valid for the construction type that is specified in the master data for the reference object, when performing an object-based search of task lists.

If you are creating an equipment or functional location task list, you can use a structure display to select the assembly. Use one of the following menu bar sequences:

- *Extras* → *Select construction type* → *Structure display*
- *Extras* → *Select construction type* → *Structure graphic*

**Entering Header Data**

If you enter the assembly number directly in an equipment or functional location task list and the system ascertains that the assembly does not belong to the bill of material for the piece of equipment or functional location, the system will issue an appropriate message. If you choose *Continue* the system will display a structure list from which you can select a valid assembly.

5. When you have finished entering the header data in your task list, you have the following options:
  - Exit the entry mode by saving the data.
  - Create operations (see [Creating an Operation \[Page 66\]](#)).

## Creating a Maintenance Task List Using a Reference

## Creating a Maintenance Task List Using a Reference

### Use

If you want to create a new maintenance task list (equipment task list, functional location task list or general maintenance task list), you can reduce the time required for data entry by using an existing maintenance task list as a reference. The system copies the data in the task list (for example, header data, operations) to the new maintenance task list. You can overwrite data if necessary.

You can use **all** types of task list to create an equipment task list, functional location task list or a general maintenance task list with a reference.

### Procedure

1. Use the menu bar sequence *Logistics → Plant maintenance → Maintenance task lists*.  
You are now on the *Maintenance Task Lists* menu.
2. Use one of the following menu paths:

Function	Menu path
Create equipment task list	<i>Task lists → For equipment → Create</i>
Change functional location task list	<i>Task lists → For functional location → Create</i>
General maintenance task list	<i>Task lists → General task lists → Create</i>

The initial screen for creating general maintenance task lists is displayed.

3. To create an equipment or functional location task list, enter the equipment number or identification for the functional location and all further necessary data in the initial screen.

To create a general maintenance task list, the number you enter depends on the type of number assignment to be used for that particular task list:

- External number assignment:

Enter an alphanumeric key in the field *Task list group*.

- Internal number assignment:

Do not enter any data in the field *Task list group*. As soon as you have entered all the other data for the general task list and saved, the system will automatically assign a number.



Do **not** choose Continue here.

4. Choose one of the following menu paths on the initial screen:

Function	Menu path
----------	-----------

**Creating a Maintenance Task List Using a Reference**

Create an equipment task list using a reference	<i>Equipment task list → Copy reference</i>
Create functional location task list using a reference	<i>Functional location task list → Copy reference</i>
Create general maintenance task list using a reference	<i>General maintenance task list → Copy reference</i>

The dialog box appears.

5. Enter the type of task list you want to use as a reference in the dialog box. Select the maintenance task list type you want to use as a reference and choose *Continue*.
6. Another dialog box appears. It contains fields for the selection of a maintenance task list that you want to use as a reference for the new task list.

Enter the necessary data and choose *Continue*.

7. Another dialog box appears. It contains a list of the task list groups corresponding to the selection you made.



It is possible that only one maintenance task list meets the selection criteria you defined.

No list is displayed in this case. The reference data is displayed in the *Header General View* of the new task list.

Select a maintenance task list from the list whose data you would like to copy to the task list you want to create.

In this case a list will not be displayed. Choose *Continue* to copy the data in the new task list.

8. Change or add to the required data.



The system will **not** copy the following reference data to the new maintenance task list:

- Maintenance packages maintenance task list for planned maintenance
- freely-assigned materials

Pay attention to the special features of maintenance task lists for structured technical objects. For more information see [Copying Data in Structured Technical Objects \[Page 25\]](#).

9. Save the maintenance task list.

**See also:**

[Entering Header Data \[Page 32\]](#)

---

**Creating an Operation**

## Creating an Operation

1. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.

You are now on the screen for entering operations.

2. Enter the necessary data.  
Be careful to enter the correct control key.
3. The following options are available to you once you have entered all the data for the operations.
  - Save the data.
  - Enter additional data for the operations (see [Entering Detail Data in Operations \[Page 68\]](#)).

## Entering Detail Data in Operations

### Use

There are two types of operations for maintenance task lists in the PM system:

- [Internal Processing Operations \[Page 18\]](#)
- [External Processing Operations \[Page 19\]](#)

The data in operations is especially important for work scheduling when the maintenance task list is included in the maintenance order and order is planned.

You can also enter user-defined data for both types of operation. For more information, see [Including User Data in Operations/Sub-Operations \[Page 82\]](#)

### Procedure

1. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.
2. Select the operations for which you want to enter detail data.
3. Select one of the following options to enter detail data:

Function	Menu path	The Detail data screen is displayed.
Enter internal processing data	<i>Operation</i> → <i>Internal processing</i>	for internal processing operations
Enter external processing data	<i>Operation</i> → <i>External processing</i>	for external processing operations

4. Enter the necessary data.

To refer to service specifications during external processing operations see [Creating an External Processing Operation with Reference to Service Specifications \[Page 72\]](#).

You now have the following options:

- Call up the next selected operation to enter detail data for this operation (see step 5).
- Call up another operation type (internal or external processing) and enter detail data (see step 3).
- Go back to the *Operation overview* screen (see step 6).
- Save your entries.

5. To go to the next selected operation, use the menu bar sequence *Operation* → *Further operations* → *Next operation*.

You go to the same data entry screen for the next selected operation.

You can only call up the operations that you have selected in the *Operations overview* screen.

6. Return to the *Operation overview* screen.

You now have the following options:

---

**Entering Detail Data in Operations**

- Save the data.
- Enter user data (see [Including User Data in Operations/Sub-Operations \[Page 82\]](#)).
- Create sub-operations for the operations you have already entered (see [Creating a Sub-Operation \[Page 78\]](#)).

## Including User Data in Operations/Sub-Operations

### Use

User data consists of all the fields that are defined using the customizing function and identified by a field key. They can be used to include additional, user-specific data for a particular operation or sub-operation.

You can define the following fields:

- General user fields
  - 10 character fields
  - 20 character fields
- Quantity fields
- Value fields
- Date fields
- Selection fields

### Procedure

1. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.
2. Select the operations and sub-operations for which you want to enter user data.
3. Use the menu bar sequence *Operation* → *User data*.

The *User data* screen is displayed. The data that you have already entered for the operation/sub-operation is displayed here.

4. To enter your operation-specific user data, enter the key in the *Field key* field.



You can only use the keys that you have defined in Customizing.

5. Choose *Continue*.

The system will display the fields defined for this key.
6. Enter the necessary data.

If you have selected more than one operation or sub-operation, you can call them up using the menu bar sequence *Operation* → *Further operations* → *Next operation*.
7. The following options are available to you once you have entered all the data.
  - You can return to the screen *Operation overview*. To do this, choose *Goto* → *Back*.
  - Save the user data.

---

**Creating Ext. Ops. With Service Specification Ref.**

## Creating Ext. Ops. With Service Specification Ref.

### Use

When you create externally processed operations based on service specifications (see [Service Specifications \[Ext.\]](#)), you can use the general task description as stored in the service specifications. You must describe how to perform the task in the operation of your maintenance task list - not in the service specifications - as only there can you enter materials, production resources/tools, personnel and so on.

As a maintenance task list is exploded in a maintenance order, the system creates a purchase requisition that also refers to the service specifications used in the operation.

For a detailed description of service specifications and external services management, see the documentation *MM - External Service Management*. The following topic merely describes how to include service specifications in maintenance task lists.

### Procedure

1. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.

2. Enter a control key in the operation you want to have a reference to service specifications to create the reference to external services management. The control key must be flagged as a *Service* indicator.

3. Enter the operation short text and choose *Continue*.

You are now on the screen for external processing.

4. Enter all the relevant data, for example, purchase order quantity, purchase order quantity unit, material group and purchasing group.

5. Choose *Continue*.

A pop-up window will appear and the system will ask you if you want to create a hierarchy.

If you answer **YES**, perform steps 5 and onwards.

If you answer **NO**, perform step 6.

6. Create the hierarchy (see documentation *MM - Service*).

To call up the individual service lines for a grouping level, double click on the level.

You are now on the screen for maintaining service specifications in externally processed operations.

7. Position your cursor on the service line and enter the service.

You can also select the service using the menu bar sequence *Service specs.* → *Service selection*

In the pop-up window that appears, select the purchase requisition or purchasing object you want to use as a reference. The system copies the specifications to the service lines in the externally processed operation.

8. Return to the data screen for external processing.

**Creating Ext. Ops. With Service Specification Ref.**

The system copies the purchase quantity and the corresponding quantity unit from the service lines and shows the net price summed up for this operation. You can no longer change the data in the screen for external processing.



On the screen for external processing data, you may also refer to an outline agreement or outline agreement item. The system automatically transfers this reference to the purchase order requisition when an order pointing to this task list is released (see documentation *MM - Purchasing*).

---

**Assigning Maintenance Packages**

## Assigning Maintenance Packages

### Use

If you want to use a maintenance task list for planned maintenance (see [Maintenance Task Lists for Planned Maintenance \[Page 22\]](#)) you can assign maintenance packages to individual operations in a maintenance task list. You cannot assign maintenance packages to sub-operations.

The assignment of maintenance packages has been simplified for Release 4.5A. You can also assign maintenance packages as before (up to Release 4.5A). For more information see [Assigning Maintenance Packages \(to Release 4.5A\) \[Ext.\]](#).

### Prerequisites

You have entered a maintenance strategy in the header of the maintenance task list (see second step).

### Procedure

1. Call up the maintenance task list in create or change mode.
2. If you have not yet assigned a maintenance strategy to a maintenance task list, use the menu bar sequence *Goto* → *Task list header* → *General view*.
  - a) Enter a maintenance strategy in the *Header General view* screen.
  - b) Use the menu bar sequence *Goto* → *Operation overview*.
3. Choose *Maintenance packages*.

The *Maintenance package overview* screen is displayed.
4. Select the packages that you want to assign to individual operations.



Once you have assigned maintenance packages to operations, you cannot change the maintenance strategy assigned to your maintenance task list.

5. Save the maintenance task list.

## Creating a Sub-Operation

### Use

Sub-operations represent an additional level of detail for an operation and are situated hierarchically below an operation. You can create different types of sub-operation for one operation. For example, you can create **externally** processed sub-operations for **internally** processed **sub**-operations and vice versa.

### Procedure

1. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.
2. Enter an operation (see [Creating an Operation \[Page 66\]](#)) and choose *Continue*.
3. In the data entry line below the operation you have just entered, the system will propose the next sequential number.



You have just entered operation 0030.

In the next operation line you will see the number 0040.

4. Overwrite the number proposed by the system with the number of the operation that you have just created (0030 in the above example). Enter the number of the sub-operation in the column *UVrg*. Enter the necessary data.
5. To create more sub-operations for the same or another operation, repeat step 4 as often as required.
6. To insert a sub-operation in a list of existing operations, position your cursor on the operation line **following** the operation for which you want to create a sub-operation.



If you want to create a sub-operation for operation 0030, position your cursor on the operation 0040.

Then use the menu bar sequence *Edit* → *Insert*.

The system enters an appropriate line where you can enter data. Enter the required data as described in the previous steps:

7. To display your entries, use the menu bar sequence *Goto* → *Operation overview*
8. If you assign a sub-operation to the wrong operation, you can easily change it by overwriting the operation number with the number of the operation to which the sub-operation should be assigned, and choosing *Continue*.
9. The following options are available to you once you have created all the necessary sub-operations.
  - Save the data.
  - Enter further data for the sub-operations.

---

**Creating a Sub-Operation**

For more information on the data you can enter for sub-operations, see

- [Including Detail Data in Sub-Operations \[Page 81\]](#)
- [Entering Dates in Sub-Operations \[Page 80\]](#)
- [Including User Data in Operations/Sub-Operations \[Page 82\]](#)

## Entering Dates in Sub-Operations

### Use

You can specify in a sub-operation when you want it to start or end in relation to the relevant operation. To do this, use the start/end reference date together with the start/end offset. The system uses these specifications to calculate the start or end date for the sub-operation.

The time references have no influence on the duration of a sub-operation. The actual duration of a sub-operation is specified in the detail data of the sub-operation. It is not used for scheduling an operation. Only the duration specified in the operation is used for scheduling.

### Procedure

1. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.
2. Select the sub-operation or sub-operations for which you want to enter the start and end dates.
3. Use the menu bar sequence *Operation* → *Sub-operation deadline*.  
You are now on the *Sub-Operation - Usage dates* screen.
4. Enter the necessary data.

Note that you must enter a **positive** offset for the start of a sub-operation (start of the operation plus n units of time) and a **negative** offset for the end of the sub-operation (end of the operation minus n units of time).

5. Save the deadlines.

---

**Including Detail Data in Sub-Operations**

## Including Detail Data in Sub-Operations

### Use

You can enter detail data for operations and sub-operations in the PM system. There are two types of sub-operations corresponding to the operations:

- [Internal Processing Operations \[Page 18\]](#)
- [External Processing Operations \[Page 19\]](#)

You can enter user-specific data for both types of sub-operations. For more information, see [Including User Data in Operations/Sub-Operations \[Page 82\]](#)

### Procedure

Execute the steps described in [Entering Detail Data in Operations \[Page 68\]](#).

## Including User Data in Operations/Sub-Operations

### Use

User data consists of all the fields that are defined using the customizing function and identified by a field key. They can be used to include additional, user-specific data for a particular operation or sub-operation.

You can define the following fields:

- General user fields
  - 10 character fields
  - 20 character fields
- Quantity fields
- Value fields
- Date fields
- Selection fields

### Procedure

8. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.
9. Select the operations and sub-operations for which you want to enter user data.
10. Use the menu bar sequence *Operation* → *User data*.

The *User data* screen is displayed. The data that you have already entered for the operation/sub-operation is displayed here.

11. To enter your operation-specific user data, enter the key in the *Field key* field.



You can only use the keys that you have defined in Customizing.

12. Choose *Continue*.

The system will display the fields defined for this key.

13. Enter the necessary data.

If you have selected more than one operation or sub-operation, you can call them up using the menu bar sequence *Operation* → *Further operations* → *Next operation*.

14. The following options are available to you once you have entered all the data.
  - You can return to the screen *Operation overview*. To do this, choose *Goto* → *Back*.
  - Save the user data.

## Documentation of Changes

# Documentation of Changes

## Use

You can document changes to maintenance task lists. This may be necessary in the following cases for example:

- New environmental protection or occupational safety regulations come into effect affecting continuous and regular maintenance.
- Changes may require further tasks in the plant and must be traceable (for example, using another spare part leads to changes in the maintenance task list).

Change documents are sufficient if you do not require a precise historical presentation for changes in the maintenance task list; you can make the changes without a history.

## Prerequisites

If you make changes with a history, the field *Active* for the object type *Plan* must be selected in the change master record that you create or use for the changes.

To define the object type *Plan*, choose *Logistics* → *Central functions* → *Engineering change management* → *Change master record* → *Change* and then *Goto* → *Object types*.

## Features

You have two options for modifying a maintenance plan or its elements. You can

- change with a history,
- change without a history.

## Changes with a History

If you make changes to your maintenance task list with a history, the system will document and save these changes along with the change management data to produce change master records. This means, at any time, you can call up:

- The data contained in the task list before the changes were made
- Who made the changes
- When the changes were made
- Which fields were changed

When you change a maintenance task list with a history, you must enter the relevant change number in the initial screen of the change transaction. Only then will the system document the changes. The changes are valid from the [validity date \[Page 28\]](#) for the change number. The change number identifies the change master record. In the PM system, change master records are maintained using **Engineering Change Management**.

You can find additional information on maintenance task lists and engineering change management in the documentation [Changing Task Lists with Reference to a Change Number \[Ext.\]](#)

### Changes without a History

If you make changes to your maintenance task list without a history, the system only documents the changes using change documents. The system automatically creates change documents for all the changes you make to the task list. In contrast to changes with a history, change documents do not display task list data for a certain period or date. On the contrary, they only show who changed what and when. They therefore serve to monitor changes.

When you change your task list without a history, you must not enter a change number in the initial screen of the change transaction. The changes you make will be valid from the last validity date entered in the task list.

### Activities

Changes with a History	Changes without a History
Enter a change number in the initial screen of the change transaction.	Do not enter a change number in the initial screen of the change transaction.
The system creates change master records.	The system creates change documents.

You can find additional information on making changes under [Changing Maintenance Task Lists \[Page 58\]](#).

## Reasons for Documenting Changes

## Reasons for Documenting Changes

The following table helps you to decide when you should make changes to maintenance task lists with a history and when without.

Reason	y/n	Change type
Do the changes need to be documented?	yes	<b>With</b> change history, this means with reference to a change master record
	no	<b>Without</b> history
Are there legal requirements for a change history?	yes	<b>With</b> change history, this means with reference to a change master record
	no	<b>Without</b> history

Answer the following questions to decide whether an existing change number is suitable for your requirements and can be assigned to a maintenance task list:

- What object types or objects are changed owing to this change number?
- What validity period has been set?
- Why do the changes have to be made?

If no existing change number is suitable, you create a new change master record.

## Changing Maintenance Task Lists

### Use

You can make changes to a maintenance task list and document these changes as required using a change number. For further information, see [Documentation of Changes \[Page 48\]](#).

### Prerequisites

For further information on the prerequisites, see [Documentation of Changes \[Page 48\]](#).

### Procedure

1. Use the menu bar sequence *Logistics → Plant maintenance → Maintenance task lists*.  
You are now on the *Maintenance Task Lists* menu.
2. Use one of the following menu paths:

Function	Menu path
Changing equipment task list	<i>Task lists → For equipment → Change</i>
Changing functional location task list	<i>Task lists → For functional location → Change</i>
Changing general maintenance task list	<i>Task lists → General task lists → Change</i>

The initial screen for changing maintenance task lists is displayed.

3. Enter the required data as described in the following table.

If you are working with a change number and would like to determine whether a change master record is suitable use the menu bar sequence *Logistics → Central functions → Engineering change management* and then *Change master → Display*.

Function	Data entry	Screen
Changing equipment task list	Enter the <b>equipment number</b> and if necessary a <b>change number</b> and choose <i>Continue</i> .	If <b>several</b> equipment task list exist, the <i>Task list overview</i> screen is displayed.  If only <b>one</b> equipment task list exists, the <i>Operations overview</i> screen is displayed.
Changing functional location task list	Enter the <b>identification</b> of the functional location and if necessary a <b>change number</b> and choose <i>Continue</i> .	If <b>several</b> task list exists for the functional location, the <i>Task list overview</i> screen is displayed.  If only <b>one</b> task list exists for the functional location, the <i>Operation list overview</i> screen is displayed.

## Changing Maintenance Task Lists

Changing general maintenance task list	Enter the <b>group number</b> and if necessary a <b>change number</b> and choose <i>Continue</i> .	If <b>several</b> general maintenance task list exists, the <i>Task list overview</i> screen is displayed.  If only <b>one</b> general maintenance task list exists, the <i>Operations overview</i> screen is displayed.
--	--	--



If you enter a change number and choose *Continue*, the system will issue a warning that the key date will be overwritten with the "Valid from" date from the change master record.

Choose *Continue* to confirm if you want to use the change number. If not, change your input.

4. Depending on the screen displayed, continue as described below:
  - Screen *Task list overview*

In this screen, select the task lists you want to change, and choose the screen you require by using the appropriate menu bar sequence.

You can select more than one maintenance task list simultaneously and call up the different task lists using *Next task list* or *Last task list*.
  - Screen *Operation overview*

You can either change data in the existing operations, add a new operation or delete (see [Subsequently Entering Operations \[Page 67\]](#) or [Deleting Operations/Sub-Operations \[Page 83\]](#)).

To change certain data, select the corresponding operations and use the menu bars to go to the appropriate screens.
5. Save the maintenance task list.

## Displaying the Change Master Record

1. Use the menu bar sequence *Logistics → Central functions → Engineering change management* and then *Change master → Display*.

The initial screen for displaying change master records is displayed.

2. Choose *Continue*.

The Change master header is displayed.

3. Use the menu bar sequence *Environment → Evaluations → Task list changes*.

The screen containing all task list changes for a change number is displayed.

For more information on change master records see the documentation *Logistics - Engineering change management*.

---

**Displaying Change Documents**

## Displaying Change Documents

### Use

There are two possibilities of displaying change documents for maintenance task lists. One provides the original documents which show the changes in a rather technical form while the other gives you a prepared list of change documents with explanatory notes. Both options are available to you either when making changes with a change number or without.

### Procedure

1. Use the menu bar sequence *Logistics → Plant maintenance → Maintenance task lists*.

You are now on the *Maintenance Task Lists* menu.

2. Use one of the following menu bar sequences:

– *Evaluations → Change documents → Document information*

– *Evaluations → Change documents → Document evaluation*

You are now on the *Display PM Task List Change Documents* screen.

3. Enter the criteria the system is to use to select and display the change documents.
4. Use the menu bar sequence *Program → Execute*.

You obtain a list of all the changes carried out in the selected maintenance task lists. The changes are displayed in chronological order. You can call up further data from this list using the menu bar sequences stated.

## Processing Maintenance Task Lists

To call up the individual functions in the table use the menu bar sequence *Logistics → Plant maintenance → Maintenance task lists*.

Function	Menu path	What you should know
Change <b>one</b> maintenance task list	<i>Task lists → &lt;Task list type&gt; → Change</i>	For further information, see <a href="#">Documentation of Changes [Page 48]</a> .
Change <b>several</b> task list	<i>Task lists → List editing → Change</i>	For more information see <a href="#">Working with Lists [Ext.]</a> and <a href="#">Documenting Changes [Page 48]</a> .
Display one task list	<i>Task lists → &lt;Task list type&gt; → Display</i>	
Display <b>several</b> task list	<i>Task lists → List editing → Display</i>	For more information see <a href="#">Working with Lists [Ext.]</a>
Display <b>one</b> task list with the object overview	<i>Task lists → &lt;Task list type&gt; → Display and then Goto → Object overview</i>	<p>You select the object overview when you want to display a random combination of individual objects from a task list on the form of a structured list, for example, task list headers, operations, material components, inspection characteristics. You can generate an operations-independent list (for example, setting up all production resources/tools and materials used) and display operations and sub-operations separately.</p> <p>You can define a composition of the individual objects and fields that meets your specific requirements in Customizing and in the <i>Settings</i> menu.</p>

## Processing Maintenance Task Lists

<p>Display <b>more than one</b> task list with the object overview</p>	<p><i>Task lists → List editing → Display (multi-level)</i></p>	<p>You select the object overview when you want to display a random combination of individual objects from a task list on the form of a structured list, for example, task list headers, operations, material components, inspection characteristics. You can generate an operations-independent list (for example, setting up all production resources/tools and materials used) and display operations and sub-operations separately. You can define a composition of the individual objects and fields that meets your specific requirements in Customizing and in the <i>Settings</i> menu.</p>
<p>Print a task list</p>	<p><i>Evaluations → Print</i></p>	<p>This is of particular use if you have extensive task lists and require a complete paper version to check them or if you want to display certain criteria in the task list (so-called views); see <a href="#">Printing Maintenance Task Lists [Page 57]</a></p>

## Printing Maintenance Task Lists

### Use

You can only run the program for printing maintenance task lists for one type of task list at a time. If, for example, you want to print equipment task lists and functional location task lists, you must run the program once for equipment task lists and again for functional location task lists.

Using selection criteria, you can specify what is to be printed. For example, you may want to print the long text and/or also the material components.

### Procedure

1. Choose the menu bar sequence *Logistics* → *Plant maintenance* → *Maintenance task lists* and then *Evaluations* → *Print*.

The screen *Task List Printing List* is displayed.

2. Select the task list type whose maintenance task list you want to print and enter the required data.

Within a task list type you can restrict the selection further by entering a specified number range, group and/or group counter.

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

The system displays a list of all the maintenance task lists corresponding to your selection criteria.

4. Print the list by choosing *List* → *Print*.

## Changing Maintenance Task Lists

## Changing Maintenance Task Lists

### Use

You can make changes to a maintenance task list and document these changes as required using a change number. For further information, see [Documentation of Changes \[Page 48\]](#).

### Prerequisites

For further information on the prerequisites, see [Documentation of Changes \[Page 48\]](#).

### Procedure

4. Use the menu bar sequence *Logistics → Plant maintenance → Maintenance task lists*.  
You are now on the *Maintenance Task Lists* menu.
5. Use one of the following menu paths:

Function	Menu path
Changing equipment task list	<i>Task lists → For equipment → Change</i>
Changing functional location task list	<i>Task lists → For functional location → Change</i>
Changing general maintenance task list	<i>Task lists → General task lists → Change</i>

The initial screen for changing maintenance task lists is displayed.

6. Enter the required data as described in the following table.

If you are working with a change number and would like to determine whether a change master record is suitable use the menu bar sequence *Logistics → Central functions → Engineering change management* and then *Change master → Display*.

Function	Data entry	Screen
Changing equipment task list	Enter the <b>equipment number</b> and if necessary a <b>change number</b> and choose <i>Continue</i> .	If <b>several</b> equipment task list exist, the <i>Task list overview</i> screen is displayed.  If only <b>one</b> equipment task list exists, the <i>Operations overview</i> screen is displayed.
Changing functional location task list	Enter the <b>identification</b> of the functional location and if necessary a <b>change number</b> and choose <i>Continue</i> .	If <b>several</b> task list exists for the functional location, the <i>Task list overview</i> screen is displayed.  If only <b>one</b> task list exists for the functional location, the <i>Operation list overview</i> screen is displayed.

Changing Maintenance Task Lists

<p>Changing general maintenance task list</p>	<p>Enter the <b>group number</b> and if necessary a <b>change number</b> and choose <i>Continue</i>.</p>	<p>If <b>several</b> general maintenance task list exists, the <i>Task list overview</i> screen is displayed.</p> <p>If only <b>one</b> general maintenance task list exists, the <i>Operations overview</i> screen is displayed.</p>
---	--	---



If you enter a change number and choose *Continue*, the system will issue a warning that the key date will be overwritten with the "Valid from" date from the change master record.

Choose *Continue* to confirm if you want to use the change number. If not, change your input.

5. Depending on the screen displayed, continue as described below:

- Screen *Task list overview*

In this screen, select the task lists you want to change, and choose the screen you require by using the appropriate menu bar sequence.

You can select more than one maintenance task list simultaneously and call up the different task lists using *Next task list* or *Last task list*.

- Screen *Operation overview*

You can either change data in the existing operations, add a new operation or delete (see [Subsequently Entering Operations \[Page 67\]](#) or [Deleting Operations/Sub-Operations \[Page 83\]](#)).

To change certain data, select the corresponding operations and use the menu bars to go to the appropriate screens.

6. Save the maintenance task list.

## Assigning Maintenance Packages

# Assigning Maintenance Packages

## Use

If you want to use a maintenance task list for planned maintenance (see [Maintenance Task Lists for Planned Maintenance \[Page 22\]](#)) you can assign maintenance packages to individual operations in a maintenance task list. You cannot assign maintenance packages to sub-operations.

The assignment of maintenance packages has been simplified for Release 4.5A. You can also assign maintenance packages as before (up to Release 4.5A). For more information see [Assigning Maintenance Packages \(to Release 4.5A\) \[Ext.\]](#).

## Prerequisites

You have entered a maintenance strategy in the header of the maintenance task list (see second step).

## Procedure

6. Call up the maintenance task list in create or change mode.
7. If you have not yet assigned a maintenance strategy to a maintenance task list, use the menu bar sequence *Goto* → *Task list header* → *General view*.
  - a) Enter a maintenance strategy in the *Header General view* screen.
  - b) Use the menu bar sequence *Goto* → *Operation overview*.
8. Choose *Maintenance packages*.

The *Maintenance package overview* screen is displayed.
9. Select the packages that you want to assign to individual operations.



Once you have assigned maintenance packages to operations, you cannot change the maintenance strategy assigned to your maintenance task list.

10. Save the maintenance task list.

## Deletion of Maintenance Task Lists

### Use

You can archive and delete maintenance task lists.

### Prerequisite

You can only delete a maintenance task list(group counter) when the task list group is no longer being used in another object such as a maintenance order or a maintenance plan item. As soon as a task list group is in use, the system will not allow you to delete the group counters in it.

### Features

You can delete a group counter at two levels or alternatively, set it with a deletion flag:

- [Deleting at Maintenance Task List Level \[Page 62\]](#)

The system then sets a **deletion flag** that you can no longer undo. The group counter is logically deleted and will no longer be displayed at the maintenance task list level.

The group counter is only physically deleted by the archiving program. This program deletes all group counters with deletion flags from the database.

- [Setting a Deletion Flag in the Task List Header \[Page 63\]](#)

the system sets a **deletion flag** that you can undo if necessary. The system displays the group counter in the header overview.

As soon the group counter has been marked with a deletion flag, you can no longer assign it to other objects such as a maintenance order, single cycle plan or maintenance plan item.

You can physically delete maintenance task lists with the archiving program by selecting all task lists that have been marked with a deletion flag.

For further information on archiving maintenance task lists see [Archiving of Maintenance Task Lists \(PM-PRM-TL\) \[Ext.\]](#).

---

**Deleting at Maintenance Task List Level**

## Deleting at Maintenance Task List Level

### Use

You should delete at maintenance task list overview level when you want to delete several maintenance task lists, in other words, group counters, at the same time.

The system then sets a deletion indicator that you can no longer undo. The group counter is logically deleted and will no longer be displayed at the maintenance task list level.

### Procedure

1. Call up the maintenance task list in change mode.
2. Select the group counter you want to delete on the maintenance task list level.
3. Use the menu bar sequence *Edit* → *Delete*.

You will come to a dialog box with a confirmation prompt.

4. If you do not want to delete the group counter, exit the window.

If you do want to delete the group counter, confirm this by pressing *Yes*.

Once you have confirmed, the system produces a message to inform you that the group counter will be flagged with a deletion indicator.

5. Choose *Continue*.

The group counters you selected disappear from the *TL overview*.

The system enters the deletion indicator in the task list header of each group for each group counter selected.

6. Save the maintenance task list.

### Result

The system archives and deletes the maintenance task list the next time the archiving program is run.

## Setting a Deletion Flag in the Task List Header

### Use

Set a deletion flag for the maintenance task lists that the system can also display in the *Task list overview* screen. You can undo the deletion flag if necessary.

### Procedure

1. Call up the maintenance task list in change mode.
2. Call up the task list header by choosing one of the following options:
  - Select *Goto → Task list overview → General overview*.
  - Select a group counter from the Task list overview and select *Task list header → General overview*.
3. In the block *Assigning to Task list header* select a *deletion flag*.
4. Save the maintenance task list.
5. Confirm the information message by choosing *Continue*.

The system sets a deletion flag for the maintenance task list.

### Result

You can archive and delete the task list the next time the archiving program is run.

## Operation

# Operation

## Definition

You can describe the individual maintenance tasks to be performed in the operations. An operation specifies the time, work center and other control information required for the maintenance task. You can describe how the task is to be performed in the operation text.

## Use

Operations have the following tasks in the PM component:

- Determination of capacity requirements
- Specification of whether a task should be carried out internally (internal processing) or externally (external processing)
- Maintenance of status
- Determination of deadlines on the operational level
- Specification of the required spare parts and resources (for example, special tools)
- Determination of flow in task completion through relationships between operations

You can assign service packages to both kinds of operations if this is allowed by the control key you have entered. Using service packages enables you to

- Plan services in all dimensions
- Jointly plan services to be performed in different dimensions
- Define services uniformly
- Structure services in an unlimited number of levels
- Make basic agreements
- Agree on conditions
- Use service catalogs
- Better describe work content

## Control Key

The control key specifies which operations should be performed. You can specify the following, for example:

- Scheduling
- Confirmation
- Settlement
- External processing
- Printing
- Costing

- Service specifications maintenance

You define the operation type using a control key. The control key specifies:

- Operation type, that is, whether internally or externally processed
- The business functions to be performed in the operation, for example, whether a purchase order will be created for the operation
- How the operation is handled while it is being processed, for example, whether it will be taken into account in costing or whether it should be printed and confirmed

For each operation it is possible to create data for both internal and external processing.

You must first assign a control key to be able to decide whether the operation should be processed internally or externally. You can enter the control key in the *Operation overview* screen and the detail screens for the individual operations.

## Integration

It is possible that you are not able to overwrite certain values that the system copies into the task list. These values originate from the master record of the work center you have entered in the task list, and are marked with a reference indicator. This indicator shows that these values are obligatory and cannot be overwritten at any point (for example, in a task list or maintenance order) where they refer to the work center.

---

**Creating an Operation**

## Creating an Operation

4. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.

You are now on the screen for entering operations.

5. Enter the necessary data.  
Be careful to enter the correct control key.
6. The following options are available to you once you have entered all the data for the operations.
  - Save the data.
  - Enter additional data for the operations (see [Entering Detail Data in Operations \[Page 68\]](#)).

## Subsequently Entering Operations

1. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.
2. Position the cursor where the new operation should be and use the menu bar sequence *Edit* → *Insert*.

The system displays a new entry line ready for input.

3. Enter the necessary data.
4. Enter detail data for the operation if necessary (see [Entering Detail Data in the Operation \[Page 68\]](#)).
5. Save the maintenance task list.



If you insert an operation in a maintenance task list for planned maintenance which is already in operation the maintenance items that were already released at the time the task list was changed will not contain the new operation.

## Entering Detail Data in Operations

## Entering Detail Data in Operations

### Use

There are two types of operations for maintenance task lists in the PM system:

- [Internal Processing Operations \[Page 18\]](#)
- [External Processing Operations \[Page 19\]](#)

The data in operations is especially important for work scheduling when the maintenance task list is included in the maintenance order and order is planned.

You can also enter user-defined data for both types of operation. For more information, see [Including User Data in Operations/Sub-Operations \[Page 82\]](#)

### Procedure

5. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.
6. Select the operations for which you want to enter detail data.
7. Select one of the following options to enter detail data:

Function	Menu path	The Detail data screen is displayed.
Enter internal processing data	<i>Operation</i> → <i>Internal processing</i>	for internal processing operations
Enter external processing data	<i>Operation</i> → <i>External processing</i>	for external processing operations

8. Enter the necessary data.

To refer to service specifications during external processing operations see [Creating an External Processing Operation with Reference to Service Specifications \[Page 72\]](#).

You now have the following options:

- Call up the next selected operation to enter detail data for this operation (see step 5).
- Call up another operation type (internal or external processing) and enter detail data (see step 3).
- Go back to the *Operation overview* screen (see step 6).
- Save your entries.

7. To go to the next selected operation, use the menu bar sequence *Operation* → *Further operations* → *Next operation*.

You go to the same data entry screen for the next selected operation.

You can only call up the operations that you have selected in the *Operations overview* screen.

8. Return to the *Operation overview* screen.

You now have the following options:

---

**Entering Detail Data in Operations**

- Save the data.
- Enter user data (see [Including User Data in Operations/Sub-Operations \[Page 82\]](#)).
- Create sub-operations for the operations you have already entered (see [Creating a Sub-Operation \[Page 78\]](#)).

## Entering QM Data for the Operation

## Entering QM Data for the Operation

### Use

You can include inspection characteristics for the *Quality Management* (QM) application component in maintenance task lists (PM task lists) or you can enter planned inspection characteristics. This is advisable, for example, if you want to keep individual data for each piece of test equipment or if you want to have a record of the results history. For more information see the documentation *Quality Management - Master Inspection Characteristics*.

You can include the maintenance task list in the [Test Equipment Management \[Ext.\]](#).

### Procedure

1. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.
2. Select the operations for which you want to enter QM data.
3. Choose *Operation* → *QM data*.

You reach the screen *Operation: QM Data*.

Enter the necessary QM data. The data which you maintain here affects the subsequent entry of inspection results and the inspection point completion (= test equipment valuation).

In the standard system, variant "2" (manual test equipment valuation) is set for the inspection point completion.

4. Return to the operation overview.
5. Maintain the inspection characteristics.
  - a) Select the operation or operations, to which you want to assign inspection characteristics (for example, diameter, color) and choose *Operation* → *Inspection characteristic overview*.

You reach the characteristics overview.

- b) Enter a master inspection characteristic or a planned inspection characteristic.

- **Master inspection characteristic**

Assign a master inspection characteristic and choose *Continue*.

- **Inspection characteristic**

Select the field *QN* (quantitative) or *QL* (qualitative). Enter a short text and choose *Continue*. You reach a dialog box, in which you can maintain the required data.

For more information, see [Inspection Characteristics \[Ext.\]](#).

- c) Return to the operation overview for the task list.

6. Save the task list.

## Including User Data in Operations/Sub-Operations

### Use

User data consists of all the fields that are defined using the customizing function and identified by a field key. They can be used to include additional, user-specific data for a particular operation or sub-operation.

You can define the following fields:

- General user fields
  - 10 character fields
  - 20 character fields
- Quantity fields
- Value fields
- Date fields
- Selection fields

### Procedure

15. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.

16. Select the operations and sub-operations for which you want to enter user data.

17. Use the menu bar sequence *Operation* → *User data*.

The *User data* screen is displayed. The data that you have already entered for the operation/sub-operation is displayed here.

18. To enter your operation-specific user data, enter the key in the *Field key* field.



You can only use the keys that you have defined in Customizing.

19. Choose *Continue*.

The system will display the fields defined for this key.

20. Enter the necessary data.

If you have selected more than one operation or sub-operation, you can call them up using the menu bar sequence *Operation* → *Further operations* → *Next operation*.

21. The following options are available to you once you have entered all the data.

- You can return to the screen *Operation overview*. To do this, choose *Goto* → *Back*.
- Save the user data.

---

**Creating Ext. Ops. With Service Specification Ref.**

## Creating Ext. Ops. With Service Specification Ref.

### Use

When you create externally processed operations based on service specifications (see [Service Specifications \[Ext.\]](#)), you can use the general task description as stored in the service specifications. You must describe how to perform the task in the operation of your maintenance task list - not in the service specifications - as only there can you enter materials, production resources/tools, personnel and so on.

As a maintenance task list is exploded in a maintenance order, the system creates a purchase requisition that also refers to the service specifications used in the operation.

For a detailed description of service specifications and external services management, see the documentation *MM - External Service Management*. The following topic merely describes how to include service specifications in maintenance task lists.

### Procedure

9. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.
10. Enter a control key in the operation you want to have a reference to service specifications to create the reference to external services management. The control key must be flagged as a *Service* indicator.
11. Enter the operation short text and choose *Continue*.  
You are now on the screen for external processing.
12. Enter all the relevant data, for example, purchase order quantity, purchase order quantity unit, material group and purchasing group.
13. Choose *Continue*.  
A pop-up window will appear and the system will ask you if you want to create a hierarchy.  
If you answer *YES*, perform steps 5 and onwards.  
If you answer *NO*, perform step 6.
14. Create the hierarchy (see documentation *MM - Service*).  
To call up the individual service lines for a grouping level, double click on the level.  
You are now on the screen for maintaining service specifications in externally processed operations.
15. Position your cursor on the service line and enter the service.  
You can also select the service using the menu bar sequence *Service specs.* → *Service selection*  
In the pop-up window that appears, select the purchase requisition or purchasing object you want to use as a reference. The system copies the specifications to the service lines in the externally processed operation.
16. Return to the data screen for external processing.

**Creating Ext. Ops. With Service Specification Ref.**

The system copies the purchase quantity and the corresponding quantity unit from the service lines and shows the net price summed up for this operation. You can no longer change the data in the screen for external processing.



On the screen for external processing data, you may also refer to an outline agreement or outline agreement item. The system automatically transfers this reference to the purchase order requisition when an order pointing to this task list is released (see documentation *MM - Purchasing*).

---

**Deleting Operations/Sub-Operations**

## Deleting Operations/Sub-Operations

1. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.
2. Select the operations or sub-operations that you want to delete.
3. Use the menu bar sequence *Edit* → *Delete*.

The system deletes the operations or sub-operations.

4. Save the maintenance task list.



If you delete an operation in a maintenance task list for planned maintenance which is in operation in your company, the maintenance items that were already released at the time the task list was changed will still contain the operation that no longer exists in the task list.

If a released order refers to the task list in which you deleted an operation after the order was released, the maintenance order also contains an operation which no longer exists in the task list.

## Internal Service Packages for the Operation

### Use

You can assign external service specifications to the operations of a task list. From Release 4.6A, you can also assign internal service specifications to an operation. The operation control key determines whether a service package will be interpreted as internal or external.

### Prerequisites

You do not need to maintain the purchasing data for operations which have an internal control key. The operation control key must provide for "Service" for operations to which you would like to assign service packages. If *internally processed operation* or *internally processed operation/external processing possible* are allowed entries in the external processing field, then service packages for internal processing are allowed.

### See also

[Configurable General Maintenance Task Lists \[Page 140\]](#)

## Sub-Operations

# Sub-Operations

## Definition

In the PM component, you can create sub-operations for all the operations in a maintenance task list. Sub-operations represent an additional level of detail for an operation and are situated hierarchically below an operation. You can assign several sub-operations to one operation. This can be an advantage in the following scenarios:

- Several work centers are required in one operation.
- Employees with varying qualifications and skills are working simultaneously on the same operation.

Sub-operations may contain some of the same information as operations, for example,

- Work center assignment
- Control key
- Start and end dates

## Structure

There are two types of operations for maintenance task lists in the PM component:

- Internal processing
- External processing



You can divide the operation “Inspection” into two sub-operations:

- Motor inspection
- Building inspection

You can also add a sub-operation to your operation if part of the task is to be processed externally. For example, the sub-operation “motor inspection” could be performed by a third party. In this case, the sub-operation will contain a purchase requisition for the external labor.

You can create different types of sub-operation for one operation. For example, you can create externally processed sub-operations for an **internally** processed operation and vice versa.

For more information on sub-operation, see [Features of the Sub-Operation \[Page 77\]](#).

## Features of the Sub-Operation

Operations and sub-operations sometimes have different features. You should note the following features for sub-operations:

- **Number**  
The numbers of the sub-operations determine the sequence in which they are performed.
- **Control key**  
You can assign a control key to each sub-operation.
- **Material components and maintenance packages**  
You **cannot** assign any material components or maintenance packages to sub-operations.
- **Capacity planning and costing**  
The sub-operations are relevant for capacity planning and costing of the maintenance orders in which the task lists are included. The work is used for capacity planning instead of the work specified in the operation.
- **Duration and scheduling**  
This data in the sub-operation is purely for information. The duration specified in the operation is always relevant for order scheduling after the task list has been canceled. However, you can plan the sub-operations within the schedule relative to the start or end of the corresponding operation.
- **Activity type**  
This is used for cost accounting instead of the activity type specified in the operation.



Example of the importance of duration and work.

The duration of an operation is two days, because the performance of the tasks specified in the sub-operations takes up this time. For the engineer that planned the tasks for an hour, the work in the corresponding sub-operation takes one hour.

## Creating a Sub-Operation

## Creating a Sub-Operation

### Use

Sub-operations represent an additional level of detail for an operation and are situated hierarchically below an operation. You can create different types of sub-operation for one operation. For example, you can create **externally** processed sub-operations for **internally** processed **sub**-operations and vice versa.

### Procedure

4. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.
5. Enter an operation (see [Creating an Operation \[Page 66\]](#)) and choose *Continue*.
6. In the data entry line below the operation you have just entered, the system will propose the next sequential number.



You have just entered operation 0030.

In the next operation line you will see the number 0040.

5. Overwrite the number proposed by the system with the number of the operation that you have just created (0030 in the above example). Enter the number of the sub-operation in the column *UVrg*. Enter the necessary data.
5. To create more sub-operations for the same or another operation, repeat step 4 as often as required.
6. To insert a sub-operation in a list of existing operations, position your cursor on the operation line **following** the operation for which you want to create a sub-operation.



If you want to create a sub-operation for operation 0030, position your cursor on the operation 0040.

Then use the menu bar sequence *Edit* → *Insert*.

The system enters an appropriate line where you can enter data. Enter the required data as described in the previous steps:

8. To display your entries, use the menu bar sequence *Goto* → *Operation overview*
8. If you assign a sub-operation to the wrong operation, you can easily change it by overwriting the operation number with the number of the operation to which the sub-operation should be assigned, and choosing *Continue*.
9. The following options are available to you once you have created all the necessary sub-operations.
  - Save the data.
  - Enter further data for the sub-operations.

---

**Creating a Sub-Operation**

For more information on the data you can enter for sub-operations, see

- [Including Detail Data in Sub-Operations \[Page 81\]](#)
- [Entering Dates in Sub-Operations \[Page 80\]](#)
- [Including User Data in Operations/Sub-Operations \[Page 82\]](#)

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**Entering Dates in Sub-Operations**

## Entering Dates in Sub-Operations

### Use

**You can specify in a sub-operation when you want it to start or end in relation to the relevant operation.** To do this, use the start/end reference date together with the start/end offset. The system uses these specifications to calculate the start or end date for the sub-operation.

The time references have no influence on the duration of a sub-operation. The actual duration of a sub-operation is specified in the detail data of the sub-operation. It is not used for scheduling an operation. Only the duration specified in the operation is used for scheduling.

### Procedure

6. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.
7. Select the sub-operation or sub-operations for which you want to enter the start and end dates.
8. Use the menu bar sequence *Operation* → *Sub-operation deadline*.  
You are now on the *Sub-Operation - Usage dates* screen.
9. Enter the necessary data.

Note that you must enter a **positive** offset for the start of a sub-operation (start of the operation plus n units of time) and a **negative** offset for the end of the sub-operation (end of the operation minus n units of time).

10. Save the deadlines.

## Including Detail Data in Sub-Operations

### Use

You can enter detail data for operations and sub-operations in the PM system. There are two types of sub-operations corresponding to the operations:

- [Internal Processing Operations \[Page 18\]](#)
- [External Processing Operations \[Page 19\]](#)

You can enter user-specific data for both types of sub-operations. For more information, see [Including User Data in Operations/Sub-Operations \[Page 82\]](#)

### Procedure

Execute the steps described in [Entering Detail Data in Operations \[Page 68\]](#).

## Including User Data in Operations/Sub-Operations

## Including User Data in Operations/Sub-Operations

### Use

User data consists of all the fields that are defined using the customizing function and identified by a field key. They can be used to include additional, user-specific data for a particular operation or sub-operation.

You can define the following fields:

- General user fields
  - 10 character fields
  - 20 character fields
- Quantity fields
- Value fields
- Date fields
- Selection fields

### Procedure

22. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.

23. Select the operations and sub-operations for which you want to enter user data.

24. Use the menu bar sequence *Operation* → *User data*.

The *User data* screen is displayed. The data that you have already entered for the operation/sub-operation is displayed here.

25. To enter your operation-specific user data, enter the key in the *Field key* field.



You can only use the keys that you have defined in Customizing.

26. Choose *Continue*.

The system will display the fields defined for this key.

27. Enter the necessary data.

If you have selected more than one operation or sub-operation, you can call them up using the menu bar sequence *Operation* → *Further operations* → *Next operation*.

28. The following options are available to you once you have entered all the data.

- You can return to the screen *Operation overview*. To do this, choose *Goto* → *Back*.
- Save the user data.

## Deleting Operations/Sub-Operations

5. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.
6. Select the operations or sub-operations that you want to delete.
7. Use the menu bar sequence *Edit* → *Delete*.

The system deletes the operations or sub-operations.

8. Save the maintenance task list.



If you delete an operation in a maintenance task list for planned maintenance which is in operation in your company, the maintenance items that were already released at the time the task list was changed will still contain the operation that no longer exists in the task list.

If a released order refers to the task list in which you deleted an operation after the order was released, the maintenance order also contains an operation which no longer exists in the task list.

---

**Material Components**

## Material Components

### Definition

Materials required for maintenance tasks. You assign the corresponding operations.

### Use

You can assign the following material components to the operations in maintenance task lists.

- Material components from the bill of material for the maintenance object (piece of equipment, functional location or header assembly) assigned to the maintenance task list.

For more information on bills of material and BOM items see [Maintenance Bills of Material \[Ext.\]](#).

- Stock materials that are not in the BOM for the maintenance object

You can assign several materials to one operation and one material to several operations.

The system copies the material components assigned to the task list to the maintenance order once the task list is exploded in the order. For more information on maintenance orders see [Work Scheduling with Maintenance Task Lists \[Ext.\]](#).

## Assignment of Material Components

### Use

You can assign the following material components to the operations in maintenance task lists.

- Material components from the bill of material for the maintenance object (piece of equipment, functional location or header assembly) assigned to the maintenance task list.

For more information on bills of material and BOM items see [What is a Bill of Material? \[Ext.\]](#).

- Stock materials that are not in the BOM for the maintenance object

You can assign several materials to one operation and one material to several operations. You **cannot** assign any material components to sub-operations.

The system copies the material components assigned to the task list to the maintenance order once the task list is exploded in the order. For more information on maintenance orders see [Work Scheduling with Maintenance Task Lists \[Ext.\]](#).

### Prerequisites

You can assign material components to all three categories of maintenance task lists, that is, general maintenance task lists, task lists for functional locations and equipment task lists.

The prerequisites for assigning material components differ from one maintenance task list category to the next.

#### Prerequisites for General Maintenance Task Lists

Assignment of material components to a general maintenance task list is controlled by the assembly assigned in the task list header. To assign material components to your general task list, you must first enter an assembly in the task list header.

In the *Plan overview* use the menu bar sequence *Task list header* → *General view*.

In the *Allocation* data section of the screen, you see the entry field for the assembly. You can enter an assembly here. Only once you have made the entry, can you assign material components from the bill of material in the header assembly using bill of material explosion. However, you can also assign stock items that are not contained in the bill of material.

If you require a higher level of detail, you can split up the header assembly by assigning an assembly from a lower hierarchical position to an operation.



You cannot change the assembly in the task list header after you have assigned material components to the task list.

#### Prerequisites for Equipment and Functional Location Task Lists

The assembly assigned in the header of an equipment or functional location task list does not have as much significance as in the general task list. It purely provides more detail, similar to the assembly entry in the individual operations of a general task list.

### Assignment of Material Components

The material components you want to assign to an equipment or functional location task list do not have to be in the bill of material for the piece of equipment or functional location when you assign them. You can also allocate a stock item.

If a bill of material exists for the equipment or functional location task list, and you assign a stock item that is not contained in the bill of material, the system produces a pool of materials assigned to the object bill of material. When you assign a further material at a later date, the system adds this to the pool.

The system does **not** add the material to the bill of material. The original bill of material remains untouched, so that it can be accessed again and again. This is important because the assignment of an extra material may be an exception for a special maintenance case and the bill of material for the piece of equipment or functional location would be falsified if the extra material was added.

### Prerequisites for all Three Maintenance Task List Types

To enable the assignment of extra materials maintenance task lists, the system administrator must specify bill of material usage for bills of material relevant to maintenance (for example, usage 4 in the standard System) in the Customizing function for maintenance task lists.

You may not change the assigned usage as long as free material assignments exist. You may lose existing material assignments if you do this.

## Assigning Material Components

### Prerequisites

For more information on the prerequisites, see [Assignment of Material Components \[Page 85\]](#).

### Procedure

1. Call up the maintenance task list in the create or change mode, and choose *Goto* → *Operation overview*.
2. Select all the operations to which you want to assign material components and use the menu bar sequence *Operation* → *Components*.

You are now on the *Component overview PM* screen of the first selected operation.

3. Assign the material components you require to each selected operation in the task list. You can do this in the following ways:
  - Assigning components by entering the material number (see a)
  - Assigning components using the structure graphic (see b)
  - Assigning components using the structure list (see c)

#### a) Assigning Components by Entering the Material Number

When you know the number of the material (stock item or bill of material item) you want to assign, enter the number in the field *Material* and choose **ENTER**.

The system automatically enters further data for the material. For example:

- Bill of material number
- Item number
- Unit of measure
- Item category

Assign all the required components to the operation. If required you can sort the components differently in the list (see [Sorting Material Components \[Page 89\]](#)).



If you assign an extra material, the item will automatically be assigned the sort term *Standard*. This indicates that the item is not from the object bill of material. If you later want to include the assigned materials in the object bill of material, you can look for these items using the sort term.

#### b) Assigning Components Using the Structure Graphic

If you do not know the number of the material you want to assign, you can select it using the structure graphic for the bill of material.

To call up the structure graphic, use the menu bar sequence *Extras* → *Component selection* → *Structure graphic*

The system displays a graphic of the material components in the bill of material assigned to the maintenance task list. You can explode or hide the individual levels within the bill of material using the appropriate function buttons.

## Assigning Material Components

Select the material components you require and assign them to the task list. To do this, use the menu bar sequence *Extras* → *Choose*.

For more information on the structure graphic see [Working With the Structure Graphic \[Page 90\]](#).

In the *Component overview* you will see the components you selected in the graphic.

If required, you can sort the components differently in the list (see [Sorting Material Components \[Page 89\]](#)).

### c) Assigning Components Using the Structure List

Instead of working with the structure graphic, you can also assign components using the structure list.

To call up the structure list, use the menu bar sequence *Extras* → *Component selection* → *Structure list*.

The system displays a list of the material components in the bill of material assigned to the maintenance task list. You can explode or hide the individual levels within the bill of material using the appropriate function buttons.

Select the material components you require and assign them to the task list.

In the *Component overview* you will see the components you selected from the list.

If required, you can sort the components differently in the list (see [Sorting Material Components \[Page 89\]](#)).

4. Save the maintenance task list.

## Sorting Material Components

### Use

You can sort the material components in the *Component overview* according to different criteria. The system will display the components in the desired sequence.

### Procedure

1. Call up the maintenance task list and choose *Goto → Operation overview*.
2. Select all the operations for which you want to sort material components and use the menu bar sequence *Operation → Components*.

You are now on the *Component overview PM* screen of the first selected operation.

3. Choose a sorting function in the *Component overview*, for example

*Edit → Sort by → Sort field*

*Edit → Sort by → Item*

*Edit → Sort by → Material component*

The system sorts the assigned material components according to the sort criteria you specified.

---

**Working With the Structure Graphic**

## Working With the Structure Graphic

### Use

The structure graphic is divided into two sections:

- Display Area
- Navigation Area

Within these sections you can select the material components you want to assign to a selected operation in the maintenance task list.

- Display Area

Depending on the size of the structure, the display area displays all or a section of the structure. This structure is made up of a series of nodes on different levels. You can hide or explode these levels. To do this, choose the menu bar sequence *Extras* → *Explode/Hide*.

- Navigation Area

The navigation area displays the entire structure. Within the navigation area is a colored frame which indicates the section of the structure currently displayed in the display area. By moving this frame with the mouse, you can display another section of the structure in the display area.

### Procedure

There are four methods of selecting nodes in the structure graphic:

- Selecting all nodes
- Selecting one node only
- Selecting several nodes
- Selecting the Complement to a Node

#### Selecting All Nodes

To select all the nodes in the structure graphic, use the menu bar sequence *Edit* → *Select* → *Select all*.

#### Selecting One Node Only

To select one node only, position your cursor on the node and select it using your mouse. The system will highlight the node to indicate that it has been selected.

#### Selecting Several Nodes

To select several nodes, first select one node as described above. To select further nodes, position your cursor on the nodes required, and select them using *SHIFT* and the mouse. The system will highlight all the nodes you select.

---

**Working With the Structure Graphic****Selecting the Complement to a Node**

To select the complement to a node, first select one node as described above. To select the complement or complements to this node, use the menu bar sequence *Edit* → *Select* → *Select complement*.

For further information on structure graphics, see the documentation *SAP Graphics: User Guide*.

---

**Displaying Material Where-Used Lists**

## Displaying Material Where-Used Lists

### Use

You can determine all task lists to which a certain material has been assigned as a component.

The material where-used list does not determine any material entered in the equipment, material or production resources/tools bills of material for a task list.

### Procedure

1. Choose *Logistics* → *Plant maintenance* → *Planned maintenance* → *Maintenance task lists* → *Evaluations* → *Where-used list* → *Material where-used list*.

The initial screen for material where-used lists is displayed.

2. Enter the necessary data.
3. Choose *Program* → *Execute*.
4. The system displays a list of those task lists in which the specified material is used.

## Production Resources/Tools

### Definition

Production resources/tools (PRTs) are the capacities you require to perform an operation at a certain work center. In contrast to machines and technical devices, PRTs are mobile, in other words they are not fixed to a specified location.

Production resources/tools include, for example,

- Tools
- Cranes
- Measuring and inspection instruments for quality inspections

### Use

If you plan work processes in maintenance task lists and at the time of planning know which resources are required to perform the operations, you can enter these resources in the task list.

### Structure

The PM application component has the following four categories of master records for production resources/tools (PRTs):

- **Material**  
If you create a PRT as a material, you can use all the functions available for a material master record. The system supports the procurement of this PRT category. In other words, this PRT category can be both externally procured and internally produced. Both quantity- and value-based inventory management can be used for this PRT category.
- **PRT master (other)**  
When you create a simple production resources/tools master record, the system does not support procurement of this PRT category, and inventory management is not possible. The advantage of the PRT category "PRT master (other)" is that little data maintenance is required for this master record.
- **Document**  
When you create a document master record for a PRT, you can manage it as a document in the R/3 system. A document is a data storage medium that either contains information for the user or is used to transfer data from one system to another. A document, for example, can contain an overview of all the pieces of equipment requiring maintenance.
- **Equipment**  
When you create a PRT as a piece of equipment, you can use all the functions available for equipment master records. It is useful for PRTs that have to be individually maintained and/or maintained at regular intervals, and which require proof of the maintenance tasks performed and/or operating times.

## Creating Material for Production Resources/Tools

# Creating Material for Production Resources/Tools

To create production resources/tools (PRT) as a **material**, you must create a material master record and maintain the **Production Resources/Tools view**.

PRT data is defined for each plant.

For more information on creating material master data, see the SAP document *Managing Material Master Data*.

To create a material master record for a PRT, perform the following seven steps:

1. In the *Maintenance Task Lists* menu, use the menu bar sequence *Environment* → *Production resources/tools* followed by the menu bar sequence *Production resources/tools* → *Material* → *Create*.

The initial screen for creating a material master record is displayed.

2. Make all the necessary entries.  
The help functions support you in this.



The material type controls the entry fields that are ready for input on the screen and the views to be maintained. You must enter a material type, for which maintenance of the **production resources/tools view** is allowed.

3. Press `ENTER`.  
The dialog box *Select view(s)* is displayed.
4. Select the view *Production resources/tools*, and press *Continue*.  
The dialog box *Organizational levels/Profiles* is displayed.
5. In the dialog box, enter the plant to which the PRT is allocated and press *ENTER* or *Data*.  
The screen *Production resources/tools is displayed*.
6. Make all the necessary entries.  
The help functions support you in this.
7. Save the material master record by using the menu bar sequence *Material* → *Save*.

## Creating Production Resources/Tools (Other)

If you want to create a production resources/tools (PRT) master record **Other**, perform the following five steps:

1. In the *Maintenance Task Lists* menu, use the menu bar sequence *Environment* → *Production resources/tools* followed by the menu bar sequence *Production resources/tools* → *PRT master (other)* → *Create*.  
The initial screen for creating a PRT of the category “Other” is displayed.
2. Make all the necessary entries.  
The help functions support you in this.
3. Press `ENTER`.  
The *Basic data* screen is displayed.
4. Make all the necessary entries.  
The help functions support you in this.
5. Save your PRT master record by using the menu bar sequence *Production resources/tools* → *save*.

---

**Creating Documents for Production Resources/Tools**

## Creating Documents for Production Resources/Tools

To create production resources/tools (PRT) as a **Document**, perform the following five steps:

1. In the *Maintenance Task Lists* menu, use the menu bar sequence *Environment* → *Production resources/tools*

followed by the menu bar sequence

*Production resources/tools* → *Document* → *Create*.

The initial screen for creating a PRT of the category "Document" is displayed.

2. Make all the necessary entries.

The help functions support you in this.



The document type for document management is specified using the customizing function. A document type for production resources/tools must be defined in your system.

3. Press `ENTER`.

The *Basic data* screen is displayed.

4. Make all the necessary entries.

The help functions support you in this.

5. Save the PRT master record using the menu bar sequence *Document* → *Save*.

For more information on the management of documents, see the documentation *Document Management System*.

## Creating Equipment Production Resources/Tools

To create production resources/tools (PRT) as an **Equipment**, you must create an equipment master record and maintain the **Production Resources/Tools view** in it.

For more information on creating equipment master data, see *PM - Structuring Technical Systems*.

To create an equipment master record for a PRT, perform the following four steps:

1. Use the menu bar *Logistics → Plant maintenance → Technical objects*

followed by the menu bar sequence

*Equipment → Create (special) → ProdRes/Tools*

or

*Equipment → Create.*

*Equipment → Create (special) → ProdRes/Tools*

*Equipment → Create.*

The initial screen for creating a PRT of an equipment is displayed. The first option contains a default equipment category, but the second category requires you to enter a permitted equipment category for the production resource/tool.

2. Make all the necessary entries in this and all other relevant screens.

The help functions support you in this.



The equipment type controls the data entry fields appearing on the screen and the views that have to be maintained. You must enter an equipment type that allows the maintenance of the **Production Resources/Tools view**.

3. You must make data entries in the *Production Resources/Tools* screen. Call up this screen using the menu bar sequence *Goto → ProdRes/Tools*.
4. Save the equipment master record by using the menu bar sequence *Equipment → Save*.

## Creating PRTs Using a Reference

## Creating PRTs Using a Reference

You can create production resources/tools (PRT) master record using a reference to reduce the time spent making data entries.

To create a PRT master record using a reference, perform the following four steps:

1. In the *Maintenance Task Lists* menu, use the menu bar sequence *Environment* → *Production resources/tools*

followed by one of the following menu bar sequences:

*ProdRes/Tools* → *Material* → *Create*

*ProdRes/Tools* → *PRT master (other)* → *Create*

*ProdRes/Tools* → *Document* → *Create*.

The initial screen for creating a PRT master record is displayed.



If the PRT is managed as an equipment, use the transactions available for equipment master records (see *PM - Structuring Technical Systems*).

2. Make the necessary entries for the selected PRT type. The following table is intended to help you in this:

To create a PRT of this type...	Enter:
Material	New material number and all necessary data in the <i>Copy from data</i> section
Other	New PRT key and all necessary data in the <i>Copy from data</i> section
Document	New document number and document type and all necessary data in the <i>Copy from data</i> section

3. Make all the entries as described in the following topics:

[Creating Material for PRTs \[Page 94\]](#)

[Creating PRTs \(Other\) \[Page 95\]](#)

[Creating Documents for PRTs \[Page 96\]](#)

4. Save the PRT master record by using one of the following menu bar sequences:

*Material* → *Save*

*Prod.Resources/Tools* → *Save*

*Document* → *Save*.



## Changing Production Resources/Tools

## Changing Production Resources/Tools

To change a production resources/tools (PRT) master record, perform the following four steps:

1. In the *Maintenance Task Lists* menu, use the menu bar sequence *Environment* → *Production resources/tools*

followed by one of the following menu bar sequences:

*ProdRes/Tools* → *Material* → *Change*

*ProdRes/Tools* → *PRT master (other)* → *Change*

*ProdRes/Tools* → *Document* → *Change*

The initial screen for changing a PRT master record is displayed.



If the PRT is managed as an equipment, use the transactions available for equipment master records (see *PM - Structuring Technical Systems*).

2. Enter the number of the PRT you want to change and press `ENTER`.
3. Depending on the PRT category, make all further necessary entries. The following table is intended to help you in this:

To change a PRT of the category...	Go to...
Material	The dialog box <i>Select View(s)</i> . Select the view(s) you require and press <i>Continue</i> . The dialog box <i>Organization Levels/Profile</i> is displayed. Enter the plant and press <code>ENTER</code> or <i>Data</i> . The screen <i>Production resources/tools</i> is displayed. Make all the necessary entries.
Other	The screen <i>Basic data</i> Make all the necessary entries.
Document	The screen <i>Basic data</i> Make all the necessary entries.

4. When you have entered all the data, save the changes using one of the following menu bar sequences:

*Material* → *Save*

*Prod.Resources/Tools* → *Save*

*Document* → *Save*.



## Displaying Production Resources/Tools

## Displaying Production Resources/Tools

To display a production resources/tools (PRT) master record, perform the following four steps:

1. In the *Maintenance Task Lists* menu, use the menu bar sequence *Environment* → *Production resources/tools*

followed by one of the following menu bar sequences:

*ProdRes/Tools* → *Material* → *Display*

*ProdRes/Tools* → *PRT master (other)* → *Display*

*ProdRes/Tools* → *Document* → *Display*.

The initial screen for displaying a PRT master record is displayed.



If the PRT is managed as an equipment, use the transactions available for equipment master records (see documentation *PM - Structuring Technical Systems*).

2. Enter the number of the PRT you want to display and press `ENTER`.
3. Depending on the PRT category, make all further necessary entries. The following table is intended to help you in this:

<u>To display a PRT of the category...</u>	<u>Go to...</u>
Material	The dialog box <i>Select View(s)</i> . Select the view(s) you require and press <i>Continue</i> . The dialog box <i>Organization Levels/Profile</i> is displayed. Enter the plant and press <code>ENTER</code> or <i>Data</i> . The screen <i>Production resources/tools</i> is displayed.
Other	The screen <i>Basic data</i>
Document	The screen <i>Basic data</i>

4. Use the appropriate menu bar sequences to go to the screens you want to display.



Use the menu bar sequence *Extras* → *Long text*.

5. To leave the display transaction for PRTs, use one of the following menu bar sequences:

*Material* → *Exit*

*Prod.Resources/Tools* → *Exit*

*Document → Exit.*

## Assigning Production Resources/Tools to Operations

## Assigning Production Resources/Tools to Operations

Production resources/tools (PRT) are assigned to the operations in maintenance task lists. You can assign both one PRT to several operations and several PRTs to one operation.

To allocate a PRT to a task list, perform the following eight steps:

1. In the *Maintenance Task List* menu, use either the *Create* or *Change* transaction for an equipment task list, functional location task list or general maintenance task list.



Use the *Create* transaction for an equipment task list by using the menu bar sequence *Task lists* → *For equipment* → *Create*.

The initial screen for creating or changing a maintenance task list is displayed.

2. Enter the necessary data and choose *Enter*.
3. Perform the steps described in the following table.

<u>If</u>	<u>Then</u>
Only <b>one</b> task list corresponds to your entries	You go to the screen <i>Operation overview</i> .
<b>Several</b> maintenance task lists meet your selection criteria	You go to the screen <i>Task list header</i> . Select the task list to which you want to allocate PRTs and choose <i>Goto</i> → <i>Operation overview</i> . You go to the screen <i>Operation overview</i> .

4. In the *Operation overview* screen, select the operations to which you want to allocate PRTs. Then choose *Operation* → *PRT*.
5. Perform the steps described in the following table:

<u>If</u>	<u>Then</u>
A PRT has not yet been allocated	You go to the dialog box <i>PRT: New Lines</i> is displayed. Perform step 6.

**Assigning Production Resources/Tools to Operations**

<p>PRTs were already allocated</p>	<p>You go to the screen <i>PRT overview</i></p> <p>To allocate further PRTs, choose one of the following menu options:</p> <p><i>Edit</i> → <i>New Lines</i> → <i>Material</i>  <i>Edit</i> → <i>New Lines</i> → <i>Others</i>  <i>Edit</i> → <i>New Lines</i> → <i>Document</i>  <i>Edit</i> → <i>New Lines</i> → <i>Equipment</i>.</p> <p>The dialog box <i>PRT: New Lines</i> is displayed.</p>
<p><b>Several</b> maintenance task lists meet your selection criteria</p>	<p>You go to the screen <i>Task list overview</i>.</p> <p>Select the task list to which you want to assign the PRT and choose <i>Goto</i> → <i>Operation overview</i>.</p> <p>Perform step 4.</p>

6. Enter the necessary data in the dialog box *PRT: New Lines*.



You define the category of PRT that you want to link to by using the function keys *Material*, *Document*, *Equipment* or *Other*.

Assign the PRT to the operation as described in the table below:

<b>If</b>	<b>Then</b>
<p>You only want to assign <b>one</b> PRT,</p>	<p>Choose <i>Continue</i>.</p> <p>The <i>PRT overview</i> screen is displayed.</p>
<p>You want to assign <b>several</b> PRTs,</p>	<p>Choose <i>Insert</i>.</p> <p>The dialog box <i>PRT: New Lines</i> is displayed again. Enter the required data for the next PRT that you want to assign.</p>



You cannot assign PRTs that have been assigned a deletion flag.

7. When you have entered all the PRTs you want to assign, press *Back*. You return to the *PRT overview* screen where all the PRTs you have assigned are displayed.
8. To save the maintenance task list, use one of the following menu bar sequences:
  - Equipment task list* → *Save*
  - FunctLoc task list* → *Save*
  - General maintenance task list* → *Save*

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Assigning Production Resources/Tools to Operations

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**Deleting the Production Resources/Tools Assignment**

## Deleting the Production Resources/Tools Assignment

To delete assigned production resources/tools (PRT) from an operation, perform the following three steps:

1. In the *Operation overview* of the maintenance task list, select the operations from which you want to delete the assigned PRT. Use the menu bar sequence *Operation → PRT*.  
The *PRT overview* screen is displayed. There you will see the PRTs that are assigned to the selected operation.
2. Select the PRT that you no longer want to be assigned to the operation. Use the menu bar sequence *Edit → Delete*.  
The system deletes the selected PRT and brings you to the next selected operation.
3. Delete the PRT for all selected operations.
4. Save the changes.

---

**Deleting Production Resources/Tools**

## Deleting Production Resources/Tools

There are two methods for deleting production resources/tools (PRT) master records:

- Direct deletion

Direct deletion means that you can delete the PRT online, without using a deletion flag and an archiving program.

You can only directly delete PRTs of the category "PRT Master (Other)", provided they are not being used in a maintenance task list or maintenance order.



You **cannot** delete PRTs of the category "Material", "Equipment" and "Document" directly.

- Assigning a deletion flag

Assigning a deletion flag, means that you assign the PRT a deletion flag that results in the PRT being deleted by an archiving program. You can assign deletion flags to all PRT categories, even if they are being used in a maintenance task list or maintenance order. The deletion flag has no influence on the assignment of PRTs to a task list or order.

PRTs that have been assigned a deletion flag will be deleted the next time the archiving program is run, provided they are no longer being used in the task list or order.

To delete or assign a deletion flag to the individual PRT categories, read the following topics:

[Deleting PRTs \(Other\)" \[Page 111\]](#)

[Assigning a Deletion Flag to "Other"/"Docu." PRTs \[Page 112\]](#)

[Assigning Deletion Flag to Material PRTs \[Page 109\]](#)

[Assigning a Deletion Flag to Equipment PRTs \[Page 114\]](#)

## Assigning a Deletion Flag to “Material” PRTs

## Assigning a Deletion Flag to “Material” PRTs

You can mark a production resources/tools (PRT) master record of the category “Material” for deletion by assigning a deletion flag to it.

You can set the deletion flag at different levels in the organizational hierarchy, for example on the following levels:

- Client  
If you set the deletion flag at client level, the archiving program will delete the material master record completely at all existing organizational levels.
- Plant  
If you assign the deletion flag at plant level, the archiving program will delete the material master record at this and all lower levels. The data on a higher level remains intact.

### Procedure

To assign a deletion flag to a PRT of the category “Material”, perform the following six steps:

1. In the *Maintenance Task Lists* menu, use the menu bar sequence *Environment* → *Production resources/tools* followed by the menu bar sequence *ProdRes/Tools* → *Material* → *Change Immediately/Plan*.  
The initial screen for changing a material PRT is displayed.
2. Enter the number of the PRT to which you want to assign a deletion flag.  
However, do **not** press `ENTER`.
3. Use the menu bar sequence *Material* → *Flag for deletion*  
The initial screen for assigning a deletion flag is displayed.
4. Make all the necessary entries. You must enter the organizational level at which the PRT is to be deleted.  
The help functions support you in this.
5. Press `ENTER`.  
The initial screen *Flag Material for Deletion: Initial Screen* is displayed.  
On the left side of this screen you will see a field for the deletion flag.
6. Select the deletion flag you require and make all further necessary entries.
7. Save your changes using the menu bar sequence *Material* → *Save*.  
The system assigns a deletion flag to the PRT. The next time the archiving program is run, the material will either be completely deleted or will be deleted on the specified levels with the specified criteria.

---

**Assigning a Deletion Flag to “Material” PRTs**

If you want to remove the deletion flag, perform steps 1 to 5 as described above. You can then remove the criteria for the deletion flag in the data entry fields and save the changes to the master record.

For more information on how to delete material master records, see the SAP document *Managing Material Master Data*.

## Deleting Production Resources/Tools (Other)

Note that only PRTs of this category can be deleted directly.

To delete PRT master, perform the following three steps:

1. In the *Maintenance Task Lists* menu, use the menu bar sequence *Environment* → *Production resources/tools* followed by the menu bar sequence *ProdRes/Tools* → *PRT master (other)* → *Change*.  
The initial screen for changing a PRT master record is displayed.
2. Enter the number of the PRT you want to delete and use the menu bar sequence *Prod.Resources/Tools* → *Delete*.  
The dialog box *Delete production resource/tool* is displayed.
3. Confirm you do want to delete the PRT by pressing *Yes*.

The system will issue a message informing you that the PRT has been deleted.



When the PRT you want to delete is still in use (for example, because it is allocated to a maintenance task list), you **cannot** delete it directly.

However, you can assign a deletion flag. Read [Assigning a Deletion Flag to "Other"/"Docu." PRTs \[Page 112\]](#)

## Assigning Deletion Flag to "Other" / "Docu." PRTs

## Assigning Deletion Flag to "Other" / "Docu." PRTs

To assign a deletion flag to a production resources/tools (PRT) master record of the types "Other" and "Document", perform the following four steps:

1. In the *Maintenance Task Lists* menu, use the menu bar sequence *Environment* → *Production resources/tools*

followed by one of the following menu bar sequences:

*ProdRes/Tools* → *PRT master (other)* → *Change*

*ProdRes/Tools* → *Document* → *Change*

The initial screen for changing a PRT master record is displayed.

2. Depending on the PRT category, make all the further necessary entries. The following table is intended to help you in this:

<u>If you want to change this type.....</u>	<u>Enter...</u>	<u>You will go to...</u>
Other	PRT number Press ENTER.	The screen <i>Basic data</i> .
Document	Document number, Document type Press ENTER.	The screen <i>Basic data</i> .

3. Now follow the steps in the table below:

<u>To assign a deletion flag to the category</u>	<u>Use the menu bar sequence:</u>	<u>The system will...</u>
Other	<i>Edit</i> → <i>Deletion flag/Reset</i>	Make an entry in the field <i>Deletion flag</i> and issue a message to inform you that the PRT is marked for deletion.
Document	<i>Edit</i> → <i>Change delete flag</i>	Make an entry in the field <i>Deletion flag</i> and issue a message to inform you that the PRT is marked for deletion.



If the PRT is still being used (for example, if it is assigned to a maintenance task list), the system will issue a warning.

**Assigning Deletion Flag to "Other" / "Docu." PRTs**

If you want to delete the PRT that is being used, press `ENTER`. The system assigns a deletion flag. As soon as the assignment has been removed, the PRT will be deleted in the next archiving run.

4. To save the changes you have made to the PRT master record, perform one of the following menu bar sequences:  
*Prod.Resources/Tools* → *Save*  
*Document* → *Save*.

The system saves the changes and the next time the archiving program is run, the marked PRTs are deleted.



To remove the deletion flag, use the same menu bar sequence in the *Basic data* screen, as you used to set the deletion flag.

Assigning a Deletion Flag or PRTs “Equipment“

## Assigning a Deletion Flag or PRTs “Equipment“

At present it is not possible to delete a production resources/tool (PRT) master record of the category “Equipment”.

## Bulk Functions for Work Centers and PRTs

### Use

Almost maintenance task lists contain data on work centers (for example, machines, persons) and/or data on production resources/tools (for example, tools, cranes).

To effectively manage and change this data, you can

- Create where-used lists
- Perform bulk changes for production resources/tools or work centers
- Change default data for bulk changes for work centers

For more information on work centers, see the documentation [Work Center \[Ext.\]](#).

### Procedure

To call up the individual functions in the table, use the menu bar sequence *Logistics → Plant maintenance → Maintenance task lists*.

Function	Menu path	What you should know
Where-used list for PRT	<i>Evaluations → Usage → PRT usage</i>	See <a href="#">Creating Where-Used Lists for PRTs [Page 117]</a>
Bulk changes for PRT	<i>Extras → Bulk changes → Replace PRT.</i>	See <a href="#">Replacing Production Resources/Tools [Page 118]</a>
Where-used list for work centers	<i>Evaluations → Usage → Work center where-used</i>	See <a href="#">Creating Where-Used Lists for Work Centers [Page 122]</a>
Bulk changes for work centers	<i>Extras → Bulk changes → Replace work center.</i>	See <a href="#">Replacing Work Centers [Page 120]</a>
Changing default data for work centers	<i>Extras → Bulk changes → Replace work center → and then Settings → Default value for work center</i>	

## Pre-Setting Overview Variants

## Pre-Setting Overview Variants

### Use

The presentation type and sequence of objects in the where-used list is controlled by the **Object overview variant**. The object overview controls the data display list for maintenance task lists. It determines which task list objects (for example, header, operation, sub-operation) and which fields the system should display from these task list objects.

You can preset your user master record to contain what you consider to be the most important overview variants for where-used lists and bulk changes.

### Activities

To pre-set the overview variants in the user master record, use the menu bar sequence *System* → *User defaults* → *User parameters*. The following parameters are relevant:

Object overview	Relevant parameter ID
Work center	V02
PRT "Material"	V03
PRT "Other"	V04
PRT "Document"	V05
PRT "Equipment"	V06

You have to assign a list variant from the Customizing function as a parameter value. In the standard system there are the following list variants:

Parameter-ID	Assigned variant
V02	L00000000110
V03	L00000000290
V04	L00000000350
V05	L00000000170
V06	L00000000230

## Creating Where-Used Lists for PRTs

### Use

Using where-used lists, you can display in which maintenance task lists specific production resources/tools (PRTs) are used. From this list of task lists, you can access the header data for the individual task lists and the detailed data screens of the individual operations.

You can use where-used lists for all four categories of [PRT types \[Page 93\]](#).

### Procedure

1. Choose the menu bar sequence *Logistics* → *Plant maintenance* → *Maintenance task lists* and then *Evaluations* → *Where-used list* → *PRT usage*.  
The screen *PRT Usage in PM Routings: Selection* is displayed.
2. To determine a *PT category* for the where-used list, use the menu bar sequence *Settings* → *PRT category*.  
In the pop-up window *PRT category*, select the desired PRT category and choose *Select*.
3. Enter the necessary data in the selection screen.
4. Use the menu bar sequence *Goto* → *Execute*.  
You see a pop-up window in which you can select the overview version you require. For more information, see [Pre-Setting Overview Variants \[Page 116\]](#).
5. Enter an existing variant and choose *Continue*.  
The system displays a list of all the elements corresponding to the object overview version and your selection criteria. This means that all the elements displayed contain the specified production resources/tools.
6. In the screen *PRT Usage in Maintenance Task Lists: Selection* you can display individual maintenance task lists in more detail by choosing the menu bar sequence: *Goto* → *Detail*.
7. Exit the function.

## Replacing Production Resources/Tools

## Replacing Production Resources/Tools

### Use

The *Plant Maintenance* component enables you to perform bulk changes for production resources/tools that are assigned to operations in maintenance task lists. Using the bulk changes procedure saves you time, because you do not need to individually change each task list.

When you change a PRT using the bulk changes procedure, the system first generates a where-used list (see [Creating Where-Used Lists for Production Resources/Tools \[Page 117\]](#)). From this list, you can select the task lists in which you want to change the PRTs.

You can use the bulk changes procedure for all four PRT categories:

- Material
- Other
- Document
- Equipment

### Procedure

1. Choose the menu bar sequence *Logistics* → *Plant maintenance* → *Maintenance task lists* and then *Extras* → *Bulk changes* → *Replace PRT*.  

The *Bulk changes* screen for replacing production resources/tools in maintenance task lists is displayed. *Selection*.
2. Enter the PRT category you want to replace. To do this, choose *Settings* → *PRT category*  

In the dialog box *Production Resources/Tools Category*, select the PRT category you require and select *Choose*.
3. Enter the necessary data.
4. To generate the where-used list, choose *Goto* → *Execute*.  

A dialog box is displayed. Here you must select the required report variant.
5. Enter an existing variant and choose *Continue*.  

For more information on where-used lists and bulk changes see [Pre-Setting Overview Variants \[Page 116\]](#)
6. You can replace production resources and tools in the screen *Where-used lists: Select results* by selecting the required lines and selecting one of the following menu bar sequences:
  - *Settings* → *Replace with* → *Material*
  - *Settings* → *Replace with* → *Miscellaneous*
  - *Settings* → *Replace with* → *Document*
  - *Settings* → *Replace with* → *Equipment*

The dialog box *Plan-related default values: Change* appears.
7. Enter the new PRT in the appropriate data entry field in the dialog box and choose *Continue*.

---

**Replacing Production Resources/Tools**

The system replaces the PRT.

8. To display the replaced PRT, choose *Environment* → *Display* → *Change*.

The system displays the *PRT overview* screen with the new PRT in the task list.

---

**Replacing Work Centers**

## Replacing Work Centers

### Use

The bulk changes function allows you to replace a specific work center by another in maintenance task lists. Using the bulk changes procedure saves you time, because you do not need to individually change each task list. The system will only replace the selected work center. You can also change the default values that are copied into the maintenance task lists from the new work center.

When you change a work center using the bulk changes procedure, the system first generates a where-used list (see [Creating Where-Used Lists for Work Centers \[Page 122\]](#)). From this list, you can select the task lists in which you want to change the work center.

You can use the bulk changes procedure to

- Replace a specified work center with a new work center
- Change default values in the new work center

### Procedure

1. Choose the menu bar sequence *Logistics → Plant maintenance → Maintenance task lists* and then *Extras → Bulk changes → Replace work center*.

You are now on the screen *Replace Work Center: Selection*.

2. Enter the following data:

- The work center you want to replace and the new work center
- The maintenance task lists in which the work center is to be replaced

3. To change the default values for the work center choose *Settings → Default values work center*

You are now in the dialog box *Plan-related default values: Change*.

Enter the necessary data.

To copy these changes to the new work center, choose *Copy value* in the desired line and then choose *Copy*.

4. To select the task lists in which the work center is to be replaced, use the menu bar sequence *Goto → Proceed*.

The dialog box appears.

5. Enter an object overview version (see also [Pre-Setting Overview Variants \[Page 116\]](#)), and choose *Continue*.

The system displays a list of all the objects corresponding to the object overview version and the selection criteria you specified.

6. Select the elements in which the work center is to be replaced and use the menu bar sequence: *Edit → Replace work center*

The system will issue a message informing you in which maintenance task lists the changes have been performed and saved.

7. Exit the function.

---

**Creating Where-Used Lists for Work Centers**

## Creating Where-Used Lists for Work Centers

### Use

The *Plant Maintenance* component enable you to create where-used lists for work centers. This is important,

- If you want to know, which work centers are used in which maintenance task lists
- If you want to make changes in certain work center master records and must therefore be able to see which maintenance task lists are affected.

The where-used list provides you with an overview of the task lists to which a specified work center has been assigned.

You can create a where-used list for all categories of maintenance task lists, that is, for general maintenance task lists, equipment task lists or functional location task lists.

You can generate an individual where-used list either for each task list type or for a specified number of all three task list types (from-to list).

### Procedure

1. Choose the menu bar sequence *Logistics* → *Plant maintenance* → *Maintenance task lists* and then *Evaluations* → *Where-used list* → *Work center where-used*.

The screen *Work Center Usage: Selection is displayed*.

2. Enter the necessary data.
3. Use the menu bar sequence *Goto* → *Execute*.

You see a pop-up window in which you can select the overview version you require. For more information, see [Pre-Setting Overview Variants \[Page 116\]](#).

4. Enter an existing variant and choose *Continue*.

The system displays a list of all the elements corresponding to the object overview version and your selection criteria. This means that all the elements displayed contain the specified work center.

5. To view the elements in the list in more detail, select these objects and use one of the following menu bar sequences:

- *Goto* → *Select*
- *Goto* → *Detail*

The system branches to the corresponding screen.

6. Exit the function.

## Relationships

### Definition

You can use relationships to link operations for maintenance task lists.

A relationship describes the chronological interdependence between two operations in a task list. A relationship specifies, for example, that one operation can only begin once another operation has been completed, or that an operation can only be completed when another operation is also completed. You can use relationships to make an operation a predecessor or successor of another operation.

### Use

You can use relationships to make a maintenance task list comparable with a standard network from the *Project System* application component. The maintenance task list is therefore used as the basis for planning, description and control of resources (for example, material, personnel, production resources/tools).

For more information about standard networks, see [PS - Project System \[Ext.\]](#).

The relationship type specifies how the individual operations are connected to each other. There are the following types:

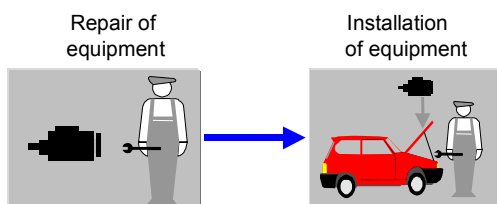
- FS Relationship
- SS Relationship
- FF Relationship
- SF Relationship

In Plant Maintenance, FS relationships with a [time interval \[Page 125\]](#) of zero are usually used.

### FS Relationship

The finish of an operation is connected to the start of the following operation.

For example, the operation “Installation of Equipment” can only start once the operation “Repair of Equipment” has been completed.

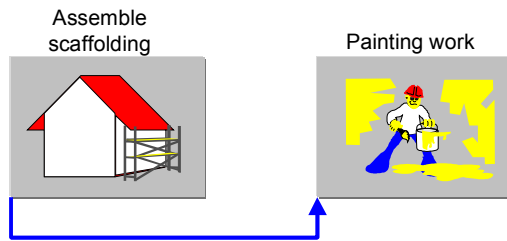


### SS Relationship

The start of an operation is connected to the start of the following operation.

For example, the operation “Painting Work” can only start once the operation “Assemble Scaffolding” has been completed.

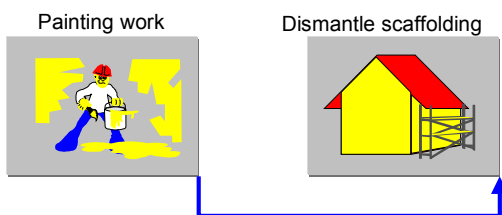
## Relationships



## FF Relationship

The end of an operation is connected to the end of the following operation.

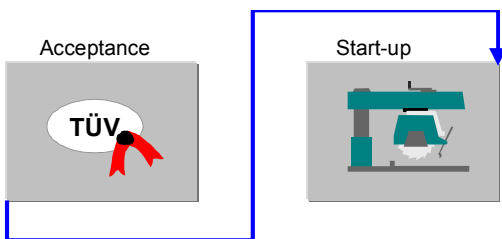
For example, the operation "Dismantle Scaffolding" can only start once the operation "Painting Work" has been completed.



## SF Relationship

The start of an operation is connected to the end of the following operation.

For example, the operation "Start-up" can only start once the operation "Acceptance" has been completed.



## Time Intervals in Relationships

The time interval is the time between two operations which are connected by a relationship.



The operation “Install piece of equipment” is connected to the operation “Repair piece of equipment” in a FS relationship with a time interval of two days. This means that - at the earliest - the operation “Install piece of equipment” can begin two days after the operation “Repair piece of equipment” has been completed.

You can specify time intervals between connected operations in two ways:

- **With positive or negative absolute values**

You enter an absolute value, for example -10 days. In a FS relationship, this means that the successor operation can begin 10 days before the predecessor operation is finished.

- **As a percentage of the duration of the predecessor or successor**

You enter a percentage, for example 80%. In a FS relationship, when the predecessor “Repair” has a duration of 10 days, the following operation “Install piece of equipment” begins 8 days (= 80% of 10 days) after the operation “Repair” was finished.

For a detailed description of relationships, see the documentation *PS Project System*.

---

**Prerequisites for Creating Relationships**

## Prerequisites for Creating Relationships

You can only connect operations using relationships. You cannot connect sub-operations with one another. In maintenance task list processing, you must first create a task list with operations, before you can connect the individual operations.

You can create relationships for all three types of maintenance task list. However, you can only connect the operation within one individual task list.

The following prerequisites must be met before you can create and maintain relationships:

- The profile for standard networks and networks must be set using the Customizing function so that the profile group, name, relationships and the specifications for graphic display appear on your screen.
- A maintenance task list must be created.
- The maintenance task list must contain several operations.
- You may not use the task list group in which the operations should be connected for planned maintenance, in other words, as soon as you have entered maintenance strategy in the maintenance task list header, you may no longer connect the operations with one another using relationships.

## Creating Relationships

### Prerequisites

For more information, see [Prerequisites for Creating Relationships \[Page 126\]](#).

### Procedure

1. Call up the maintenance task list (equipment task list, functional location task list or general maintenance task list) in the create or change mode, and choose *Goto* → *Operation overview*.
2. Set the network profile for the graphic by using *Settings* → *Profile* and then enter the profile and profile group you require in the *General data* section.
3. Choose *Continue*.  
You return to the screen *Operation overview*.
4. Now decide how you want to create the relationships:
  - In the graphic (see [Creating a Relationship in the Graphic \[Page 128\]](#))
  - In the list (see [Creating a Relationship in the List \[Page 131\]](#))



Remember: You can only connect operations to one another, not sub-operations.

---

**Creating a Relationship in the Graphic**

## Creating a Relationship in the Graphic

### Prerequisites

For more information, see [Prerequisites for Creating Relationships \[Page 126\]](#).

### Procedure

1. Choose *Goto* → *Network graphic*.

You reach the SAP Graphical Editor screen. This displays all the operations that have been entered previously for the maintenance task list.

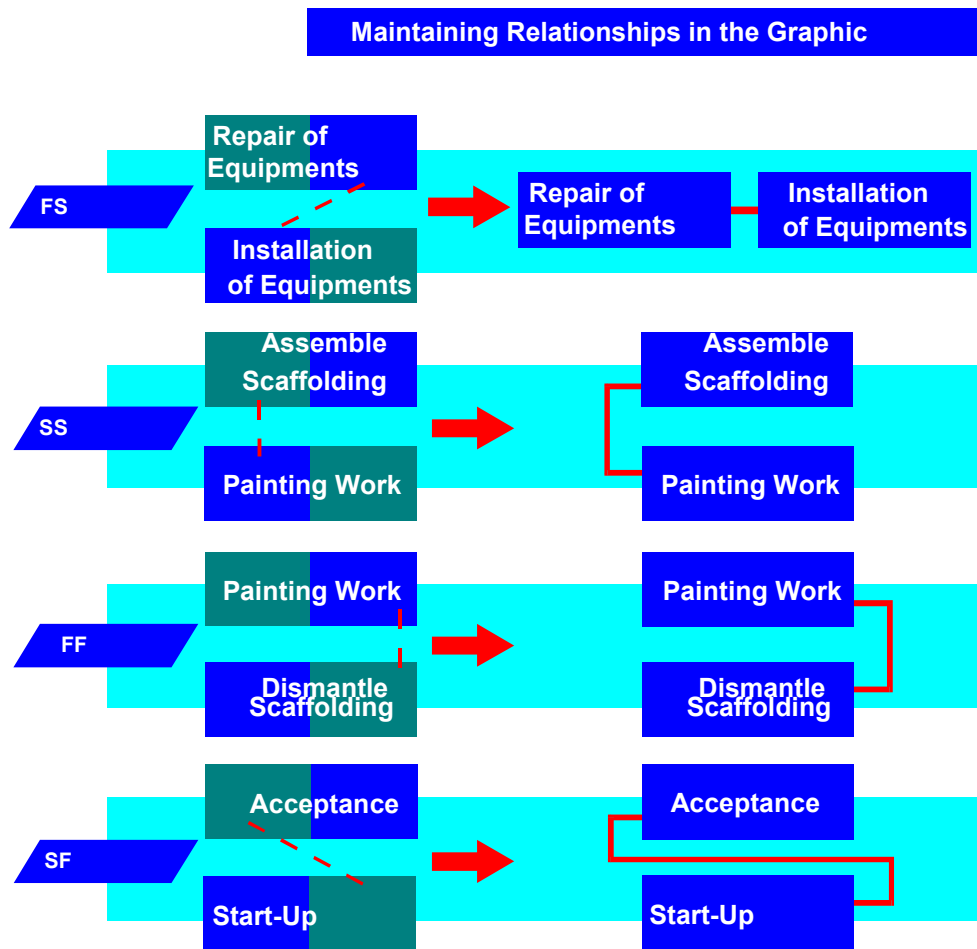
2. Press the *Connect* push-button.
3. Press and hold the left mouse button on the operation **from which** you want to create a relationship. The position of the pointer specifies the type of relationship (see the figure “Maintaining Relationships in the Graphic” below).

Each element in a maintenance plan (for example, operation, sub-operation, material component) is valid for a certain period of time.

4. Drag the line to the operation, **for which** you want to create the relationship. The position of the pointer specifies the type of relationship (see the figure “Maintaining Relationships in the Graphic” below).
5. Release the mouse button.

The system will connect the two operations with a line and will record the type of relationship above the line. The line extends from the right edge of the predecessor to the left edge of the successor, and therefore only shows that a relationship exists; the type of relationship is always written above the line.

Creating a Relationship in the Graphic



Defining the relationship type using the mouse cursor (lines here do not correspond to those you would see in the graphic on the screen)

- To enter detailed data for a relationship (for example, time interval), select the relationship and choose *Details* → *Relationship*.

Make all the required entries. The help functions support you in this.

Use *Back* to return to the graphical display.



From the graphic (menu option *Details*), you can also call up the screens for externally and internally processed operations, enter or change data and then return to the graphic for relationships.

You can also create new operations in the graphic. To do this, see [Creating an Operation in the Graphic \[Page 132\]](#).

- To create additional relationships, repeat steps 1 to 6.
- Return to the operation overview of the maintenance task list using *Goto* → *Back*.

**Creating a Relationship in the Graphic**

9. Save the maintenance task list.

## Creating a Relationship in the List

### Prerequisites

For more information, see [Prerequisites for Creating Relationships \[Page 126\]](#).

### Procedure

1. In the *Operation Overview* screen, select the operations for which you want to create relationships.
2. Then choose *Operation → Relationship*.

You reach the screen *Operation Relationships*.

3. In the screen *Operation Relationships* in the upper part of the screen, you will see the first operation selected **from which** you want to create the relationship.

In the data section *Relationships*, enter the operations **with which** you want to connect the operation mentioned above, the type of relationship and any additional data.

The help functions support you when entering data.



From the list, you can call up the screens for the data from internally and externally processed operations, enter or change the data and then return to the relationships list.

4. To call up the next selected operation, choose *Operation → Add operation → Next operation*.
5. Proceed in the same way for all the other operations you selected.

When you reach the last selected operation, the system will issue a message informing you of this. You can either return to the *Operation Overview* screen by using *Goto → Back*, and call up further functions for the maintenance task list, or perform step 6 immediately.

6. Save the maintenance task list.

#### See also:

[Working with Lists \[Ext.\]](#)

---

**Creating an Operation in the Graphic**

## Creating an Operation in the Graphic

If you are creating or changing relationships, and realize that a certain operation has not been created, you can create the operation you require in the network graphic. To do this, perform the following five steps:

1. Select the pushbutton *Insert mode*.  
In the navigation area you will see a standard operation.
2. Select this operation in the navigation area.
3. Position the pointer in the display area where the new operation should be and press the left mouse button.  
The standard operation will appear there.
4. Select the new operation. Use the menu bar *Modify* to call up the processing screens for the operation and enter all the relevant operation data.
5. Once you return to the graphic display, you can connect this operation with the other operations using relationships.

## Changing Relationships

If you want to make changes to the relationships, remember that the maintenance task list may be in use in your company already, and the changes will not be transferred to created maintenance orders and released maintenance items which refer to the task list.

To change relationships, call up the relationships as described in the topic [Creating Relationships \[Page 127\]](#).

You can change both the data in existing relationships and add or insert new relationships to the existing network.

To change relationships, proceed as for creating relationships (see topic [Creating Relationships \[Page 127\]](#)).

---

**Displaying Relationships**

## Displaying Relationships

To display your relationships, call up the appropriate maintenance task list in the *Maintenance Task Lists* screen with one of the following options:

*Task lists* → *For equipment* → *Display*

*Task lists* → *For function location* → *Display*

*Task lists* → *General task lists* → *Display*.

Call up the relationships overview as described in the topic [Creating Relationships \[Page 127\]](#).

## Deleting Relationships

When you delete a relationship, you change the network structure. Therefore, you should always remember that maintenance task lists may be in use in your company and that the changes you make will not be transferred to a created maintenance order and the maintenance items which refer to the maintenance task list.

To delete a relationship, perform the following six steps:

1. In the *Maintenance Task Lists* screen, call up the maintenance task list in which you want to delete the relationships using one of the following options:

*Task lists → For equipment → Change*

*Task lists → For functional location → Change*

*Task lists → General maintenance task list → Change.*

2. Call up the *Operation Overview* of the maintenance task list. If you want to call up the relationships list, select the operation for which you want to delete a relationship.
3. Set the network profile for the graphic, by choosing *Settings → Profile* and enter the profile required with the profile group and name in the section *General data*. Return to the operation overview by using *Continue*.

4. Call up the list or the graphic for relationships with one of the following options:

*Operation → Relationships*

or

*Goto → Network graphic*

5. Select the relationship you want to delete.
6. Choose *Edit → Object → Delete*.
7. Save the changes.

## Loop Analysis

### Loop Analysis

In Plant Maintenance, it is presumed that the operations connected by relationships within an operation network will be performed one after the other and individual operations will not be repeated. A loop should be avoided as this can cause problems when scheduling the maintenance order in which the maintenance task list is included.

To avoid saving such loops in a maintenance task list, the PM system offers you loop analysis. This is a tool which checks if any loops exist in the operation network. You should always use loop analysis when you have created or changed relationships.

To start loop analysis, perform the following steps:

1. Call up the maintenance task list in which you want to start the loop analysis by using one of the following menu bar sequences:

*Task lists → For equipment → Change*

*Task lists → For functional location → Change*

*Task lists → General task lists → Change.*

2. Call up the *Operation overview* of the maintenance task list.
3. Set the network profile for the graphic, by choosing *Settings → Profile* and enter the profile required with the profile group and name in the section *General data*. Return to the operation overview by using *Continue*.
4. Go to the network graphic for relationships by choosing the following option:  
*Goto → Network graphic.*

The system displays the existing relationships in the network graphic.

5. To start the loop analysis, choose the menu bar sequence *Edit → Functions → Loop analysis → Proceed*.  
The system checks all relationships to see if they form a loop. If it finds a loop, it will highlight the affected relationships and operations.
6. Select the relationship(s) that produce a loop and choose the menu bar sequence *Edit → Object → Delete*.



To remove the highlighting, choose *Reset*.

7. Exit the graphic and save the changes to the maintenance task list.

## Cost Analysis

### Use

You can perform cost analyses for maintenance task lists with the *Plant Maintenance* component. This allows you to see which of the operations described have created which costs in a maintenance task list. This enables you to control your costs without creating an order.

### Prerequisites

All the data entry fields relevant to costing and the preparation possibilities of the costing result must have been set using the customizing function by your CO consultant.

### Features

The cost analysis can refer either to entire task lists or individual operations (for example, all externally processed operations).

Enter the following data in the costs analysis:

- All material costs
- All costs for external processing
- All costs for internal processing

Cost calculation depends on the costing variant (for example, with or without surcharges) assigned to the order type that is used as a basis for the cost analysis.

You can only run the cost analysis program for **one** maintenance task list type. If you want to calculate the costs for equipment task lists and for functional location task lists, you must run the program once for the equipment task lists and again for the functional location task lists.

### Creating a Log

Within the cost analysis framework, you can create a log which checks all the costing relevant master data for completeness and consistency. For example, the system checks if all activity types and valuation segments of the assigned materials are maintained. The system creates a corresponding message in the cost analysis when errors or inaccuracies occur.

This inconsistency check is important to ensure that the task list is correct before it is included in the maintenance order. Only in this way can you ensure that there will be no problems when creating the order as a result of inadequately maintained data.

---

**Analyzing Costs**

## Analyzing Costs

1. Choose the menu bar sequence *Logistics* → *Plant maintenance* → *Maintenance task lists* and then *Evaluations* → *Costing PM task lists*

The screen *Task list costing* is displayed.

2. Select the maintenance task list type for which you want to perform the cost analysis.

Within a task list type you can restrict the selection further if required, by entering one or more pieces of equipment or functional locations, a specified task list group and/or specific group counter. Enter the necessary data.

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

The dialog box *Select operation* appears.

4. Select all the operations that are to be included in the cost analysis. Then press *Copy selection*.

If you want to cost all the operations displayed, you can simply choose *Copy all* without selecting them.



While the system calculates the costs, it may also issue system message with information about the orders. You can simply ignore these messages as they are not relevant to maintenance task list costing. The messages are only issued because the system simulates a pseudo-order in the background when costing the task list in order to be able to perform the costing function.

The system produces a list of all the maintenance task lists and operations corresponding to the selection criteria you have defined and displays the costing result.

The presentation depends on the basic cost report. If you require another presentation, choose one by using the menu bar sequence *Goto* → *Other report*. The reports displayed depend on the options set centrally in the CO component.

5. You can call up further information from the list by using any of the available menu bar sequences.

## Creating a Log for Cost Analysis

### Use

You can create a log while the system issues all inconsistencies relevant to costing.

### Procedure

1. Choose the menu bar sequence *Logistics* → *Plant maintenance* → *Maintenance task lists* and then *Evaluations* → *Costing PM task lists*

The screen *Task list costing* is displayed.

2. Select the field *Create log*.
3. Use the menu bar sequence *Program* → *Execute*.

The dialog box *Select operation* appears.

4. Once you have selected all the operations, you can view the log in the initial screen for analyzing and controlling errors.

You can choose *Log* → *Display* to display different versions of the log.

The long texts for the individual system messages describe the problems that have occurred and offer solutions. You should eliminate the problem before releasing the maintenance task list and including it in the maintenance order.

5. Return to the screen for displaying the costing result.

## Configurable General Maintenance Task Lists

## Configurable General Maintenance Task Lists

### Definition

A general maintenance task list in which you, for example, group together all possible operations for repairing different object types in a **super task list**. This means that you do not have to create a separate general maintenance task list for each variant of a technical object, but that you configure each variant accordingly.

You create **object dependencies** for the individual operations of the general maintenance task list, by specifying, for example, that the system should only select an **operation** during maintenance or service order creation when particular characteristic values apply. In addition, you can assign an assembly to the general maintenance task list. If you have entered object dependencies for the materials in the corresponding material BOM, the system copies the **material components** with the assigned object dependencies into the general maintenance task list. This means that you are also able to configure materials, and define that they are only selected when particular characteristic values apply.

### Use

When maintaining technical objects, it is sometimes the case that task lists for maintaining different object types only differ from one another by additional, variant-specific operations, and that otherwise, they are largely identical. In cases such as this, you can use configurable general maintenance task lists.

For example, this may be the case if you want to repair production lines that only differ from one another as regards additional operations that are based on the age or on the modernity of the system. Another situation where you could use configurable general maintenance task lists would be if you have created service contracts for object types that differ from one another based on, for example, the type of motor concerned (for example, fork lift truck with electric engine, fork lift truck with diesel engine).



#### Configurable General Maintenance Task List for Fork Lift Truck

Operation	Object dependency: Select if the type of engine is...
Check electronics	Electric
Check wear and tear of carbon brushes	Electric
Check tread depth of tires	Electric, Diesel
Change hydraulics oil	Electric, Diesel
Check tension of lift chain	Electric, Diesel
Change oil filter	Diesel
Change air filter	Diesel
Clean fuel injectors	Diesel

**Configurable General Maintenance Task Lists**

You can use the configurable general maintenance task list in Plant Maintenance (PM) and Customer Service (CS). Observe the following features for the [configuration profile \[Page 142\]](#):

Use	Features
PM, maintenance order	Assign an object dependency and a configuration profile to the general maintenance task list.
CS, service order with configurable service product	A configuration profile is assigned to the configurable service product. From this, assign object dependencies but no separate configuration profile to the general maintenance task list. If, however, you still choose to assign object dependencies, they will be ignored by the system.
CS, service order with "normal" service product	Assign an object dependency and a configuration profile to the general maintenance task list.
PM and CS	Assign an object dependency and a configuration profile to the general maintenance task list.  If you assign the general maintenance task list in the Customer Service component to a service order with a configurable service product, the configuration of the service product has priority over the configuration of the general maintenance task list.

For more information on the service product, see [Configurable Service Product \[Ext.\]](#).

**Integration**

The configurable general maintenance task list integrates the following components:

- Classification system
- Variant configuration
- Maintenance orders or service orders

If you create a maintenance or service order and assign a configurable general maintenance task list to it, the system recognizes that the general maintenance task list is assigned to a configuration profile. It calls up characteristic valuation and only selects the relevant operations for the order from the super task list, based on the object dependencies that you specified.

**See also**

[Configurable Service Specifications \[Page 148\]](#)

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**Configuration Profile**

## Configuration Profile

### Definition

You maintain the configuration parameters for a configurable general maintenance task list in the configuration profile.

The settings that you make here also concern the BOM explosion for the piece of material. In addition, at least one class, whose class type allows variant configuration, must be assigned to each configuration profile. The class contains the characteristics that the system proposes for characteristic evaluation when you create a maintenance or service order.

## Creation of Configurable General Maintenance Task Lists

### Purpose

When maintaining technical objects, it is sometimes the case that task lists for maintaining different object types only differ from one another by additional, variant-specific operations, and that otherwise, they are largely identical. In cases such as this, you can use configurable general maintenance task lists.

If you create a maintenance or service order and assign a configurable general maintenance task list to it, the system recognizes that the general maintenance task list is assigned to a configuration profile. It calls up characteristic valuation and only selects the relevant operations for the order from the super task list, based on the object dependencies that you specified.

### Prerequisites

- You have created a class in the class system and assigned characteristics to it, for example, the class “Fork lift truck” with the characteristics “Engine type”, “Construction year” and “Extras”. For more information, see [The Classification System \[Ext.\]](#).
- You are familiar with the variant configuration (see [Logistics \(General\) - Variant Configuration \[Ext.\]](#)).

### Process Flow

1. You [create a general maintenance task list \[Page 144\]](#) and enter object dependencies for the individual operations.
2. You [enter a configuration profile \[Page 146\]](#) for the general maintenance task list and assign one or more classes to the configuration profile.

### Result

You can assign the general maintenance task list to a maintenance or service order and then select suitable operations for it. The class(es) that you assign to the general maintenance task list using the configuration profile control(s) which characteristics the system proposes for the characteristic evaluation.

### See also

[Configurable Service Specifications \[Page 148\]](#)

## Creating Configurable General Maintenance Task Lists

# Creating Configurable General Maintenance Task Lists

## Prerequisites

You have created a class in the class system and assigned characteristics to it, for example, the class "Fork lift truck" with the characteristics "Engine type", "Construction year" and "Extras". For more information, see [The Classification System \[Ext.\]](#).

## Procedure

1. Choose *Logistics* → *Plant maintenance* → *Planned maintenance* → *Maintenance task lists* → *Task lists* → *General task lists* → *Create*.

The initial screen for creating general maintenance task lists is displayed.

For more information about creating general maintenance task lists, see [Creating Maintenance Task Lists: Process \[Page 29\]](#).

2. Enter object dependencies for the individual operations.

To do this, select the operation to which you want to assign an object dependency in the screen *Operation overview*, and choose *Extras* → *Object dependencies* → *Editor*.

The dialog box appears.

3. Select the relationship type and choose *Continue*.

The screen for maintaining object dependencies is displayed.

4. Enter the source text for the object dependency.



```
$parent.engine type eq 'Electrical'
```

(The system should only select operations for the engine type "Electrical").

For more information on object dependencies, see [Logistics \(General\) - Variant Configuration \[Ext.\]](#).

5. Save the general maintenance task list.



In the general maintenance task list, you cannot assign object dependencies directly to the free **material components**. An assignment of object dependencies to material components is only possible if you assign a material of the category *Assembly* to the general maintenance task list in the task list header, and you select the material components using component selection from the material BOM. The system copies the object dependency that is assigned to the components in the bill of material to the general maintenance task list. In this way, you are also able to control the configuration of the material components, and define that the system only selects components for particular characteristic values (for example, material "Air filter" for engine type "Diesel") when you create a maintenance or service order.

For more information on material components, see [Assignment of Material Components \[Page 85\]](#).

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**Creating Configurable General Maintenance Task Lists****Result**

- You have created a general maintenance task list and must now [create a configuration profile \[Page 146\]](#).
  - You can assign the general maintenance task list to a maintenance or service order and then select suitable operations for it. The class(es) that you assign to the general maintenance task list using the configuration profile control(s) which characteristics the system proposes for the characteristic evaluation.

For more information, see the SAP documentation *PM - Maintenance Orders* and *PM - Service Management*

**See also**

[Configurable Service Specifications \[Page 148\]](#)

[Processing Maintenance Task Lists \[Page 55\]](#)

## Creating Config. Profile for Gen. Maint. Task List

## Creating Config. Profile for Gen. Maint. Task List

### Prerequisites

You have created a general maintenance task list (see [Creating Configurable General Maintenance Task Lists \[Page 144\]](#)).

### Procedure

1. Use the menu bear sequence *Logistics* → *Plant maintenance* → *Maintenance task lists* and then one of the following menu paths:

- *Task lists* → *General task lists* → *Configuration profile* → *Create*
- *Environment* → *Variant configuration* and then *Config. profile* → *Create*

A dialog box is displayed, in which you can select the required configurable object.

2. Select *General maintenance task list* and choose *Continue*.

The initial screen for creating configuration profiles is displayed.



By choosing *Extras* → *Change confble.obj.*, you can change the object later if required.

3. Enter the name of the general maintenance task list that you want to create a profile for and choose *Continue*.

The Profile overview screen is displayed.

4. Enter a **profile name** and a **class type** by which the object is to be classified, for each profile that you want to create.



The class type must be admissible for the variant configuration. You can perform this setting in the Customizing function for the class system.

5. Assign one or more classes to each profile for the general maintenance task list. The class must be created for the class type that you have specified in the Overview screen. In this way, you determine which characteristics are proposed by the system when you assign the configurable general maintenance task list to a service or maintenance order.

To do this, choose *Goto* → *Class allocations*.

The Assignment screen for classes is displayed.

6. Enter the class that you want to assign to the object and return to the configuration profile.

7. To determine the status of the profile, select *Goto* → *Profile detail*.



When you create the profile, the status is set to *In preparation*. You can change the status to *Released* once you have assigned the object to a class.

---

**Creating Config. Profile for Gen. Maint. Task List**

8. Return to the Profile overview screen.
9. Save the configuration profile.

For more information on variant configurations and the creation of configuration profiles, see the documentation *LO - Variant Configuration Guide*.

## Result

You can assign the general maintenance task list to a maintenance or service order and then select suitable operations for it. The class(es) that you assign to the general maintenance task list using the configuration profile, control which characteristics the system proposes for the characteristic evaluation.

For more information on maintenance and service orders, see the documentation *PM - Maintenance Orders* and *PM - Service Management*.

---

**Service Packages in Configurable General Maintenance Task Lists**

## Service Packages in Configurable General Maintenance Task Lists

### Use

You can include configurable general maintenance task lists in an order during order creation. The system analyzes and evaluates the object dependencies of the operations and the material components in the general maintenance task list using the configuration and copies the relevant operations and components to the order.

You can also assign service packages to the operations of a general maintenance task list and define object dependencies for individual service lines. For example, you can define if a service line is necessary only for the assembly of red bicycles.

Object dependencies for service lines enable you to transfer and value the services to be executed during order creation.

For more information about creating configurable general maintenance task lists, see [Configurable General Maintenance Task Lists \[Page 140\]](#).

### Integration

The following components are integrated in the function:

- Task lists of the *Plant Maintenance* and *Customer Service* application components
- Maintenance or service orders of the *Plant Maintenance* and *Customer Service* application components
- Service specifications of the *Materials Management* application component

### Prerequisites

You have specified a control key for operations to which a service package that allows external processing should be assigned (for example, *PM03* or *PM04*).

### Features

You can include general maintenance task lists with service packages in an order. You have the following options:

- You can include a general maintenance task list manually in an order. For more information, see [Selecting a Task List for an Order \[Ext.\]](#).
- If you create an order with a service product, the system automatically includes the general maintenance task list using the task list assigned to the service product. For further information, see [Creating a Sales Order With a Service Product \[Ext.\]](#).

In both cases, the system calls up the configuration when including the general maintenance task list. You evaluate the characteristics here, that is, you enter Color = Red as a characteristic (for example). Based on the object dependencies, the system then selects suitable operations and service lines from the general maintenance task list.

The system copies the following operations to the order:

- All operations without object dependencies

**Service Packages in Configurable General Maintenance Task Lists**

- All operations with object dependencies that are relevant after evaluation and analysis of the object

In addition to selecting suitable service lines, you can also set values in the service lines using the object dependencies, for example, quantity.

**Activity**

Function	Menu path
Assigning service packages	<i>Operation → Overviews → Service packages</i>
Defining object dependencies for the operation	<i>Extras → Object dependencies → Editor</i>
Defining object dependencies for the service line	In the service package: <i>Extras → Object dependencies → Editor</i>