



AMOS Business Suite 9.2

M&P version 9.2

User Guide

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Comments and Suggestions

We welcome any suggestion, idea or concept you might have on ways we can improve this manual for you. Please forward your thoughts by email to:

documentation@spectec.net

Chapter 1 General Information

This User Guide is for users of the AMOS Maintenance & Purchase (AMOS M&P) module version 9.1. This document is written from the point of view that the reader understands the requirements of the job and now needs to acquire an understanding of how to use AMOS M&P in fulfilling those requirements.

AMOS M&P is a Windows application for integrated management of maintenance work and costs, stock control and purchasing in geographically spread organisations. The AMOS M&P module works in conjunction with the AMOS Business Suite (license required).

1.1 Who Should Read the User Guide?

This User Guide is for people using an AMOS M&P system that is already installed and running. The guide contains information on how to:

- Plan or report maintenance work
- Control maintenance costs or plan maintenance budgets
- Request, requisition or purchase stock
- Take inventory or manage stored goods
- Approve planned purchases
- Receive goods

No previous knowledge of AMOS M&P or Windows is required, but if you are completely new to computers, you may prefer to start with the basic documentation for your PC and Windows.

1.2 How This User Guide is Organised

The initial chapters give you an overview of the AMOS M&P application within the AMOS Business Suite.

The main features for Maintenance, Stock, Purchase and Budgeting are found in Chapters 4 to 7. Chapter 8 lists the Options menus related to the windows in these areas of the application, and the items available from them.

1.3 Related Documentation

The *AMOS Business Suite Installation Guide* contains information on how to install the application.

The *AMOS Business Suite Reference Manual* contains technical information about the application.

Chapter 2 Introduction to AMOS M&P

This chapter provides a brief introduction to the AMOS M&P module of the AMOS Business Suite, and also this User Guide.

AMOS M&P is a computer-based system for planning and reporting maintenance, and for performing stock control and stock purchasing.

The various functions in AMOS M&P work together so that if you have reported performing a maintenance job that requires certain spare parts, the spare parts will automatically be listed in the stock control records as removed in connection with that job.

Likewise, the purchasing function will hold a purchase order as active until the goods are registered as received, at which point they will be added into the stock control records.

AMOS M&P allows you to see what has been spent on various maintenance activities or purchases, and what is planned or budgeted to be spent in the future.

AMOS M&P has been developed specifically for companies and organisations with plants or installations that are geographically distributed. That is, where maintenance, stock control and requisitioning take place at one or more local installations, while purchasing and transport planning typically take place at a central headquarters.

Many AMOS M&P customers are shipping lines, but AMOS M&P is also used to great advantage by manufacturing companies and transport/delivery organisations.

2.1 Using Component and Stock Types

AMOS M&P version 3.0 introduced optional functionality in the form of the two windows Component Types and Stock Types. The general principles behind component types and stock types are quite similar, and they are therefore discussed together in this section.

This functionality is optional, controlled by the two parameters Use Component Types and Use Stock Types. If these parameters are set to the default FALSE value, AMOS will behave as it did prior to version 3.0. This means that all component information must be entered in the Components register at the individual location, and similarly for the Stock Items register. The two parameters mentioned above are discussed in the *AMOS Business Suite Reference Manual*.

If your organisation elects to use the types functionality, the Component Types and Stock Types registers are typically updated at the main location only, and information is then exported to the various installations. Export and import functions are described in the *AMOS Business Suite Reference Manual*.

2.1.1 Advantages to Using Component and Stock Types

There are several advantages to using the Types functionality:

It is much easier to carry out analyses across all the installations in the organisation. For example, when the Component Types function is used, it is possible to select the **Components for this Type** command from the **Options** menu to get an overview of how many components of the selected type are in use in the entire organisation. This makes it much easier to ensure that the stock level is correct, and the information is useful in obtaining good quotation prices when re-ordering stock.

Another major advantage is the reduction in the need for registering the same information several times. This saves time, and makes it easier avoid incorrect registration of data. If an error has been made, it is sufficient to correct it once.

The Component Types/Stock Types windows work according to the same principles and are discussed in the Maintenance and Stock Management chapters of this Guide.

2.2 Working with AMOS M&P at a Local Installation

Plan Maintenance

Define jobs to be performed regularly. Define maintenance schedules. Print lists of jobs to be done in the immediate future, as check-lists or with full descriptions of work. Plan extraordinary maintenance with Work Orders. See Chapter 4.

Report Maintenance

Report performance of planned maintenance, manually or semi-automatically with simple reporting. Keep records required by inspecting authorities. Print or display maintenance records. Report unexpected work and routine checks. Create work orders and report work based on work orders. See Chapter 4.

Control Stock

Display and print inventory list for each storage area. Update quantities directly, after taking inventory. Display automatic transactions in and out of stock from maintenance or purchasing activities. Review current stock quantities in relation to pre-set minimum, maximum and reorder levels. Automatically calculate the amount needed to fill stock to any of those three levels. Store preferred vendor, price and vendor supplied units for all stock. See Chapter 5.

Request Stock

Enter desired quantities of items as they are used or expire. See Chapter 5.

Requisition Stock and Consumables

Create requisition forms for stock items automatically, based on desired quantities and preferred vendors, or create forms manually. Create requisition forms for consumables. See Chapter 5.

Track Purchasing

Answer questions such as: Has the purchaser started to work with my last requisition? Was the order approved? Was it confirmed? When is it expected to arrive? What purchase orders are still active? See Chapter 5.

Receive Goods

Based on purchase orders, mark goods received, automatically updating stock. See Chapter 5.

Track Costs and Budgets

What have I spent so far this month? This fiscal year? How much of the budgeted amount remains for this period? Save and analyse costs due to unexpected maintenance over time to evaluate and improve preventive maintenance program. See Chapter 7.

2.3 Working With AMOS M&P at the Head Office

Receive Requisitions

Import data from various local installations to the main office. See Chapter NO TAGNO TAG.

Make Queries

When you don't have a preferred vendor, or you are going to purchase items for the first time, you can make a query to potential vendors. See Chapter 6.

Compare Quotations

You receive quotations in response to queries you send out. You record them, and have AMOS calculate the total price of each quotation. You can compare quotations, and have AMOS recommend a vendor. See Chapter 6.

Create Purchase Orders

When you have decided to create a purchase order, you can create a new one, or convert a requisition or a query into a purchase order. See Chapter 6.

Approve Purchase Orders

If the organisation requires that a purchase order be approved by someone other than the purchaser, there is a separate function for this. See Chapter 6.

Order Goods

When you order goods, you may want to split a requisition into purchase orders sent to different vendors. You may be able to send the orders directly from AMOS. See Chapter 6.

Confirm Orders

When vendors confirm orders, you must record the reference number of the vendor's confirmation on the AMOS Purchase Order. You must also record deliveries on the Purchase Order. See Chapter 6.

Plan Deliveries

The registered delivery line items must be assigned to actual deliveries. This will ensure you that all ordered items are eventually delivered and transported to the installation. See Chapter 6.

Plan Transport

AMOS helps you create transport documents, which also helps get an overview of unassigned deliveries. A transport form can be used to print a list of deliveries to be loaded on a transport. See Chapter 6.

Track Costs and Budgets

What have we spent so far this month? This fiscal year? How much of the budgeted amount remains for this period? Save and analyse costs due to unexpected maintenance over time to evaluate and improve preventive maintenance program, both for individual installations and for the company as a whole. See Chapter 6.

Answers to Typical Purchasing Questions

Some typical questions include “What deliveries are we expecting?”, “Which purchase orders do we need to send?” and “Are there any orders where we are waiting for vendor confirmation?” These and other similar questions are covered in Chapter 6.

Chapter 3 Using AMOS Business Suite

The AMOS Business Suite is an integrated framework of several leading AMOS applications. Each AMOS application is configured as a Plug-in of the Business Suite and is individually enabled by license codes. When the Business Suite is installed, only the plug-in applications that you have entered a license code for will be accessible.

3.1 How to Start AMOS Business Suite

There are two main methods to start the application:

- Select the application from the **Start > Programs > AMOS** menu.
- Double-click the shortcut icon on your windows desktop.



AMOS Business Suite icon

To start the AMOS Business Suite:

1. Start the application by double-clicking on the AMOS Business Suite icon located on your windows desktop. Alternatively, you can select the application icon from the **Start > Programs > AMOS** menu.

The logon screen opens.

2. Type in your user name and password.
3. Click **OK**.

Note

If you don't have a logon account or you have forgotten your password, contact your system administrator.

If your logon details are accepted, the AMOS Business Suite desktop will then be displayed.

3.1.1 Why Do I Have to Logon?

Some of the functions in AMOS Business Suite are reserved for authorised people only: approving work, approving requisitions, and changing budgets, to name a few.

When you log on, you tell AMOS who you are, and AMOS will lock any commands that you are not authorised to use.

Also, AMOS keeps track of who performs certain operations, and when. That gives you a clear, secure record as required by many inspection organisations.

Note

Your organisation may use one or more additional security options available within AMOS such as complex passwords, maximum password age, minimum password length, maximum number of logon attempts and/or restriction of recently used passwords when registering a new one. Ask your system administrator if you are unsure if any of these features are employed.

3.1.2 System License

To utilise the AMOS Business Suite, you require a valid system licence. The licence file contains information about the organisation and about which modules have been purchased.

If you are presented with an error message stating that the system licence must be updated, you must obtain a new system licence file from your AMOS distributor.

To update the license, select **Tools > Configuration > Update System License** to enter the SQL File dialog box. Locate the folder with the .Sql file, and double click it or click **Open** to update the license.

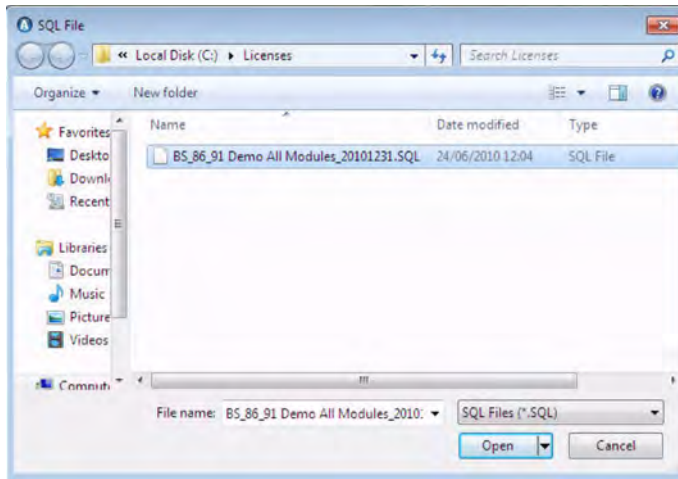


Figure 1 An Example Window for Updating a License

3.2 Navigating Within AMOS Business Suite

3.2.1 The Dashboard

When you start up AMOS Business Suite, you have the option of opening the application to a customisable home page, or Dashboard. You can add convenient information to the dashboard, such as Alerts and Work Flow Notifications. This information is easily accessible no matter how many windows you have open at a time: a **Dashboard** button will be present in the **Task Bar** at the top left corner of your window. Clicking on it will return you to the Dashboard, while leaving your other windows open underneath. What you see in your Dashboard will vary according to your own settings, and changes to your data.

If you have enabled it, the **List Bar/Icon Bar** is on the left hand side of the Dashboard. It contains shortcuts to main areas of the application and is always visible from every window.

This side bar can also contain a menu called **Views**. Views are user-defined, frequently used screen configurations. Each view is capable of recording which screens are open, which screen is active, which filter criteria are defined and the sorting order applied in the window. Each saved view can be restored as and when required by opening the dialog at **Tools > Select View**, or, you can select one from the Views menu in the side bar at any time and it will open up in place of the window you were in. Views are defined (and selectable) in the **Views tab** of the window at **Tools > Options**. You can also access the list of Views, and the Options window itself, by clicking the two shortcut buttons on the top left corner of the task bar.

To switch the Dashboard on and off...	...go to Tools > Options and check or clear the Enable Dashboard checkbox in the Dashboard tab .
To switch the Task Bar on or off...	...go to Tools > Options and check or clear the Task bar checkbox in the General tab .
To hide or display the List Bar/Icon Bar ...	...go to Tools > Options and click the radio buttons in the General tab .
To display the list of Views in your side bar...	...go to Tools > Options and ensure that the List Bar/Icon Bar radio button in the General tab is On.

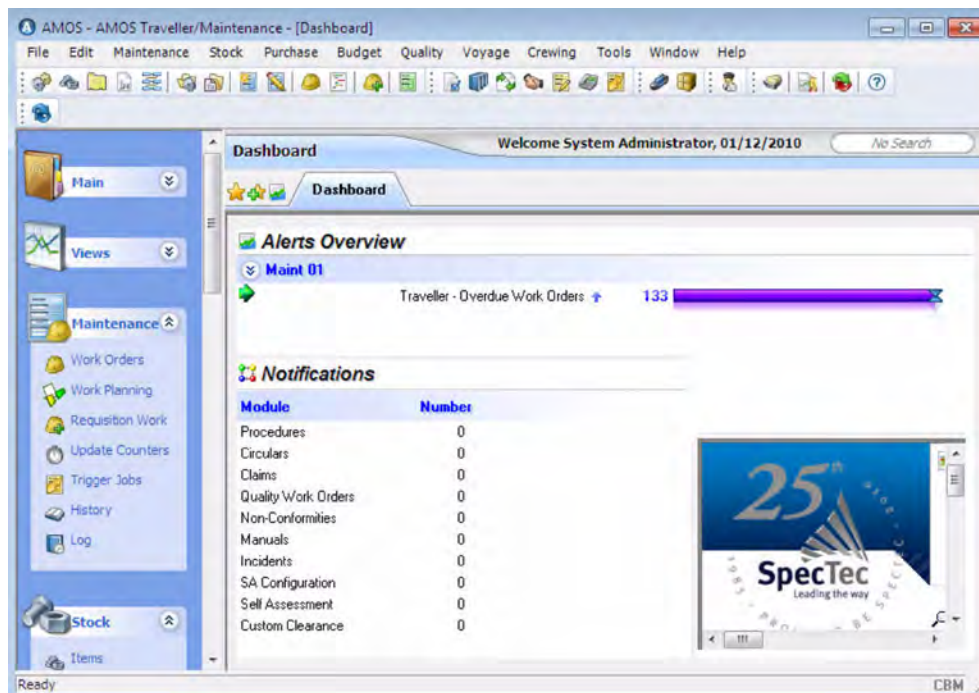


Figure 2 The Dashboard, with List Bar

See the *AMOS Business Suite Reference Manual* for more information about the **Tools > Options** window. Your Dashboard is split into segments: the two standard segments are Alerts Overview and Notifications.

3.2.1.1 Alerts Overview

The Alerts Overview is a list of the current alerts present in the system. All the system alerts are configured and stored in the register at **Tools > Configuration > Dashboard Alerts**.

The list of Alerts that appears on the dashboard is user-definable, in the **Tools > Options** window **Dashboard** tab. See the *AMOS Business Suite Reference Manual* for more information about customising your Alerts list.

Double-clicking an alert opens the appropriate window with the list of records. Right-clicking in the Alerts Overview opens a pop-up menu. You can choose to **Refresh** the Alerts, **Open** the selected one, or **Print** the contents of the Alerts Overview.

You can change the Alerts display from a graph into a pie chart by clicking on the double arrow icon to the left side of the Alerts Group name. Alerts can also be configured with a set threshold indicating the maximum acceptable value on the given alert. If this threshold is crossed the alert bar and label will change colour and AMOS can send an email to the responsible users. Thresholds and automatic email notification, are defined in the **Dashboard Alerts** window.

It is also possible to display a gauge along side the Alert bars, with numbers on a dial visualising the alert values. This gauge is switched on or off in the **Tools > Options > Dashboard** tab.

3.2.1.2 Notifications

This area of the Dashboard contains a list of modules for which workflow is in use in your system. For each module, you will see the number of workflow notifications presently awaiting acknowledgement (for the logged in user). Double-clicking on a module name will take you directly to the Work Flow Notifications window, which contains the list of all notifications awaiting acknowledgement by the current user.

3.2.1.3 Customising the Appearance of Your Dashboard

You can enter a link to a website, in the **URL** field on the Dashboard tab of the Options window. Once saved, this page will always appear in the right corner of your dashboard. Using the **Image** field in the same tab, you can lookup and enter the location of an image file within your system. Once saved, this image will always appear as the background of your dashboard.

3.2.2 The Windows in AMOS

Figure 3 shows the AMOS main window (when the dashboard is switched off). It controls any other windows that you open with AMOS, and it contains:

- The pull down menus. These menus contain all the commands in AMOS.
- The main toolbar. These buttons are shortcuts to frequently used parts of AMOS.

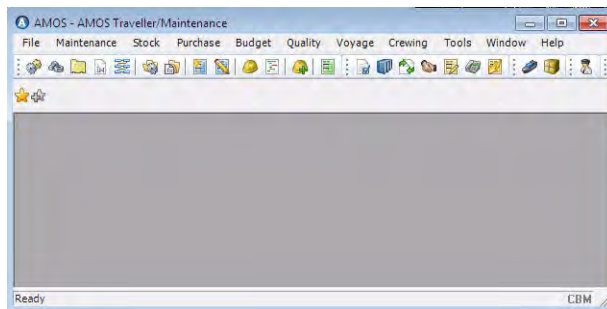


Figure 3 The AMOS Business Suite opening window

Note

The modules and commands available to you are controlled by the software license purchased by your company, and some commands are user defined. The illustrations in this manual may therefore differ from what you see on your screen.

3.2.2.1 Title Bars

The AMOS Business Suite is designed to be as user-friendly as possible. The user interface, in similarity to many commonly used applications, offers alternative navigation options to cater for most peoples' preferences.

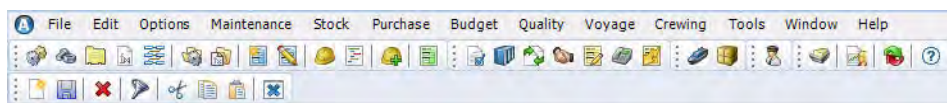


Figure 4 Navigation Bars

When you first open AMOS Business Suite the window that appears will have a title bar, usually blue in colour. The title bar informs you which installation (vessel) and department you are viewing information for. In the following example, the installation is 'AMOS Voyager' and the department is 'Maintenance'.

In addition to the main title bar, each window that is opened within the application has its own 'Window Title Bar'. These title bars display the name of the open window and, depending on the information you are viewing, sometimes extra details of the individual item displayed within the window.

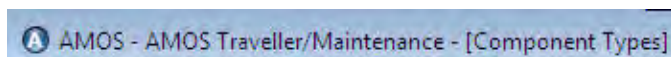


Figure 5 Window Title Bar

3.2.2.2 The Menu Bar

The main navigation area within AMOS Business Suite is the Menu Bar below.

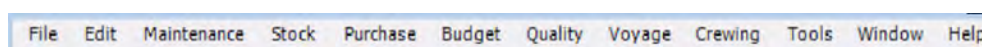


Figure 6 Menu Bar

All of the commands and functions available within the application can be accessed through the Menu Bar. Once you open a data window, the Menu Bar changes to include the **Edit** and sometimes the **Options** menu items as illustrated below.

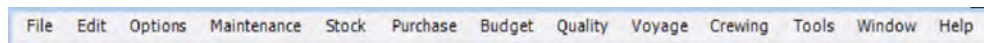


Figure 7 Extended Menu Bar

When your license does not include certain functionality, those menus will be 'greyed out'. Greyed out menus can be hidden by setting the parameter 'Hide Inaccessible Menu Entries' to TRUE.

3.2.2.3 The Standard Toolbars

AMOS Business Suite, in similarity to many common applications, makes extensive use of Toolbars to simplify navigation within the program. The toolbar shown below is a combination of the M&P and General toolbars, and is usually placed directly beneath the Menu Bar at the top of the application window. Toolbars are also available for each of the other integrated applications.

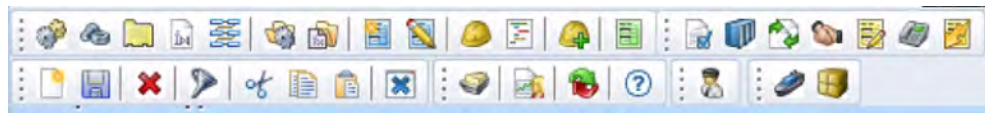


Figure 8 Standard Toolbars

If you have Toolbar tips activated (at **Tools > Options**), a description of the button's function will appear when you hover over it with the mouse.

Note

The number of visible buttons may vary depending on how the application has been set-up, the license that is in use and your access level within the system.

3.2.2.4 The Window Toolbar

When you open a window within the AMOS Business Suite a second toolbar, called the Window or Secondary Toolbar, usually becomes available.

This toolbar can be different for each window that you open as the buttons available depend on the functions related to the open window.

The functions represented on the Window Toolbar are a combination of the basic functions of the **File** and **Edit** menus combined with the most used functions within the associated **Options** menu.

3.2.2.5 Customising Toolbars

You can decide where you want to locate the AMOS Business Suite toolbars. Right-click in the toolbar area to open the menu shown. The Standard Bar is the main toolbar, while the Window Bar is the secondary toolbar which is dependent on the window opened. You can select along which edge of the screen these are to be located, or you may select **Floating** to have the toolbars as floating palettes.

If you select **Show Text**, the buttons become bigger and display the names of the buttons. Finally, if **Show Tips** is selected, you will see tool tips over a button/field/label when you hover over it with the mouse.

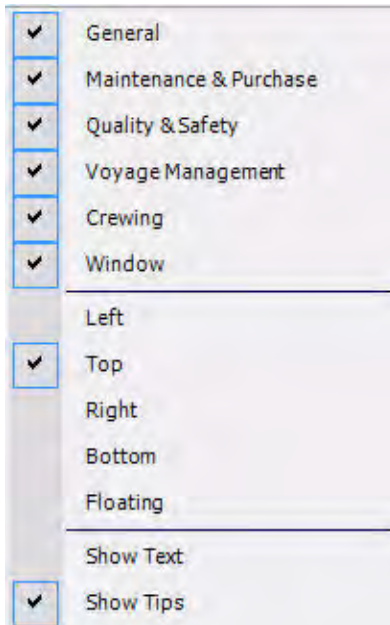


Figure 9 Customise Toolbar Menu

To choose from a more comprehensive set of options, go to **Tools > Options**. There are extra options on the General tab. For example, you can choose the default window settings from the drop-down list. For more about the **Tools > Options** window, see the *AMOS Business Suite Reference Manual*.

3.2.2.6 Shortcut Keys

Many of the most commonly used commands within AMOS Business Suite can be accessed by pressing a single key on the keyboard or a combination of keys. These key combinations are called **Shortcut Keys**.

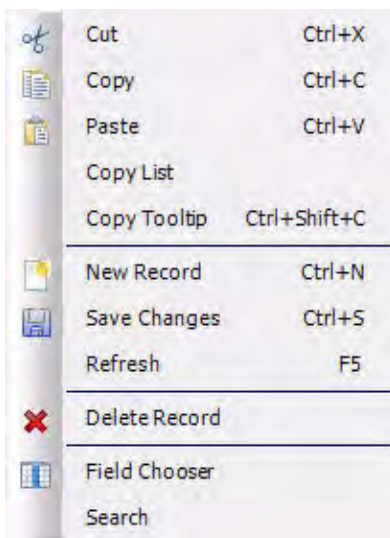


Figure 10 A Typical Edit Menu with Shortcut Keys

Wherever you see key combinations towards the right side of menu options, as above, you can use them as an alternative. If the shortcut takes the form of **Ctrl+?** or **Alt+?**, press the **Control** or **Alt** key and the key represented by the '?' at the same time.

Note

The availability of Keyboard Shortcuts depends on the currently active window and how the application has been set up at your installation.

3.2.2.7 Active Window Refresh

Select **Edit > Refresh**, or press the **F5** key to refresh the contents of the active window without re-opening or re-filtering the existing window.

3.2.2.8 Lock Application

Select **File > Lock Application** to prevent access to any of the presently in-use windows, without closing the system. The Login dialog will appear, with the current user's Login ID greyed out. It will not be possible to continue this session until the password for the current user is re-entered.

3.2.2.9 Saving Data and Closing a Window

When you have finished adding or editing the information in a form, click the **Save** button in the toolbar, or, click the right mouse button and select **Save Changes** from the pop-up, or press the **CTRL+S** keys on your keyboard, to save the changes.

Once you have finished with a window or form and you have saved the changes, click the **X** button in the upper right corner of the window, click the **X** button in the toolbar, go to **File > Close**, or press the **CTRL+F4** keys on your keyboard to close the window.

3.2.2.10 Exiting AMOS Business Suite

When you are finished working in AMOS Business Suite, remember to click the **Save** button if you want to save any changes you have made that have not yet been saved. (If you forget to save, you will be prompted to do so before you are allowed to exit). Then select **File > Exit** to leave the application.

3.3 Common Features in AMOS Business Suite

3.3.1 Installations and Departments

The AMOS Business Suite contains functions to handle complex organisations. You can divide your organisation into installations (any office or site where AMOS is installed) and divide these installations into departments. To view your company's list of defined installations and departments, select **File > Switch Department**. The Switch Department window only presents the departments the logged in user has access to. For instructions on defining new installations and departments, see the *AMOS Business Suite Reference Manual*.

It is important that before you begin any work in AMOS M&P, you check that you are in the correct department. The top line of the AMOS window shows Installation/Department. If you are not in the correct department, switch departments before doing anything else.

3.3.1.1 Switching Departments

Note

Close any open windows prior to switching departments. It is not possible to switch from one department to another while windows are open.

To switch departments within your AMOS installation:

1. Select **File > Switch Department**, or click the corresponding toolbar button.
2. In the Switch Department window that appears, select the correct department and click **OK**.

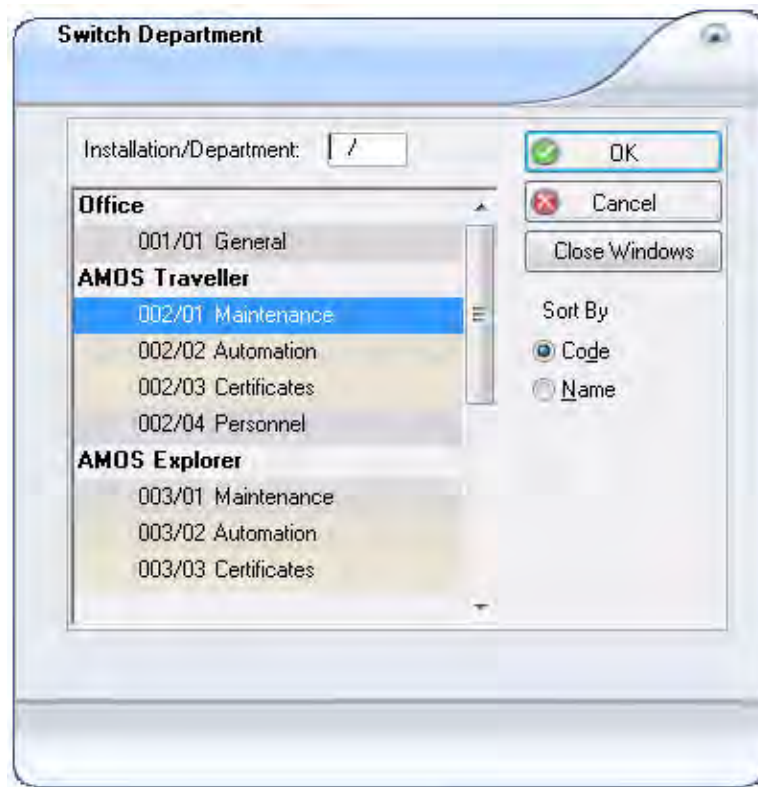


Figure 11 The Switch Department Window

If you have any open windows, click the **Close Windows** button first.

3. After a moment, you will see the new Department appear in the top line of the AMOS window.

3.3.2 Filters

AMOS Business Suite makes extensive use of Filters throughout the application. As the AMOS Business Suite database builds over time, the powerful filter function becomes very useful. Filters are used to narrow down the lists in the windows by allowing you to define the criteria for the data you wish to retrieve from the database. For example, if you want to see a list of only the tankers in the sites window, you can specify a filter that shows only those entries. At any time you can re-filter within a window by clicking the **Filter** button in the toolbar. Filters change their appearance according to the register you are working with.

3.3.2.1 What is a Filter?

A Filter is an order form for a search function. You can type characters (text or numbers as appropriate) into fields in the filter, and a search through the database will then pick out only those records or forms that contain the same characters in the same fields that you have entered into the filter. A filter therefore enables you to be more specific about what you ask for, and thereby reduce the number of hits generated by a search. This then reduces the amount of data that you have to look through to find what you actually want. The characters you type into the fields in a filter are called Search criteria. It is also possible to search for records by the way the text sounds: for example, entering a phonetic spelling of a person's name or address, or a piece of equipment, without knowing exactly how it is spelled.

Filters change their layout and content depending on the function you are currently using, such that the search criteria you can add to the filter is appropriate to a search within that function.

Figure 12 shows an example of a typical filter.

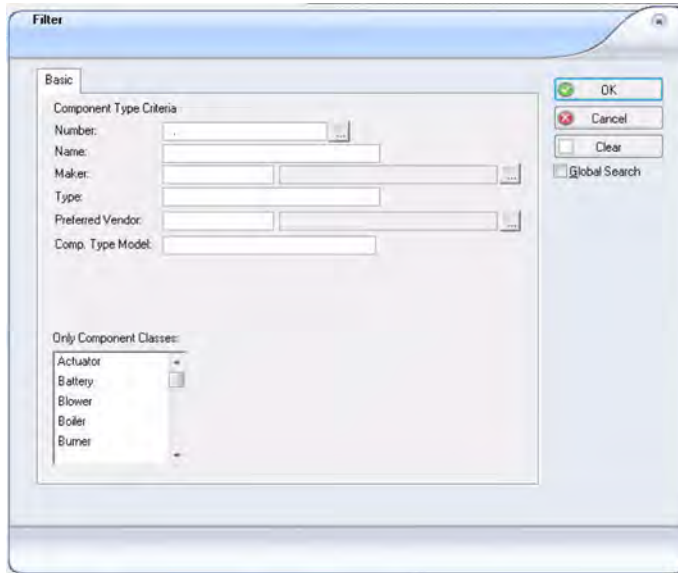


Figure 12 Example of a filter form

Some fields in a filter may link to additional filters to enable you to more easily find the correct search criteria to add to the first filter. These cascaded filters all work on the same principles, so if you can use one then you can use them all.

The fields in a filter can be used in combination to produce a search that restricts the data returned to an extremely exact specification. This can be very useful when your database entries number in the thousands, but you must be careful - if you are too specific or make a mistake in a field, you may not get any hits!

To by-pass the filter and list all the records available under the command, click **OK** without adding any search criteria to the filter. **OK** is the default command at this point, so you can just press the **ENTER** key on your keyboard.

Of course, if there is no record with the specified criteria registered, then the result box will come up empty and ask you if you wish to create a new entry.

Note

Searching / filtering using the " or ' characters is not supported by the system, so do not include these characters in any field when adding search criteria to a filter.

3.3.3 Look-up Buttons

To help further refine your search request, on some fields you can select values from a lookup filter. On the right-hand-side of the field is a lookup button:



The lookup button

Click this button to open a secondary window to help you select pre-defined values from your database. Sometimes the lookup list has its own filter, which opens first.

If you know the starting letter or number of the information you are searching for, you can enter it into the standard filter window before clicking on '**OK**' in order to restrict the look-up filter by displaying only records beginning with the letter/number you have entered.

Look up filters enable you to quickly find the information you are searching for. The following window shows a typical example of a look-up window. It is possible to sort information and search using either the code or the name associated with the information you are viewing. You choose the type of information you want to select from by clicking in one of the two radio buttons and then type the first letters of the information you are searching for. As you type the letters, the highlight moves automatically to the first record starting with those letters. Once the highlight is on the record you want to use, click **OK**.

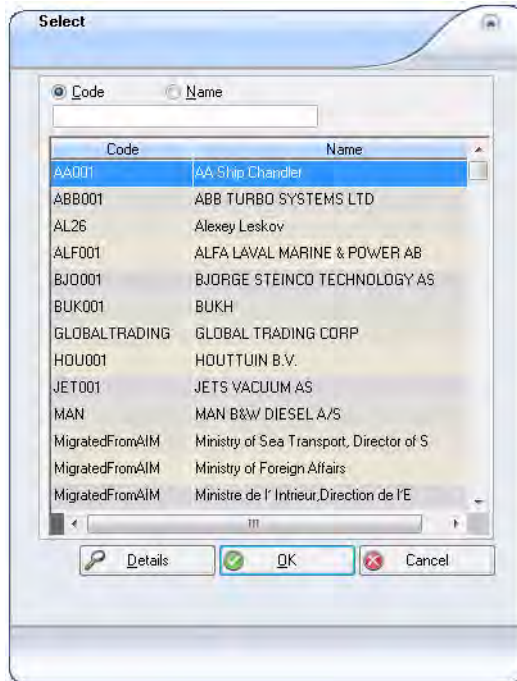


Figure 13 Example of a look-up filter

Some of these filters may also have an additional **Details** button which can be used to open a window containing read-only information regarding the highlighted selection.

3.3.4 Searching Inside a Window

Most windows throughout the application also contain a field on the top far right of the Task bar called **Search**. Clicking the magnifying glass icon, or typing directly in the field allows you to search within the records listed in the window, whether you have already filtered them or not. Holding the **SHIFT** key and clicking in the field opens an Advanced Search dialog, where you can enter further search parameters.

Search capability is also accessible from the **Edit menu**.

3.3.5 Column Sorting

After you have opened a window, you can sort the records it contains by clicking on the column headers. Once sorted, the column sort order is indicated by an arrow icon in the column header.

In most cases, all the columns in a table are sortable and their sort state is indicated by an arrow icon in the column header. If there is no arrow then the column is unsorted.

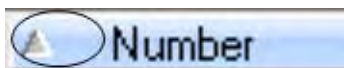


Figure 14 A Column Sorting Arrow

3.3.6 Column Ordering

Many of the screen displays within AMOS Business Suite contain multiple columns. Sometimes these columns may not all be visible at the same time and the information in the columns may be cropped, even when the window has been maximised.

To make it easier for you to see the information that you really want, you can change column widths and the order in which the columns appear using 'drag and drop' techniques.

To alter the width of a column, move the cursor to the vertical line at the side of the title of the column you wish to alter until the cursor changes to a bold vertical line with arrows on either side of it as shown below:

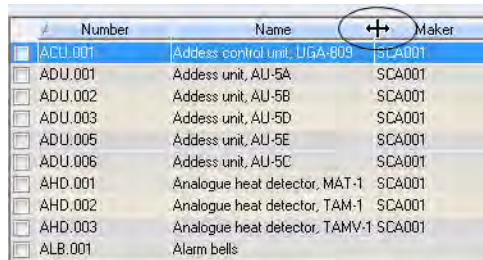


Figure 15 Modifying Column Widths

Once the symbol is visible, click and hold the left mouse button, and drag the symbol sideways until you have the desired column width. Then release the mouse button.

To move a column to a different position, place the pointer in the header of the column you wish to move, then click and hold the left mouse button. The column will become black. Drag the mouse cursor to the desired column position and then release the mouse button to drop the column in place.

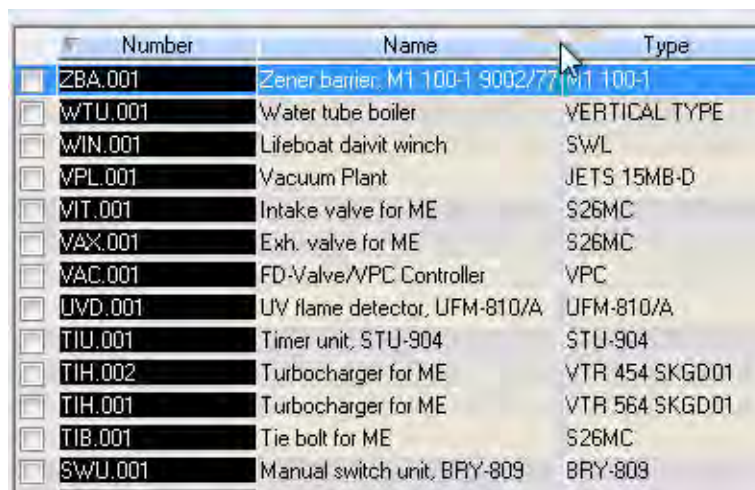


Figure 16 Moving a Column

This facility allows you to re-organise the columns in any way you choose.

Note

This technique does not permanently change the column order within AMOS. If you close and then re-open the window, the column order will revert to the default setting. However if you re-apply a filter without closing the window, the column order will remain as you altered it.

If you want to have a more permanent re-ordering of the columns in a window you can save the window as a 'View' which you can select again and again through the 'Select View' function described in section 3.2.1.

3.3.7 Split Scrollbars

Depending on how you have sized the window, the horizontal scrollbar at the bottom of the windows has a vertical split line at the left side enabling you to divide the list area into two sections to scroll separately.

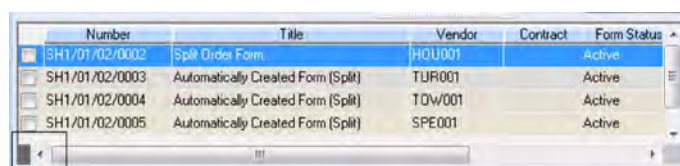


Figure 17 A split line in the list

Click on the line and drag it to where you want to divide the list. Each pane will have its own scrollbar.

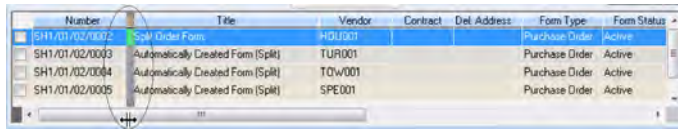


Figure 18 Dragging the split line

3.3.8 Detailed Description Windows

Many of the windows throughout AMOS Business Suite include forms in which you can add free-text. Known as **Details tabs/Full Description windows** (accessed through the **Options menu**) these are intended for detailed descriptions of parts, jobs, functions etc. and general information for which there are no specific fields in the window. Templates (see section 3.3.8.1) can also be used to create special forms, and depending on the type of text editor which is selected for use, you can also attach documents, illustrations and other files to the tab.

There are two types of editor available for these windows. The editor available to you is determined by the parameters found in **Tools > Configuration > Parameters > Options > General > Editor**. These can be set to CLASSIC or ENHANCED for each module within the suite.

Note

The same type of editor will be set on all Details forms in the selected module.

The Classic editor type

The Classic editor is a simple text editor. All input is made via the keyboard without any formatting options. The font style and size is set by the Editor Font parameter that is to be found in the same parameters folder as the Editor Type parameters.

The Enhanced editor type

The Enhanced editor is a rich text editor. It allows you to perform many of the formatting features available in common word processing applications. It is also possible to add tables and images to the detailed description window by using the context menu (right-click). Hyperlinks may also be added in this editor, but you should manually alter the appearance to create the standard hyperlink appearance (blue underlined text).

Note

If you switch from the classic editor to enhanced editor, any modified details screens will contain hidden formatting code. This formatting code will become visible if the editor is switched back to classic, and will be displayed as the first 5 or 6 lines when viewed. This formatting text must be removed manually.

Note

When text is present in a details window, the keyboard input language will change to the language of that text, if it is different from the set keyboard input language. If a details window is empty, the keyboard input remains on the set language.

3.3.8.1 Templates

AMOS provides a feature called **Templates**, which makes it possible to define how a **Details tab** or **Full Description window** should be presented on screen. Using a template, the Details tab/window can be given the appearance of a specialised input form.

Users can create new templates using PowerBuilder, and import them into the Business Suite. These templates can then be attached to the Details tabs in the application such that the users can fill in forms rather than write information into blank pages. This process can assist the user by 'asking' for the required information.

The templates are usually attached to the Details tabs using the **Edit > Change Template** menu command. However, a template may be attached automatically on creation of a new table entry, by setting a default parameter.

Note

Read more about creating and using templates, and the **Templates register** in the *AMOS Business Suite Reference Manual*.

3.3.9 The Edit and Options Menus

When you have opened a data window within the AMOS Business Suite application, the Menu bar will extend to show the **Edit** and sometimes, **Options** Menus. The items available in these menus will vary depending on the currently active window.

Note

A combination of these two menus also appears if you click the right mouse button whilst you are viewing an open window.

3.3.9.1 The Edit Menu

The Edit Menu contains the basic information manipulation tools for all AMOS Business Suite data windows, providing that there is editable information within the window.

When there is a column at the left hand side of the data window that allows for tagging of one or more records, the Edit menu will be similar to the following:

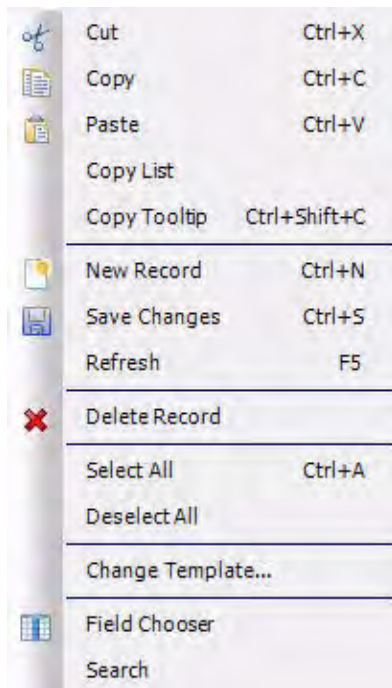


Figure 19 Edit Menu

If there is no facility to choose fields in the current window, the Field Chooser menu option will not be visible.

Cut	Removes the highlighted text and places it on the clipboard.
Copy	Places a copy of the highlighted text on the clipboard.
Paste	Places the contents of the clipboard at the cursor position.
New Record	Creates a new, blank, record.
Save Changes	Saves any changes made to information.
Refresh	Updates the current window with recent information.
Delete Record	Deletes the currently highlighted record.
Select All	Tags all records in the current window (checks all boxes).
Deselect All	Un-tags all records in the current window (clears boxes).
Change Template	Changes the template to be used for details screens.

Note

Changing a template may make it impossible to read existing information that has already been entered using a different template or without a template altogether.

Field Chooser Gives access to the Field Chooser window where you can select which fields are to be shown in the lower data window of certain screens. When you select this command, a list of the columns available for this window is displayed. Check the boxes for those columns you wish to appear in the list.

Search Opens a Search field in the top of the list part of the window. Typing directly in the field allows you to search within the listed records, whether they have already been filtered them or not. Holding the **SHIFT** key and clicking in the field opens an Advanced Search dialog, where further search parameters can be entered.

3.3.9.2 The Options Menu

The **Options** menu is specific to the currently active window within AMOS Business Suite. Remember that the functions on these menus can also be accessed by right-clicking the mouse.

As the **Options** menu is different for almost every active window, you will find descriptions of each menu option in the related chapters and in the Options Menu Chapter at the back of this guide.

3.3.10 Calendar Facility

AMOS Business Suite contains a Calendar Facility that can be used to select dates within data entry windows and filter windows.



Figure 20 Example of a calendar

If you double-click in a date field, or press the **F2** key on your keyboard while the cursor is in a date field, a calendar opens. This enables you to select the required date, which will automatically be entered in the correct format.

If you prefer to type the dates manually, you can do so by typing two digits each for the day, month and year separated with a space.

When you enter the date information in this way, the date field will automatically adjust to the default view when you press enter or move to another field.

Note

The format of the date within AMOS Business Suite is controlled by the default settings within your operating system. On a Windows based machine, open the Regional Settings function within Control Panel.

3.4 Printing

3.4.1 Printer Setup

Select **File > Printer Setup** to view a list of the defined printers. The default Windows printer is used unless you select a different printer from the Printer Set-up window.

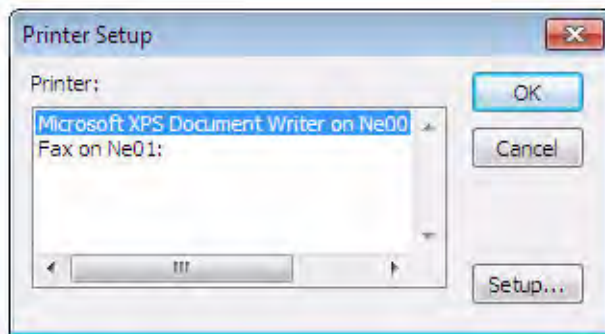


Figure 21 The Printer Set-up Window

Click the **Setup** button to enter the Properties dialog box for the selected printer. The options available in this box depend on the printer and printer driver selected.

3.4.2 Print

Select **File > Print** to print the contents of the active window on the default Windows printer. There is a corresponding toolbar button. To print on a different printer, select **File > Printer Setup** before starting the printout.

3.5 The Database

Log files. The database can maintain log of every transaction, making it possible to regenerate a database after a crash. The log file should, if possible be on another disk than the database file. See the DBLOG command line utility or the Transaction Log.

Utility Backup. Usually, you cannot copy the database file when it is in use. There is a utility, called db backup, which performs a backup on a running database.

Utilities. It is possible to execute database commands from inside AMOS using the utilities Execute SQL and Execute SQL (File). These are access controlled and available at **Tools > Utilities > .**

Password Scrambling. The password shown in AMOS's ini file is readable. Using the tool at **Tools > Utilities > Password Scrambling**, you can enter the current password and AMOS will provide a scrambled one for you to copy into the ini file, in its place. You can find the ini file in your AMOS Business Suite installation folder.

3.6 Help

The application includes context-sensitive help. Context-sensitive means that when you open the Help, it will open at the appropriate page so you should not need to search through the file to find the information you need.

To obtain help on a particular window, make the window active by clicking in it, then press the **F1** button on your keyboard or for the filter windows click the **Help** button. The Help window will open, initially located towards the upper-right corner of your display, at the page applicable to the window.

Note

The various application modules in the AMOS Business Suite each have their own Help files, and registers and functions that are common to more than one module are also described in the Framework Help file (the Help file for the background application within which the modules run). The Help files are opened via the application windows, and there are no links between the various Help files, so if the wrong window is active when you press the **F1** key, you may find yourself in the wrong Help file! Several Help files can be open simultaneously.

3.6.1 Navigating Through the Help File

The Help file document that opens may be linked to other documents containing additional relevant information. Click on the links, normally in blue text and underlined, to open the new document.

The Help window itself also contains several controls to simplify navigation through the help file.

3.6.2 Moving the Help Window

Place the pointer on the Help window's title bar and click and hold the left mouse button while you drag the window to the desired position. When the window is in the desired position, release the mouse button. After you close the Help window the system will remember the new location, and next time you open the Help window it will open in this new location.

3.6.3 Resizing the Help Window

Place the pointer on the window frame that you wish to move and click and hold the left mouse button while you drag the frame to the desired size. When the window is the desired size, release the mouse button. After you close the Help window the system will remember the new size, and next time you open the Help window it will open in this size.

Chapter 4 Maintenance

This chapter focuses on the maintenance functions in AMOS M&P.

- Section 4.1 contains an overview of how the program helps you plan maintenance in the organisation and the principles involved.
- Sections 4.2 and 4.3 describe the use of Component Types and Components.
- Section 4.5 and 4.6 show you how to set up maintenance Jobs using AMOS M&P. Section 4.7 explains how these jobs can be scheduled.
- Section 4.9 explains how to keep maintenance running smoothly at your installation: generating, planning and issuing work orders.
- Section 4.11 covers how to report work as it is performed.
- Section 4.12 and 4.13 covers controlling work orders and the maintenance log.

4.1 How Does AMOS M&P Plan Maintenance for Me?

4.1.1 It All Begins With Components

The maintenance information in AMOS is organised according to your physical installation: the ship, assembly line or plant.

In AMOS, your installation is described by its Components. A component is any physical unit that you will perform a maintenance job on.

A component may be made up of other smaller components. At the lowest level components have parts. A Part is the smallest physical unit that you would normally replace at one time.

4.2 Component Types

In a larger organisation, identical components may be in use on various site locations. When your company selects to use the Component Type functionality in AMOS M&P (by setting the 'Use Component Types' parameter to TRUE), information such as Maker and Type is registered only once at the head office location. Once a new component of a defined type is registered at a given site, it inherits information from the Component Type window.

The information you save in the Component Type window is like a general template for all instances of that component type, and is modifiable at Component level to apply to specific components actually in use at an installation -for example adjustments to jobs, or to counters, might be needed at component level.

An example of the Component Types window is shown in Figure 22:

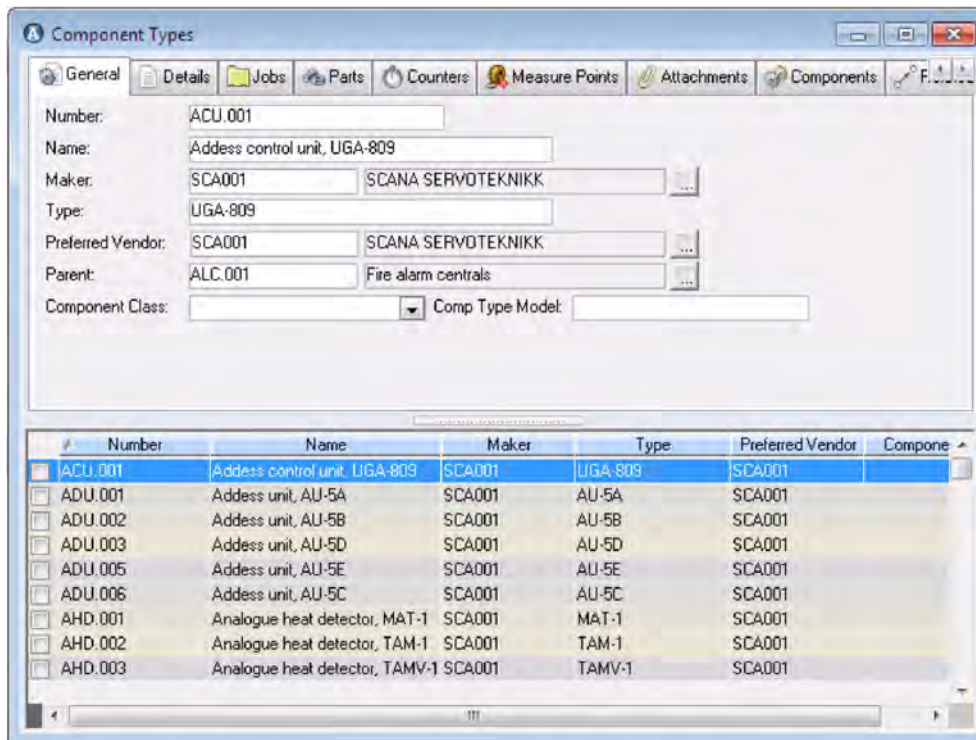


Figure 22 Example of a Component Types window

4.2.1 Creating a New Component Type

To create a new component type:

- Click the **New** button in the toolbar. Fill in the information in the General tab as follows:
 - Number** - enter a unique number for the Component Type. This will be used to lookup the Component Type information in the Component window.
 - Name** - enter a name for the Component Type. For example, enter the name Lifeboat Motor.
 - Maker** - enter the manufacturer of this particular Lifeboat Motor. Once you have selected a manufacturer, their address and other relevant information is available to view by selecting **Options > Maker**.
 - Type** - enter the type number of the motor.
 - Preferred Vendor** - enter the vendor your organisation buys this from. Once you have selected a preferred vendor, their address and other relevant information is available to view by selecting **Options > Preferred Vendor**.
 - Parent** - the Component Type you are registering could belong to another Component Type. Setting Parent components allows you to organise a hierarchy. For example, select as Parent the Component Type 'Lifeboat' - the actual lifeboat that this motor belongs to.
 - Component Class** - Classes are a way of grouping Components. For example your organisation might classify groups of machinery. In the case of the Lifeboat Motor, select class Diesel Motors.
- Click **Save**. The information will appear in the list in the bottom of the window.

Note

If a Component Type similar to the one you are creating already exists and all you want to do is make a minor change (i.e. enter a new Type number), use the **Copy** function: select the Component Type to copy, and then go to **Options > Copy**. The Copy Component dialog will open allowing you to select the items in the original record to duplicate, and enter a new **Component** Type number. Click **OK** to return to the main window and view the duplicated record. You can make changes to the copied Component Type like for any other new record - add jobs, parts, etc. - and **Save** the new Component Type.

4.2.1.1 Adding Jobs to a Component Type

The Jobs tab contains a list of any jobs that have already been linked to the selected Component Type.

The tab contains three buttons:

- **New** - click New to open the Jobs window and add a new job. See section 4.5 for more on the Jobs window. When you add a new job to a component type and **Save** it you have the option to apply it with all its information, to all existing Components of this Type registered in the Components window throughout your organisation.
- **Delete** - select a line and click Delete to remove the job from this Type.
- **View** - select a line and click View to open the Jobs window with this job's details displayed. If you change anything AMOS will ask if you want the changes to reflect on existing components of this type in the Components window.

4.2.1.2 Adding Parts to a Component Type

The Parts tab is for specifying parts - stock items - which build the selected component type. There are four buttons in the tab:

- **New** - select a Component Type in the list and click the **New** button to get a blank line. Use the lookups to add the Stock Items that build components of this type.
- **Delete** - select a line and click the **Delete** button to remove the part from the list.
- **View** - select a line and click the **View** button to open the Stock Items window at that part.
- **Add. Info** - select a line and click the **Add.Info** button to open a Details window for adding further information about the Component Type and its parts.

After entering a stock item, you can add an **Alternative No.** in the last field. This is another stock item which according to the manufacturer or vendor can be used interchangeably with the listed item, in the selected Component Type.

When you add parts to a Component Type, the Component Type is then listed in the Component Types tab on the Stock Items window, for each item added as a part. The alternate part will be listed with the Component Type entry on the Stock Item. Parts and their alternatives will also be registered on Components based on this Component Type.

4.2.1.3 Linking Counters and Measure Points to a Component Type

You can link Counters and Measure Points to a Component Type within the Counters/Measure Points tabs. For more on counters and measure points and their use in AMOS M&P see section 4.7.1.

The information you define here can be inherited on Components of this type registered throughout your organisation.

To add a counter/measure point to the tab select a Component Type in the list part and click the **New** button inside the tab. Select a line and click **Delete**, to remove it. When you define a new counter/measure point here you can enter some basic starting information with it which users can alter at Component level when they read the counter/measure point. Updates can be done within the Components window, or directly in the Update windows. If the parameter 'Allow Negative Value of Counters' is set to FALSE, users may require correct access settings to update counters in the fields inside the Components window Counters tab.

4.2.1.4 Component Types – The Components Tab

The Components tab lists individual Components of the selected Type that have been registered at installations throughout your organisation. It also shows the status and function of each registered component. Whenever a component type is registered as a component, the details of the registration will appear here.

When Components are registered from Type and inherit Component Type Jobs too, restrictions can be made at Component Job level to indicate which information should be affected by changes to the Type Job, and which information should be protected. If certain fields on the Component Job are protected from change, 'Link restriction' appears in the **CompJob** column on this tab. Read about linking and unlinking Component Type Job fields in section 4.5.

4.2.1.5 Related Component Types

Use this tab to enter a list of other Component Types which are related to the selected one. This list of related Types (and their parts) will appear in the Parts tab in the Components window when an instance of this Type is registered.

4.2.1.6 Register a Component Type as a Component

To transfer all of a Component Type's details, including jobs, counters and measure points, to a Component record at an installation register the Component Type as a Component at the installation from this window. This creates a new record for that installation's Component window containing all the Type's details - the unique number for the component itself, and other details have to be entered directly in the Component window as in the case of any other new record. It is also possible to edit the Component - for example, add jobs specific to this instance only (not Type-wide) or delete jobs, etc.

To register a component of the selected type at an installation:

1. Select **Options > Register as Component**. The Register as Component window, containing a list of the defined installations and departments appears.
2. Select an installation/department from the list and click **OK** to register a new Component of the selected Type there. Holding the **CTRL** key and clicking in the list lets you select multiple installations/departments to register the component at.
3. Many Component Types are linked to parts. Parts are stock items that make up a component and must be registered as stock items within AMOS M&P. To automatically register these stock items at the same time as the component registration, check the box entitled **Auto-Register Stock Items** at the bottom of the window.
4. Click **OK** and you will return to the main window. The new record(s) you've created will be available in the Components window for the selected installation(s). Enter a unique number for each instance of the component, and edit (add or remove) information as necessary in the Components window.

4.3 The Components Window

Note

The Components window has its own **Options menu**. Any of the available options that are not covered in the following sections are discussed in section 8.1.1 of this guide.

Once a list of Component Types has been created for your entire organisation, that information can be inherited on an individual basis in the Components window. At any local installation you can register an instance of a particular type and certain details registered at Type level will appear here for your Component. All you have to do is enter the information that belongs specifically to this component, such as **Number, Serial Number, Location**, etc. There are two ways to register a Component in your system:

- Create a new record directly in the Components window (this only inherits the **General tab** and **Related/Parts tab** information from **Type**) and manually add the other details, or
- Create a new registration from the Component Types window using the Options menu item **Register as Component**, which causes the Component to inherit all registered Type information including **Jobs, Counters** and **Measure Points**. See section 4.2.1.6 for instructions on how to do this.

Note

If a Component similar to the one you are creating already exists and all you want to do is make a minor change (i.e. enter a new number), use the **Copy** function: select the Component to copy and then go to **Options > Copy**. The Copy Component dialog will open allowing you to select the items in the original record to duplicate and enter a new (unique) **Component Number**. Click **OK** to return to the main window and view the duplicated record. You can make changes to the copied component like for any other new record - add jobs, counters, etc - and **Save** the new Component.

- The **Locations** field on the General tab has two buttons beside: Click the lookup button to view a list of defined locations. Click the **Hierarchy** button to view the Locations window. If the component is installed in a function, its location will be the same as that of the function. If the function location changes then so will the component location.
- Depending on how you registered the new Component the **Jobs** tab may contain jobs from Type level or not. This tab works in the same way as the Jobs tab in the Component Type window and you can use it to view **Details** or **Delete** listed jobs, and to access the Jobs window to **View** existing jobs or **Add** new ones that apply to this Component specifically. Read more about the Jobs window in section 4.5.

- Inside the **Parts** tab you see the Component Type itself that this Component is linked to and below that, all the Parts that belong to that type. There can also be a list of related Component Types and the parts that they are made up of (created in the Component Types window).

Comp. Type No.	Comp. Name	Maker Code	Maker Name	Comp Type
BEB.001	Bottom end bearing for ME	MAN	MAN B&W DIESEL A/S	S26MC

Item No	Item Name	Maker Ref	In Use	Drawing No	Pc
601.06.00.001	Bottom end bearing, Part 01	65449889	0		
601.06.00.002	Bottom end bearing, Part 02	9849849	0		

Number	Name	Type	Serial No.	Comment1	Class Code	Status	Func. No.	F1
BCH.001.001	Bolts & checks etc for ME	S26MC	1000058		ME CHO	In Use	601.12.00	ME, B E
BEB.001.001	Bottom end bearing for ME	S26MC	1000049		ME BOT	In Use	601.06.01	ME C
BEB.001.002	Bottom end bearing for ME	S26MC	1000050		ME BOT	In Use	601.06.02	ME C
BEB.001.003	Bottom end bearing for ME	S26MC	1000051		ME BOT	In Use	601.06.03	ME C
BEB.001.004	Bottom end bearing for ME	S26MC	1000052		ME BOT	In Use	601.06.04	ME C
BEJ.001.001	Bearing of the hyd. cyl. journal		1000111			In Use	331.14.01	Beari
BEJ.002.001	Bearing of the hydraulic cylindr		1000114			In Use	331.46.01	Beari
BEM.001.001	Main bearing & journal for ME	S26MC	1000053		ME MAI	In Use	601.07.01	ME C
BEM.001.002	Main bearing & journal for ME	S26MC	1000054		ME MAI	In Use	601.07.02	ME C

Figure 23 The Parts tab

- The **W.O** tab contains a list of work orders that have been linked to the selected component in the Work Orders window. Select one and click the **View** button to open the Work Order in the Work Orders window.
- The **History** tab contains a list of all maintenance history carried out on work orders for the selected component. Select a record and click the **View** button to open the History window and display the details.
- When a user reports work the information is stored in the maintenance log. The **Maint. Log** tab in the Components window contains a list of all the maintenance log entries for the selected component. Select a log entry and click the **View** button to open the Maintenance Log window.
- Components can perform more than one function or may be removed from their normal function for repair, etc. The **Functions Performed** tab keeps a record of all functions performed by the selected component along with all installation and removal details.

4.3.1 Components and Counters

The **Counters** tab may already contain information from the Component Types window. In this case, the information can be changed to suit the particular instance of the Component Type you are registering. If you add a **New** counter or **Delete** or change an existing one here in the Components window these actions will only apply locally to the selected Component.

If the parameter 'Allow Negative Value of Counters' is set to FALSE, you may require correct access settings to update counters directly in the fields on this tab.

You can also adjust counters for the selected component within this tab using the other three buttons:

- **Update** - if you read a Counter on your vessel, click the **Update** button to open a dialog where you can enter a new Current Date and Current Value for the selected counter. If the 'Allow Negative Value of Counters' parameter is set to FALSE, the Update dialog will not allow a value which results in the Current value being lower than the previous value. Counters can also be updated from the Update Counters window. See section 4.7.1.1.
- **Set Start** - whenever you insert a new counter, or you want to restart a counter, you need to set the starting values. Select a counter and click this button to open the Set Start dialog.
- **Replace** - if a counter breaks down and you replace it, select the counter that has been replaced and click the **Replace** button to open the dialog where you can enter the starting value on the new counter so the system can accurately maintain the **Total Running** value on the counter for the component. For example:

1. A counter is inserted on 20.01.08. It already has a value of 10. This value is entered as the **Latest Start Value**. The counter is updated regularly.
2. On 21.01.09 the counter breaks down with a **Current Value** of 2021. It is replaced with another used counter which has a value of 500. This **Starting Value** is entered in the **Replace** dialog along with the date. Upon returning to the Counter tab, 500 has become the **Current Value** and the **Latest Start Value** for the counter. The former total and date of replacement become the **Latest Zeroed Date** and **Total**.
3. On 22.01.09 a user reads the counter and updates the Current Value to 511. This means that the component has a **Total Running** value of 2022:

$$2021 - 10 + 511 - 500 = 2022$$

4.3.1.1 Depending Counters in the Component Counters Tab

Components may have counters which depend on other component's counters (see section 4.7.1.2 for more about depending counters). You need the correct combination of access rights (Counters; Update/Set Start/Replace - Counters with Dependency on the Access Control Functions tab) to Update, Set Start or Replace values on counters which depend on other counters, from inside the Components window Counters tab. If a counter does not depend on anything else, you can adjust it here directly.

For example:

Counter A on component 2 (A2) depends on Counter A on component 1 (A1).
 Counter A on component 3 (A3) depends on Counter A on component 2 (A2).

You can update or set start on A1 and the depending counters will be adjusted accordingly. But you cannot change A2 (and its depending counter) directly, without the correct access. When you have the correct access to change the depending counter A2, if you check the Update Depending Counters box, A3 will also be changed. A1 will not change.

4.3.2 Components and Measure Points

The **Measure Point** tab may already contain information from the Component Types window. In this case, the information can be changed to suit the particular instance of the Component Type you are registering. If you add a **New** measure point or **Delete** or change an existing one here in the Components window these actions will only apply locally to the selected Component.

You can update measure points for the selected component within this tab by clicking the **Update** button. This opens the Update Component Measure Points window, which can also be accessed directly from the Maintenance menu. See section 4.7.1.1 for more on the this window.

When you update a measure point with a **Current Value** that falls outside the set values, AMOS will generate work orders for the necessary job.

4.4 Components Perform Functions

Components move around, but functions do not. For example, in a 6-cylinder internal combustion engine, Piston 3 is a function. There can also be a component called piston 3 - today. However, that physical component may be taken out, cleaned and put back into the piston 4 position, and the component name then becomes piston 4. The functions defined in the Functions window may also be displayed and manipulated in the Functions hierarchy, which is described in section 9.3.4.

4.4.1 The Functions Window

Note

The Functions window has its own **Options menu**. Any of the available options that are not covered in the following sections are discussed in section 8.1.3 of this guide.

Number	Description	Reference	Criticality	Component Number	Component Name
331.01.01	Deck Crane	Ref. No 1000082	High	DCR.001.001	Deck Crane
331.05.01	Main crane frame	Ref. No 1000080	Low	MCF.001.001	Main crane frame
331.09.01	Main crane bearing	Ref. No 1000079	High	MCB.001.001	Main crane bearing
331.09.02	Hoisting mechanism	Ref. No 1000076	Low	HOM.001.001	Hoisting mechanism
331.09.03	Slewing mechanism	Ref. No 1000075	High	SLM.001.001	Slewing mechanism
331.09.04	Lifting mechanism	Ref. No 1000072	Low	LIM.001.001	Lifting mechanism
331.13.01	Crane jib	Ref. No 1000074	Low	CRJ.001.001	Crane jib
331.14.01	Bearing of the hyd. cyl. journal	Ref. No 1000073	High	BEJ.001.001	Bearing of the hyd. cyl. jour
331.17.01	Rigging	Ref. No 1000081	Low	RIG.001.001	Rigging
331.17.02	Cargo hooks	Ref. No 1000071	High	CHO.001.001	Cargo hooks

Number of records found: 68

Figure 24 The Functions Window

- The **Parent Function** lookup field allows you to create a function hierarchy in this window as an alternative to using the Functions Hierarchy window described in section 9.3.4.
- Use the **Criticality** field to designate a degree of criticality for the selected function. If criticality indicators are in use in your system, an icon will appear in the list part of the window next to the selected function, to visibly differentiate between the levels of criticality present.
- The **Component Performing the Function** field displays the component installed in the selected function. The installed component has the same **Location** as the function it is installed in: if the function location changes then so will the component location. Installation and removal of components can be done using the corresponding Options menu items here, or in the Functions Hierarchy. See section 9.3.4.1 for more details on installing and removing components.
- The **Details** tab is for a full description of the Function.
- The two **Budget** lookups inside the **Financial Info** tab define the default budget codes for the component installed in the function.
- The **Counters** tab is for registering counters against functions. This allows you to record cumulative counter readings for a function regardless of the component(s) performing it. Whenever a component installed in the function has its counter reading updated, the function counter is also incremented by the same amount as the component. These counter values are displayed in the counter overview window found at **Maintenance > Counters > Overview**.
- Open the **Rotation Log** tab to view the components installed in and removed from a selected function. The rotation log is automatically updated when changes are made in the Functions Hierarchy. To see the comments registered while installing or removing a component in a function, select the required line and click the **Notes** button.
- Select **Options > Change Status** to change the status of a function. When a function is no longer required, you cannot delete it in case it has any history or rotation associated with it. Instead, a status can be placed against a function in the same way as against a component, and when the function is set to scrapped, it will not appear in the register or the Function Hierarchy. To set a function to scrapped, if there are any sub-functions, first manually move the sub-functions, or set the sub-functions to be scrapped as well by checking the **Change status of sub-functions also** checkbox in the Change Status dialog. Only then can the status of the function be changed to Scrapped.

4.5 Jobs are Regular Maintenance on Components

Every Component needs regular maintenance. Maintenance jobs are predictable and will be performed over and over again throughout the lifetime of your installation. The details for the regular maintenance jobs for each component are defined in the Jobs window: each Job contains a **Job Description** to describe how the work is to be carried out, and information about the intervals at which it should be performed. The resulting record is then linked to the appropriate Component. This is done by saving the Job record in the Jobs tab of either the Component Types or the Components window.

4.5.1 Component Type Jobs

The Jobs you create and save from the **Component Types window Jobs tab** are like general templates for all instances of that Component Type, and can be applied to any existing Components of that Type or transferred directly onto new Component records. They are modifiable at Component level to apply to specific components actually in use at an installation –for example scheduling adjustments might be needed at component level.

So if you have a job that should apply to every single component of a certain type, access the Jobs window at Component Type level and create it there. When you save this new or changed Component Type Job, a dialog box appears with the option to reflect the changes on existing components of that type.

Or, you can create a new component record at any installation with all the component type job information attached by selecting the record in Component Types and choosing **Options > Register as Component**.

4.5.1.1 Defining Exceptions on Component Jobs: Linking Fields

As mentioned above, when Component Type Jobs are inherited on Component level, they can be modified on a case-by-case basis if necessary. Even though a Type Job may be applicable to every individual component registered against it, there could be certain aspects on Component Job level for a particular instance of the component that you wish to protect from changes to the Component Type Job.

For example, a **Type Job** is inherited on fifteen components and all the information is the same. But, on five instances of the component you want the job carried out at a different frequency and by a different discipline. Simply changing the **Periodic Frequency** and **Responsible Discipline** on each of these five jobs is problematic – if the Type itself is altered in the future and saved to reflect on Component Jobs, not only will the Type changes be applied to every instance of the Component Job, but also the Periodic Frequency and Responsible Discipline changed manually on the five jobs will be overwritten with the original values contained at Type level.

To prevent this, you can define at Component Job level for any Component if certain fields should be protected from Type updates. Any field can be linked to or unlinked from the Type Job meaning that changes made to the Type will be applied only to the linked fields, upon saving and selecting to reflect the changes on existing components of that Type. So in this example, protect the Responsible Discipline and Periodic Frequency fields by unlinking them on the Component Job level for the five components. The changes you make manually to those fields will not then be overwritten by anything from Component Type Job level, although all other linked fields can be updated from Type as usual. The Responsible Discipline and Periodic Frequency fields on the other ten instances of the Component Job will be updated if they are changed at Type level.

Figure 25 A Job with Resp. Discipline and Periodic Frequency unlinked from Type

Deactivating a Component Type Job deactivates the same job at Component level, wherever the **Active** checkbox is linked. **Deleting** a Component Type job deletes inherited Component Jobs regardless of whether the fields are linked or not.

The ability to link or unlink fields depends on your access rights. Provided you do have the access required, the **Options menu** on Component Jobs will contain the item **Show Indicators**. Selecting this option displays the same link icon next to every field on the **General tab**. Clicking the icon for any field toggles it between linked and unlinked. Additionally, a set of **Related Registers** is listed on the window with the link icon beside each one indicating if content in the corresponding tabs should be linked to Type, or not.

When the linking functionality is enabled, three more options are added onto the Options menu:

- **Link All to Type** - all fields for every job in the Component Job window, will be linked to Type. To link all fields on some jobs but not others, tag the jobs in the list first before selecting this option.
- **Remove All Links to Type** - all fields for every job in the window, are unlinked from Type. To unlink all fields on some jobs but not on others, tag the jobs in the list first before selecting this option.
- **Copy Link from Selected** - if you have defined link status for a component job with the appropriate fields linked/unlinked, and you want to apply this same configuration to one or more jobs in the window, tag the other job(s) you want the configuration applied to. Then select Copy Link from Selected. The same fields will be linked/unlinked on the tagged jobs, as on the current one.

The same functionality applies in the Component Hierarchy and Function Hierarchy window, Jobs tabs.

4.5.2 Component Jobs

When you access the Jobs window from the **Component window Jobs tab** and create and save a job from there, it applies only to that selected instance of the Component.

4.5.3 Working in the Jobs Windows

Note

It is also possible to work with and plan jobs in the Job Planner window at **Maintenance > Job Planning** (see section 4.5.8) which works in the same way as the Work Order Planning window at **Maintenance > Work Planning**.

Several jobs may be connected to one component or component type, in the **Jobs** window. The Jobs window is accessed by clicking the **View** and **New** buttons in the Jobs tab of the Component or Component Type windows. Remember to **Save** before exiting the Jobs window so that the newly defined Job record will appear in the Jobs tab.

Remember, in the Component Jobs window you can define which fields should be linked to the Component Type Job they are inherited from, and which fields should be protected from Type updates. See section 4.5 above.

The information you should define in the Jobs window includes:

- **Job Description** - the pre-defined job description which tells you what the job is and what it is called. For example, Lifeboat Motor Weekly Check. You can access the Job Description register at **Options > Job Description** to add a new one if needed.
- **Periodic Frequency** - the intervals at which the job should be carried out. So, for example, entering 1 Month(s) means the job is to be done on a monthly basis.
- **Planning Method** - this is used for scheduling jobs in the Work Planning window (see section 4.10.2.1). There are two kinds of Planning Methods available in AMOS M&P. Assigning jobs to **Variable Planning** enables a flexible reporting date. For example, if a job is to be reported every 30 days, the next due date is calculated according the date of the last report. So, reported on 5 May causes the next due date to be set to 5 June. However, if the job is set to **Fixed Planning**, then in this scenario, the report will always be due on the same day of each month. This means that no matter when you report the job, the next due date remains fixed, even if the job was reported late and less than 30 days remain until the next set date.
- **(Resp.) Discipline** - the employee discipline needed to carry out the work. In the case of an already existing job, the **Required Disciplines** tab contains a list of all other disciplines used in previous instances of the job. Required Disciplines can be added or removed in this tab.
- **Output Format** - the output format for printouts: There are three available output formats: **List** - containing a single line for each job. **Compact List** - containing only the most important information. **Work Order format** - also includes the textual description of each job.
- **History Template** - if there is a template registered for reporting the history of the job on select it here.
- **Mandatory History/Reporting Options** - whether you see the Mandatory History checkbox, or the Reporting Options group depends on the setting of the parameter 'Compatible to Version'.

If this parameter is set to < 9.2.00, the Mandatory History checkbox is displayed and checking it means that recording history during Report Work on this job, will be mandatory.

If this parameter is set to >= 9.2.00, the Reporting Options group is displayed containing the three options History, Resources and Stock Usage. Select a setting from the drop-down list for each one to define the behaviour of the corresponding option in the Report Work window:

Checked/Unchecked - the option's corresponding checkbox on Report Work will be checked/unchecked.

Mandatory - the corresponding checkbox will be checked and protected. Reporting this option will be required during report work.

Parameter - AMOS will refer to the 'Report by Default' parameters to determine the setting of the corresponding checkbox. These parameters control whether the option on Report Work is switched on or off by default.

- **Active** - to automatically generate new work orders when the previous one is reported complete, the system parameter 'Automatically Reschedule Work Orders' must be set to True. This also causes AMOS to generate a work order automatically for any new Component Job you create - if the **Active** box is checked on the new job. This box is checked by default, but if you uncheck it before saving, this job will not be included when you generate the first work orders for newly defined jobs. Unchecking the box is useful if you are creating a job to include in a round and do not want an individual work order created for a job which should be part of a round work order.
- **Estimates** - enter the expected **Total Duration** in hours, and **Total Cost** for the job.
- **Maint. Criteria** - any criteria to meet for the purpose of carrying out the job. For example, if the vessel has to be At Anchor, or at Sea, etc.
- **Window** - the number of days before the actual due date of the job. It is shown in the Work Planning window, described in its own section.
- **Priority** - of the job.

- **Last Done, Next Due, CBM Status** (Component Jobs only) – so the system can determine when the job should be done, enter the date it was last performed on the selected component, and the CBM Status if applicable. Using the Periodic Frequency and the Last Done date the system will provide the Next Due date for you. After the job has been performed again, AMOS will also take into account the Planning Method in determining the next due date.
- **Work Classification** – the **Type** of maintenance (Modify, Remove, Repair), the **Class** (Breakdown, Renewal, Critical), and the **Cause** (Erosion, Overheating, Structural Deficiency).
- **Planned for Component Status** – the component status required for a work order to be generated. Note that work orders are not generated for scrapped or transferred components. If the component status is changed or is reverted back to a previous status, the work order will still be generated on the selection of **Maintenance > Generate Work Orders**, if the parameter 'Automatically Reschedule Work Orders' is set to TRUE, and it is indicated in the Component Jobs window that a Work Order is needed for that status (the appropriate box is checked).
- **Maint./Stock Budget** (Component Jobs only) – the Budgets to which costs should be attributed. These may be pre-set by default or selected using the lookup buttons.
- **Triggers** – open the **Triggers tab** to link as many triggers as necessary to the selected job. To add a trigger click the **New** button in the tab and select the trigger from the drop-down list that appears. Read about Triggers in section 4.7.2.
- **Included in Rounds** (Component Jobs only) – if the selected component job has been added to a round, the round is listed in this tab. Double-clicking on a round in the list opens the Rounds window, details displayed. See section 4.6 for more on Rounds.
- **Create a Work Order** (Component Jobs only) – select **Options > Create Work Order** to directly create a new work order for the selected Component Job with most details included.

4.5.4 Counters/Measure Points on Jobs

AMOS uses Counters and Measure Points as one way of determining when Jobs are due.

Open the tabs to link any relevant counters/measure points to a job and set values as required. Note that Counters and Measure Points will not be available for selection unless they have been linked to the Component/Type itself in the Component or Component Types window.

When adding a measure point to a job, you can specify if the job should be triggered by the measure point values by setting the **Trigger Job When** field to Never, Below Minimum, Above Maximum, or Both. Measure Points can be updated during Report Work – however they will not be listed and available for updating in the Report Work window for this job unless you set the **Update on Report Work** field to Optional or Mandatory.

Read more about working with Counters and Measure Points in section 4.7.1.

4.5.5 Related Component Jobs

If at least two jobs are already listed in the Component Jobs window (this does not apply at Type level), and they are similar jobs, you can 'relate' them to create a hierarchy of jobs that can be reported together.

When reporting on related jobs, if the main job is to be marked as completed but one or more of the related jobs is incomplete, a warning appears suggesting that you mark the main job incomplete. To report the main job as completed anyway, you must report separately all the open related jobs.

To relate jobs:

1. Select the main job and open the **Related Jobs tab**.
2. Click the **New** button in the tab to get a new line. Use the lookup buttons to choose the related job.
3. You can create several levels of related jobs, but you cannot create a loop back to any of the previously related jobs.

4.5.6 Reserving Parts on Jobs

Using the **Required Parts** tab, you can add a list of parts that are needed to carry out the selected job. Within the Required Parts tab you can also enter the **Quantity** of each part needed, and **Reserve** a number of parts depending on how many you already have on hand.

Figure 26 Required Parts on Component Jobs - advance booking required

If your system is set up to require advance booking of parts, you will see a field called **Booking Window**, and a checkbox labelled **Dynamic Booking**. The Booking Window is the number of days required to supply a stock item from requisition approval to supply on board, for use on a job. You can enter a fixed value in the Booking Window field, or check the Dynamic Booking checkbox. This causes the system to ignore any fixed values in the Booking Window field and instead use the value entered in the **Median Supply Time** field in the Stock Item window for the booked item. Booking parts in advance tells AMOS how much time is needed to get all stock items required for the selected job, onsite and ready to go.

Note

AMOS determines the **Supply Time** for an item as the amount of days between when an item is requested, and when it arrives at the installation. When an order is received, AMOS calculates the Supply Time and enters the result in the Stock Transaction Log, where users can recalculate it if necessary. The Median Supply Time is derived from all instances of deliveries of this item, and appears in the Stock Item window for the item.

When a work order is generated for a job with booked parts, AMOS will reserve the needed parts for the duration of time between the work order's **Start** and **End** dates. The Booking Window value will appear in the Work Order's Required Parts tab, to indicate how far ahead the parts should be ordered to fulfil the work order's due date. The window will be included in the duration of the booking.

When parts booking is enforced it is not possible to:

- Use the In/Out of Stock window to remove any quantity larger than what is in stock and not already booked.
- Report a quantity of stock used on a work order that is larger than the quantity in stock and not already booked.
- Send out a quantity on a Transfer Document larger than what is in stock and not already booked.

4.5.7 Complex Activities Management – Job Dependencies

If the system parameter 'Use Job Dependencies' is set to TRUE, you can configure links between two or more component jobs inside the Component level Jobs window (accessed from the Components window).

Note

These links can also be configured in the Jobs Planning window at **Maintenance > Job Planning**, where you can use the graphic timeline to easily visualise your chain.

Once linked, the jobs form a 'chain of dependency': a relationship where each job is depending on the job(s) 'above' it in the chain. When work orders are generated for these jobs they are also linked to each other according to the dependency chain: the depending work order cannot be reported on until the dependant work order has been finished and set to completed. The dependency between work orders can be altered in the Dependencies tab of the Work Orders window.

The jobs can be linked in almost any configuration, not just a straight line. A job with one or more jobs linked to it, is called the **Dependant Job**. Jobs linked to a Dependant Job are called **Depending Jobs**. Any job can be both Dependant and Depending at the same time, according to where it is in the chain, for example, in a chain comprised of Jobs A-B-C, B is Depending on A and Dependant for C.

Keep in mind:

- Dependant Jobs must be marked as 'Active'.
- The component a Dependant Job belongs to must have any of the statuses marked for the job in the Jobs window 'Planned for Component Status'.
- Counter based Jobs cannot be added to a dependency chain, and,
- The jobs in one chain must all have the same frequency and planning method set in the Jobs window.

Any job can belong to several different components. When you create a dependency chain, you are not limited to the list of jobs assigned to one component. Rather, you can link any jobs which need to be performed in a set sequence, regardless of which component(s) they might belong to. You can also specify that a dependency chain is only valid when the component a job in the chain belongs to is performing a set function.

4.5.7.1 Creating a Dependency Chain

To configure a dependency chain you need to think about your components and jobs in advance and how they might be related. Then:

1. Select the Component which needs work and open its Jobs tab. Select the job you want to start with. This job is your first Dependant job - Job A.
2. Click **View**. The Jobs window opens to show the details for Job A.
3. Open the **Dependency tab**. Any job(s) you add here will be depending on Job A and work order(s) will not be generated until Job A is complete.
4. Because different components might require work inside of this job dependency chain, select the **Component** the depending Job belongs to. Then, lookup the depending **Job** - Job B.
When you **Save** this entry (and work orders are generated), it means that Job B cannot be started until Job A is completed.
5. Because components rotate from one function to another and require different jobs, job dependencies can change at any time. To avoid altering dependency chains every time a component is moved, you can define that a dependency is only valid when the component (selected in step 4.) to which the job belongs, is performing a defined function. Lookup the function in the field **Only when Component is Performing Function**.
Now the dependency between Job A and Job B is only valid if Job B's component is installed on the specified Function. In other words, if the component is removed from the function, then Job B can be performed at any time, regardless of whether Job A is completed or not.
6. If you add one job in the Dependency tab as Depending on Job A, you will have a straightforward A - B link. If you add two (or more) jobs here, you will then create a pyramid. That is, when Job A is completed, both of these jobs will have work orders generated and be able to start at the same time.
7. **Save** the dependency chain.
To add another link in the chain (Job C):
8. In the Components window select the component Job B belongs to as chosen in the Dependency tab in Step 4.
9. Open the Jobs tab for that component and select Job B there. Open the Jobs window.
10. With Job B displayed in the Jobs window, go to the **Dependency tab**.
11. Add Job C as described above. Job C is now Depending on Job B.
12. **Save** your work. You can add as many jobs to your dependency chain as necessary.

When work orders are generated for these jobs they are also linked in the same order. Work Order dependencies can be altered in the Work Orders window Dependencies tab, or in the Work Planning window.

Note

When a component status is changed, and active work orders exist for that component's jobs but have not been started, the work orders will be cancelled even if dependencies exist between them. AMOS will notify you about the cancelled work orders, and the dependencies will not be removed. You can for example replace the original component inserting the new component's jobs into the dependency chain to replace the cancelled work order.

4.5.8 The Job Planning Window

Note

The Job Planning window has its own **Options menu**. These options are discussed in section 8.1.9 of this guide.

You create Jobs in the Jobs window accessed through the Component Type and Components windows. Those jobs will be listed with their details in the Job Planning window which has a graphic timeline that works in the same way as the Work Order Planning window (see section 4.10.2.1). You can use the timeline to visually schedule your jobs before generating work orders to carry them out.

If the system parameter 'Use Job Dependencies' is set to TRUE, you can configure links between two or more component jobs inside the Jobs window (accessed from the Components window). You can also configure these links here in the Job Planning window, where you can use the graphic timeline to easily visualise your chain. Use the **Dependency tab** and/or the **Options** menu command to add and remove dependencies between jobs. Section 4.5.7 explains how to create dependencies.

4.6 Grouping Several Jobs into a Round

The amount of paperwork created by the system may become unnecessarily large if a work order is printed for every job. The Rounds window is therefore used to group several related jobs so that they are included on a single work order. Typically, a round will comprise similar jobs performed by personnel of the same discipline, but the system allows you to include in a round jobs that would normally be performed by different disciplines.

You can define a new round and add jobs to it, and you can add jobs to an existing round. When a job is added to a Round, the Round appears in the **Included in Rounds tab** in the Component Jobs window. The same tab and information also appear inside the Jobs tab on the Component Hierarchy and Function Hierarchy. When changing and then saving an existing round, if active work orders already exist for any of the jobs within the round, AMOS will ask you if you want to see a list of the active records in the Work Orders window. You can then cancel the work orders outside the round, if you want.

Note

The Rounds window has its own **Options menu**. Any available items on this menu which are not discussed here, are covered in section 8.1.5 of this guide.

4.6.1 Defining a New Round

1. Select **Maintenance > Rounds**.

The Rounds Criteria filter opens. Click **OK** to go to the window.

Code	Title	Resp. Discipline	Frequency	Window	Last Done	Priority
R001	12 Months Crane Maintenance	External	12 Month(s)	3	10/04/2002	5
R002	3 Months Crane Maintenance	External	3 Month(s)	3	29/08/2002	5
R003	6 Months Crane Maintenance	External	6 Month(s)	3	10/04/2002	5
R004	Weekly Lifeboat Maintenance	Motorman	1 Week(s)	3	29/08/2002	5

Figure 27 Example of the Rounds window

The lower part of the window contains a list of the rounds already registered, while the upper part of the window contains the details of the currently selected round.

2. Click the **New** button in the toolbar to get a new line.
3. Assign a **Code** to the new round.

When you assign a code to the round, you may prefer to use the same prefix for all rounds to make it easier to identify work orders generated from the round.
4. Type in a **Title** for the round.
5. **Planning Method** - there are two kinds of Planning Methods available in AMOS M&P: Variable and Fixed. They are described in section 4.5.3. When a Round is reported as complete, the system generates the next round-type work order according to the planning method selected for the previous round.
6. Select the **Discipline** (rank or position title) of the person or grade required to perform the round.

A round would normally contain jobs performed by the same discipline, but the system allows you to include jobs from different disciplines if you want. However, when you select a job belonging to a different discipline than the other jobs in the group, the system will ask you if you really want to do so and you will need to confirm the selection.
7. Select the **Output Format**. There are three available output formats for a round: **List** - containing a single line for each job. **Compact List** - containing only the most important information. **Work Order format** - also includes the textual description of each job.
8. Select a **Reporting Method** - **Simple** or **Full**. You can report work against both types of rounds in several stages, so that you only check off the jobs that have actually been completed at a given time. Leaving the **Override on Report** box unchecked means that your selection here will be applied in the Report Work window. If you check the box, when a user reports on this round they will be prompted to select which method to use, with the one selected here presented as default.

9. Set the **Frequency** the round is to be performed at, the **Priority** of the round, and a **Window** within which the round is to be performed.
10. Check the **Include All Jobs when Generating Work Orders** check-box to generate a work order covering all the maintenance jobs included in the round (regardless of their frequency) when the user selects **Options > Create Work Order**. If this box is left unchecked, you must ensure that:
 - The **Round Frequency** is set to the same interval as that of one of the included component jobs – the one with the lowest frequency interval. And,
 - The linked component job frequency is a multiple of the round frequency (i.e. if the round frequency is 2 weeks, then the component job frequency should be 2, 4, 6 8, etc weeks).
11. **Last Done** is the date on which the round was last completed. The combination of Last Done and Frequency gives the date by which the round must be completed next time. The value specified in the Window field gives the period, in days, during which the round must be completed. For example, if Last Done is 25.12.04, Frequency is 12 Months and Window is 5, then the round can be completed any time between 20th and 25th December 2005.
12. There are three **Reporting Options** fields: **History**, **Resources** and **Stock Usage**. Later, when a user reports on the round work order for any job with Job set to Completed, the corresponding checkboxes in the Report Work window will follow the setting indicated here:

Checked/Unchecked – the option's corresponding checkbox on Report Work will be checked/unchecked.

Mandatory – the corresponding checkbox will be checked and protected. Reporting this option will be required during report work.

Parameter – AMOS will refer to the 'Report by Default' parameters to determine the setting of the corresponding checkbox. These parameters control whether the option on Report Work is switched on or off by default.

Read from Job – report options can be set on the Component/Component Type Job. Select Read from Job to take the Reporting Option setting from there for the jobs in this round.
13. **Save** your round.

4.6.2 Allocating Jobs to a Round

After defining the round, allocate jobs to it.

Jobs on rounds can be Function or Component driven. When you list a **Component** and a Component **Job** here and the Component is currently installed on a Function, that function will appear in the **Currently Performing Function** field. As long as the Component Job itself is Active, it will be marked **Active** in the round as well.

A function driven job will be performed as part of the round only if the component the job belongs to, is **Currently Performing** the function listed in the **Only When Performing Function** field, and the **Function Driven** box is checked. If the component for this job is currently performing another function or not installed on a function at all, the job will be inactive.

Example: you list two different components and jobs on the same round. But, both jobs are driven by the same function. Only one component can be installed on this function at any given time. So, the component installed and performing the driving function, is the one whose job will be activated. The other job, also dependant on the same function, will not be activated until the first component is removed and the second installed on that function. On the other hand, if neither component is installed on that function, both jobs will be inactive. When work orders are generated for the round, the inactive job(s) will not be included or available for reporting.

To create a Jobs list:

1. Open the **Jobs tab**. Jobs already included in an existing round are listed here. Ensure the Round you want to allocate jobs to is selected in the bottom of the window.
2. There are two ways to add a new job: click the **New** button or the **Add Jobs** button. Click **New** to get a blank line.

Add the Component and Component Job:

3. Click the lookup to select the first **Component** on which to perform the maintenance. Click **OK**.
4. Click the next lookup to select a **Job** from the list of jobs available for that component. If you pick a job that is allocated to a discipline other than that selected for the round, you get the following question:
 'Responsible discipline for Round is not the same as for Job, is this OK?'
5. Click **OK** if this is what you intended, or click **Cancel** to pick a different job. You can add jobs whether they are currently active or not. AMOS will fill the **Currently Performing Function** fields with the code and description of the Function this Component is installed on right now. Continue adding Jobs to the round.
6. You can also use the **Add Jobs...** button. This is different from the **New** button in that it opens a dialog called **Add Similar Jobs** which you can use to filter and add multiple jobs at once. For example, select a Job in the **Job Description** field in the filter. When you click **Next**, you will be presented with a list of all components which have this job assigned. Check the boxes of the component(s)/jobs(s) you want to include. When you click **OK** they will all be added at once to the **Jobs tab** on the Rounds window. Or, if multiple jobs are defined on the same component, you will see each job listed separately in the dialog and can choose which ones should be included in this round.
7. Next to every Job you have added to the Jobs tab, is a checkbox called **Active** which is checked by default. If the component job is **deactivated** (in the Component Job window) at any time or the component itself is scrapped or transferred, this box will automatically be unchecked and rechecked again if the job is reactivated later. You can uncheck this box to deactivate the job within the round: the Component Job itself will still be active. Deactivating a job in the Rounds window returns a dialog reminding you to create a work order for this job, outside of the Round. If you reactivate a job inside a round, and a work order exists for that job but has not been reported on yet, you will be presented with the option to cancel the existing work order and create a new one with the changes to the round included.
8. To indicate that a job should be function driven – that is, the job will only be performed as part of the round IF the component it is linked to is installed on a particular function – check the **Function Driven** checkbox on the far right side of the job.
9. The lookup button and field under **Only When Performing Function** become active. A function driven job will only be active in the round when its component is currently performing the same function as indicated in the Only When Performing Function field.
 - If the component is currently performing a function, this may already appear in the newly active fields. Otherwise, lookup the function. If this Function and the Current function match, the job will remain active.
 - If the component is not currently performing a function, or you select a different function here than the **Current** one, the **Active** box will be unchecked.
 - If the component is at any time removed from the driving function, the job will remain listed but not marked **Active** in this round. If the component is installed on another function this will be listed in the Current field, or, if it is not installed on another function at all, its current field will remain blank.
 - If another component is installed on the driving function, AMOS will check if this component is also linked to the same job defined on the function in the round. If so the job is activated.

Once you have selected the jobs to assign to the round, the list may look like this:

Move	Component	Job	Active	Currently Performing Function	Only when Performing Function
	DCR.001.001	C079 1	☒	331.01.01	☐ Function Driven
	Deck Crane	DECK CRANE YEARLY CHECK		Deck Crane	
	DCR.001.001	C081 1	☒	331.01.01	☐ Function Driven
	Deck Crane	CHECKS TIGHTNESS OF BOLTS		Deck Crane	
	DCR.001.001	P001 1	☒	331.01.01	☐ Function Driven
	Deck Crane	SUPERVISION OF DECK CRANE		Deck Crane	
	CHD.001.001	1008 1	☒	331.17.02	☐ Function Driven
	Cargo hooks	CARGO HOOK AND SHACKLES		Cargo hooks	

Figure 28 Example of jobs in a round

To change the sequence of the jobs, select a job to move and click one of the blue arrows for that job to move it up or down in the sequence. The jobs which are included in the round when work orders are generated, planned and issued, depends on the setting of the Include all Jobs when Generating Work Order checkbox – see step 10. in section 4.6.1 above.

4.6.3 Reporting a Round

You define certain settings for reporting on rounds. In the **General tab**, select a **Reporting Method – Simple or Full**. You can report work against both types of rounds in several stages, so that you only check off the jobs that have actually been completed at a given time. Leaving the **Override on Report** box unchecked means that your selection here will be applied in the Report Work window. If you check the box, when a user reports on this round they will be prompted to select which method to use, with the one selected here presented as default.

Only jobs marked **Active** will be available to report on when reporting a round.

Reporting work on Round work orders is covered with reporting on other types of work orders, in section 4.11.

4.7 How Does AMOS M&P Know When to Schedule Jobs?

Each job has information about when it should be performed. AMOS M&P uses several methods to determine when jobs are due:

- **Counters** – the job can be performed when a counter reaches a predefined level. See section 4.7.1.
- **CBM/Measure Points** – If your installation uses automatic Condition-Based Maintenance (CBM) and components are linked to measure points, then a job may be scheduled whenever certain circumstances occur. See section 4.7.1.
- **Triggers** – It is also possible to use manual triggers to schedule jobs that must be performed at recurring intervals, such as daily, weekly or monthly, or jobs which are handled when a specific event occurs. See section 4.7.2.

4.7.1 Counters, CBM and Measure Points

Job descriptions normally include information about when the job should be performed. This can be a **frequency** such as daily, weekly, monthly or annually, or the job can be performed when a **counter** reaches a predefined value. For example if an engine is to be checked every 1200 running hours AMOS M&P will start counting the running hours as soon as it is reported that the engine has been installed. When 1200 hours approaches, the job 'Check the engine' will appear when the job lists for the coming period are printed or the Work Planning window is opened. Once the job is reported as completed, AMOS M&P will restart counting.

AMOS M&P counts time automatically but the counters must be updated either manually, or automatically through CBM. For example, if there are maintenance jobs that must be performed when the ship has docked a certain number of times, there will be a counter for the number times the ship has docked which must be updated manually each time the vessel enters a harbour.

If your installation uses automatic **Condition-Based Maintenance (CBM)** functions, then a job may be scheduled when a monitor or sensor detects a predefined condition in a component and passes this information to AMOS M&P. For example, a sensor might detect when the temperature in a cooled unit rises above 10 deg.C, or when an arm on a rotating unit has made 36000 rotations. Linking **Measure Points** to components and then manually updating the measure points, is another way of determining when a job should be done. The value of a measure point is not incremental, and can have an up/down trend over time – for example, a Pressure Gauge or a Temperature Gauge. When a user defined Measure Point is updated with a value that falls outside of its preset minimum or maximum values, work orders will be generated.

It is difficult to predict when Measure Point or CBM jobs might be required and so AMOS does not generate work orders in advance but rather as needed.

4.7.1.1 Updating Counters and Measure Points

Counters and Measure Points must be updated at regular intervals, otherwise AMOS M&P will not be able to calculate the next maintenance date for parts or components that depend on them.

Note

Updates can only be performed by authorised personnel at the installation or site at which the component using the counter or measure point is installed.

It is sensible to update all counters/measure points at the same time, and a routine for this operation is normally established by your organisation (this routine would be included as a job in AMOS M&P). The routine would probably involve printing out a list of all the counters/measure points, going around the site and checking them and updating the list, then coming back to AMOS M&P to update the records. This is basically the routine described here. To perform updates:

1. Select **Maintenance > Counters/Measure Points > Update**. The Update filter opens.
2. Add search criteria as necessary and click the **OK** button. To update all counters/measure points at the same time do not add search criteria to the filter.
3. Press the **CTRL+P** keys on your keyboard to print out the list.
4. Take the list around to the read-out locations and update the list, then return to AMOS M&P.
5. To update the readings, click in the **Current Value** field, then type in the new value. The day's date will be added to the **Date Read** field automatically. You can also change the values using the **Options menu** items **Set Current Value** and **Add to Current Value**.

If the 'Allow Negative Value of Counters' parameter is set to FALSE, the Update window will not allow a value which results in the Current value being lower than the previous value.

6. To change the date, double-click in the **Date Read** field to open a calendar, and select the required date.

Updates to measure points replace the previous reading with a new one and no average is maintained by the system.

7. Click **Save**. AMOS M&P now updates the total running time for the components controlled by the counters you have updated, and compares current values to the set values for components controlled by measure points, and recalculates the date-due for all jobs accordingly. The save and update operation may therefore take some time.

Note

Measure Points can also be updated from the Report Work window, while reporting on a work order. In this case, the measure point **Date Read** will be set with the date entered in the Report Work window **Date Done** field. The measure point values will be updated only if the Date Done entered in the Report Work window is the same as or later than the current Date Read on the measure point. The Measure Point Log will be updated regardless of the date.

To see an overview of the registered counters/measure points and the components they are linked to, the current values, etc., go to **Maintenance > Counters/Measure Points > Overview**.

The window at **Maintenance > Counters/Measure Points > Counter Log/Measure Point Log** stores all updates, enabling you to view them at will.

4.7.1.2 Component Counters Dependent on Other Components' Counters

Some components may be dependent on other components' running times. For example, if an engine has 10 pistons, each piston will run for the same amount of time as the others, and all will run for the same amount of time as the engine in which they are fitted. It would be a waste of time to have to update each piston counter separately. The piston counter fields can therefore be linked to the counter field for the engine by entering the engine's component number in the Depends On field at the right side of the Components window Counters tab.

Note

You need the correct combination of access rights to Update, Set Start or Replace values on components whose counters depend on other counters, from inside the Components window Counters tab.

For example:

1. Open the Components window.
2. Select a component that is likely to include other components, for example an engine, and open the **Counters** tab.

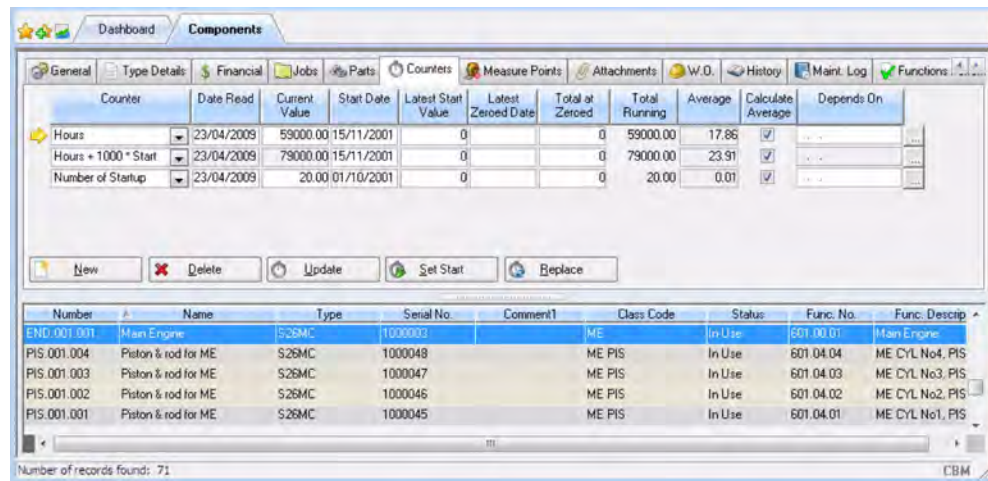


Figure 29 The Counters tab, for Main Engine

Notice the **Depends On** field towards the right of the upper part of the tab. As the engine is the 'mother' component for all its parts, the engine's counter does not depend on anything else. Also, the **Date Read** field will include the date the counter was last updated.

Note

Because the engine's counter does not depend on anything else, you can update the values directly, from within the Components window Counters tab, as required.

3. Select one of the main engine pistons in the list, and select the Counters tab.

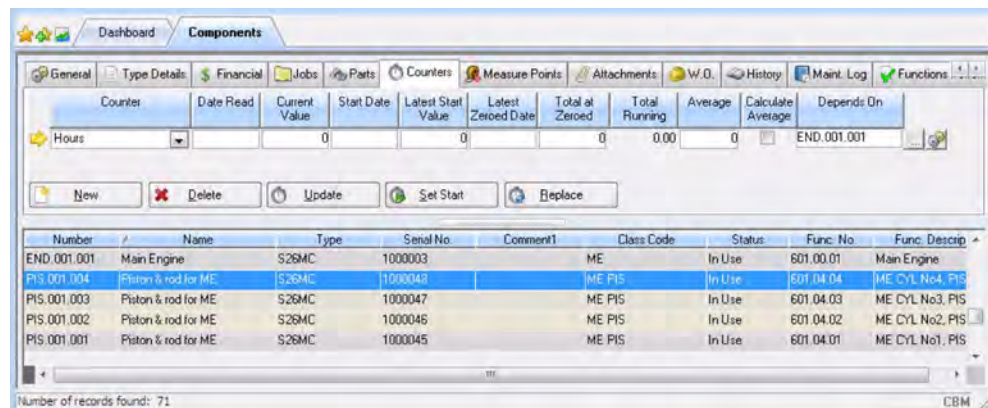


Figure 30 The Counters tab for a Main Engine Piston & Rod

Note the **Depends On** field; this part depends for its counter on the main engine. Its current value will be incremented by the same amount, and the **Date Read** value will be inherited from that of the main engine.

Note

To change the values on this counter directly from the Components window Counters tab (i.e. independently of the main engine counter it depends on), you need to have access to Counters; Update/Set Start/Replace - Counters with Dependency.

4.7.1.3 When a Part is Replaced

When a part that takes its counter value from the component it is installed in is replaced, the new part's counter will have a lower value than that of the other original parts in the component. Each part's counter therefore does not take its value directly from the component into which it is installed. Instead, when the component's counter is updated, the difference between the old and the new counter value for the component is added to each of the parts' counters. See section 4.3.1 for more on replacing and setting counters.

4.7.1.4 Counters on Functions

It is possible to link a counter to a function.

To add function counters in the Function window, open the **Counters** tab there and click the **New** button.

To add function counters in the Functions Hierarchy, go to **Maintenance > Functions hierarchy > Options > Function Counters**

If there is a change in the counter reading (of the same type) of a component installed in the function, the function counter reading will be incremented by the difference between the previous and current values.

The function counter value is displayed in the counter overview window.

If required, you can alter the function counter at any time without affecting the component counters installed in the function.

4.7.2 Triggers

Triggers are another way of determining when jobs should be carried out (for example, at a frequency, such as daily, or at an event, such as departure). When a trigger is combined with a component job, you can generate work orders for pre-defined events. The triggers are linked to jobs in the Job Triggers window, and activated to generate work orders by selecting **Maintenance > Trigger Jobs**. The system can then tell you which jobs to carry out, and when.

Note

Triggers apply to Component Types in the same way and can be inherited in the Component window with Job information.

4.7.2.1 Connecting Triggers to Jobs

The Jobs tab in the Components and Component Types windows contains a list of all the jobs associated with the selected Component or Component Type. Whether you access the Job Triggers window through the Component Jobs tab or Component Types Jobs tab depends on whether you want to connect the trigger to a job on just one specific component, or if you want to make it available system-wide to all components of the selected type.

To connect a trigger to a job:

1. Inside the Component/Component Type Jobs tab, select the job from the list and click the **View** button. The Component/Component Type Jobs window opens, displaying the details.
2. Open the Triggers tab, which displays a list of triggers associated with the current job. The current trigger is highlighted.
3. To add a new trigger – click the **New** button and select a trigger from the drop-down list. Or, To delete a trigger, select the appropriate line and click the **Delete** button. Or, To change the current trigger without adding any more, select the desired trigger from the drop-down list in the existing line.
4. **Save** your changes. Close the window to return to the Jobs window. **Save** again and close the Jobs window to return to the Jobs tab.

4.7.2.1.1 Trigger Jobs...

After linking triggers to selected jobs, activate the triggers to generate work orders:

1. Select **Maintenance > Trigger Jobs**. The Trigger Jobs dialog opens.
2. Check the appropriate checkbox according to whether you want to trigger Procedure jobs (Quality) or Component jobs (Maintenance). You can trigger both at once.
3. From the drop-down list select the trigger you want to set.
4. Check the checkbox **Show created work orders**, to see the work orders created by triggering the jobs.
5. Click **OK** to trigger the jobs, or **Cancel** to abort the process. If you checked the **Show created work orders** checkbox, the Work Orders window will open after the jobs are triggered. If there are no jobs available to trigger, a dialog box appears to inform you of that.

4.8 How Do I Keep Maintenance Running Smoothly?

How you manage maintenance depends on whether a job was expected and planned, or not.

4.9 Unplanned and Unexpected Maintenance

AMOS M&P contains two related concepts for maintenance that is handled when the need arises:

- **Unplanned** maintenance covers tasks which have not been planned as jobs in your system, but which are carried out when a need occurs. When the job has been completed, relevant information about it is entered in the system.
- **Unexpected** maintenance covers jobs which have been planned in AMOS M&P, but have been actually performed before the scheduled due date when the need arises. Once information about the job has been entered in the system, AMOS M&P will take it into consideration when calculating when the job needs to be handled the next time.

4.9.1 Requisition Work to Plan and Record One-off Tasks

Sometimes you will need to perform **unplanned maintenance work** that is not defined as a job because it happens so rarely or unpredictably; for example, you install an additional refrigeration unit, or take the ship into dry-dock. Or, an **equipment failure** might occur, making it necessary to generate a work order for the necessary repairs.

AMOS M&P helps you to plan and document this kind of work as well.

For one-off tasks like this, you create a Requisition work order for the component on which work is to be done, describing the work, the parts needed, and the time to be used. Later, you report the work back to AMOS M&P by entering completion data for the work order.

To create a Requisition Work Order:

1. Select **Maintenance > Requisition Work** to open the Requisition Work window.
2. The window opens. Enter a name for the work order in the **Title** field. Lookup the **Component** or **Function** you are requisitioning the work for.
3. Lookup a **Job Description** for the work if one for the job you are planning exists.
4. Enter a date in **Planned Start**, and the Requisition automatically generates an entry to view in the Work Planning window at **Maintenance > Work Planning**.
5. Make sure to indicate if the work is unexpected, by checking the box **Unexpected Work**.
6. Fill in the three free text fields for **Effect**, **Cause** and **Action Taken** to provide a good description of why the work order has been issued.
7. Add any required permits in the **Permits to Work** tab by clicking the **New** button in the bottom of the tab, and selected a permit from the drop-down list. The permits will be included on the subsequent work order.
8. If you are requisitioning this work order in response to an equipment failure, use the **Failure Mode** tab to record related details. See section 4.9.1.1 below.
9. Check the **List Work Order** checkbox to automatically open the new work order in the Work Orders window.

Or, click **OK** and you will be asked if you want to **Save** the Requisition - click **Yes**. The Requisition Work dialog shuts.

To activate this kind of Work Order, you need to plan it in the Work Planning window/Work Orders window, before issuing it and carrying out the work.

Note

If your system includes a valid license for AMOS Quality and Safety, an extra checkbox called **Create Non-Conformity** is available. Checking this causes the Non Conformity window in AMOS Q&S to open when you click **OK** here. Refer to the *AMOS Q&S User Guide* for further details.

4.9.1.1 Recording an Equipment Failure

When a piece of equipment fails, if you collect the necessary data and then enter it into the system AMOS can help you to classify the failure, define its exact cause and provide data for statistical reports. To record an equipment failure, you first specify a **Failure Mode** - whatever went wrong with the piece of equipment which caused it to fail. Failure Modes are generally known in advance and so are specified on the requisition/work order. You may not know the *cause* of the failure mode in advance: this is generally discovered after repairs begin, and can be specified or updated later on.

Failure Modes and related information regarding a failure can be recorded in different ways:

- a piece of equipment fails, and you create a Requisition Work Order specifically to handle the related repairs; or,
- you add the details regarding the equipment failure directly onto a Work Order which already exists in your system.

The Failure registers at **File > Open Register > Maintenance >** must be completed before this functionality is usable. The Requisition Work window and the Work Orders window will then both contain a tab called Failure Mode. If you add this information in the Requisition Work window, it will appear automatically on the resulting Work Order. Otherwise, you can also add the same information to an existing work order:

- **Date** – the date of the failure, by default today.
- **Mode** – what went wrong with the piece of equipment causing it to fail, for example Overheating. Failure Modes are linked to component classes: for example failure on a type of Pump will not apply also to a Motor. Therefore the contents of this lookup list depend on the component the requisition/work order is for, as specified in the General tab. If you select a failure Mode first and later add or change the Component on the requisition/work order AMOS will check if the Mode applies to the newly selected component. If it does not, AMOS will remove the specified Mode.
- **Effect** – the effect resulting from the failure – i.e. an interruption to the voyage, a delay in operations, etc.
- **Description** – the observed and definite cause of the failure mode. This may not be known yet, or could change later if another cause is discovered during repair work. If in fact another definite cause is discovered, the Description can be updated later.
- **Detection Method** – the way in which the failure was noticed – monitoring, testing, observation, etc.
- Use the **Function** lookups in the bottom half of this tab to register which system(s) have been affected by the failure. Then, select a **Severity Code** to indicate the extent to which each listed system has been affected.

After entering this information, **Save** the requisition/work order as usual.

4.9.2 Mark Unexpected Work to Improve Your Records

The goal of any maintenance program is to keep things running smoothly by reducing the number and size of unexpected problems: failures and breakdowns.

When a job has to be performed even though it was not scheduled yet – for example in the event of an equipment failure – go ahead and do the work and report the job as unexpected. In this case the Report Work window will contain an extra tab, **Failure Mode**, so that you can specify details about the breakdown. When you report unexpected work AMOS M&P then adapts the schedule for the change. For example, if you must replace a part after 10 months rather than the expected 12, AMOS M&P will set the next replacement for 12 months from now, not 2 months from now.

When the work that was performed is so unexpected that it is not described as a job in AMOS M&P, then you can still create a work order describing the work, and identify the work order as unexpected.

If you are careful to mark unexpected work, then you can measure the success of your regular maintenance program by watching the amount of unexpected work decrease. Over time, you can use AMOS M&P to collect information about where your regular maintenance program might be adjusted to produce an even smoother-running installation.

4.10 Planned Maintenance

Once AMOS M&P is up and running with components, jobs, rounds, counters/measure points and so on defined, your tasks to create a jobs list are:

1. **Generate** work orders for newly defined jobs (see section 4.10.1),
2. Use the Work Planning window and/or the Work Orders window to set the correct status and otherwise **Plan** each work order (section 4.10.2),
3. **Issue** actual work orders (section 4.10.3) based on the generated work orders, to activate them and see what needs to be done,

Once the list of jobs is created and ready to go:

4. Carry out the jobs and **Report** (section 4.11) on them as soon as possible after they are performed, by entering information in AMOS M&P. Reporting methods differ depending on what kind of work order it is and if the job was planned or not.

Once the work has been performed and reported on a work order and the status is set to Completed, AMOS M&P automatically generates the next work order depending on how the job has been defined (based on frequency, counters, measure points or CBM).

5. The final step is to **Control** the work reports and **File** them for the records. Now closed and stored, the work order may be viewed but no further changes can be made. See section 4.12.

4.10.1 Generating the First Work Orders

When new jobs are defined, it is necessary to **generate the first work orders**. Work Orders describe which jobs and other tasks need doing.

There are several types of work orders in AMOS M&P:

- **Periodic** work orders, which are generated for jobs with a defined periodic frequency or a counter,
- **CBM** work orders, generated for Condition Based Maintenance or measure point jobs,
- **Round** work orders (see section 4.6). For routine checks with little hands-on work, use the Rounds function to group multiple jobs together and generate a single work order.
- **Requisition** work orders, which are generated by requesting work as the need arises (see section 4.9.1).

To generate work orders for newly defined jobs:

1. Select **Maintenance > Generate Work Orders**. The Work Order Generation dialog opens:

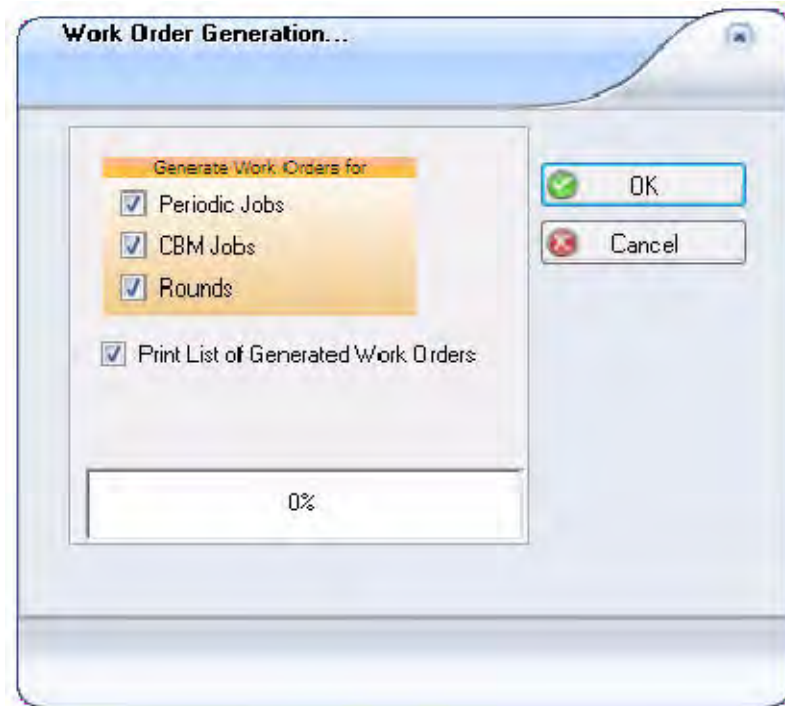


Figure 31 The Work Order Generation dialog box

2. Check the relevant boxes in the **Generate Work Orders For** area.
3. Check the **Print List of Generated Work Orders** box if you want to do so, and click **OK** to generate the work orders.
4. Click **OK** when you are asked to confirm that you really want to generate work orders.

4.10.1.1 What Happens Next?

- Work orders for jobs defined with a **periodic frequency** are handled automatically once the system has been ‘kick-started’ by generating the first work order: once the status of this work order has been set to Completed, the system generates the next work order.

Jobs based on **counters** can also be handled automatically: AMOS M&P can estimate the next time a counter based job falls due and a new work order of this kind is generated by the system. If such counters are updated manually, it is important to make sure the counters are updated regularly to aid AMOS M&P in making good predictions.

- AMOS M&P does not know when a CBM or measure point signal will appear. Therefore, no work orders for such jobs are generated automatically until a CBM event occurs or a measure point value falls outside the set boundaries. New work orders will be generated when the previous work order is completed or measure point updated again.

A work order is registered as started the first time you report work based on it and it changes status as it progresses through the work flow. Here is a list of the various statuses a work order may have:

Status	Occurrence
Requested	Set the status of work orders generated for periodic jobs to Requested (unless a set system parameter gives such jobs the status Planned). This is also the status assigned to work orders requested manually in the Requisition Work window.
Planned	Set work orders with a status of Requested, Pending or Postponed to Planned if the work will start when the Due Date is approved. If certain system parameters are set, periodic jobs are automatically set to Planned.
Issued	You can issue and print work orders set to Planned.
Postponed	If you need to postpone a job, change the current status to Postponed, from Requested, Pending or Planned.

Pending	Set jobs depending on a specified condition, such as Shut-down required, to Pending. Jobs with the current status Requested, Postponed, or Planned can be changed to Pending.
Cancelled	Set this status if it is necessary to cancel a work order.
Completed	Change the status to Completed if a work order report specifies that the work has been done.
Controlled	Change status to Controlled to file work orders, unless the system parameters specify that Completed work orders are filed automatically.
Filed	Only Completed jobs can be set as Filed. Once status has been changed to Filed, the work order is closed and stored. It can be viewed but not changed.

4.10.1.2 Creating a Work Order for a Planned Job Yourself

On some occasions it is necessary to create a new work order in between regular due dates of the defined frequency. For example, a job may be defined to be carried out twice a year, and major maintenance is being planned between the previous and the next due date. AMOS M&P makes it possible to schedule an additional work order for that job in between the regularly planned work orders. To do so, access the Jobs window and select the job in question. Then go to **Options > Create Work Order**. You can also manually create Work Orders for a job from the Function Hierarchy: select a function, and in the **Jobs tab** choose the appropriate job and click the **New WO** button at the bottom of the window.

4.10.2 Planning Work Orders

Once you have generated your first work orders they need to be planned. This work can be done using the **Work Planning window** and/or the **Work Orders window**. Planning elements you need to carry out include setting the correct status of the newly generated work orders and work orders that have been requested manually in the Requisition Work window, and adjusting other details (such as parts and disciplines, etc) inherited from the Jobs window.

While planning, you can use the **Maintenance Tasks window** to handle recurring instances of the same job and the **Projects window** to group together extraordinary or emergency maintenance work under a project name and sub-divide it into sections.

You can skip this step if your system is configured to automatically set the status of generated work orders to Planned rather than Requested.

4.10.2.1 Working in the Work Planning Window

Note

Different kinds of functionality are available according to your system license.

Note

The Work Planning window has its own **Options menu**. Any of the available options that are not covered in the following sections are discussed in section 8.1.7 of this guide.

To open the Work Planning window, go to **Maintenance > Work Planning**. This window is used to plan, reschedule and otherwise follow up on work orders.

On the left hand side of the window is a list of the work orders matching any criteria you specified in the filter window. Each work order is represented by a colour coded horizontal bar on the timeline to the right. The lower part of the window shows the **Details** of the selected work order. You can make general changes and updates to a work order in the fields in this area.

A single line on the chart may represent several jobs (for example, if the work order represents a round). If a round is attached to a work order, the command **Included Jobs** is available in the **Options menu**. Select it to access the list of jobs that are included in the round.

When you first enter the Work Planning window, the Gantt chart scrolls to Today. When you click on a work order title, the Gantt chart automatically scrolls to the associated work order and selects it.

Make sure you **Save** your work before exiting this window.

4.10.2.1.1 Work With Multiple Work Orders at Once

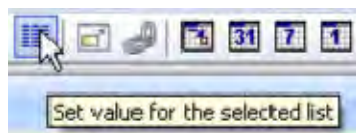
At the very bottom you find the **Selected List** tab. This tab allows you to work on multiple work orders at once, and is only activated when you select more than one work order. Select multiple work orders by holding the **CTRL** key down while clicking the work order titles. To perform the same task on all work orders at once (for example, changing status), go to **Edit > Select All** to select all Work Orders and list them in this tab. Make sure to filter the present work orders first, to shorten the list to only those work orders on which you want to perform this same task. Choose **Edit > Deselect All** to undo the selection.

Number	Title	Due Date	Locked	Pl. Start	Planned By	Status	Unexpected Work	Est. Duration (Hrs.)	Priority	Window (Days)	Window Start	Resp. Discipline
SH1/04/0169	L009 - WEEKLY LUBRICATION OF TH	2004 01 07	☐		Jean Administrator	Issued	☐	3.00	5	4	2004 01 03	2. Engineer
SH1/04/0170	L011 - MONTHLY LUBRICATION OF TH	2004 01 31	☐		Jean Administrator	Issued	☐	4.00	5	3	2004 01 26	2. Engineer
SH1/04/0171	C048 - CHECK OF DECK CRANE MAIN	2004 03 31	☐		Jean Administrator	Issued	☐	5.00	5	6	2004 03 25	External

Figure 32 Selecting multiple work orders

4.10.2.1.2 Change a Work Order's Values

When several work orders are grouped into a selected list, you can alter the values of all of them simultaneously. Select **Options > Change Values** to open the Change Values window. There is also a toolbar button to access the same window that becomes active when multiple work orders are selected:



When you click it (or use the Options menu), you enter the following dialog box:

Change Values

Est. Duration (Hrs.):

Priority:

Window (Days):

Due Date:

Resp. Discipline:

Unexpected Work: ☐ Yes ☐ No

Figure 33 The Change Values Dialog

Use the dialog box to indicate changes that are common to the selected work orders. In the example above, you notice that neither Yes nor No are selected for Unexpected Work. This is because some of the selected work orders have each value. For example, if you click **Yes** in the dialog box, that value is set for all of the selected work orders.

4.10.2.1.3 Change a Work Order's Status

The second toolbar contains icons representing the various statuses a work order may have. Each status is represented by a specific colour.

To change the selected work order's status, click the appropriate Status button in the toolbar. For example, to change the status of a work order from Requested to Planned, click the **Planned** button. You see that the colour of the work order changes to the colour indicating Planned work orders. Or, select **Options > Change Status To** to change the selected work order's status to one of the listed alternatives. Or, you can press the **F8** key to alter the status to Planned.

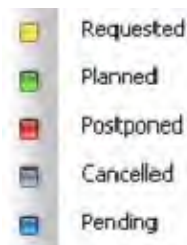


Figure 34 The Change Status To Sub-menu and the Toolbar Shortcut

You can change the status of several work orders at the same time. When you have selected more than one work order, the **Selected List** tab at the bottom of the screen is automatically activated, and the selected work orders are listed on it. You can now click on one of the **Status** buttons in the toolbar to set a specific status for them all.

4.10.2.1.4 Reschedule a Work Order

Note

There are two kinds of planning methods available: fixed and variable. If you reschedule a fixed job within its reschedule limit, the dates of the jobs to follow will not change. If you reschedule a variable job, you must reschedule the jobs that follow by the same amount of time. The planning method is set for each job when you create it in the Jobs window.

Change the Duration of a Work Order

If you click a work order and hold the mouse button down, a note appears on the screen showing the planned duration of the selected work order.

To change the planned duration of a task, change the value in the field **Est. Duration (Hrs)**. The timeline represents whole days, and the estimated number of hours is rounded up to the next full day. A one-hour job is represented on the timeline as a one-day job, while a job estimated at 36 hours is represented as a two-day job.



The defined **Window** is represented graphically on the timeline. For example, if a Planned work order has a window of 4 days and a duration of 1 day, the horizontal bar in the timeline will show the window just to the left of the work order in a slightly less intense version of the same status colour as the work order.

Change the Start/End Dates for a Work Order

Drag a work order sideways in the timeline to change the planned start of the job. As you drag, the information in the note changes to reflect the current position of the work order. When you drop the bar representing the work order, the details in the lower part of the window are updated to reflect the new planned start and finish dates.

4.10.2.1.5 Specify Disciplines for a Work Order

The timeline contains a box for each work order according to discipline(s) required. The number of required hours appears to the right hand side of each work order. It is easy to see if there are manpower shortages or scheduling conflicts. Place the cursor over a work order to view the text box containing the work order number.

The **Disciplines** tab provides an overview of the work planned for each discipline. To add an additional Discipline, open the tab and click the **New** button and then select the discipline from the first drop-down list and specify the number of hours and Estimated Cost. You can also specify additional disciplines by choosing **Options > Required Disciplines**.

4.10.2.1.6 Plan Work Order Dependencies

If Job Dependency Chains have been configured in the Component Jobs window (see section 4.5.7) or in the Job Planning window, when the work orders for these jobs are generated, they will also be linked together. You can view and alter these linked work orders here. You can also create work order dependencies here in the first place; the graphical layout makes it easier to visualise and plan work orders according to which jobs depend on which others.

4.10.2.1.7 Change the Timeline Display

Select **Options > Scale > Go to Today** to jump to today's date, regardless of the time scale in use. Selecting **Month**, **Week** or **Day** changes the way the timeline is displayed by altering the amount of time displayed in the timeline window. There are corresponding toolbar buttons for these options.

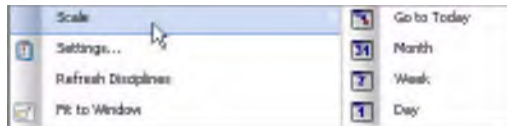


Figure 35 The Scale Sub-menu

You can specify how the Gantt chart Timeline should look by setting up the calendar. To access the dialog for setting up the calendar select **Options > Settings**.

You can set the Work Order Tracking Accuracy parameter to display and track work orders to the nearest 15 minutes if required.

Note

If you check the **Autoscale** box in the Settings dialog, the number of pixels per day is set to **0**, and AMOS M&P automatically scales the timeline to display the defined work orders. In the dialog box, there is an option called **Today**. If you check this, a thin, green vertical line will indicate the current date, making it easier to identify due and overdue jobs.

4.10.2.2 Maintenance Tasks

Recurring instances of the same job are called Maintenance Tasks. If the Maintenance Task module is part of your license, and the Maintenance Task functionality is enabled by setting the parameter 'Use Maintenance Tasks' to TRUE, the Work Planning window allows the possibility to display Maintenance Tasks next to the existing Work Orders.

These tasks appear in the planning window as frequently as they are scheduled in the selected period. In any planning period, you can handle multiple maintenance tasks.

Note

The Maintenance Task functionality described in the following sections is *in addition* to the work planning functionality described above, provided you have the correct license.

4.10.2.2.1 The Work Planning – Maintenance Task Window

Note

The Work Planning - Maintenance Tasks window has its own **Options menu**. Any of the available options that are not covered in the following sections are discussed in section 8.1.8 of this guide.

Maintenance Tasks are performed on a recurring basis. If a job is to be performed at a monthly frequency and you choose to review the planning for one year, then for this job the existing work order and eleven subsequent tasks will be displayed in the Planner. Jobs are listed on the left side of the window and clicking the + button beside one will expand it to show the complete list of work orders/tasks. The details, (required parts and required disciplines) for the Maintenance Tasks are retrieved from the Component Job. When the work order is reported to the system, a new work order is generated based on the data from the next task in line for that job.

When Maintenance Tasks is activated, the Work Planning Filter is similar to the standard Work Planning filter. The main difference is that this filter includes an additional tab called **Maintenance Tasks**. You must enter a **From Date** and **To Date** in this tab for the period in which you want to work, before you can proceed to the window. The Planning window will then show the Work Orders and Tasks generated for this period of time, and a list of all component jobs in the system, including those which do not have work order(s) due/task(s) generated inside of the time frame you have set. Checking the **Only include WOs that are due within this date range** box on the filter restricts the list of component jobs displayed in the Planning window to those with work orders due/maintenance tasks generated within the set time frame only. Another way of restricting the number of work orders displayed is to set **Due Between** dates in the filter's **Basic** tab. All component jobs will be listed, but they will contain only the work orders due between those dates.

You can also set the **Periodic Frequency** of the tasks you want to view, and **Job Descriptions**, **Counters** and **Component Types** associated with the Maintenance Tasks.

Note

If you check the **Global Search** checkbox in the Work Planning filter, **Generate Maintenance Tasks** in the **Options** menu will be disabled in the resulting window. If you do not check the Global Search checkbox, the Generate Maintenance Tasks option will be available (depending on access rights). In this case, when you select to Generate Maintenance Tasks, the Global Search checkbox in the resulting filter will be disabled.

After the filter, the Work Planning - Maintenance Task window opens:

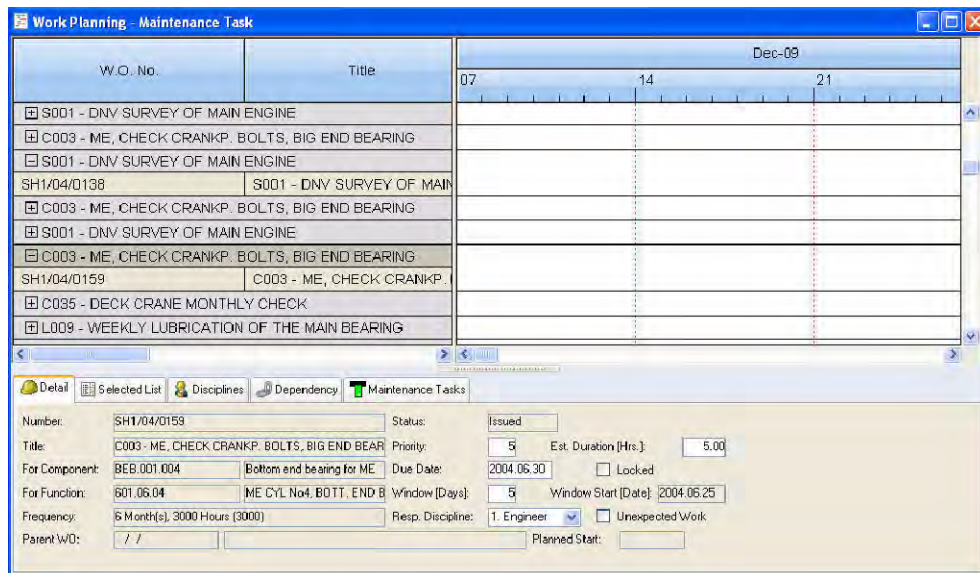


Figure 36 The Work Planning - Maintenance Task Window

You may want to resize different areas of the window depending what you are working on. When resizing the top part of the window by dragging the left hand columns, there is a difference whether you place the cursor in the column header row, or in the list of component jobs below. Dragging with the cursor in the header row moves the entire gantt chart, resizing or zooming, the timeline. If you drag the header row to the left, each month takes less space. If you drag it to the right, it increases the space each month will use. Placing the cursor in the list part of the columns, under the header row, and dragging left or right, expands or contracts the visible space for the columns versus the visible space for the gantt chart.

Note

If you resize the **Discipline** column within this tab, by dragging it out to its full width, all the columns in the top part of the window will also resize automatically to their own full width. Dragging the Discipline column to the left, to less than its full width, will then sync the top and bottom timelines again.

- When a plan is generated, all tasks will appear in green. They will stay green as long as there is no planned due date. When you alter a task, so that a planned due date is set, the task will appear as yellow. All additional created tasks will always be yellow, since the planned due date is always set for these tasks.

- The status of the required parts on order for a Maintenance Task or a Work Order is visually indicated on the Gantt chart. If all the parts have been ordered, there is a green ball present on the Gantt chart next to the selected task or work order. If some parts have not been ordered yet, you will see a yellow ball next to the selected task or work order. If no parts have been ordered, you will see a blue ball. The same icon appears in the **Onorder** column on the **Selected List tab**.
- A red exclamation point next to the selected Maintenance Task in the Gantt chart indicates that the task has been generated with a different frequency from the frequency that currently exists in the component job.

The Maintenance Tasks Tab

The Work Planning – Maintenance Task window contains a tab called Maintenance Tasks. This tab lists the Maintenance Tasks associated with the selected Component Job or Work Order.

There are three buttons at the bottom of this tab:

- **Delete** - clicking this button deletes the selected maintenance task.
- **Not Ordered** - to check if all the parts are available for the selected task, click this button. If none of the parts have been ordered for the selected task or some have been ordered but not all (indicated by a blue or yellow ball on the Gantt chart and in the **Onorder** column), clicking this button displays a dialog box with the first twenty required parts that are missing.
- **Forms** - clicking this button opens the forms belonging to the selected maintenance task. Clicking the **Forms** button at the bottom from the Selected List tab opens the forms for all selected tasks and work orders.

4.10.2.2.2 Working in the Work Planning – Maintenance Task Window

- If the selected task has many required disciplines, these disciplines have to be updated whenever you move a task. Selecting **Options > Do not refresh collapsed req. disciplines** prevents this update. Switching this option off by selecting it again, enables collapsed disciplines to be updated. A checkmark in the menu next to this option indicates that it is ON.
- Selecting **Options > Generate Maintenance Tasks** allows you to extend the planning into the future. If you have changed the frequencies for the selected tasks, they will be overwritten. If the frequency remains the same, it will generate new instances of tasks.

Note

If you check the **Global Search** checkbox in the Work Planning filter, **Generate Maintenance Tasks** in the Options menu will be disabled in the resulting window. If you do not check the Global Search checkbox, the Generate Maintenance Tasks option will be available (depending on access rights). In this case, when you select to Generate Maintenance Tasks, the Global Search checkbox in the resulting filter will be disabled.

- If the selected work order or maintenance task requires parts, select **Options > Order Parts** to generate order forms and put these parts on order. This will place all required parts for the selected work order or maintenance task onto a form, without taking current stock levels into consideration. Parts which have already been ordered will not be ordered twice, and if all required parts for the selected work order/maintenance task have been ordered, no new forms will be created and AMOS will inform you that all required parts for the selected work order/maintenance task are already on order. If some but not all parts have been ordered already, AMOS will ask if you want to generate purchase orders for the outstanding parts.

Reschedule Limits

A Reschedule Limit is a set amount of days before and after the calculated due date, within which a task can be carried out. These limits are defined in the register found at **File > Open Register > Maintenance > Reschedule Limits** (read more about it in the *AMOS Business Suite Reference Manual*). The reschedule limits can subsequently be registered against the Component Jobs and are then displayed in the Planning window for those tasks.

You can move and reschedule maintenance tasks but it is not possible to reschedule them into the future outside of the pre-defined task reschedule limit.

It is possible to reschedule a task outside of its limits to an earlier date. For the task that you reschedule, this updates the planned due date, the calculated due date and the reschedule limit. For any subsequent tasks, both the calculated due date and reschedule limit are updated. The planned due date for tasks moved as subsequent tasks is never altered.

When a variable task is rescheduled within its limits, the planned and calculated due dates for that task only, are moved. The reschedule limit is set for that task according to the new calculated due date. For any subsequent tasks up to the next planned task, the calculated due date and reschedule limit are updated with the same amount of time. If you reschedule a variable task outside of its limits to an earlier date, only the generated tasks behind it will be affected, not those in front. The tasks generated behind the rescheduled one, will be rescheduled using the originally planned interval according to the Component Job definition for the rescheduled task. Any additionally created tasks behind the current task will not be rescheduled. Additional tasks, generated when moving planning out of the reschedule limits, do not have reschedule limits themselves.

Note

When you are rescheduling a variable task, if one or more instances of that task are outside the timeline you have filtered for in the Work Planning window, a dialog box will appear to warn you that there are maintenance tasks involved which are not displayed in the Planning window and therefore will not be rescheduled. To include these tasks in the rescheduling action, re-filter the timeline for the due date of the last task. If you reschedule a variable task without including all tasks in the timeline, the tasks outside the displayed timeline will remain unchanged.

4.10.2.3 The Maintenance Tasks (Read Only) Window

Some users open the Work Planning - Maintenance Tasks window to view planning, but not to change it. The read-only Work Planning - Maintenance Tasks window is simplified and intended for those users who just need to view the planning. It is not possible to change any planning in this window. This window only appears if the user has the correct access rights: Maintenance Planning (Read Only) checked in the functions tab of the Access Control window, and a system license for Maintenance Tasks. This window is accessed by the same menu command as the standard Work Planning - Maintenance Tasks window, and uses the same filter. All the tabs are the same as in standard Work Planning - Maintenance Tasks window, but are now read-only. The Options menu for the read-only window contains fewer items. Options that change the planning, such as **Generate Maintenance Tasks**, are not available in this window. The options available function in the same way as in the standard Work Planning window, but are also read-only.

4.10.2.4 Projects

Note

The Projects window has its own **Options menu**. Any of the available options that are not covered in the following sections are discussed in section 8.1.10 of this guide.

Use the Projects window to group together extraordinary or emergency maintenance work under a project name and sub-divide it into sections. Grouping work together like this enables the user to closely monitor related maintenance within a major project situation such as damage repair or refit.

When you open the Projects window (after using the filter) you need to add projects, sections and jobs. The Projects window appears empty until you begin entering information.

4.10.2.4.1 Setting Up a New Project and Adding a Section

You cannot create a section unless you have already created a project. Once you have created a project and a section, you can then create jobs.

To create a new **Project**:

1. Go to Maintenance > Projects to open the window. Click the **New** button on the toolbar to open the **Specify new object type** dialog box:



Figure 37 The Specify New Object Type dialog box

2. Select **Project** and click **OK**. A new Project icon is added to the hierarchy pane, and the General tab empties:

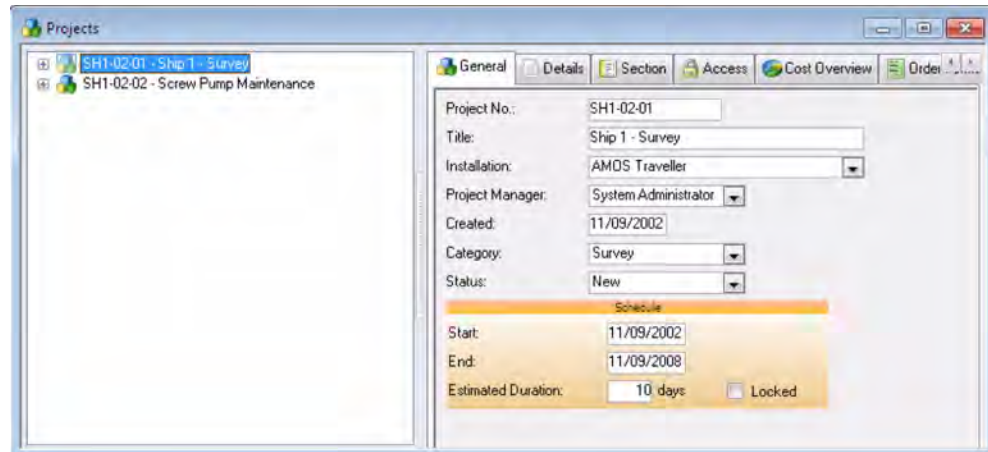


Figure 38 The Project Window, Creating a New Project

3. Enter the required information for the project you want to create. The **Project No.** and **Title** fields should contain information meaningful to your organisation. Select **Installation**, **Project Manager**, **Category** and **Status** from the various drop down windows. **Created**, **Start** and **End** are all date fields. Set the dates using the calendar feature. Use the **Locked** checkbox to fix the **Estimated Duration** of a project. This feature is useful for comparing estimated duration against the actual duration upon completion of the project. Use the pane on the right to attach account **Categories** and **Codes** to the project.

Note that you cannot open the Section tab yet, because no section has been created.

4. **Save** your Project so far.

Now, add a **Section** to your Project:

5. Select the new Project icon in the hierarchy and click the **New** button on the toolbar. When the **Specify new object type** dialog box opens, click **Section** and then **OK**.
6. The **Section tab** in the Projects window will open up automatically. All section properties are shown here.

The main area of the Section tab is the same as the Work Orders window described in section 4.10.2.5 with a line at the top where you add your own number and title to the resulting section work order.

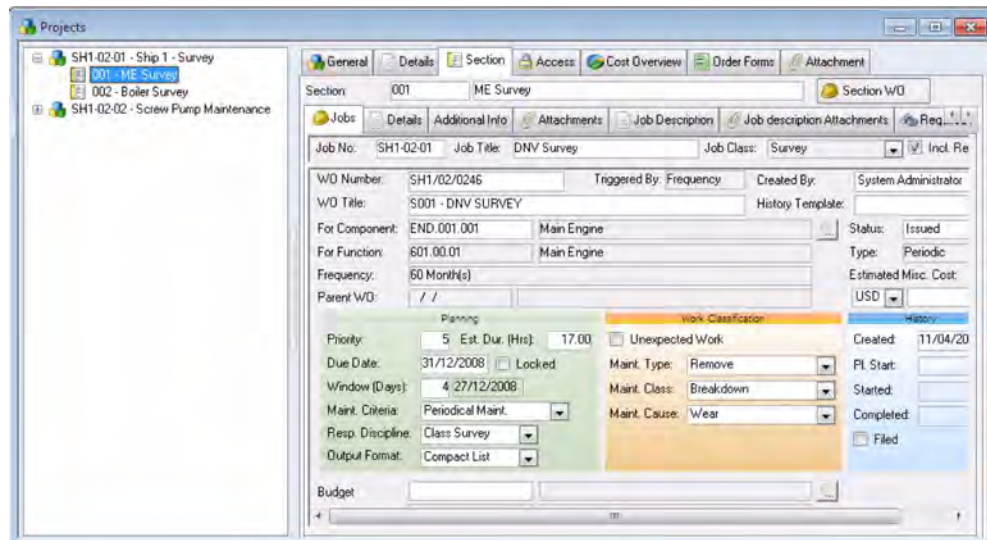


Figure 39 Creating a Section

7. **Save** your new section.

Repeat steps 5 - 7 to add as many sections as necessary for every project.

4.10.2.4.2 Adding Jobs to a Project

8. When you have created a project with at least one section, to add a **Job** select the section and click the **New** button on the toolbar.
9. In the **Specify new object type** dialog box, click **Job** and **OK**.
10. The following window opens:

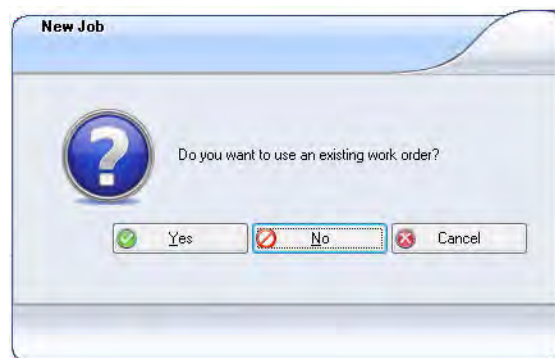


Figure 40 The New Job dialog box

Click **Yes** to select any existing work order and have its details appear in the **Jobs sub-tab**. If you select a periodic work order as part of the project, its due date becomes locked to avoid it falling outside of the project timeframe. You can add multiple Work Orders at one time. See section 4.10.2.5 for information.

Click **No**, and the fields in the work order area of the **Jobs sub-tab** become active and you can create a manual work order as described in section 4.10.2.5. Note that any manually created project job is issued the next available work order number to uniquely identify it.

When you add a new job in either way, the due date is automatically set for you as the project's start date. You add your own **Job No.** and **Job Title**.

11. On the Projects window General tab, clicking the **Project WO** button will open the Work Orders window listing all work orders belonging to the entire project. Clicking the **Section WO** button in the Section tab will open the Work Orders window listing all work orders restricted to that section. Open the Work Orders window for the selected project work order(s) to add Required Parts and Disciplines (see section 4.10.2.5). This information will then appear in the sub-tabs here.

Repeat steps 8 – 11 to add as many jobs as required to every section.

You can also add a job using the Options menu:

1. Select a Section in the hierarchy. Go to **Options > Create Job from Job Description**.
2. The Create Requisition Job dialog opens. Click **Next**.
3. You are prompted to lookup and select a **Job Description**. Click **Next** to continue.
4. Enter a **Job No.**, click **Next**, and **OK**. The dialog closes and you return to the main window, with your project job added to the hierarchy.
5. Add the details to the sub-tabs.

4.10.2.4.3 Sub-Contracting Project Jobs

To sub-contract project jobs to an external supplier, select **Options > Order** and the following window opens:

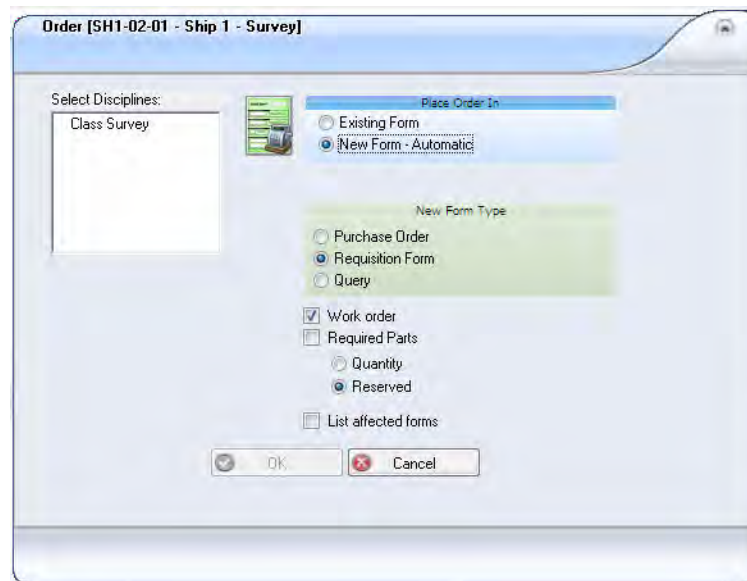


Figure 41 The Create Order Form Dialog Box

To sub-contract project jobs it is important that the disciplines selected to carry out the jobs are defined as external in the Discipline Register. At least one work order in the project section must have its **Responsible Discipline** set to an external one, to allow you to place the work order on a purchase form. When you open the Order window above, select the required external discipline from the left-hand window. AMOS M&P lists all external disciplines that have been used for the jobs contained within the selected project.

When you have selected the discipline, decide whether to add the jobs as service line items to an **Existing** form or to create a **New** form altogether. If you opt to create a new form, specify its **Type**. Check the box to **List affected forms**.

You can also choose to order the parts for the work order as well: check the **Required Parts** checkbox and mark either **Quantity** or **Reserved**. AMOS will place the parts onto order forms. Parts which have already been placed on a form will not be ordered twice. You will be informed if some or all parts have already been ordered.

4.10.2.4.4 Project Jobs on Order Forms

The Order Forms tab contains a list of all Project Jobs for the selected Project or Section which have been placed on Order Forms, and the form details. Select a line and click the **Forms** button to go the Forms window.

4.10.2.4.5 Setting Access Control for Projects

Each project has its own, dedicated, access control feature to allow or deny different levels of access to any defined group. Open the Access tab in the Projects window to set user group access.

4.10.2.4.6 Copying a Project

To save time when creating a new project that is similar to one which already exists, copy the existing one and make the appropriate changes to the new project. You can also copy information from one existing project or section to another. You can choose to copy entire projects, sections or job details and requisition work orders, within one department or across departments.

Selecting the project or section in the hierarchy and then going to **Options > Copy Project** opens up a new dialog where you can select which items to copy from the source project, and lookup an existing project to copy to, or create an entirely new project. You also choose the **Department** which the destination project should belong to.

4.10.2.4.7 Project Compendiums

To print your project in full with all information (Name, Title, Installation, Dates, Sections, Jobs, etc.) as a Word document:

1. Select the project in the hierarchy. Go to **Options > Create Project Compendium**.
2. The Project Compendium dialog opens. Use the lookup to define a name and location for the project file. Check the box if you want the newly created document to open up in Word automatically.
3. Click **OK** and the details are exported. If you checked the box in step 2, the project opens up in Word. Otherwise browse to the location you stored it and open it from there.

You can choose to include Project Specifications with your printed compendium:

Go to **Options > Specification > Specification Preamble** to open a details window for entering general information such as standard terms for dry-docking and other projects. The Preamble prints before the list of project jobs on the project specification report.

Go to **Options > Specification > Specification Postscript** to open a details window for entering general information such as standard terms for dry-docking and other projects. The Postscript prints after the list of project jobs on the project specification report.

The Preamble and Postscript are capable of accepting templates as defined in the parameters 'Project Preamble' and 'Project Postscript'. Go to **Options > Specification > Change Template Preamble/Postscript** to open the Select Template dialog box and choose a new template to apply to the Preamble/Postscript.

The contents of the **Required Parts** and **Required Discipline** tabs are included on your printed compendium: two checkboxes in the Jobs sub-tab, **Incl. Req. Parts. Comp.** and **Incl. Req. Discs Comp.** are checked by default. Uncheck them to leave them off the Compendium.

It is possible to **define** the data inserted into the following sections of the compendium:

- Required Disciplines
- Required Parts
- Work Permit
- Work Order

The data windows are found in the WOPRO.PBL and can be adjusted according to your requirements. Only the label and corresponding data will be used (not the layout):

1. Open any of the listed data windows with Powerbuilder.
2. Adjust the SQL as desired. There are some columns that are required so expanding the SQL is recommended rather than reducing it.
3. Insert or remove any column in the design view of the data window.
4. Insert static text controls next to your columns.
5. The name of the static text needs to match the column name, <column name> + "_t".
6. Set the tab order of the columns; this will be the order of the data shown in the compendium.
7. To exclude data from the compendium, but still have it present in the data window simply set the tab order to 0.

8. **Save** the adjusted data window.

4.10.2.5 Working in the Work Orders Window

Note

The Work Orders window has its own **Options menu**. Any of the available options that are not covered in the following sections are discussed in section 8.1.6 of this guide.

The Work Orders window (**Maintenance > Work Orders**) gives you a list of all the work orders in your system. From this window, you can select an issued or started work order and report work on it, or you can change the current status of the work order and plan it (as you can in the Work Planning window).

Number	Title	Component	Priority	Resp. Discipline	Status	Date
SH1/04/0132	S001 - DNV SURVEY OF MAIN ENGINE	CYL.001.004	5	Class Survey	Issued	31/12/2008
SH1/04/0133	S001 - DNV SURVEY OF MAIN ENGINE	CYL.001.003	5	Class Survey	Issued	31/12/2008

Number of records found: 114

Figure 42 The Work Orders window

At the bottom of the Work Orders window you find a list of work orders matching the filter criteria you specified. Select one of them to display its details in the top of the window. Here are some of the things you can do in the Work Orders window:

- Change the status of a selected work order by opening the **Status** drop-down list and selecting the proper status from it.
- Enter or alter a suggested amount to display on the Details tab during reports, in the **Estimated Misc. Cost** field.
- Work orders contain a checkbox called **Locked**. For new work orders generated automatically by AMOS M&P, this box will always be unchecked. This means that the system may adjust the estimated due date based on counters, for example. Work orders you generate manually are locked when defined, but you may uncheck the box if the due date needs to be moved for some reason.
- The **Additional Info. tab** contains three text fields for providing additional information about the **Effect** and **Cause** of the selected Work order, and the **Action Taken**. At the bottom of this tab is a field entitled **Form No.** The form numbers and descriptions of any purchase forms created for the selected work order appear here.
- If the selected work order is a round, the Job Descriptions tab will change to Round Details and display the information entered at **Maintenance > Rounds > Options > Details**.

- The **Required Parts** tab for the Work Orders window is for registering the parts in use in the selected work order and information related to the parts such as price, etc. The currency and price as displayed in this tab are used when updating the Stock Transaction register with details of Stock Used entered in Report Work for the Work Order. Click the **New** and **Delete** buttons at the bottom of the tab to add or remove parts on the work order. Click the **View** button to display the stock items window for a selected part. Clicking the **Show All** button displays all the spare parts ever used in previous instances of this job. The **Max. Used** field contains the maximum number of the selected stock item ever used in reporting this job. The **Reported** field contains the total quantity of this item which has been reported throughout the system against the selected work order.
- The **Required Disciplines** tab for the Work Orders window is for registering which disciplines are involved in the selected work order. Click the **New** and **Delete** buttons at the bottom of the tab to add or remove disciplines on the work order. Click the **Show All** button to show all disciplines ever used in previous instances of this job.
- If the selected work order is defined as a round, the **Included Jobs** tab displays a list of all the active jobs included in the round. The tab also contains three buttons: **Component**, **Job** and **Job Details**. These buttons allow access to attachments stored in different areas, for the job selected in the tab. Clicking **Component** opens any attachments linked to the component the selected job is for. Clicking **Job** opens any attachment linked to the component job itself. The **Job Details** button opens the relevant Job Description. All attachments linked either to the Component or the Job, will be listed in the **Attachments tab**.
- The **Financials Tab** is where you select the work order budget code and, if you have a license that includes the accounting module, also the cost centre and account. Much of this information may be present by default according to how the system was set up, and your level of access within the application also affects the options available here.
- Use the **Permits to Work tab** to add, remove, view, acknowledge and print any permits to work attached to the job description associated with the work order. It is not possible to delete a permit to work if it has been issued or acknowledged. To View/Acknowledge a permit, double-click it. The details will appear in a new window. If the permit is issued to you, you will have the option to acknowledge it immediately. An acknowledged permit is still viewable, but no further issuing, withdrawing or acknowledging is possible. If a permit is issued to any particular user, no one else can acknowledge the permit and only the specified user can report the work on this order. To allow another user to perform the work, the issued permit must be withdrawn from the original user and re-assigned to the new one.
- If Failure Modes are in use and the Work Order was requisitioned as a result of an equipment failure, the **Failure Mode tab** will already contain information entered on the Requisition. If not, you can register failure details on a new or existing work order here, such as what caused the failure which and system(s) affected, etc. against an existing work order where applicable. See section 4.9.1.1 about registering equipment failures in AMOS.
- The **Non Conformity tab** contains a list of non conformities for the selected work order. The **Number**, **Name**, **Due Date** and **Status** of the non conformities are listed in the top half of the window. To create a non conformity for the selected work order, click **New**.
- Jobs can be linked together in Dependency chains and the resulting work orders are then linked in the same way (see section 4.5.7 for more information on Dependencies). The **Dependency tab** in this window contains two lists. The Work Orders on the left are Dependant to the selected one. That is, the work order you have selected in the window cannot be started until the work orders in the Dependant list have been completed. On the right is a list of Depending work orders. These work orders cannot be started until the selected one is completed. Using the **New** and **Delete** buttons you can add or remove Work Orders in the Dependency.
- To purchase a work order as a service, select **Options > Order**. The selection window opens, where you can choose whether to add the work order as a line item to an existing form or to create a new form altogether. Check the checkbox if you want to list affected forms. When a new form is created it receives the next form number in the sequence and the work order details are included as a line item attached to the form. Additionally, you can choose to order parts for the Work Order as well: check the **Required Parts** checkbox and mark either **Quantity** or **Reserved**. AMOS will try to place work orders and their parts onto the same order form, where possible. Parts which have already been placed on a Purchase form, will not be ordered twice. You will be informed if some or all parts have already been ordered.

- Select **Options > Add to Project** to add the selected work order onto an existing project. The **Add to Project** dialog box appears, containing fields to select the Project and Section to add to. The selected work order is listed underneath the Select Project_Section areas of the dialog box. To add multiple work orders, check the boxes of all the work orders you want to add, and then choose **Options > Add to Project**. See section 4.10.2.4 for more information about projects.

4.10.2.5.1 Copying Work Orders

Instead of filling out a new Work Order when a similar one has already been generated, AMOS M&P allows you to copy an existing Work Order.

To copy an existing Work Order:

1. Open the Work Orders window.
2. Select one or more Work Orders to copy.
3. Go to **Options > Copy**.
4. Choose whether to copy the **Details**, **Required Parts** and **Required Disciplines**.
5. Click **OK**. The system generates the new Work Order(s) according to the current auto-numbering system and it (they) will appear at the bottom of the Work Order data window.

4.10.3 Issuing Work Orders

Once you have generated your first work orders and then planned them, **Issue** the actual work orders to activate and print them out:

1. Open the Work Orders window.
2. For each **Planned** work order you want to **Issue**, check the box on the left side to include it.

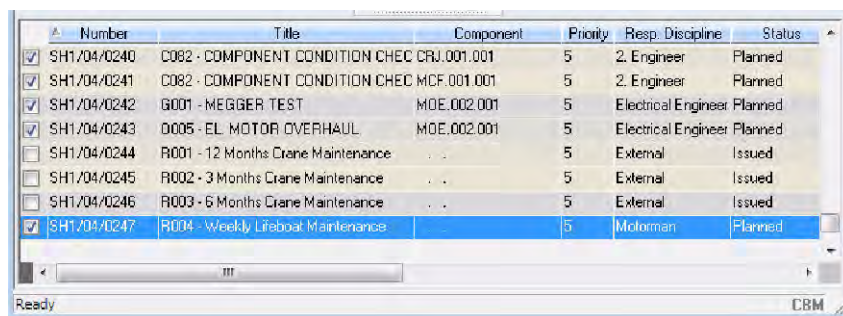


Figure 43 Selecting work orders to issue

3. Select **Options > Issue**, or click the corresponding toolbar button.
4. In the Issue Work Orders dialog box, select the **Output Format** you want to use:

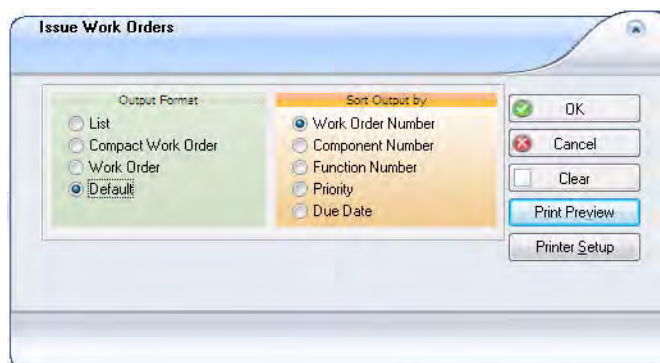


Figure 44 Setting output parameters

5. Click **Print Preview** to view the list on your screen first and make certain that it is the list you want.
6. If the list looks right, click the **Print** button in the tool bar or select **File > Print** to print the list. All the information belonging to each Work Order is printed together on one page (or more as required) including rich text and plain text. Any templates are printed on separate pages. The summary for each Work Order follows it immediately, and then the information for the next Work Order follows that.
7. If not, close the Print Preview window by clicking in its upper right corner, and go back to step 5.

4.11 What Did We Do? Reporting Work

Once the jobs have been performed, you report the work back to AMOS M&P by entering information about who did the work, when, and what materials were used, if any. You may also use the system to report unplanned maintenance that has already been performed. The system uses your report to update your maintenance schedule and if you do not report work as it is done, AMOS M&P will keep reminding you to do it.

Depending on what kind of work order it is, when you report the work and set the status to Completed, AMOS M&P automatically generates the next Work Order for those jobs which need to be done at set intervals, and can begin counting again.

Reporting time and materials used lets AMOS M&P help you keep track of stock and expenses and predict future needs. AMOS M&P can also use these reports to provide the maintenance records you need to document compliance with warranty terms or safety regulations.

Remember:

- For one-time tasks with no job defined that you know about in advance, make a Requisition work order. This is described in section 4.9.1. Report on the Requisition work order as soon as the work is started.
- In some cases maintenance is handled on the spot and reported after it has been completed. Read more about this in the next section.
- When reporting jobs done out-of-turn, remember to mark the report 'unexpected' so AMOS M&P can help you evaluate your maintenance program fairly.
- Reported work cannot be saved if the work is dependent on a counter/measure point that has not been updated.

4.11.1 Accessing the Report Work Window

You may approach reporting work from one of the following angles:

- Select **Maintenance > Report Work** without any open windows. A series of dialog boxes will open allowing you to locate the Work Order by Component, Function or the Work Order itself:

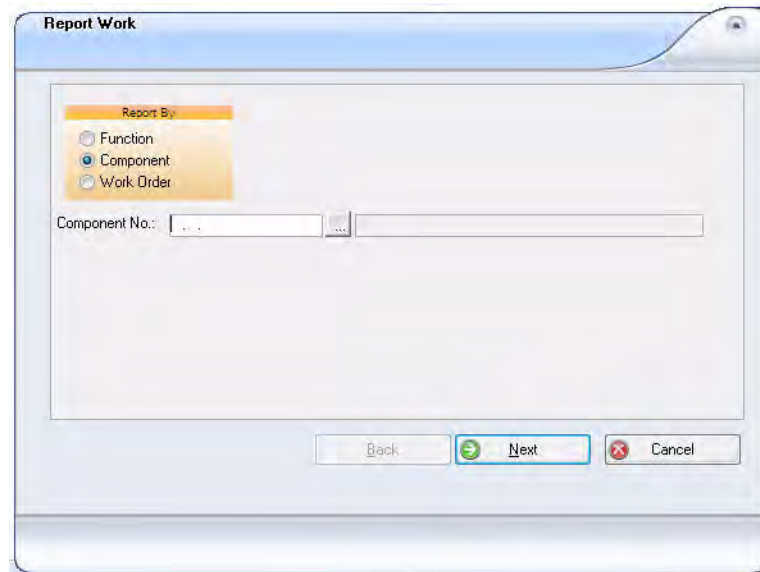


Figure 45 The Report Work window - selecting the item

Click the lookup button to select the relevant Component, Function, or Work Order from the lists. If you choose to report by Work Order and select the relevant work order with the lookup button, when you click **Next** you go directly to the Report Work window.

If you choose to report by Component or Function and select the relevant component/function, when you click **Next** you get a list containing the item **Unplanned Maintenance** plus the issued work orders for the jobs connected to the selected component/function:

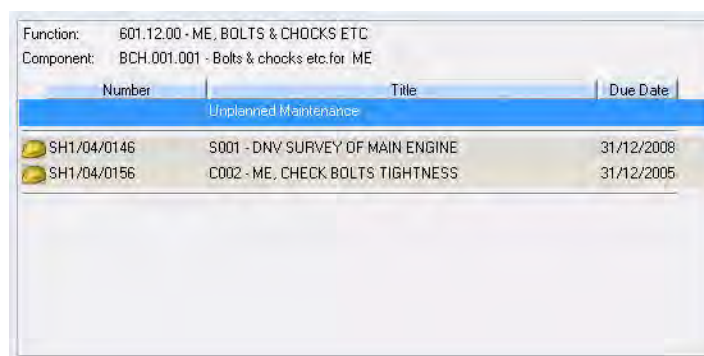


Figure 46 Selecting a Work Order to report on

When you have selected the work order you want, click **Next** to enter the Report Work window. Or, if you are reporting Unplanned Maintenance, just click **Next** to enter the Report Work window.

- The second approach to reporting work is to select **Options > Report Work** while in the Components window with a Component selected in the list. You will enter a dialog box in which you select the work order to report on (see Figure 46). Once you have selected your work order, click **Next** to enter the Report Work window. Similarly, the Report Work command is available from the Function hierarchy Options menu.

- Finally, in the third approach, you can report work from the Work Orders window by selecting **Options > Report Work**, with a Work Order selected in the list. This opens the Report Work main window directly with the selected Work Order's details displayed.

4.11.2 Reporting on Work Orders In the Report Work Window

Note

The Report Work window has its own **Options menu**. Any of the available options that are not covered in the following sections are discussed in section 8.1.11 of this guide.

Once you have arrived in the Report Work window using any of the three methods described above, you can begin to Report your work. There are several factors to keep in mind when reporting, which influence the content and use of the Report Work window. These are discussed in sections 4.11.2.5 to 4.11.2.11.

Remember to **Save** your report when you are finished.

Figure 47 Reporting work - entering the details

Fill in the general information for your report in the Details tab:

- 'Unplanned Maintenance' is the default title for reports on Unplanned maintenance, but you can change it if you like. If you change the title here, it will appear automatically in the **Description** field of the **History** tab. Select a **Discipline** (needed to perform the work) from the drop-down list beside the title if applicable.
- Enter the basic completion data in the General information area. If you need to report in relation to a budget, be certain to select the appropriate **Budget Code**. If the work is overdue and reported for a date later than the due date in the Work Order, the **Overdue Reason** button next to the **Date Done** field will appear active. Click this button to open the **Overdue** dialog. It is mandatory to enter a reason here, the application will not allow you to **Save** until you do.
- Mark the job as **Unexpected Work** if it did not appear on the printed maintenance plans - that is, if it is a regularly scheduled job that had to be performed out of turn.
- You may select one **Type**, **Class** and **Cause**.
- You may be offered the option to report several jobs at the same time if the 'related jobs' feature is being used.
- If a job has been started or work has been carried out but not completed, uncheck the **Mark Work Order as Completed** checkbox to enable further reporting.

- The **Reporting Options** area contains the three check boxes **History**, **Stock Used** and **Resources Used**. If an option is checked it is then necessary to fill in data on the corresponding tab. To leave the tab empty, you have to un-check the corresponding box to be allowed to exit the window. It is also possible to make reporting on these options mandatory. In this case, it will not be possible to uncheck that option's check box. The details will need to be entered before you can complete the work report. Defining whether these options are mandatory or not is done in the Component Job or Rounds window.
- The **Attachments tab** lets you include external files such as photos with your report. These attachments can later on be viewed from the Maintenance Log.
- There are tabs in the window that you may fill in to register such things as stock and resources used, and measure points to update. See the following sections.

If you accessed the window by selecting to report work as **Unplanned Maintenance** for a component, the **Failure Mode tab** is added. See section 4.11.2.5 for more details.

When you report work on a defined **round** using simple reporting, the **Jobs tab** is added. See section 4.11.2.9 for more details.

4.11.2.1 Resources Used

To report time used to complete maintenance jobs, fill out the Resources Used tab. This tab can display **Disciplines** or **Employees**, depending on how AMOS M&P is set up. Typically, the system will be set up to register resources by discipline. AMOS M&P will update your budget information.

To add a Discipline, click in the main part of the screen and click the **New** button on the toolbar. When the new line appears, select a discipline from the drop-down list, and enter the number of **Hours** spent and the **Cost**. To delete a discipline, select the correct line, and click the **Delete** button in the toolbar.

4.11.2.2 Stock Used

If parts from stock were used to complete the job you are reporting, fill out the Stock Used tab to keep your stock and budget information up-to-date: a record will be created automatically in the Stock Transaction window containing the details you enter here.

Use the lookup buttons to find the **Item number** and **Name**, and enter the quantity used. If you have used stock items that are defined as perishable, select the correct expiry date from the **Expiry Date** lookup list. If AMOS M&P is set up to take **Depreciation** into account, you can differentiate between the use of new and used stock items by selecting the appropriate level of Depreciation from the drop-down menu in the column furthest to the right in the Stock Used tab.

4.11.2.3 History

Any history previously reported on this entry will appear in the History tab. The appearance of the history tab can vary from installation to installation, and from job to job depending on which editor is in use and also if templates have been applied. The information you enter here will appear in the window at **Maintenance > History** as well.

4.11.2.4 Measure Points

If any Measure Points were attached to the Job you are reporting (in the Component/Type Jobs window see section 4.5.4), and the **Update on Report Work** value for those measure points was set to Optional or Mandatory, a Measure Points tab will be added to the Report Work window, and you can update the values as appropriate.

In this case, the measure point **Date Read** will be set with the date entered in the Report Work window **Date Done** field. The measure point values will be updated only if the Date Done entered in the Report Work window is the same as or later than the current Date Read on the measure point. The Measure Point Log will be updated regardless of the date.

4.11.2.5 Reporting Unplanned Maintenance

If you accessed the Report Work window by selecting to report work as **Unplanned Maintenance** for a component, the **Failure Mode tab** is added. For example, in the event that you performed some maintenance work which was not already planned, in response to an equipment failure. You can specify the details related to the failure, here in this tab. AMOS uses such details when creating maintenance reports. Read about recording equipment failures on work orders, in section 4.9.1.1.

4.11.2.6 Reporting Work for Related Jobs

AMOS M&P allows for the creation of related jobs that are reported in the same way as any other work order.

An example of when you might see related jobs is when you remove a cylinder cover for any reason and then tighten the bolts again when you replace it. It would not make much sense to have a job which required the removal and replacement of the cover on a certain day and then to perform the tightening job once more on the following day. If you are reporting work and see the following window, it is best to tag all of the jobs and report them together:

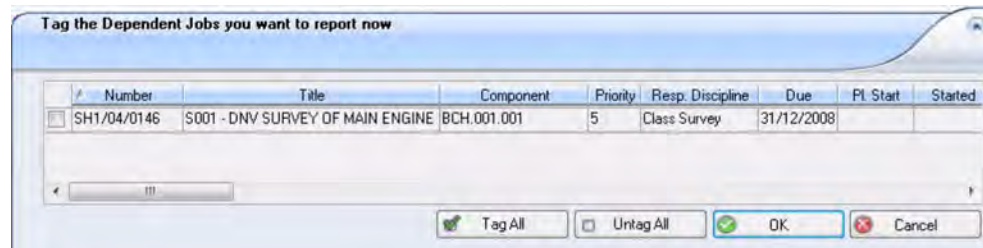


Figure 48 The Report Dependent Jobs window

When you click **OK**, a report work window will open for each tagged job.

Note

You can report the main work order without tagging any of the related jobs, but they will need to be reported at some point in time.

4.11.2.7 Reporting on Dependant and Depending Jobs

In the case of work orders which are linked in a dependency chain, it is not possible to report on a work order out of sequence. The Dependant work order must be completed before the next Depending one can be started. If you select a Work Order to report on, and receive the message 'Report work not possible due to dependency to other work orders', this means that the work order you've selected depends on another one which has not been completed yet. To see which work order(s) is blocking the selected one, open the Dependency tab. Any work orders listed in the Dependant Work Orders section must be completed before you can report the selected one.

For more about Job Dependencies, see section 4.5.7.

4.11.2.8 Work Orders with Permits to Work

Some work orders may have one or more Permits to Work attached to them. One use for permits is to ensure that certain safety information is issued to the person carrying out the work.

When using permits to work keep in mind:

- All Permits to Work need to be acknowledged before the work can be reported.
- All Permits to Work need to be issued to a user, and that user will be the only one who can acknowledge them.

Work orders with permits to work attached should be carried out and reported in the same way as any other work order except for the following additional steps which should be completed before you start performing the work.

1. In the Work Orders window, check the Permits to Work tab for the work order in question. If there are one or more permits to work listed, ensure that they have been issued to you. If not, issue them to yourself by selecting **Options > Change Permit to Work Status** or contact someone who can do it for you if you do not have access to the command.
2. Double-click each permit in the list to open the details screen for the permit. You can print the permit using the button on the bottom part of the window or just close it. When the window closes you will be presented with a dialog box asking if you want to acknowledge the permit, click **OK** to do so.

3. Carry out the work contained in the work order.
4. Report the work as usual.

4.11.2.9 Reporting Rounds

A Round consists of several jobs grouped together as explained in section 4.6. There are two **Reporting Methods** for rounds, Full or Simple. The method to use is defined on the Round itself: however if the **Override on Report** checkbox was checked there, when you choose to report work which is part of a round a dialog will be presented before you reach the Report Work window. You then have the option to report using the default method as defined on the round, or choose the other method instead. The option to change the reporting method is only presented the first time work is reported on this round (not during subsequent reports) and only if the **Override on Report** checkbox is checked.

The **Reporting Options** area contains the three check boxes **History**, **Stock Used** and **Resources Used**. If you check an option it is then necessary to fill in data on the corresponding tab. If the tab is to be left empty, you have to un-check the corresponding box to be allowed to exit the window. It is also possible to make reporting on these options mandatory. In this case, it will not be possible to uncheck that option's check box. The details will need to be entered before you can complete the work report. Defining whether these options are mandatory or not is done in the Rounds window.

When you report work on a defined round work order with report method set to **Simple**, the **Jobs** tab is added to the Report Work window, making it possible to check which defined round jobs have been completed. You cannot save a report with the **Mark Work Order as Completed** checkbox flagged, until all the jobs belonging to the same work order have been finished and marked as complete. Reporting can continue on the incomplete work order until every job is checked off.

When a job in a round is completed, the **Date Last Done** and the **Next Due Date** will be updated for this job automatically.

Reporting rounds with the simple method creates one maintenance history record for all the jobs/components included in the round, rather than separate entries for each one.

Figure 49 shows the Report Work dialog box for a round work order where the Report Method is set to Simple.



Figure 49 Reporting on a Round – Report Method Simple

The toolbar contains three buttons that may be used to Mark or Unmark all the jobs as completed, and Select/Deselect All:



There are corresponding commands in the **Edit** menu.

4.11.2.9.1 Full Reporting on Rounds

The Reporting Method on a round can also be set to **Full**. In such a case, when you access the Report Work window and select the work order and click **Next**, you are presented with a Round Summary dialog before the Report Work window itself opens.

Figure 50 Example of a Round Summary dialog

Data entered in this window is automatically populated on to each of the jobs attached to the round. This is to aid in the reporting of the individual jobs in the following scenarios:

- If a job is complete, it should contain (at least) a **Date Done** and the **Job State** Completed.
- If a job has been started or work has been carried out, but not completed, it should contain (at least) a **Date Done**, and the **Job State** drop-down field set to Partly Done, to enable further reporting.
- If a job has not been started, it should not contain a **Date Done** and the **Job State** should be set to Not Done to enable reporting at another time.

To report on a round work order with Full reporting method:

1. When you arrive at the Round Summary dialog, fill in the fields:
 - The **Date Done** is pre-populated with the current date. This date can be changed or removed, as necessary.
 - The amounts you enter in the **Total Duration** and **Misc. Expenses** fields are automatically distributed equally between the incomplete jobs connected to the work order.
 - The amount you enter in the **Down Time (Hrs)** field is assigned unchanged to each incomplete job. If you set a **Job State** here, it is applied as default to all the jobs.
 - Use the **Resources Used** tab to specify who performed the work. The **Disciplines** and information you enter are also distributed between the jobs not yet completed.
2. When you are finished entering the values, click **Next**. The **Report Work** window will appear.
3. If any **History** and **Resources/Stock Used** entries are required (the box in Reporting Options is checked) you will not be able to save your report until entering those details. Whether or not you can uncheck these options is defined on the Round itself.
4. The jobs included in the round are displayed in the list at the bottom of the window. Select the job to report work on, and fill in the various tabs. When the job is completed, remember to select **Completed** in the **Job State** field on the **Details** tab. If the **Date Done** is not already set, it will be set to today for you. The **Date Last Done** and the **Next Due Date** will be updated for this job automatically. Leave the **Job State** as Partly/Not Done to keep reporting later.
5. You can report on a round work order several times, until finished and the **State** for all included jobs is set to completed. The **Prev. Compl** column in the bottom right corner of the window shows which jobs are already complete when work has been reported previously.

Set the **State** for all jobs at once using the **Options** menu or right-click menu. Choose **Mark All...**The dialog which opens allows you to select one of the three Job States – Not Done, Partly Done or Complete – to apply to all jobs at once.

6. Check the **Mark Work Order as Completed** box the last time work is reported against this work order. If you check the **Mark Work Order as Completed** box, but not all of the jobs' state is set to completed, you will receive a warning message that not all of the jobs have been completed. The dialog presents four options:
 - You can automatically **Unmark** the work order as completed, or
 - Choose to **Mark** all jobs as complete and provide dates done, or
 - Select **Cancel**, to return to the main window and manually uncheck the Work Order **Completed** box or set all jobs to complete, or
 - Click **Continue** to report the work order anyway. Maintenance log entries will not be created for jobs with **State** Not Done and they will not be registered as done. If the **Mark Work Order as Completed** box is checked and **none** of the jobs are set to completed, you will be notified and AMOS will not allow you to save the report.

4.11.2.10 Reporting on Planned Jobs Unexpectedly

In previous versions of AMOS M&P, it was sometimes difficult to report work on a low frequency job when actual work had been performed earlier than expected. The reason was that it was necessary to generate new work orders manually. Now, a new work order is generated automatically as soon as the status of the previous work order has been set to **Completed**, and it is now possible to report any work on planned jobs carried out before the scheduled due date.

4.11.2.11 Reporting Work Based on Requisitions

Why report work based on a Requisition work order?

Reporting work allows you to track the progress of work based on work orders.

- When you report parts used, your stock records and cost records are updated.
- When you report disciplines/time used, your cost records are updated.
- If a history template is defined for your installation, reporting the work enables you to record the data needed for your maintenance log.
- Because the work order is linked to a component, reporting work based on the work order ensures that your maintenance log is complete and correct.

You report on a Requisition work order the same way you report on job-based work orders created in AMOS M&P.

4.12 Controlling Work Orders

Unless a system parameter has been set so that completed work orders are filed automatically, use the Work Order window to control your work orders and file them. In the Work Orders window, tag the work orders to mark as Controlled and select **Options > Control** or click the corresponding toolbar button.

4.13 Log Entries, Analyses and Forecasts

4.13.1 The (Maintenance) Log

AMOS M&P automatically logs five types of data while you use the various maintenance functions. These data types are:

- **History** – displays all history recorded in the Report Work window. To read full text descriptions go to **Options > Details**.
- **Stock Used** – opens the Stock Transactions window.
- **Resources Used** – displays all resources entered against the selected work order.

- **Counter Readings** – displays the status of any defined counters for the component of the selected line. If no counters are defined for the component in question, the window is empty.
- **Overdue Reasons** – if the selected line contains overdue work, choose this option to display a dialog containing the reason supplied for the late work.

The data displayed in the log is retrieved from the Report Work window.

1. Select **Maintenance > Log**.
2. The filter opens. Enter search criteria as appropriate, and click **OK**. The Maintenance Log window opens.
3. The entries are listed at the bottom of the window. The top of the window shows some detailed information for the selected list entry. To see additional details for the entry, select the data type (as above) which you want to see from the **Options menu**. There are corresponding buttons in the toolbar. Attachments such as photos added during the reporting phase can be viewed by selecting **Options > Attachments**.

Note

If nothing happens when you select an option, there was no data for AMOS M&P to display.

4.13.2 The Component Status Log

Select **Maintenance > Component Status Log** to open the corresponding window. The top of the Component Status Log window displays the details for the selected component in the list: status, status changes, dates, work order etc. The components are listed at the bottom of the window.

4.13.3 Workload Forecast

Selecting **Maintenance > Forecast** opens the Workload Forecast Analysis filter where users can produce a forecast for human resources required for a set future period of time in a range of installations and departments. The forecast is based on existing work orders and planned maintenance – AMOS simulates the future occurrence of the same job(s) to provide the forecast output. After setting the forecast parameters in the filter and clicking **OK**, the user will go to the Workload Forecast Analysis window where the results will be displayed and can be summarised and saved.

Chapter 5 Stock Management

5.1 Introduction

This chapter covers the AMOS M&P functions you can use to keep track of what is on hand; in other words, how to manage stock.

- Section 5.2 describes the principles of stock management.
- Section 5.5 shows how you use the Stock Wanted function.
- Section 5.6 explains how to register movement of stock in and out.
- Section 5.7 deals with how you can use AMOS M&P to guide you in the process of taking inventory.
- Section 5.8 covers stock transactions.
- Section 5.9 describes the function to transfer stock items between sites.

5.2 Using AMOS M&P for Stock Management

AMOS M&P was created to keep stock management as simple and effective as possible. AMOS M&P takes advantage of information that must be recorded in maintenance and purchasing records to simplify your stock management:

- AMOS M&P adds items to stock when they are purchased and received.
- AMOS M&P removes items from stock when work reports in maintenance show that parts have been used.
- It is possible to define multiple locations for stock items.

The **Stock** menu contains the following items:

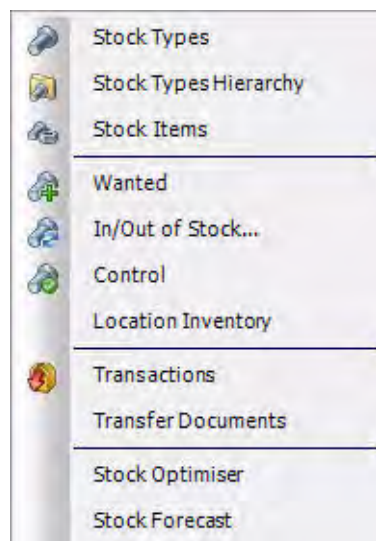


Figure 51 The Stock menu

5.2.1 Where Do I Find Stock Management Functions?

AMOS M&P has several main windows dealing with Stock Management:

- To figure out what you need more of, select **Stock > Wanted**.
- Select **Stock > In/Out of Stock** if you need to report stock transactions.
- When you take inventory of your stock, select **Stock > Control** to update the quantities in AMOS M&P.

- To see where items are coming from and where they are going, select **Stock > Transactions**.
- To handle the transfer of stock items between sites, select **Stock > Transfer Documents**.

Receiving stock

You may also consider receiving goods to be a stock management function. If you need to record stock as received, use the Purchase menu:

- Select **Purchase > Forms** to find the correct Purchase Order.
- From the Purchase Order, select **Options > Receive**.

5.3 Stock Types

In section 4.2 is a description of the Component Type functionality in AMOS M&P. The same principles are used in the Stock Types functionality. This is particularly useful in larger organisations. Information such as **Maker** and **Type** is registered only once at the main location. Once a new stock item of a defined type is registered at a given site, it inherits information from the Stock Type register.

The Stock Types window contains several tabs for related information such as **Vendors** and connected **Attachments**. Figure 52 shows an example.

Number	Name	Maker Code	Makerref	Pref. Vendor Code	Stock Class
331.01.01.001	Main crane frame - assembly	TOW001	1	TOW001	Spe
331.01.01.002	Hoisting mechanism	TOW001	2	TOW001	Spe
331.01.01.003	Slewing mechanism	TOW001	3	TOW001	Spe

Figure 52 Example of the Stock Types window

Note

The Stock Types window has its own **Options menu**. The options are discussed in section 8.2.1 of this guide.

5.4 Defining a Stock Item

Stock items are defined – get their names and ID numbers – in the Stock Items register. To get to this register, select **Stock > Stock Items**. Using the filter that appears, you can:

- Check **Search in Vendors' Ref.** to use the criteria in the **Maker's Ref.** field to search the Vendors' Ref. register also.
- Click the **Stock Class** lookup button to select the required stock class and/or the **Stock Status** drop down window to select between All, Stocked or Non-stocked items.
- Specify the component to which the stock item is connected in the **Component No.** field.

- Check the box **Current Stock > 0** to filter for stock currently having >0 items in at least one location.

The Stock Items register is also the source of:

- Unit definition: do we count pieces, cases, or boxes?
- Desired stock levels and quantities: minimum, maximum, reorder level, etc.
- Preferred vendor and manufacturer details, including prices and units supplied. Selecting **Options > Preferred Vendor** opens a window where you can specify address and other relevant information for the preferred vendor of the stock item. Selecting **Options > Maker** opens the Maker Address window where you can enter details about the manufacturer of the Stock Item.
- Stock item location: using the **Add** and **Remove** buttons you can specify which physical locations actually contain the selected stock item.
- Lists of Component Types and Components which currently use or contain the selected stock item. Note that some Components/Component Types in the list contain a reference to an **Alternative No.** This is another Stock Item which according to the manufacturer or vendor can be used interchangeably with the selected item, in the listed Component or Component Type.
- Is the item perishable and does it require an expiry date.

Figure 53 Example of the Stock Items window

Note

The Stock Items window has its own **Options menu**. These options are discussed in section 8.2.2 of this guide.

5.4.1 Stock Depreciation

Some stock items will depreciate in usefulness (and therefore value) with time, as they get older and reach the end of their shelf life. AMOS M&P gives you the opportunity to configure stock items such that the financial side of the program reflects this ageing of your inventory.

Note

This option must only be activated whilst all stock levels are still set to 0 and before any stock transactions have been carried out.

Before using stock depreciation you must first activate the feature and set the levels of depreciation:

1. Select **Tools > Configuration > Parameters > Options > Stock > Use Stock Item Depreciation**.

2. Click the lookup button to the right of the **Value** field in **Global** and select the **True** radio button.
3. Click **OK**.

Now you need to set the depreciation levels.

4. Go to **Tools > Configuration > Depreciation Levels**.
 - Define names and percentage values for each of the depreciation levels. The 'Useful' state determines whether stock at that level is taken into consideration when calculating stock levels. This reflects the fact that certain items may be retained (perhaps for emergencies or cannibalisation), even though they have outlived their shelf life. You can set depreciation levels such as: 'Absent - 0%', 'Small - 30%', 'Average - 50%', 'Full - 100%', etc.

Once the option is activated, the Stock Item screen contains a new element for Depreciation on the Overview tab:

Location	In Stock	Absent	Small	Average
Store 01	78.00	0.00	0.00	0.00
Store 02	3.00	0.00	0.00	0.00
Total Stock:	81.00			

Figure 54 Stock depreciation levels

Additionally, the Stock Transaction screen shows a new **Depreciation** drop-down window where you can select stock according to depreciation level.

5.4.2 Selecting a New Stock Item Location

You can register the location of stock items. To specify a location for the stock item selected in the lower part of the window:

1. Click the **Add** button in the **Locations** area of the window
A look-up window opens listing all available locations not in use for the selected component.
2. Select the required location from the list.

If the stock item is stored in several locations, one location is always the default. Mark this with a flag by selecting it and then clicking the **Default** button.

Note

If a stock item is perishable, the **Locations** tab becomes available in the far right side of the window. This tab is read-only and lists the details for one selected item at a time.

5.4.2.1 Moving a Stock Item to a Different Location

To move a stock item from one location to another, select it in the Stock Items window and then go to **Options > Move** to open the following dialog:

Figure 55 The Move Stock Dialog Box (1)

1. The drop-down lists **Source** and **Destination Locations** contain the available locations for the current stock item. Select the ones to transfer from and to and enter the **Quantity** to transfer.
2. The drop-down list in the **Destination Department** field contains the departments within the current installation that it is possible to move the item to. The available departments depend on your level of access and if the selected stock item is defined for that department.
3. Select an **Expiry Date** if the item is perishable.
4. When you have entered the required data click **OK** to carry out the movement of stock. It is not possible to transfer stock if the source and destination locations are the same, nor is it possible to transfer more items of a particular location or expiry date than there are available.

If you select multiple stock items in the main window and then go to **Options > Move**, the **Move Stock** dialog box changes to the following:

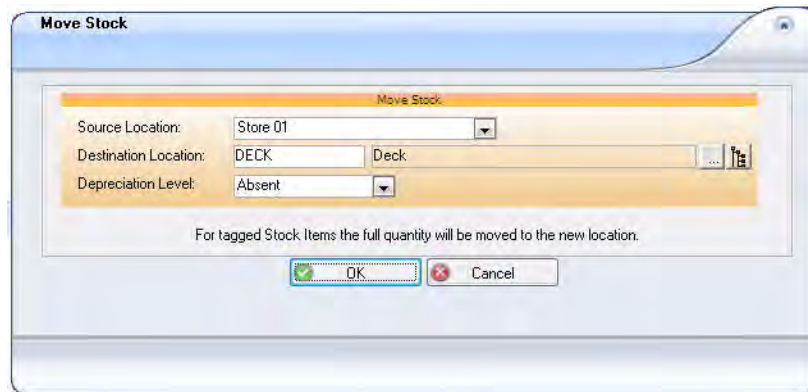


Figure 56 The Move Stock Dialog Box (2)

Use this window to transfer all available stock (the full quantity) for the selected items from a source location to a destination location. Any expiry date details automatically follow the relevant stock items to the destination location. Stock transactions of type Transferred In and Transferred Out are created for the moved stock items.

5.5 Stock Wanted

The Stock Wanted window offers you a complete overview of your current stock, and the information you will need while setting up your shopping list.

AMOS M&P uses the quantities that you type in the **Wanted** column in the Stock Wanted window in Purchasing.

When someone at your installation creates an automatic requisition, AMOS M&P will add in the items and quantities from the Stock Wanted window. The person making the requisition can change the items or quantities if necessary.

Note

The Stock Wanted window has its own **Options menu**. Any of the available options that are not covered in the following sections are discussed in section 8.2.3 of this guide.

5.5.1 Setting Up a Shopping List Using Stock Wanted

1. Select **Stock > Wanted**. When the filter opens, enter search criteria as needed and click **OK** to go to the window.

Number: 331.01.01.003 Slewing mechanism
 Maker: TOW001 TOWIMOR SA
 Maker's Ref.: 3
 Preferred Vendor: TOW001 TOWIMOR SA
 Price: USD 38.41 Unit: Pc
 Outstanding: 0.00 Outstanding Tasks: 0.00 Criticality: Normal
 Reserved: 0.00 Total/USD: 76.82 Reorder Level: 102.00
 For Component: DCR.001.001 Deck Crane
 For Function: 331.01.01 Deck Crane

Number	Name	Maker Code	Maker Name	Wanted	Unit	For Component	In Stock	Min
331.01.01.001	Main crane frame - assembly	TOW001	TOWIMOR SA	17.00	Pc	DCR.001.001	81.00	98.00
331.01.01.003	Slewing mechanism	TOW001	TOWIMOR SA	6.00	Pc	DCR.001.001	34.00	100.00
331.01.01.004	Jib-assembly	TOW001	TOWIMOR SA	0.00	Pc	DCR.001.001	3.00	1.00
331.01.01.005	Rope block 16 t	TOW001	TOWIMOR SA	0.00	Pc	...	32.00	3.00
331.01.01.007	Column - upper part	TOW001	TOWIMOR SA	0.00	Pc	...	6.00	4.00
331.01.01.008	Rim bearing 062.50.2546.100.	TOW001	TOWIMOR SA	0.00	Pc	...	0.00	5.00
331.01.01.010	Rotary partition live-way no.53	TOW001	TOWIMOR SA	0.00	Pc	...	18.00	7.00
331.01.01.018	Servo-motor pin	TOW001	TOWIMOR SA	0.00	Pc	...	26.00	15.00
331.01.01.011	Slide bearing Ge160TA-2RS	TOW001	TOWIMOR SA	0.00	Pc	...	19.00	8.00
331.01.01.012	Bolt M30x210-10.9	TOW001	TOWIMOR SA	0.00	Pc	...	20.00	9.00

Number of records found: 2599

Figure 57 Example of the Stock Wanted window

- Review the information in the window, and decide which items and quantities you want.

The upper section of the window contains information for the currently highlighted stock item, inherited from the Stock Items window. The lower part of the window is divided into columns. The **In Stock** column shows how many of each item you have. If the number is red the quantity in stock is less than the reorder level defined in the Stock Items window.

The **Outstanding** field shows the quantity requisitioned but not yet received. To see where these items are in the purchasing pipeline, select the item and select **Options > Show Outstanding Forms**. You see the form numbers – use them to locate the details through the **Purchase** menu. (See Chapter 6). The **For Component** field enables you to specify for which component the item is wanted. If the stock item is already associated with a single component number, that number appears automatically during the quantity wanted update.

If the reorder level is incorrect, or any other aspect of the stock item definition needs changing, select the stock item and choose **Options > View Stock Item** to open the Stock Items window and view the record.

- For each desired item, click in the column marked **Wanted** and enter the desired quantity.

Or, you can change quantities **automatically**, using the options menu: to ask for either the reorder quantity, or have AMOS M&P calculate the quantity needed to fill stock to either minimum or maximum level, select **Options > Calculate Wanted Quantities**. The dialog shown below opens.

Number: 331.01.01.005
 Maker: BUK001 BUKH
 Preferred Vendor: ...
 Stock Class: ...

Calculate Wanted to Quantity

☒ Reorder Quantity (based on Reorder level)
☐ Minimum (based on Minimum level)
☐ Maximum (based on Maximum level)
☐ Maximum (based on Reorder level)

Other

Work Order Due Date: 02/12/2010
☐ Simulate Future Work
☒ Display Wanted Quantities > 0 Only
 Any critically above or equal to: Normal

OK Cancel

Figure 58 The Calculate Wanted Quantities dialog

- Select a stock item by Number, Maker, Preferred Vendor or Stock Class. Alter the target quantity using the radio buttons:

- Select **Reorder Quantity** (based on Reorder level) to display the reorder quantity, if the total quantity of stock on hand plus outstanding order quantities are below the Reorder stock level.
 - Select **Minimum** (based on Minimum level) to calculate the quantity required to bring the stock level up to the Minimum amount if the total quantity of stock on hand plus outstanding order quantities are below the Minimum stock level.
 - Select **Maximum** (based on Maximum level) to calculate the quantity required to bring the stock level up to the Maximum amount if the total quantity of stock on hand plus outstanding order quantities are below the Maximum stock level.
 - Select **Maximum** (based on Reorder level) to calculate the quantity required to bring the stock level up to the Maximum amount if the total quantity of stock on hand plus outstanding order quantities are below the Reorder stock level.
 - Check the **Display Wanted Quantities >0 Only** check box to exclude from the display list any items where the Wanted Quantity is 0. Uncheck the checkbox to display all the stock items in the specified range whether they require ordering or not.
 - Checking **Simulate Future Work** causes AMOS to consider future work orders that have not been generated yet, and predict wanted quantities that will be required for those as well.
4. Click **OK** to process the calculation and exit the dialog.

AMOS M&P calculates whether a stock item requires ordering by adding outstanding orders to current stock and then subtracting those stock items reserved against work orders. The resulting figure (quantity on hand) is then compared to the reorder level figure. If the quantity on hand is less than or equal to the reorder level, a requirement is indicated when the menu item Calculate Wanted Quantities is processed.

5. In the main window, click **Save**.

Note

If your license includes the **Maintenance Tasks** module, the Stock Wanted window contains an additional column called **Outstanding Tasks**. This column displays the quantity of outstanding items on forms for maintenance tasks. Required parts for maintenance tasks are purchased through the Work Planning window and the values in the Outstanding Tasks column do not influence the Stock Wanted calculation.

5.5.2 Creating Purchase Forms from Stock Wanted

After you have updated your quantities for the Stock Wanted calculation, you can generate forms for the wanted items:

1. If you tag several lines in the Stock Wanted window (see Figure 57 above) and then select **Options > Generate Forms** you will be presented with a dialog box in which you can specify the type of forms that you want generated. Check the **List newly created forms** checkbox to display the newly created forms in the Forms window upon generation. When you click **OK** the forms are then generated automatically. All items with a defined wanted quantity are processed.



Figure 59 The Form Creation dialog

2. If you do not tag any lines, when you select **Options > Generate Forms** and choose your form type, you will next be presented with a dialog box to specify the range for which you want to create them.

3. You can further restrict form creation by using the **Preferred Vendor** and **Stock Class** fields to specify form creation for items only with a particular class or vendor. Click **OK** to proceed with the form generation.
4. If you checked the **List newly created forms** checkbox earlier the newly created forms are listed in the Forms window.
5. Click **OK** to proceed with the form(s) generation.

5.6 Registering Stock In or Out

Most stock transactions are related to either a maintenance action or a purchase form, and AMOS M&P captures these transactions and displays them for you with the Stock Transactions window.

However, in some circumstances you may need to register Stock in or out of stores manually in the **In/Out of Stock** window.

When stock is moved in and out of stores in the In/Out of Stock window and a work order is registered with the transaction, the quantity reported used will be included in the stock usage statistics along with stock transactions reported against the same work order elsewhere in the system, such as the Report Work window. These statistics, 'Avg. Used' and 'Max. Used' appear on the **Required Parts** tabs of the Work Order and Component Job windows, for each stock item listed. Stock Items registered here as 'Returned Unused' also affect the statistics.

Stock items are removed from stock for different reasons. The **Transaction Type** drop-down list contains the various reasons. The following transaction types may be used:

- **Purchased** (the quantity is increased)
- **Used** (the quantity is decreased)
- **Returned unused** (the quantity is increased)
- **Lost** (the quantity is decreased)
- **Found** (the quantity is increased)
- **Sold** (the quantity is decreased)
- **Transferred in** (the quantity is increased)
- **Transferred out** (the quantity is decreased)
- **Delivered back** (the quantity is increased)
- **Lent out** (the quantity is decreased)
- **Trashed** (the quantity is decreased)

If the stock item is marked as perishable, you will have to enter an expiry date if you are increasing stock. If you are decreasing stock you will have to select the correct expiry date.

To manually register stock going in and out of stores:

1. Select **Stock > In/Out of Stock**. You can also access this window from the Stock Items window by selecting **Options > In/Out of Stock**. The window opens directly without a filter.
2. Use the lookup to enter the **Stock Item** number and name in the middle part of the window. AMOS M&P displays read-only information for the selected Stock Item, in the **Info - Current Item** area in the bottom of the window:
 - The default **Location**.
 - Total **Current Stock** available in the default location.
 - **Total Stock** shows the total number of parts available in all locations.
 - The **On Order** field shows how many parts are currently on order.
3. The **Trans. Date** at the top, will be set as today's date but can be altered if required.
4. Select the **Transaction Type** from the drop-down list. The type you select determines which other information is required, such as **Work Order** number, **Component** number, etc. If you select 'Return Unused' and select a Work Order, the Quantity returned cannot exceed the quantity reported as used against that work order.

Note

Whether or not you are allowed to report stock movements against Work Orders with status Completed or Filed, depends on the setting of the parameter 'In/Out of Stock on WO of Status'. If allowed, and you select a work order with one of these statuses, AMOS will warn you that the transaction will be reported against a job which is already finished.

5. Next to the Stock Item, select the **Location** for which you want to register stock movement. If there is only one specified location for the stock item this will be selected by default.
6. Enter the **Quantity** and complete any other fields that you want to record.
7. If the **Transaction Codes** register is used at your installation, you can click the **Transaction Codes** button and select a code. For example, the transaction codes may be used to designate a responsible person or a project number.

Figure 60 The In/Out of Stock form

8. To add another transaction to the list click the **New Entry** button and fill in the various fields on the window as described above. All stock item transactions must be of the same type to use the same form.
9. Click **OK** to close the window.

When spare booking is enforced (by a system parameter called 'Stock Reservation, Required Booking') it is not possible to use the In/Out of Stock window to remove any quantity larger than what is in stock and not already booked.

5.7 Taking Inventory: Stock Control

Stock items do occasionally get removed from stock without being recorded, so at regular intervals – once a year, once a quarter, or once a month – you will need to take inventory to ensure that the actual stock in store matches your stock records.

AMOS M&P provides a simple way to update stock records so that minor differences do not add up over time, leading to invalid stock records.

1. First print an inventory list from AMOS M&P so you know what should be in stock.

2. Then go to the store and perform a physical count of what is actually on the shelves in the storage area, noting the actual numbers on your list.
3. Then return to AMOS M&P and enter the actual numbers in the **Stock Control** window. Or, if you prefer, define new **Stock Transactions** (see section 5.8) for any missing items or extra items so you have a more complete record of the actions.

Selecting **Options > Transaction Codes** lets you connect stock transaction expenses to specific budget dimensions such as a particular project or an individual user.

5.7.1 Printing a Stock List

1. Select **Stock > Control**.
2. AMOS displays the Filter window.
3. Click **OK** to list all stock. Or, select a storage location. Or, type the beginning of a stock item number first, to restrict the list to those items you are interested in.

AMOS M&P displays the Stock Control window.

Number	Name	Maker's Reference	Stock Unit	In Stock	Actual	Expiry Date
331.01.01.001	Main crane frame - assembly	1	Pc	78.00	78.00	
331.01.01.002	Hoisting mechanism	2	Pc	0	0.00	
331.01.01.003	Slewing mechanism	3	Pc	91.00	91.00	
331.01.01.004	Jib-assembly	4	Pc	3.00	3.00	
331.01.01.005	Rigging	6	Pc	0	0.00	
331.01.01.006	Rope block 16 t	7	Pc	32.00	32.00	
331.01.01.007	Column - upper part	9	Pc	6.00	6.00	
331.01.01.008	Rim bearing 062.50.2546.100.41.152	10	Pc	0	0.00	
331.01.01.014	Washer	18	Pc	10.00	10.00	
331.01.01.015	Washer	19	Pc	23.00	23.00	
331.01.01.016	Washer	21	Pc	23.00	23.00	

Figure 61 Example of the Stock Control window

4. Select **File > Print** to print the list shown in the window, according to the settings you filtered by. There is also a **Print** button on the toolbar.
5. To update stock quantities, click in the appropriate field in the column headed **Actual** and type the correct amount. Note that the value which appears in the Actual column upon opening the window, is determined by the setting of the parameter 'Stock Control: Populate Actual Column'.

There are three possible settings for this parameter and so the Actual column: can be populated already to match the In Stock column, or; contain no values at all, or; contain a 0 for every line in the window.

6. Click **Save**.

Note

If the stock item is marked as perishable, you will have to enter an expiry date if you are increasing stock. If you are decreasing stock you will have to select the correct expiry date.

5.7.2 Checking Stock by Location: Location Inventory

When an Inventory is performed, even if no alterations are made to the Stock Levels it is still important to keep an audit trail indicating the user who performed the check, the location the inventory was performed at, and the date. This provides a way for external auditors to verify that formal stock checks are being carried out regularly. The **Location Inventory** window is used to enable a formal stock check at every location, and users are required acknowledge that every location has been verified, for the sake of an audit trail. The window works in the same way as the Stock Control window described above and is opened by selecting **Stock > Location Inventory**.

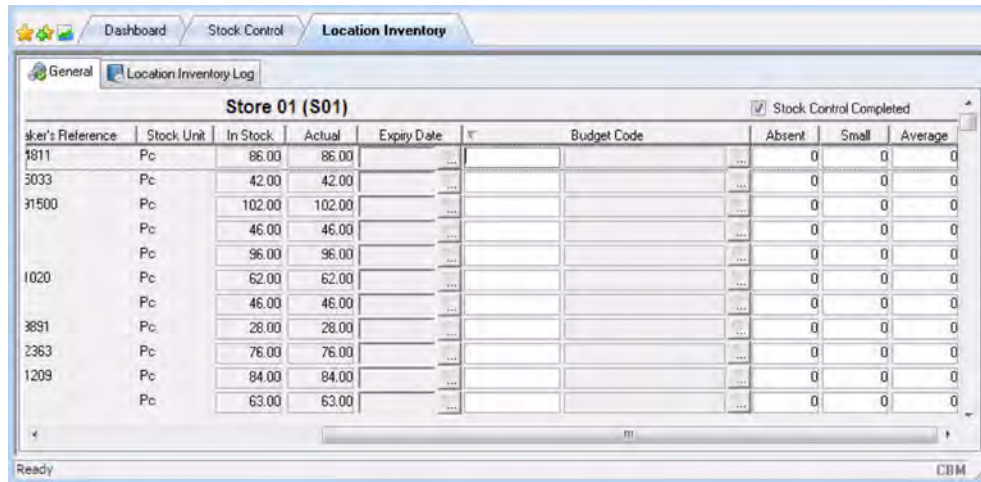


Figure 62 The Location Inventory window

The differences are:

- to ensure that every location is formally checked and the audit trail is kept, it is only possible to filter by location when opening this window. This means every item appears in the lists for the filtered locations; you cannot filter out by component or function.
- there is a checkbox **Stock Control Completed** in the heading for every location. Stock Level changes made to any location will not be saved unless the user checks this box.
- a tab, **Location Inventory Log**, shows the locations and the date of last inventory for each location when you select it in the left side list, as well as the user who performed the check. When you check the stock levels at any location listed in the main window and flag the Stock Control Completed box, that location will be added to this list – regardless of whether or not the Actual levels were changed or not. Selecting a location and clicking the **Show All** button will display all inventory log entries for each location.

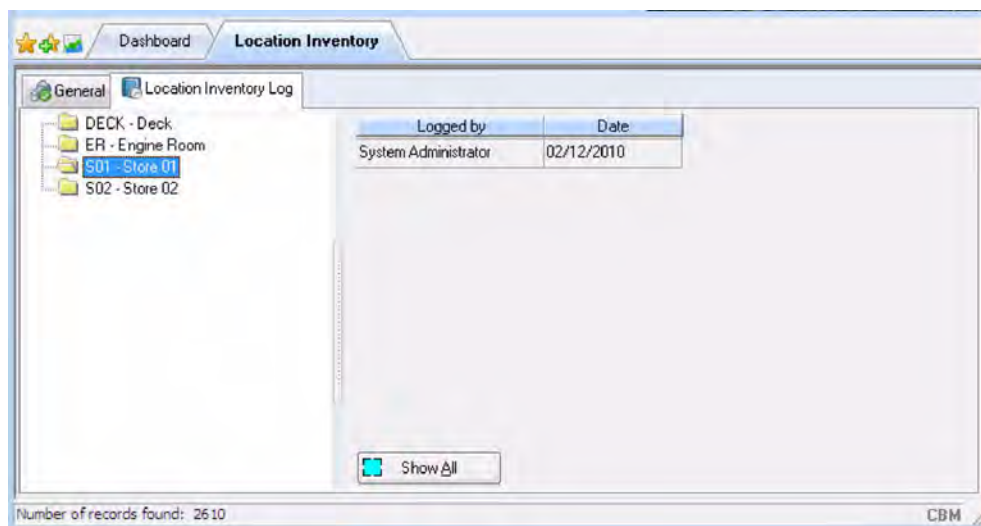


Figure 63 Location Inventory Log

When checking inventory by location if you should happen to find an item not already listed in the window, you can add it:

1. Select the location in the main window and click the **New** button on the toolbar.
2. A select list will appear and you can select the item(s) to add. Click **OK** to close the list.

3. The item is added to the Location Inventory, under the location you selected. Specify the number In Stock.
4. This location will be added to the list of **Locations** with **Current Stock** as specified, on the **Stock Items window General tab** for the newly added item.

5.8 Tracing Stock In/Out: Stock Transactions

Because AMOS M&P can automatically update your stock records, based on work reported in maintenance and on goods marked received in Purchase, there will not normally be much work to do in Stock Transactions.

You can view automatically recorded transactions and correct them or add additional information if necessary.

Using the Stock Transactions window, you can see what is recorded as moving in and out of stock through the Maintenance and Purchasing functions. This information is drawn from the In/Out of Stock window itself, as well as other places where stock usage is entered, such as the **Maintenance > Report Work** window.

Note

The Stock Transactions window has its own **Options menu**. Any of the available options that are not covered in the following sections are discussed in section 8.2.4 of this guide.

5.8.1 Using Stock Transactions

1. Select **Stock > Transactions**. The filter appears. Click **OK** to list all transactions or enter details to restrict the list that returns.

AMOS M&P displays the Stock Transactions window as shown in Figure 64.

2. Select a transaction to see the complete details in the upper half of the window.

Remember you can sort or re-sort the transaction list by clicking on the column title. To see the transactions sorted by type instead of **Date**, click the **Type** column header.

3. To correct a transaction or add details, select the transaction and make your changes in the upper half of the window. Make sure to enter an **Expiry Date** when increasing stock quantities for perishable items. If you are decreasing stock for perishable items you will have to select the correct Expiry Date.
4. If you have made any changes, remember to **Save**.

The screenshot shows the 'Stock Transactions' window. The top section contains fields for Item Number, Component, Performed Function, Current Function, Job, Work Order, and Location. Below these are 'Transaction Details' and 'Order Details' sections. The 'Transaction Details' section includes fields for Transaction Date, Transaction No., Transaction Type, Reported By, Price, Budget Code, Reference, Depreciation Level, and Transfer Doc. No. The 'Order Details' section includes fields for Order No., Delivery Time [Days], and Supply Time [Days]. At the bottom is a table with columns: Trans. Date, Item No., Name, Trans. Type, Component No., Performed Function No., Function No., Job, Revision, Work Order, and Reported By. The table lists several transactions, including those for 'Cap', 'Key', and 'Nut'.

Trans. Date	Item No.	Name	Trans. Type	Component No.	Performed Function No.	Function No.	Job	Revision	Work Order	Reported By
29/08/2002	712.11.01.007	Cap	Used	SEP.001.001	712.11.01	712.11.01	C030	1	SH1/02/0320	SYSOP
29/08/2002	703.05.01.009	Key	Used	PUS.005.001	703.05.01	703.05.01	C018	1	SH1/02/0316	SYSOP
29/08/2002	703.05.01.009	Key	Used	PUS.005.002	703.05.02	703.05.02	C018	1	SH1/02/0288	SYSOP
29/08/2002	703.05.01.010	Key	Used	PUS.006.001	712.35.01	712.35.01	C037	1	SH1/02/0345	SYSOP
29/08/2002	581.10.05.007	Nut	Used	VAC.001.001	581.10.30	581.10.30	C082	1	SH1/02/0359	SYSOP
29/08/2002	703.05.01.005	Nut	Used	PUS.005.001	703.05.01	703.05.01	C037	1	SH1/02/0317	SYSOP

Figure 64 Example of the Stock Transactions window

- The two fields **Current Function** and **Performed Function** indicate which function the selected component is currently performing on today's date (if any) and which function it was performing at the time this Stock Transaction took place – for example if the transaction is the result of a work report on a job, the Performed Function field will contain the function recorded in the Maintenance log when the work was reported.
- If the transaction is of Type **Used**, either **Job** or **Work Order** should be filled out, but not both.
- Since transactions of Type **Purchased** represent stock items coming into stock, these fields will be blank.
- **Transaction Details** are filled in automatically for a transaction that comes from purchasing or maintenance.
- **Order Details** are filled in automatically for a transaction that comes from purchasing.

To reverse a transaction (for example, one made in error or to return incorrectly delivered goods), select **Options > Reverse Transaction**. If you attempt to remove more items than are currently in stock, you will be warned that reversing the transaction will remove more than the current number of stocked items. You must then verify whether this operation is **OK** or not. If any accounting transactions are linked to the reversed stock transaction, new accounting transactions are created to reverse the existing ones.

5.9 Transfer Documents

If there is a surplus of certain stock items at one installation but a deficit at another, create a Transfer Document and ensure correct stock level updates at both installations:

Note

The Transfer Documents window has its own **Options menu**. Any of the options that are not covered in the following sections are discussed in section 8.2.5 of this guide.

1. Select **Stock > Transfer Documents**. The filter appears.
2. Check the various document statuses that you want to be included and click **OK**. The Transfer Documents dialog box opens.

Number	Title	Recipient	Donor	Status	Created	Submitted	Approved	Tr
123456	Transfer Doc No1	002	001	Submitted	02/09/2002	02/09/2002	02/09/2002	

Number of records found: 1

Figure 65 The Transfer Documents dialog

3. Enter an identifying **Number** and **Title** for the transfer.
4. The **Recipient Inst.** field is grey and is not available for editing. The text in this field is the name of the installation that created the document (your current installation).
5. Select the installation that is providing the stock items for the transfer from the **Donating Inst.** drop-down list. If you are unsure of the donating installation you can leave it blank and the office can select it later.

6. Select the **Reason** for the transfer from the drop-down list.

Note

If you double-click on a line of a transfer document, you enter the **Transfer Line Items** window. You can also access this window by selecting **Options > Line Items**. In this window, you can select exactly which types of items are covered by this transfer document. Add new line items by clicking the **New** button and entering the **Part** number and the **Requested** quantity. Double-clicking on a line opens the Stock Type window for that line item. Save and Close this window to return to the Transfer Documents window.

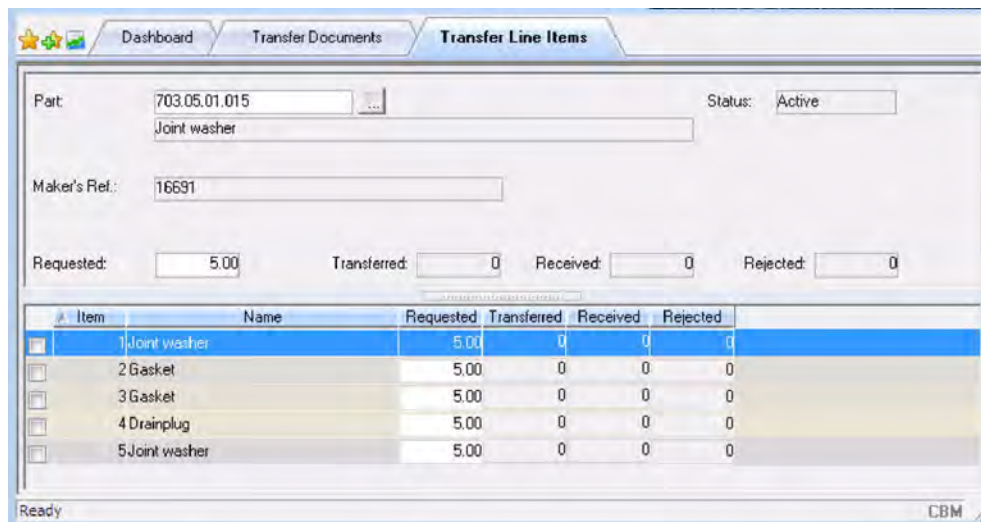


Figure 66 Example of the Transfer Line Items window

Note

The Transfer Line Items window has its own **Options menu**. These options are discussed in section 8.2.5.1 of this guide.

5.9.1 Handling a Transfer Document

In summary, a transfer document progresses through the following steps:

Step	Recipient Status	Donating Status
Transfer document Created	Unsubmitted	Not shown
Transfer document Submitted	Submitted	Not shown
Transfer form Approved	Submitted	Pending
Goods Partly Transferred	Partly Transferred	Partly Transferred
Goods Transferred	Transferred	In Transit
Goods Received	Received	Received

When you have entered information in the Transfer Documents (and the Transfer Line Items window), you can use the commands in the **Options** menu to handle the selected transfer document. The visible status of a transfer document depends upon the installation from which you are viewing the information (Recipient installation or Donating installation). As the transfer document is processed, the status is shown in the **History** area of the Transfer Documents window. See the upper right side of the window shown in Figure 65.

5.9.1.1 Submit

When you select **Options > Submit**, the following dialog box opens:

The Submit window is for accepting or rejecting submission of the transfer document.

5.9.1.2 Change Approval

After submitting a Transfer Document, someone with the required system authority can grant approval. Select **Options > Change Approval...**

The Grant Approval window (like the Submit window) is for accepting or rejecting approval of the Transfer Document. Once again, the current date and identity of the person logged on appear by default. If you mistakenly approve the wrong document or need to reverse an approval, select **Options > Change Approval...** once more.

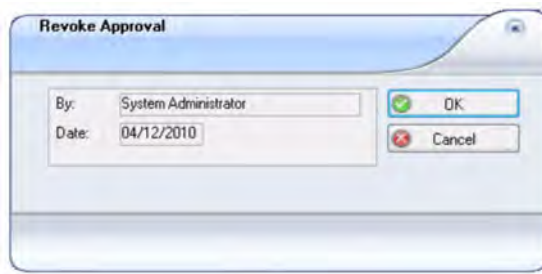


Figure 67 Revoking Approval on a Transfer Document

The Revoke Approval window (like the Grant Approval window) allows you to accept or reject revoking of approval of the Transfer Document. The current date and identity of the person logged on are set by default.

Revoking the approval of a Transfer Document does not record the identity of the person who carried out the instruction or the date on which the approval was revoked. It simply re-sets the approval status to the un-approved condition.

Note

After the recipient installation has created, submitted and approved a transfer document, the donating installation receives a copy of the same transfer document. When the donating installation opens their own Transfer window, the request for transfer will be shown, with the status Pending.

5.9.1.3 Transfer

When, as the donating installation, you select a Transfer Document with status Pending, **Options > Transfer** becomes available.

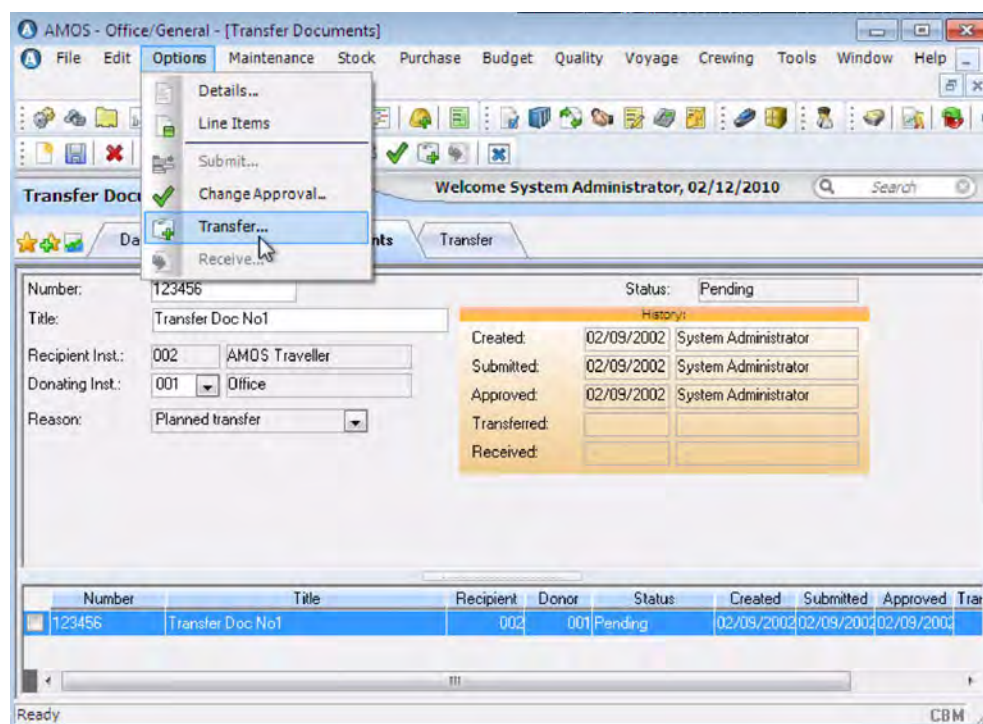


Figure 68 Transferring from a Donor Installation

To transfer the amount shown on the Transfer Document, select **Options > Fill** to automatically update the **Transferring** column to the same as the **Requested** column. To send a partial amount, enter each quantity individually.

When the Transfer Document is correctly filled out, **Save** the information. When you save the document, you will be asked if you want to mark the document as Transferred. If the document is complete or you do not have the required items, click **Yes**. To make a partial transfer now (with the intention of completing the transfer quantity at a later stage) click **No**. Re-enter the Transfer Document later to complete it.

After the donating installation has marked a Transfer Document as **Transferred**, the recipient installation sees that the Transfer Document is marked **In Transit**. There is an interim status of **Partly Transferred** to indicate that not all of the requested items have been sent.

Note

AMOS will inform you if there are related jobs or job dependencies found for an item on the Transfer Document. In this case you will have the option to transfer all related or depending components and leave the dependencies in place, or, remove the dependencies prior to transferring only the specified items.

5.9.1.4 Receive

When the transferred items arrive at the recipient installation, access the transfer document in the usual way and select it. If its status is marked **In Transit**, you can select **Options > Receive**.

Once again, select **Options > Fill** to automatically match the **Receiving** quantity to the **Transferred** quantity, or enter the figures manually. It is possible to receive/reject and to attach a budget code to the transferred items if required.

When the transfer document is complete, click **Save**. Once the quantity received matches the quantity transferred you will be prompted to mark the Transfer Document as Received.

After a Transfer Document has been marked as received, no further action can be taken against it.

Note

The visible status of a transfer document depends on the installation from which you are viewing the information (recipient or donor).

5.10 Stock Optimiser

The Stock Optimiser function is a trigger to an external application developed to analyse stock usage (using data extracted from AMOS M&P) and to provide recommendations on the minimum stock quantities required to achieve a balance between cost of spares on hand compared to predicted breakdown prevention.

A separate license to activate Stock Optimiser is required and the application has its own user documentation.

Access to Stock Optimiser is governed by the access control entry entitled Stock Optimiser located in the **Tools > Configuration > Groups > Options > Access Control – Functions** tab.

5.11 Forecasting Requirements – Stock Forecast

Selecting **Stock > Forecast** opens the Stock Forecast Analysis filter where you can produce a forecast for material resources required for a set future period of time in a range of installations and departments. The forecast is based on existing work orders and planned maintenance – AMOS simulates the future occurrence of the same job(s) to provide the forecast output. After setting the forecast parameters in the filter and clicking **OK**, the user will go to the Stock Forecast Analysis window where the results will be displayed and can be summarised and saved.

Chapter 6 Purchasing

6.1 Introduction

This chapter covers purchasing issues in AMOS M&P.

- Section 6.2 explains the principles behind AMOS M&P purchasing functions.
- Section 6.3 explains the process of requisitioning stock items.
- Section 6.4 describes the process of making a query to potential vendors.
- Section 6.5 explains how the program can help you in identifying the best offer among several quotations received.
- Section 6.6 demonstrates how to generate a purchase order based on the preferred quotations.
- Section 6.7 describes in more detail how you work with purchase orders.
- Section 6.8 explains the Voucher function, which optionally may be used to update the budget.
- Section 6.9 covers the planning of delivery of received goods to the installations, and section 6.10 handles how such deliveries are registered.
- Section 6.12 explains how to use the Custom Clearance functionality to meet custom clearance operations applied in certain countries.
- Finally, section 6.13 explains how you can use AMOS M&P to answer typical purchasing questions.

6.2 Purchasing with AMOS M&P

As you have seen in Chapter 5, AMOS M&P makes it easy to see when it is time to reorder.

Then you can use Purchasing in AMOS M&P to create forms to requisition or to order the parts or consumables that you need, and to track each order until the goods arrive at your installation and are placed in your stock.

Especially if the purchasing function is divided between a requisitioner at the installation and a purchaser at some central location, AMOS M&P will help you to communicate clearly by letting both of you see the same form numbers and the status of each form. This requires that you regularly import and export data between your sites.

6.2.1 Stock Items Become Form Lines

Any item in your stock register can be ordered. Each item is one line item in a form.

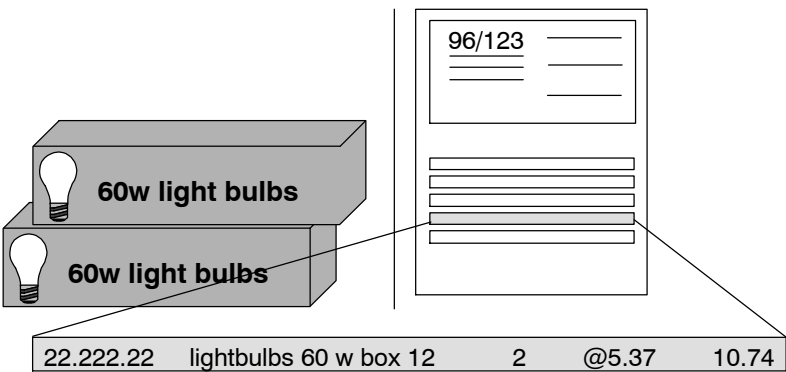


Figure 69 Stock item example

A purchasing form can contain as many line items as you find convenient. Usually you will want to group items you expect to purchase from the same vendor in one form, but this is your choice.

On your command, AMOS M&P will automatically create requisition forms for stock items that have wanted quantities on the Stock Wanted window. (See Stock Wanted in Chapter 5.)

For each item, AMOS M&P selects your preferred vendor and calculates how many of the supplied units are needed to meet your stock requirements.

When you automatically requisition many items at the same time, AMOS M&P groups the items by preferred vendor, creating one requisition for each vendor and one catch-all requisition for items where there is no vendor registered.

6.2.2 Forms Have Two Parts: Headers and Lines

In AMOS M&P each form has two parts: the form headers and the line items.

The information that is the same for the whole form (like the address of your installation, the form number and the like) is called the form header.

You can see the list of all your forms and view their headers in the Forms window:

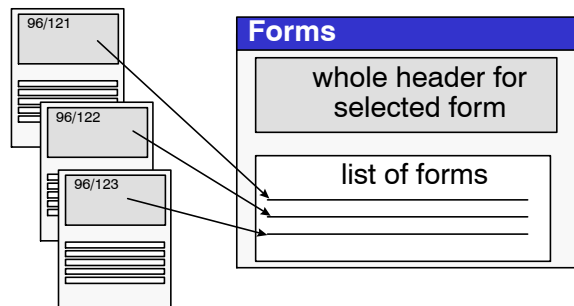


Figure 70 Forms in the Forms window

The line items for a selected form can be viewed in the **Line Items** window. You can also see what forms individual items are located in by starting with the **Stock Wanted** window, selecting a stock item that you need to know about, and going to the Forms window.

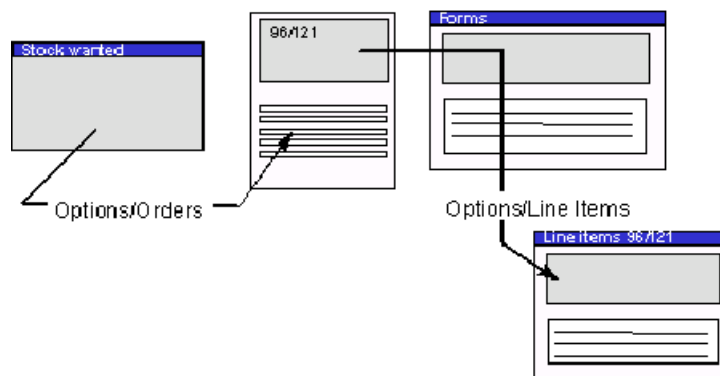


Figure 71 Stock Wanted to Line Items

6.2.3 The Form Number Always Stays the Same

In AMOS M&P, the form number always stays the same. Only the form type and status change.

You can always see the number in the form header.

6.2.4 Type In Once, Print Out Different Purchasing Forms

Besides a number that doesn't change, each form also has a form type and a status. You can change these whenever you need to. By changing the type and the status, you can re-use the information in the windows to print out whatever paper documentation you need: requisition forms, queries and purchase orders.

Naturally, it is up to your organisation to decide what these values will mean.

If you are the requester at an installation working with a centralised purchaser, it might look like this, though:

Form Type	What is Happening
Requisition	This is a form that you created, at the installation. It is your request to the purchaser to obtain some goods.
Query	This is a form that the purchaser is checking prices and vendors for; you are waiting for quotations.
Purchase Order	This is a form where quotations have been received, and the decision to purchase has been made. The requester and/or the purchaser are tracking the delivery, transport and receipt of the ordered goods.

Any type of form, a requisition, query, or purchase order, can have any of these states:

Form Status	What is Happening
Active	Either the requester or the purchaser is working on getting this form filled. Active forms can also be sorted and grouped according to the dates you record for the following milestones: Approved for purchase Ordered by purchaser Confirmed by vendor Received at installation
Split	This form still exists, but all of its original line items have been split off into other forms. The form is not cancelled, because it is useful for information purposes, even though we do not expect to receive deliveries in relation to this form. The split line items and their previous and new locations are shown by selecting Options > Show All .
Cancelled	This is a form number that is no longer in use.
Parked	This is a form that either the requester or the purchaser does not feel is complete. It is parked on the desk (and in the AMOS database) of one or the other, and the other person does not see this form until its status changes. AMOS M&P normally helps the requester and the purchaser to copy their data to each other regularly, so that each can track progress without continual phone calls. Parked forms are not copied, so this status helps to save on communication costs.
Filed	A filed form is one for which all goods have been received at the installation.

6.2.5 Forms Are Forever, But Line Items Split Up

As everyone who works with purchasing knows, items that were originally requested on the same form are not always purchased from the same vendor, supplied at the same time, or received together at the installation.

AMOS M&P allows you to split line items away from their original form so that you can create forms that correctly show what purchasing actions you are taking. A line that has been split is visible in two places in AMOS M&P:

- In the original form, when you select **Options > Show All**, it will appear as an inactive line showing the form number where the active line is located, and
- In the form where it is active, shown as received (or cancelled) for a form to be filed.

On forms that have been Received and Filed, AMOS will prevent you from splitting line items. To split line items on a Filed form, first convert the form to Active, and set the **Received** quantity on the selected line item, to 0. Otherwise, you will receive the message that AMOS 'Cannot split line items that have been received'.

6.2.6 Orders Arrive in More Than One Delivery

AMOS M&P lets you assign the line items in a form to one or more deliveries so that you can track the actual delivery situation.

In AMOS M&P, delivery refers to getting the goods from the vendor to your organisation, often to a central location.

6.2.7 Goods Are Transported From Central Locations to the Installation

With Transport Documents, AMOS M&P lets you view the deliveries you have been advised to expect, and group deliveries from different vendors into appropriate transportation lots to be conveyed to the installation.

6.2.8 Goods Marked as Received Become Stock Items

The final step in the purchasing process is to confirm the receipt of goods at the installation.

As you confirm receipt in the purchasing forms and save your changes, AMOS M&P will update your stock records automatically.

Consumables are not recorded into stock.

6.3 Requisitioning Stock Items or Consumables

A requisition is a purchasing form that is usually created at an installation and sent to a central purchasing function. The requisition tells exactly what goods are wanted, and in what quantities.

Normally the purchaser will then check the requisition form and convert it into a purchase order.

You can create requisitions automatically or manually.

If the goods you want are registered as stock items AMOS M&P will create one or more requisitions for you automatically.

To requisition consumables, that is goods that are not registered as stock items, create your own requisition manually.

6.3.1 Creating an Automatic Requisition for Stock Items

1. Select **Purchase > Forms** or click the button in the toolbar.

The Purchasing forms filter opens.

2. Click **OK** to retrieve all the existing requisitions, queries and purchase orders. If you only want to see specific forms, you may prefer to fill out some details in the filter before you click **OK**.

3. In the Forms window, click the **New** button on the toolbar.

AMOS M&P asks how you would like to create the new form, and what kind of form to create.

4. Select **Automatic** and **Requisition Form**, and click **OK**.

AMOS M&P asks you to specify the stock item number range to create requisitions for.

5. Specify the numbers and click **OK**.

To save time, leave the number fields blank to create requisitions for all the stock items with wanted quantities shown in the Stock Wanted window. You can always remove lines or edit quantities in the requisitions.

AMOS M&P checks the preferred vendor for each item. If the vendor supplied units are different from the stock item units – for example you buy in cases, but you use up a bottle at a time and thus count your stock in bottles – AMOS M&P calculates the quantities of the vendor-supplied units needed to fill your stock requirements. Then AMOS M&P groups the items by preferred vendor, making one requisition for each vendor. The new requisitions are shown in the list at the lower half of the Forms window.

6.3.2 Creating a Requisition Manually

1. In the Forms window, click **New** to create a new form header.
2. Select **Manual** and **Requisition Form**, and click **OK**.
3. Fill out the values in the form header.

4. Click **Save** to save the new form header.
5. Select **Options > Line items** to move to that part of your form.
6. In the Line Items window, click **New** to insert a new line item.
Insert as many line items as you require.
7. Click **Save**.

6.3.3 The Forms Filter

The filter contains two tabs. In the **Basic tab**, refine the displayed results to a very precise level:

- enter any details to find a specific form – **Number**, **Title**, etc.
- search by **Budget Code** or **Financial Year**,
- **Only Forms** – select the **Approval** status of the forms you want returned, lookup a **Contract**, or select **Priority**, **Payment Terms** or **Receipt Condition**. The **Form State** list allows you to search for forms that are for example, Confirmed, Awaiting Quotation Receive or have received only some of the expected quotations, etc.
- filter for forms created in any given number of days up until today. For example enter 5 in the **Created within the last days field**, and return forms created starting from five days ago, until today.

In the **Advanced tab**, restrict the displayed results to a more general level of form types, statuses and content.

When you click the **Select All** button, a pop-up menu with two options appears: Form Types and Statuses Only, or Expanded. Selecting the first option checks all the Types and Statuses listed on the Advanced tab. Selecting the second option checks all Types and Statuses including all Stock Classes, Priorities and Departments (if running in multi-department mode).

You can set the **Content** drop-down field in the Advanced tab to one of three options:

- **All** – the default value that returns all forms. Or,
- **Goods Only** – returns forms that do not contain any service lines. Or,
- **Services** – returns forms that have at least one service line.

You can set the **Quality Check** drop-down field in the Advanced tab to one of three options also:

- **All** – uses the existing filter criteria.
- **Claims only** – returns forms containing order lines with Quality Check records.
- **Without Claims** – returns forms which do not contain order lines with Quality Check records.

In the Advanced tab of the filter, you can restrict your search to return forms for Maintenance Tasks only, by checking the checkbox **Only show forms attached to Maintenance Tasks**. This checkbox is only available if Maintenance Tasks is part of your licence.

6.3.4 The Forms Window

Note

The Forms window has an associated **Options menu**. These Options are discussed in section 8.3.1 of this guide.

The Forms window provides a list of all the purchase forms (Requisition, Query, and Purchase Order) available in the system. Use this window to create a new form or alter an existing one. It is also possible to select one or more forms for processing through the usual purchase functions.

When you open the Forms window, a list of existing forms of all types appears in the bottom of the window. Click on any line to select that form and display its details in the top of the window.

At different stages throughout the purchasing process you will add information to your form headers. Fill in the form header for a Requisition, Query or Purchase Order in the forms window as described below.

The screenshot shows the 'Forms' window in the AMOS M&P system. The window has a menu bar with 'Forms' and a toolbar with icons for Dashboard, Forms, General, Details, Additional Info, Attachments, Audit Trail, Quotations, and Quality Check. The main area contains a form for a Purchase Order. The form has several tabs: General, Details, Additional Info, Attachments, Audit Trail, Quotations, and Quality Check. The General tab is active, showing fields for Number (SH1/01/02/0002), Title (Split Order Form), Vendor (HOU001), Contract, Delivery Location, Delivery Address, Budget Date (02/09/2002), Budget Code, Type (Purchase Order), Status (Active), Stock Class, Latest Delivery Date, Latest Delivery Date for Vendor, Vendor's Delivery Date, Confirmation Ref., Priority, Delivery Terms, and Payment Terms. There is also a Cost Overview section with fields for Estimate, Part Paid, Final Total, Vendor Estimate, SHIPPING, and Currency. A table at the bottom lists several forms with columns for Number, Title, Vendor, Contract, Del. Address, Form Type, Form Status, Latest Del. Date, Created, Approved, Ordered, and Confirmed.

Number	Title	Vendor	Contract	Del. Address	Form Type	Form Status	Latest Del. Date	Created	Approved	Ordered	Confirmed
SH1/01/02/0002	Split Order Form	HOU001			Purchase Order	Active		02/09/2002	23/12/2003	23/12/2003	
SH1/01/02/0003	Automatically Created Form (Split)	TUR001			Purchase Order	Active		02/09/2002			
SH1/01/02/0004	Automatically Created Form (Split)	TOW001			Purchase Order	Active		02/09/2002			
SH1/01/02/0005	Automatically Created Form (Split)	SPE001			Purchase Order	Active		02/09/2002	08/10/2009	08/10/2005	
SH1/01/02/0006	Automatically Created Form	TOW001			Purchase Order	Active	09/09/2002	09/09/2002	09/09/2002	09/09/2002	09/09/2002

Figure 72 Example of the Forms window

- Click the lookup buttons to select **Vendor** and **Delivery Address**. At any time if you want to include a comment or remark to the vendor with the form, go to **Options > Note to Vendor**, or click the corresponding toolbar button. A details window opens where you can enter your notes and click **OK** to return to the main window. The same option exists in the **Quotation** window. If a note to vendor exists at Quotation level, it will be used instead of the note entered on the form header. To use a note entered here at form header level, you must check the **Use form header 'Notes to Vendor'** checkbox on the Quotation window. Left unchecked, the note added at Quotation level will be sent.
- In the same way you can attach notes returned from the vendor. The notes can be sent and received using e-Business portals.
- Forms can be linked to **Purchase Contracts**, if valid contracts with suppliers have been registered in your system. Read more about setting up and using Contracts in section 6.11.7.
- Budget Date** tells AMOS M&P when these costs should be charged against your budget.
- You can change type and status at any time, to print out the forms you need or to reflect the progress of your work.
- Cost Overview** numbers are used for budgeting purposes. You must enter the numbers yourself if you want them to be used, but you may leave any or all of these fields blank. You can select a **Currency** from the drop-down list. If you use a currency other than your base currency, the values will automatically appear in the **Additional Info** tab, calculated to base currency.

Note

There is a parameter which can be set to make the **Estimate** field mandatory. If this parameter is set to TRUE, the field must contain an amount, otherwise you will not be able to save the form.

- When the form becomes a purchase order and the vendor confirms the order, place the vendor's reference in the **Confirmation ref.** field. Later you can use the vendor's reference to locate this form directly from the filter.
- There are three Delivery Date fields. **Latest Delivery Date** is the date you require the goods at its final destination. **Latest Delivery Date for Vendor** is the date the buyer expects to receive the shipment, and **Vendor's Delivery Date** is the date the vendor expects to deliver the goods.
- When you print an original purchase order, the **Ordered** field is filled in by AMOS M&P. Once an original has been printed, you are not allowed to print another. Thus, you should not fill in the **Ordered** field yourself.
- Checking the **Portal Queue** checkbox will bypass portal validation. It is recommended to **Print** to Portal instead.

- The **Details** tab displays a description for the selected form. Use this window for adding general information to a purchase form and in conjunction with a pre-formatted template if required. There is a column of checkboxes entitled Details in the list section of the window that contains a tick in the event that a details window is available.
- The **Additional Info.** tab displays the user names of those people who have created, approved or ordered the selected form. There is also a checkbox called **Service Order** that is checked if any of the line items are orders for services rather than goods. The **Cost Overview** section in this tab is read-only and displays the values from the **General tab** Cost Overview, calculated in your system's base currency. If your system license includes **Custom Clearance** and the selected order form belongs to a Custom Clearance agreement, you can select that CC Contract here. See section 6.12 for more about Custom Clearance.
- You can add external files to the selected form by clicking the **New** button inside the **Attachments tab**. Open up existing attachments by clicking the **View** button.

If your system is configured to export order forms and quotations through a ShipServ portal driver and the appropriate portal settings are defined, you can send attachments through the portal with the selected order form by flagging the **Mail Attachment** checkbox.
- The **Quotations tab** displays a list of all the quotations created for the selected form. Click the **View** button at the bottom of the tab to open a quotation in the list. Add quotations to forms using the Options menu.
- The **Quality Check tab** allows you to attach comments to the selected form regarding the quality of the received goods.
- The **Audit Trail tab** displays alterations in various fields for the selected purchase form. The table displays the Modification Date, Changed item, Old Value, New Value and the login ID of the person who carried out the modification.

6.3.5 The Line Items Window

The Line Items - General tab displays the individual stock items on the selected form. The individual line items are displayed in the lower part of the window and the upper section displays the details of the selected line item.

To open the line items window:

1. Select **Options > Line Items** whilst in the Forms window. The Line Items window opens and you can edit/fill in the fields:

Item	Name/Title	Quantity	Unit	Curr	Price	% Discount	Total
1	Rigging	5.00	Pc	NOK	1.70	0	8.50
2	Hoisting mechanism	2.00	Pc	NOK	171.11	0	342.22
3	Rope block 16 t	2.00	Pc	NOK	2.00	0	4.00

Figure 73 Example of the Line Items window

Note

The Line Items window has an associated **Options menu**. These options are discussed in section 8.3.1.1 of this guide.

- For consumables, leave the part number field empty. Use the **Part Name** field to enter a descriptive title.
- If you enter a **Part Number** using the lookup button, the filter for stock items will open. Within this filter, the stock item number lookup leads to a second filter, for stock type. It is then possible to select any stock type from the list. Remember that if you select a stock type for which no stock item is registered in the current department, when you return to the Line Items window no Part Number will appear.
- The number in the **Requested** field is available for you to change when the Purchasing form is of type Requisition forms.
- The number in the **Ordered** field is available for you to alter when the form is changed to a Purchase Order.
- If the purchase is part of the budget, you can check the **Budgeted Purchase** field.
- If part of the order cannot be confirmed, you may enter a number of items that have been cancelled in the **Cancelled** field. This keeps the line from remaining permanently unfilled, which would prevent you from filing the purchase order.
- Check the **Include on Forms** box if you require the line item to be included on outputs such as printouts, faxes or e-Business documents. This allows for the addition of line items carrying extra costs such as transportation, insurance etc.
- The **Quality Check** tab allows you to attach comments regarding the quality of the selected item.
- The **Audit Trail** tab displays alterations made to various fields for the selected line item. The table displays the **Modification Date**, **Changed item**, **Old Value**, **New Value** and the **login ID** of the person who carried out the modification.
- The **Financial** tab displays the financial details for the selected line item. Enter **Account Codes** for each listed category. If your license includes the accounting module, you can enter a cost centre for each line item.

It is also possible to purchase services through the Line Items window. If you use the **Content** drop-down list and select **Services** instead of Goods, the Line Items window changes to display services. In this case you would select a **Work Order Number** and **Title** instead of a **Part Number** and **Part Name** against the Purchase Order. The Content field can also be displayed in the list part of the window, if you select it with the **Field Chooser**. Right-click in the list part and go to Field Chooser, then select Content from the list of fields, and click **Apply** and **OK**.

If the required parts listed on a work order have been placed onto a purchase form created from the Work Orders window, the number and title of the relevant work order the items belong to, appears in the Line Items window General tab.

Note

To identify which forms contain services, the **Additional Info.** tab has a checkbox which will be marked if one or more line items are for services. The final column of the forms window can also be used to view the services checkbox.

6.4 Making a Query

For routine purchases you probably already know which vendor offers you the best combination of price, quality and delivery times. This vendor will usually be registered in AMOS as the preferred vendor for those items, along with price and vendor unit data.

Where you do not have a clear preference, or for items that have not been purchased before, you may want to create a query form which you can print and send to the vendors.

You can make a query form in two ways:

- If the line items have already been entered, you have a requisition form or a purchase order. Simply change the form type in the form header to Query before printing your query.
- If there is no form already in the system, create a new form with the type Query and then add the line items.

6.4.1 Why Should You Make a Query Form?

The only difference between a query form and a requisition or purchase order is the form type. You can still record quotations etc. on any form, no matter what its type. However, the form types and form states help you to track the progress of your purchasing work.

6.4.2 Turning a Requisition into a Query

1. Open the Forms window. In the list at the lower half of the window, select the form that you want to make into a query.
2. Select **Options > Convert**, and select the desired form type from the list on the right.
3. To change more than one form, check the boxes at the left-hand side to tag all the forms to be changed, and then select **Options > Convert Tagged**.

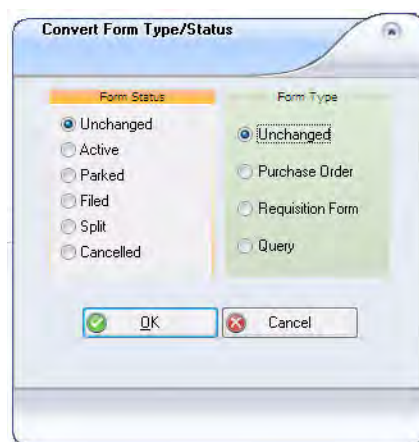


Figure 74 The Convert Form Type/Status Dialog Box

4. **Save** your work.

6.4.3 Creating a Query Form from Scratch

To create a query form when there is no requisition or purchase order to change, proceed as follows:

1. Open the Forms window and click the **New** button on the toolbar.
The Form Creation dialog box opens.
2. In the dialog box, choose **Query**.

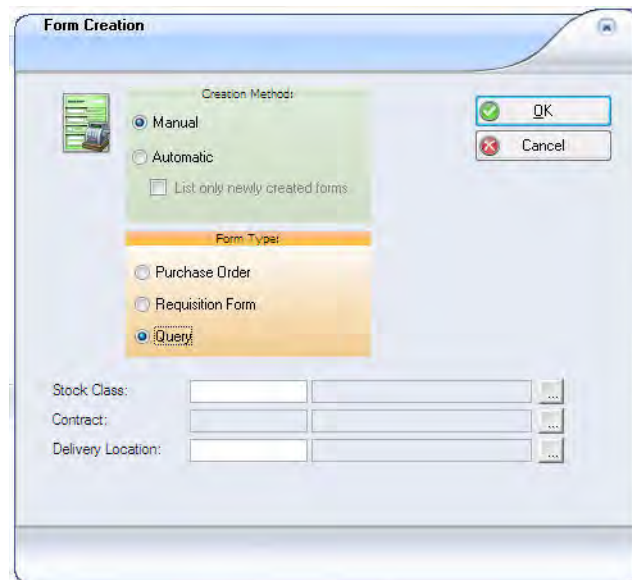


Figure 75 The Form Creation dialog box

3. Choose **Manual** for a query about consumables, or if you want to add line items yourself. Choose **Automatic** if you want the line items created based on the wanted values in the Stock wanted window.
4. Proceed as when creating a requisition.

6.5 Getting the Best Price: Quotations

When you have made queries to vendors about a possible order, you will normally receive quotations in return.

- AMOS M&P lets you record both who you queried and the prices and delivery times that the vendors quoted. You may record on a line-by-line basis if you want.
- AMOS M&P will perform currency calculations and set up a table so that you can compare prices, and help you to flag the best offer. AMOS M&P will even show you whether there is anything to gain by splitting an order between several vendors to obtain the best price on each item, though the potential savings in price must then be compared to your increased administration and handling costs.
- The **Quotations** window contains the details for all quotations listed in the Quotations tab for the Purchase form.
- Each quotation can be viewed individually; you can also record prices for each line item in each quotation, if you want.
- The **Compare** window lets you compare prices from all the quotations.

6.5.1 Recording Quotations

To record that you have sent a query and expect to receive a quotation, or to record the quotation after you have received it, follow these instructions:

1. Open the Forms window. Select the form you are working with from the list in the lower half of the window.
2. Select **Options > Quotations**. The Quotations window opens.

The screenshot shows the 'Quotations [SH1/01/10/0001 - Purchase Form]' window. It has two tabs: 'General' and 'Attachments'. The 'General' tab is active, showing fields for Vendor (AA001), Contact, and a 'Portal Queue' checkbox. There are checkboxes for 'Use form header Notes to Vendor', 'Complete Quotation' (checked), and 'Update Stock Items'. A 'History' section shows 'Sent' (02/11/2010, Anna Ottoson), 'Rejected', and 'Selected'. A 'Details' section shows 'Note To Vendor', 'Note from Vendor', and 'Terms and Conditions', all set to 'False'. Below these are fields for 'Vendor's Ref.', 'Received Date' (02/11/2010), 'Order before Date' (10/11/2010), and 'Expiration Date'. The 'Quoted Price' is shown as USD 330.00. There are also fields for 'Del. Time (Days)' (0) and '% Discount Given'. At the bottom, a table lists the quotation details:

Vendor	Sent	Received	Rejected	Selected	Price	Del. Time [Days]
AA Ship Chandler	02/11/2010	02/11/2010			330.00	0

Figure 76 Example of the Quotations Window

Note

The Quotations window has an associated **Options Menu**. Options not covered here are discussed in section 8.3.1.2 of this guide.

3. To register a new quotation, click **New**. A line is added to the list in the lower half of the window. To make changes to a quotation, select the quotation in the list at the lower half of the window, and make changes in the fields in the top half of the window. If you enter a total and the currency for the quote, AMOS M&P will automatically convert to your default currency.

To record quotes line-by-line, from the Quotations window select **Options > Line Items**.

The screenshot shows the 'Quotation Line Items [SH1/01/10/0001 - Purchase Form - AA Ship Chandler]' window. It displays fields for Part No. (331.01.01.005), Part Name (Rigging), Makers Ref. No. (6), Remark, Comment 1, and Purchase Unit (Pc). The 'Status' is 'Active' and 'Content' is 'Goods'. Below these fields is a table with the following data:

Item	Name/Title	Quantity	Purchase Unit	Currency	Price	% Discount	Del. Time	Total /USD/
1	Rigging	5.00	Pc	USD	20.00	0	0	100.00
2	Rim bearing 062.50.2546.100.41.152	20.00	Pc	USD	10.00	0	0	200.00
3	Washer	15.00	Pc	USD	2.00	0	0	30.00

Figure 77 Example of the Quotations Line Items Window

The Quotation Line Items window opens.

4. The lines are copied from the Purchase Form for you so all you need to do is add price and delivery information.
 5. Click **Save** before closing the Quotation Line Items window and returning to the Quotations window.
 - You can add external files to the selected Quotation by clicking the **New** button inside the **Attachments** tab. Open up existing attachments by clicking the **View** button.
- If the vendor on this quotation is linked to a ShipServ portal driver and the appropriate portal settings are defined, you can send attachments for the quotation through the portal as well by flagging the **Mail Attachment** checkbox. The same option to add attachments and send them via the portal exists in the **Forms** window: if you check the box **Use form header Attachments** on the **Quotation General** tab any attachments added to the form header will be sent together with this quotation. Otherwise, attachments linked here at Quotation level are used.
6. Remember also to save any changes you may have made in the Quotations window.

6.5.2 Calculating the Total Price of a Quotation

To find the Quotations window, see section 6.5.1.

1. Select a line in the list at the lower half of the Quotations window.
2. Select **Options > Calculate**. The following dialog appears:



Figure 78 The Calculate Dialog Box

The **Quoted Price** displayed is the total price of the quotation, line item quantity multiplied by price minus discount, from the highlighted supplier. The correct operation of the Calculate function depends upon quotation prices and discounts being entered at line item level. AMOS M&P calculates the combined prices of all the line items in the quotation and converts it to your default currency. The total for the selected quotation is shown in the upper half of the Quotation window.

6.5.3 Comparing Quotations

If you need help to find the Quotations window, see section 6.5.1.

1. In the Quotations window, select **Options > Compare**.

AMOS M&P displays a window with all of the quotations you have registered for this query. Each line item of a quotation appears with columns for each possible vendor and an extra column at the far right hand side displaying the lowest price found (or shortest delivery time) for each line item. There can be multiple quotations from one vendor. The details for the best offer are highlighted in bolded blue text.

If any quotation has been selected a gold star icon will appear in its header. If any of the quotations has a **Note from Vendor** registered against it, an icon will appear in the record. Hovering the mouse over that icon will display a tooltip with the vendor's text.

The correct operation of the Compare function depends upon quotation prices and discounts being entered at line item level.

Note

The Compare Quotations window has an associated Options menu. Options not covered here, are listed in section 8.3.1.2.2 of this guide.

Item	Name	Stock Unit	Makers reference	AA Ship Chandler Quotation Unit	Price	ABB TURBO SYSTEMS LTD Quotation Unit	Price	Lowest Price
1	Rigging	Pc	6	Pc	100.00	Pc	0.00	100.00
2	Rim bearing 062.50.2546.100.41.152.	Pc	10	Pc	200.00	Pc	0.00	200.00
3	Washer	Pc	17	Pc	30.00	Pc	0.00	30.00
					330.00		0.00	330.00

Figure 79 Comparing quotations

- To compare delivery times, select **Options > Del. Time**.
- You can switch back to prices by giving the command **Options > Price** again.

6.5.4 Splitting An Order

If you need help to find the Quotations window, see section 6.5.1.

Once you have received quotes from a variety of suppliers, you may want to split an order to achieve the best prices.

- In the Quotations window, select **Options > Compare**. The Compare Quotations window opens.
- Select the line to be split into another query or purchase order.
- Go to **Options > Split**.

Figure 80 Splitting a Quote

- Set the vendor for the form you want to split to.
AMOS M&P asks you to define where to split the line to.
 - Choose **Sub-form** to create a new purchase form. This new form is given the same number as the original, followed by a letter: for example **1997/1023A**.
 - Choose **Existing form** to select from the forms you already have
 - Choose **New form - Automatic** to automatically create a new form with a new number.
- Click **OK** to start creating the new form.
- Remember to **Save** your changes before you close the windows.

You can also split line items on Purchase Order forms. For more information see section 6.7.2.

6.5.5 Selecting a Quotation

When you have more than one quotation for the same form – from several different vendors or multiple quotations from one vendor – you need to select which quotation to accept before making a purchase order. If one of the quotations listed in the Form Quotations tab is from the same vendor as listed on the General tab for the form, a green icon will appear to the left of that record to notify you of this. However, it will not be automatically selected. To select your quotation:

1. Select the form in the Forms window and go to **Options > Quotations**. The Quotations window for that form opens.
2. In the list part of the window click the quotation you want to select. Go to **Options > Select**.
3. The Select Quotation dialog opens where AMOS M&P asks which information to base the selection on. Check the boxes as appropriate. Keep in mind:
 - **Use Quotation Prices and Units** - updates order line item details (price, unit, currency code, quantity and factor) with values from the quotation lines.
 - **Use Vendor Prices and Units** - updates order line item details with values from 'Multi Vendor Financial'. Vendor prices are those registered in the stock items register in the vendor details for each item.

Note

If you check to use both Quotation and Vendor prices, the system will use a quotation price if available, otherwise it will make use of the registered vendor price in the stock register.

- **Update Ordered Quantity** - recalculate order line quantity based on value 'Original Quantity' divided by 'Factor'.
 - **Update Form Estimate** - calculates the order form estimate based on quoted price and user price if provided. The price will be copied to the **Estimate** field on the form header.
 - **Verify Offered Unit and Quantity** - verify that the unit and quantity the vendor is offering meet your requirements.
4. Click **OK** to return to the Quotations window. The selected Quotation now shows a gold star icon at the top of the window. When you reopen the Forms window the same icon will appear in the Quotations tab beside the selected quotation for this form.

You can also select a quotation on the Form General tab by clicking the lookup button next to the Vendor, if a quotation from the vendor listed in the field already exists for this form. The **Select Quotation** dialog will appear containing the same checkboxes as above. To ensure that the Quotation is selected, check the box **Mark the Quotation as Selected**. If more than one quotation from that vendor exists for this form (for example different prices for different delivery destinations), you will not be allowed to select the quotation here on the form header. Instead, make the selection in the Quotations window as above, where you select not only the vendor but the specific quotation as well.

Note

A quotation past its expiry date cannot be accepted.

6.6 Making a Purchase Order

A Purchase Order is a form with the type set to Purchase Order. Earlier, the same form might have had its type set as a Requisition or Query.

You would normally want to make sure the form type is Purchase order once you have made a decision to purchase requisitioned goods.

When you want a purchase order, you can either:

- Convert the form type of an existing Query or Requisition to Purchase order.
- Create a new Form with type Purchase Order.

6.6.1 Converting a Requisition or Query to a Purchase Order

1. Open the Forms window. In the list in the lower half of the window, select the form that you want to make into a Purchase Order.
2. Select **Options > Convert**, select **Purchase Order** from the Form type list, and click **OK**.
To change more than one form, check the boxes to tag all the forms to be changed before you select **Options > Convert Tagged**.
3. **Save** your work.

6.6.2 Creating a New Purchase Order

To create a Purchase Order form when there is no requisition or purchase order to change, proceed as follows:

1. Open the Forms window. Click the **New** button on the toolbar.
2. In the dialog box, choose **Purchase Order**.
3. Choose **Manual** for a Purchase Order for consumables, or if you want to add line items yourself. Choose **Automatic** if you want the line items created based on the wanted values in the Stock wanted window.
4. Proceed as when creating a requisition.

6.7 Working With Purchase Orders

6.7.1 Approving An Order

Many organisations require that Purchase Orders be approved by someone other than the purchaser.

AMOS M&P provides a function for approving Purchase orders. Later you can see who approved the Purchase order, and when approval was given.

1. Select **Purchase > Forms**. AMOS displays the filter.
2. In the **Approval** drop-down list select 'Awaiting approval' and click **OK**.
The Forms window opens. The forms awaiting approval are listed in the lower half of the window.
3. Select a form to approve.
4. Select **Options > Change Approval**.
5. Click **Grant Approval**.
AMOS M&P updates the **Approved** field in the form history to show the date of approval.
Later, you can look at the **Additional Info** tab for the Forms window to see who approved the form.

6.7.2 Splitting Lines to New Orders

Why does AMOS M&P let you split lines? Here is an example:

Suppose that a requisition contains items that you would prefer to purchase from three different vendors. You must create new forms for some of the items, or move the items over onto existing forms to those vendors. You also want a simple way to document and what has happened for the person who originally requisitioned the goods.

AMOS M&P solves this problem by allowing you to 'split' line items.

On forms that have been Received and Filed, AMOS will prevent you from splitting line items. To split line items on a Filed form, first convert the form to Active, and set the Received quantity on the selected line item, to 0. Otherwise, you will receive the message that AMOS 'Cannot split line items that have been received'.

You can keep track of ordered items even though they may no longer be on the originally created form. A split line is visible in two places:

- When you look at the form where the line originated, if you select **Options > Show All**, you will be able to see the line but you not change it in any way. The line will contain a reference to the new form number, so you will always be able to find the line item.
- The Line item is of course visible and active in the new form. Here, the reference to the old form is shown, in case you need to refer to the original form.

To split lines:

1. In the Forms window, select the form that contains the line items you need to split.
This is the original form. (It might be a requisition, query or purchase order).
2. Select **Options > Line Items**.
AMOS M&P displays the line items for the form you selected.
3. Click in the white box at the beginning of each line you would like to move to a new form.

4. Select **Options > Split**.

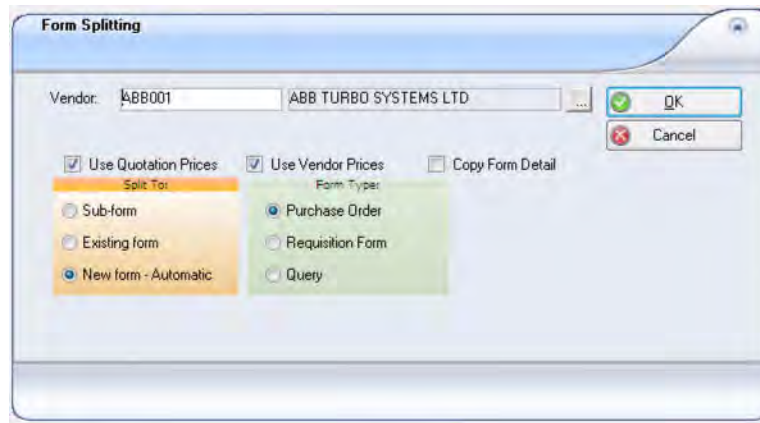


Figure 81 The Form Splitting Dialog

5. Set the vendor for the form you want to split to (the new form).
AMOS M&P asks you to define where to split the line to.
 - Choose **Sub-form** to create a new purchase form. The new form will have the same number as the original, followed by a letter: for example **1997/1023A**.
 - Choose **Existing form** to select from the forms you already have and consolidate similar items into one order.
 - Choose **New form - Automatic** to automatically create a new form with a completely new number.
6. To transfer the line item details information at the same time, check the **Copy Form Detail** checkbox.

Note

When copying, converting and/or splitting forms, the number series used to generate the new form number is the series used by the department that created the original form - not the series used by the department the user is currently logged on to.

7. Click **OK** to start creating the new form.
8. Remember to **Save** your changes before you close the window.

6.7.3 Printing Purchase Orders

If you click **Print** in the secondary toolbar of the Forms window without having selected any purchase orders, you enter the Print Forms window. Here, you specify which range of purchase orders you want to print. In the lower part of the window is a number of check boxes to tell AMOS M&P which forms you want to print.

In the **Output Format** area, you have the following options:

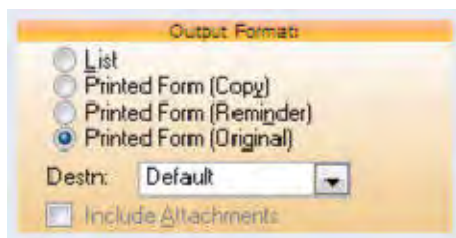


Figure 82 The Output Format dialog

If you select **Printed Form (Original)**, the system 'stamps' the order date on the order. This means you cannot take out another original. You must choose this output format to print to Destination **Portal**. You can select **Printed Form (Copy)** either before or after you print the original. When **Printed Form (Copy)** is selected you cannot print to portal. You can also select to send the vendor a **Reminder**, which works in the same way as a Copy.

The **Output to Fax** option is only available if the AMOS-Mail fax driver is installed on the PC. If you select this option, AMOS will automatically find the registered fax number of the recipient, and the fax is sent without any further prompting for address information.

When sending to portal, you have the option to send attachments as well (or not): check the **Include Attachments** box.

If you tag one or more print orders in the Forms window before you click **Print**, you enter the **Print Tagged Forms** box. Since you have already indicated which purchase orders you want to print, you do not need to supply AMOS M&P with any selection criteria. You have the same Output Format options, and you can specify if the output should be sorted by **Form Number**, by **Vendor** or by **Budget Code**. You also have the option to print a 'Letter of Rejection' (LoR) instead of, or as well as, the tagged forms, regardless of form type.

6.7.4 When the Vendor Confirms the Order

When you receive confirmation from the vendor, you have two tasks to do in AMOS M&P:

1. Record the reference number of the vendor's confirmation in the header of your Purchase Order in AMOS M&P.
This way if you need to speak to the vendor about the order later, you will be able to tell him exactly which order you are referring to with a number he can find on his own system.
2. Register one or more deliveries for the Purchase order, depending on the information you received from the vendor.

6.7.4.1 Deliveries

Deliveries are forms used to distribute goods in transit to remote locations such as ships. They are a form of temporary goods received form that follows the stock items until they are officially received at the ordering installation. If the address entered in the destination field is classed as a goods receivable address, the line item quantities entered are transferred to the appropriate voucher to authorise payment. The goods receivable function is described in section 6.10.

Deliveries can be added to a single transport document or split over several documents. Once added to a transport document the delivery is classed as consolidated. Deliveries unassigned to a transport document are classed as unconsolidated.

If the vendor has informed you that the goods will be delivered in more than one lot, there is no problem. AMOS M&P will allow you to register as many deliveries as necessary on a single order. The deliveries window lists all deliveries for one Purchase form. There is one Delivery Line Items window for each delivery. The line items from the purchase form are assigned to the various deliveries.

To record the reference number and register a delivery:

1. Open the Forms window. Select the Purchase form to record delivery information for.
The form will normally be of type Purchase order and status Active, but you can register deliveries for a form with any type and any status except Filed.
2. Type in the vendor's confirmation reference number in the header.
3. Click **Save**.
4. Select **Options > Deliveries**.
AMOS M&P displays the Delivery window for your chosen Purchase form.
5. Click **New** on the toolbar to create a delivery.
6. Fill in the fields in the top half of the Deliveries window.
7. Click **Save**.
8. Create as many deliveries for the order as you will need. Go on to the next section.

Note

The Deliveries window has an associated **Options menu**. Options not discussed here are listed in section 8.3.1.3 of this guide.

6.7.5 What Will Arrive in Each Delivery?

The next steps tell you how to assign the line items of the form to the different deliveries. Registering this information will help you to ensure that all ordered items are eventually delivered and transported to the installation.

1. Go to the Deliveries window for the Purchase form you want to work with. If you are not certain how, see steps 1 – 6 in section 6.7.4 above.
2. Select deliveries in the list in the lower half of the Deliveries window.
3. Select **Options > Line Items**.
AMOS M&P opens the Delivery Line Items window.
4. Enter the quantity of each item that will be included in this delivery in the **Confirmed** column.
The Confirmed column shows the total quantity of each item already assigned to other deliveries. Select **Options > Fill Delivery** to calculate outstanding quantities, and enter these in the **Quantity** column.
5. **Save** your changes and close the Line items window.
6. If there are still some unassigned quantities, repeat steps 2. to 5.

Note

The **Document No.** field contains the unique identifying number of the transport documents the delivery is assigned to. Use the look-up button or press **F2** whilst the cursor is in this field to get a list of the transport documents that you have created.

6.8 Using Vouchers

Depending on your system setup, AMOS M&P may also be used to handle vouchers (both invoices and credit notes). Your organisation may also set up the system to use the voucher function to automatically update the budget. This is further explained in Chapter 7.

To enter vouchers against a form, you need to have at least read access rights for forms of that type.

To create a voucher:

1. Select a form in the Forms window.
2. Select **Options > Vouchers**. The following window opens:

Figure 83 Example of the Vouchers Window

3. Click the **New** button on the toolbar. Fill in the information in the Vouchers dialog box.
4. AMOS M&P automatically assigns the first available voucher number to the item you create and the purchase form to which it belongs is listed in the window title bar.
5. The **Type** drop-down menu contains the two values Invoice and Credit Note. Select the correct type for the voucher you are creating.
6. If the voucher is for the whole purchase form or it is the last in a number of forms, check the **Final Invoice** box.
7. **Save** before exiting the dialog.

Note

If your system is set up to use vouchers, and you decide to delete a voucher, first manually delete all the voucher lines, and then delete the voucher. Otherwise the budget will not be updated correctly.

6.8.1 Voucher Line Items

In the Vouchers window, selecting **Options > Line Items** opens the Voucher Lines window.

Each voucher contains the same line items as the purchase form to which it belongs. If there are several vouchers against a single purchase form, the quantity received to date is updated each time a new voucher is created. This makes it easy to see when a final invoice should be created.

The Delivery column denotes the quantity arrived at a goods receivable address through the registration of a delivery and can therefore be classed as received. The Received column denotes the quantity arrived at the installation and actually received. If there are many line items on a voucher, go to **Options > Fill Voucher** to automatically fill the **Quantity** column.

To add together the net amounts of all line items on a voucher, from the main Vouchers window go to **Options > Calculate Net Amount**. AMOS M&P then updates the net value of the selected voucher with the resulting figure.

6.9 Transporting Delivered Goods to the Installation

Deliveries will arrive at the central purchasing depot continuously, but transport to ships or installations is usually arranged periodically.

Transport Documents group goods that have come into a central location on different purchase forms and need to be forwarded to remote installations. A form with many line items can be split over several transport documents and a transport document can contain line items from several purchase forms.

AMOS M&P helps purchasers to record transport plans in transport documents, to assign deliveries to transport documents, and to get an overview of unassigned deliveries.

A transport document can be used to print a list of deliveries to be loaded on a transport.

Installations expecting stock items can view the transport documents destined for delivery to see what will arrive, where it will be sent, when it will arrive and who the freight forwarder is.

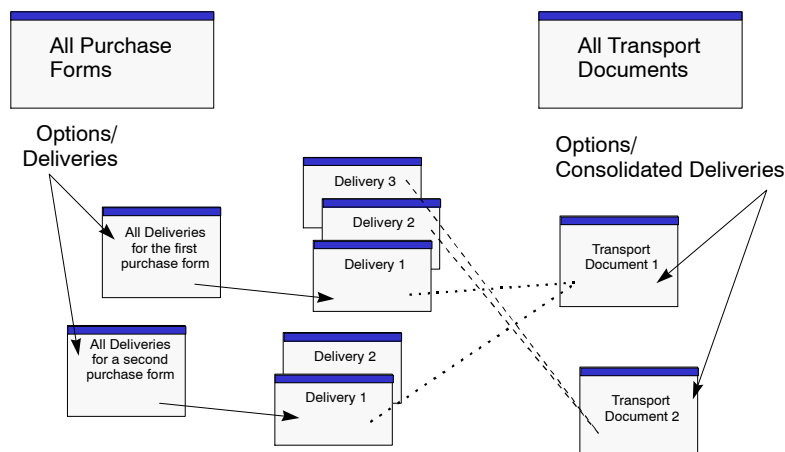


Figure 84 Delivery document overview

Deliveries from different Purchase forms can be consolidated onto a single transport document.

6.9.1 Creating a Transport Document

1. Go to **Purchase > Transport Documents** to open the window, and click **New** on the toolbar. The system automatically generates numbers for transport documents.
2. Fill in whichever of the remaining information you find useful: **Title** and **Arrival Date** will be particularly interesting to you later.
3. Click **Save**.

Now you have a transport document, but as yet you have not filled it with any deliveries. Go on to the next instructions.

Note

The Transport Document window has an associated **Options menu**. Options which are not covered here, are listed in section 8.3.2 of this guide.

6.9.2 Adding Deliveries to a Transport Document

First, you need to see what deliveries are not yet assigned transport.

1. In the Transport Document window, select **Options > Unconsolidated** deliveries.

AMOS M&P displays a list of the deliveries that need to be consolidated.

If AMOS M&P says **No deliveries found** then either you have not yet defined deliveries for your purchase orders, or all deliveries have already been consolidated on transport documents.

2. Select a delivery in the list in the lower half of the window.
3. Select **Options > Attach**.
4. Back in the list of deliveries, click **Save**.

To see what deliveries are assigned to a certain transport document:

5. Go to the Transport Document window.
6. In the lower half of the window, select the Transport document you are curious about.
7. Select **Options > Consolidated Deliveries**.

6.10 Registering Delivery of Goods

When goods arrive at the installation, you have several tasks to perform in AMOS M&P:

- You must tell AMOS M&P what you have received.
 - If the entire Purchase Order has been received, you must change the Purchase Order status from Active to Filed.
1. Open the Forms window and select the Purchase Order you want to receive.
 2. If you are receiving goods from more than one order, check the box at the beginning of the line to tag each order.
 3. Select **Options > Receive** (or **Receive Tagged**).

AMOS M&P asks if you are receiving the entire Purchase Order.

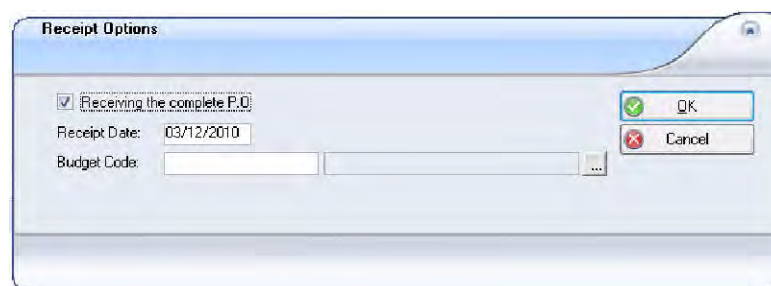


Figure 85 The Receipt Options window

Usually it is easiest to answer **Yes** to this question, and then to change the quantities of the items you have not received. If there are many items, and most of the order has arrived, check the **Receiving the complete P.O.** box to open the Receive window with the totals already entered. Items which do not have a default Location registered in the Stock Items window, will not be filled in the **Receive** window.

4. Click **OK**. AMOS M&P displays the Receive window.

Figure 86 Example of the Receive Window

5. For each line item, enter the number received (if you need to change it from what AMOS M&P suggests).

When you mark 6 received, and save the changes, AMOS M&P will subtract 6 from the **On Order** field.

You may be prompted to enter expiry dates for perishable items if you have not selected an expiry date already. Double-click in the field to use the **Calendar** function to select the date.

6. If the items have more than one location, specify the **Location** to which the items are being received.
7. When you have set all the quantities, click **Save**. If any of the items you have set a quantity for does not have a default Location already registered in the **Stock Items** window, you will not be able to save. Those **Locations** will have to be created, first.

If all items on the order have now been received, AMOS M&P will ask if you want to file the order.

8. Click **Yes** to file the order.

Note

The Receive window has an associated **Options menu**. The options available from this menu are covered in section 8.3.1.5 of this guide.

6.11 Purchase Contracts

Creating a Purchase Contract allows you to register a price and delivery agreement with a vendor on stock to be purchased in the future. The prices and terms as set out in the contract can be applied to any purchases of the selected items when ordered from that vendor. You can have more than one contract per vendor, as long as the contracts are for different types of items.

Contracts are based on **Product Groups** and **Delivery Zones**, with different terms for each: Product Groups contain all the stock available for purchase on any given contract, while Delivery Zones contain a breakdown of all possible delivery locations for that vendor.

Whenever you arrange a new contract, register it in the Contracts window. If the terms change on existing contracts, ensure that these updates are entered here as well. Contracts are Work Flow driven and you should update the status as changes are made.

For every contract you have:

1. Register the basic details for the contract on the **Contracts window General tab**. See section 6.11.1.
2. Set up **Delivery Zones** and group locations together. See section 6.11.2.
3. Set up **Product Groups** and assign Stock to each group. See section 6.11.3.
4. The Product Groups and Delivery Zones create a Price Matrix in the **Contract Items tab**. Register the contract items' base prices, and discounts by Group and Zone combinations in this matrix. See section 6.11.4.

5. Define discounts in the **Discount tab**. These will apply at Contract level – a discount registered here will be deducted from the overall contract as a whole. See section 6.11.5.
6. **Save** the finished Contract and use the Work Flow to issue it making it available to apply to Purchase Orders. See section 6.11.6.

6.11.1 Registering a New Contract

Note

To quickly copy the details of an existing contract onto a new record, click the **New** button and then select **Options > Copy from Contract**. A list of all the pre-existing contracts opens. Choose a contract here and click **OK**, and the details are copied from this contract into the current one you are working on. While copying you can also choose to copy only the Delivery Zones or Product Groups from the first contract onto the second.

Otherwise, to create a new Contract from scratch:

1. Go to **Purchase > Contracts** to open the Contracts window.
2. Click **New** or **OK** in the filter to go directly to the window.
3. Click the **New** button on the toolbar.

Figure 87 Registering a new Contract

4. Enter a **Number** for the contract and click the lookup to select the **Vendor**. If a Rule and Mask have been defined for Contract Numbers, that field will be populated automatically.
5. If the vendor has a different name or code for this contract, enter it in the **Vendor's Ref.** field.
6. Enter a name for the contract in the **Description** field and any notes in the **Comment** fields.
7. Select **Delivery Terms** and **Payment Terms**. The **Contract Currency** you choose is for all values on this contract.
8. When the contract is fully registered, you will be able to base Purchase Forms on it. To ensure that any forms based on this contract can contain non-contracted line items in addition to the line items covered by this contract, check the **Allow Non-Contract Item** checkbox. Unchecked, it will not be possible to place other items not specified on the contract onto any purchase forms based on it.
9. Lookup **Start** and **End Dates** for this contract to indicate when the contract will be available for use, and for how long.
10. Pricing **Levels** entered here apply to the entire contract. The same information can be entered at Product Group level as well, and will then apply to the items within a group.
11. Open the **Installation/Department tab**. This tab is only available in systems using Stock Types. If Stock Types are not in use, the tab will not be visible.

A contract can apply to multiple installations/departments. Use the checklist in this tab to indicate which installations and departments the selected contract can be used at. Only installations which share the same Stock Types as the installation you are currently logged in at can be selected in this list.

Check the **Add Stock Items** box beside an installation to ensure that AMOS will automatically create stock items at the checked installation if they do not exist already, and if the installation does share the stock type.

12. **Save** the contract so far.

Note

When you open the Purchase Contracts window for the first time after upgrading a database where Purchase Contracts already existed, if any of these existing contract contains references to Stock Classes AMOS will present two options: delete the Stock Class references and replace them Stock items of the same class, or, delete the Stock Class references and do not replace them automatically.

6.11.2 Defining Delivery Zones

Delivery locations differ from vendor to vendor and must be defined on each contract in the **Delivery Location tab** before you can populate the matrix in the **Contract Items tab**.

A Delivery Zone is any set region containing a group of delivery locations – Ports – which the supplier will deliver the contract items to. Prices and Discounts on Contract Groups are usually affected by different Delivery Locations.

To define a delivery zone and locations ensure the correct contract is selected and then:

1. In the left side of the **Delivery Locations tab**, build a hierarchy of locations: create a Parent or Root location by clicking the **New** button at the bottom of the hierarchy panel.
2. Define a **Code** and **Name**, for example Main Ports. **Save**, and select the name in the hierarchy.
3. Then, click the **New** button in the Location area and use the lookup to find a location, for example Rotterdam, Houston, etc.

Specify as many locations as applicable, here – all to which the vendor can deliver. Add multiple locations at once by holding the **CTRL** key in the lookup dialog and clicking to **multi-select** as many as required. Click **OK** to return to the main window.

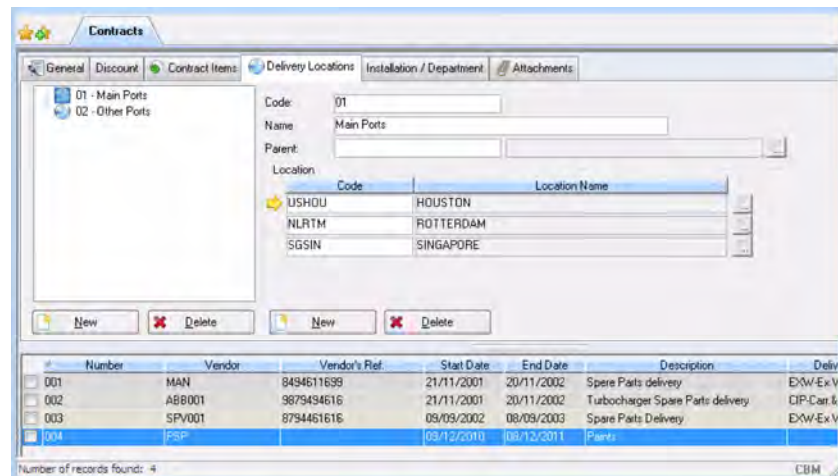


Figure 88 Adding Delivery Zones and Locations

4. To remove a location from the group, select it in the list and click the **Delete** button.
5. **Save** the list of locations. Add further Zones and Locations as required, in the same way.
6. Discounts can apply to an entire Zone, for example a 10% discount on a delivery to any of the locations inside of one zone. To specify a discount, select a Zone in the list.
7. Click the **New** button inside the **Discount** area. Select the **Type**, specify the **Volume** which must be ordered to receive the discount and then enter the percentage, deduction or fixed price accordingly.

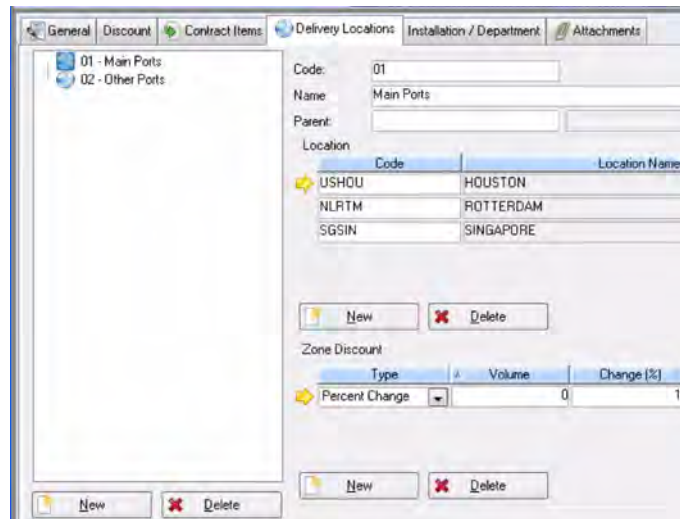


Figure 89 Specifying a Zone-level discount

8. **Save** your work. Carry on to create Product Groups.

6.11.3 Setting up Product Groups

A **Product Group** is a grouping of stock to be purchased on contract from the selected vendor, with prices and discounts applied. The Groups are maintained in the **Contract Items tab**. You must define these Groups and assign items before you can create and populate the matrix in the **Contract Items tab**.

Defining Product Groups makes it much easier to register data on your contracts: when the items on a contract are grouped by product, you can define discounts which apply to an entire group at each delivery location, instead of defining discounts per every item on each delivery location.

For example if the vendor offers a 10% discount on all paints, rather than registering the discount against each individual paint from that vendor, you add all their paints to one Product Group. Then, you can apply the discount to the group and all items within will receive it. If the discount only applies to that product group when the delivery takes place at a certain location, you will be able to apply it for the group in combination with the specified location only, once Delivery Zones are defined.

In the case that there are exceptions to the discount, you can either remove those items from the group, or apply the exception to those items manually. See section 6.11.4 about applying exceptions to individual items within a group.

Ensure the correct contract is selected and open the **Contract Items tab**. If any Groups are defined already they will be listed here. Clicking the + sign beside a Group expands it to show any items already assigned to it, and you can view or alter its properties by clicking on it.

To add a new Product Group:

1. Click the green + sign inside the **Contract Items tab**.
2. The **Specify new object type** dialog opens. Click **Product Group** and then **OK**.
3. The **New Contract Group** dialog opens. Give the group a name according to the items to go into it: i.e. Crane Parts.
4. Enter the details as set out in your agreement with the vendor. These details apply to the entire Product Group. Click **OK**.

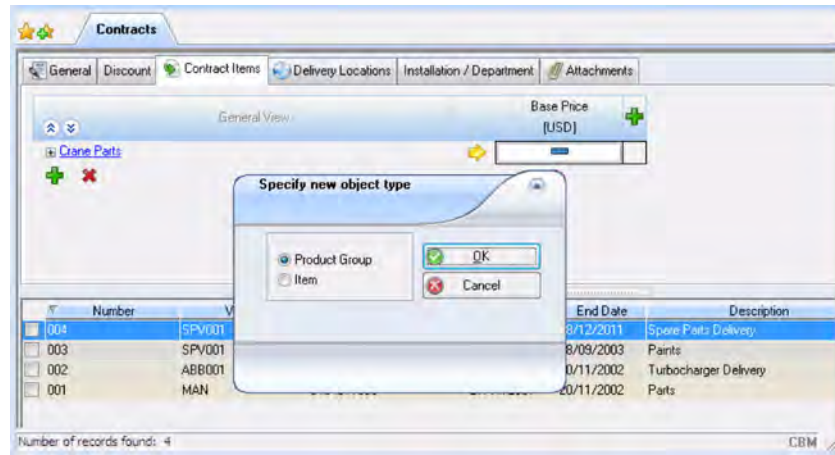


Figure 90 Creating a Product Group

5. Your new group will be displayed: click the + sign to expand it.
6. Now, add items to the newly defined Group: click the green + sign again and in the dialog, select **Item**. Click **OK**.

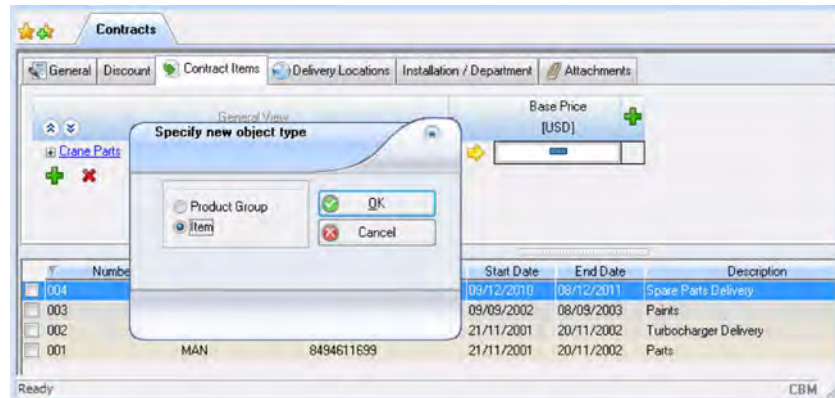


Figure 91 Adding an Item

7. The Stock Type/Items filter appears containing the **Stock Types/Items** which have been distributed to your installation. Set filter criteria to narrow the list. Then click **OK**.
8. The **Select** dialog appears: select an item/type to add to the group. By holding the **CTRL** key and clicking you can **multi-select** any number of items. To move the selected item(s) click **OK**.

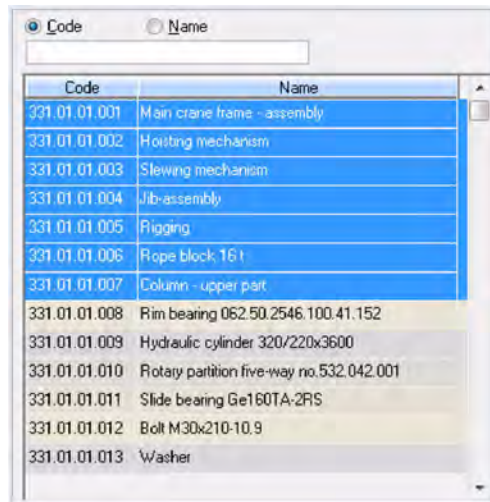


Figure 92 Multi-selecting Items to add to a Product Group

- You return to the main window and the type or item is now listed in the hierarchy under the Product Group. They are categorised within the Product Group by their Class. If no class has been assigned on a particular stock item, it will appear in a default category labelled <None>. Clicking on a line will open the **Stock Types** or **Stock Items** window.

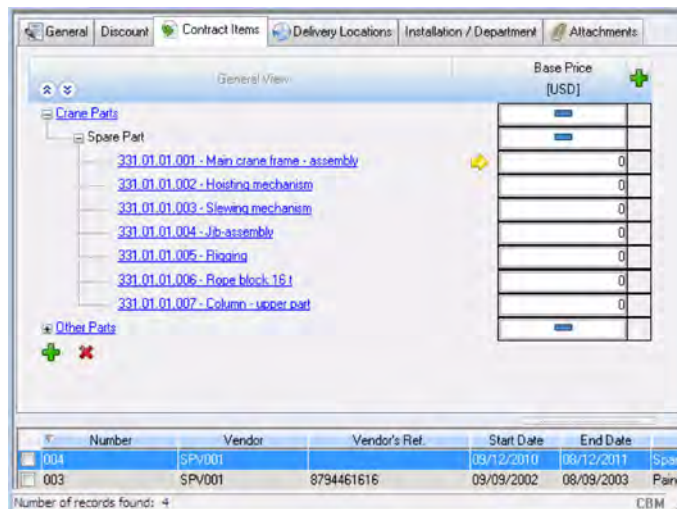


Figure 93 Two Product Groups, and items added

- Create more Product Groups and add Items as required. **Save** your work. If Delivery Zones and Locations are not already specified for this contract, do that now. Otherwise, when both Zones and Product Groups/Items have been registered, create and populate the Price Matrix.

6.11.4 Creating the Price Matrix

When you have registered a Contract and set up Delivery Zones and Product Groups, register the contract items' **Base Prices**, and discounts by Group and Location combinations in the **Contract Items** tab.

The Delivery Zones and Product Groups create a **Price Matrix** in the **Contract Items** tab: Product Groups and their items appear on the left side and Delivery Zones and their Locations appear on the right. Click the + and - signs to collapse and expand Zones and Groups as you work. Register the contract items' base prices, and discounts by Group and Zone combinations in this matrix.

To easily populate the matrix outside of AMOS, you can export it to Excel. Having filled in the details there, you import it back to AMOS: When your Product Groups and Delivery Zones are defined, you can select **Options > Export Contract/Import Contract** to export a contract to **Excel**, add new or update existing prices and discounts there, and then import it again - rather than managing your matrix inside of AMOS.

Otherwise:

1. Ensure the correct contract is selected.
2. Open the **Contract Items** tab.
3. Add a **Delivery Zone** by clicking the green + sign beside **Base Price**.
4. The **Delivery Locations** select dialog appears listing all locations defined against this contract. Select one, or select several by holding the **CTRL** key and clicking on the locations you want to add.
5. Click **OK** to close the dialog and return to the main window. The locations will now appear at the top of the tab, forming the matrix.

Depending on the size of the window or the number of columns you have displayed, all the columns might not be visible at once. In this case you will see a horizontal scrollbar at the bottom of the matrix and you can scroll the matrix back and forth. At the left side of the scrollbar you see a grey vertical divider line. You can click and drag this to any place in the matrix thereby splitting the column display into two. All columns are available on each side of the split line and can be scrolled independently, to easily view delivery locations which were not originally displayed side by side.

6. Expand a **Product Group**.

Contract	Base Price (USD)	Main Parts ROTTERDAM	Main Parts SINGAPORE	Main Parts HOUSTON	Other Parts TOWNSVILLE
231.01.01.001 - Main crane frame - assembly	0				
231.01.01.002 - Hoisting mechanism	0				
231.01.01.003 - Slewing mechanism	0				
231.01.01.004 - Jib assembly	0				
231.01.01.005 - Rigging	0				
231.01.01.006 - Rope block 16 t	0				
231.01.01.007 - Columns - upper part	0				

IT	Number	Vendor	Vendor's Ref	Start Date	End Date	Description	Delivery Terms	Payment Terms
004	SPV001	8794461516	09/09/2002	08/09/2003	Spare Part Delivery	ENW Ex Works	60 days	
002	ABB001	9879494616	21/11/2001	20/11/2002	Turbobcharger Delivery	CIP-Can & Insur P	30 days	

Figure 94 The Price Matrix

7. In the first column, register the set **Base Price** for each item in the Group, in the contract's currency specified in the **General** tab. This price is standard for the vendor and independent of the delivery location.
8. Register exceptions to any discount entered at Product Group level, by specifying the discount percentage in the appropriate cell.

For example, all items in Product Group 1 receive a 10% discount when delivered to any location in Delivery Location 1. Find the intersection of Location 1 and Product Group 1 on the matrix, and enter 10. You do not need to enter %. This discount then applies to all items in the contract group, and all delivery locations inside the location group. This value will show on each item and location matrix field. Perhaps there is an additional discount applying to a certain item on delivery to a particular location: register case-by-case exceptions on items within a Product Group in the appropriate cell.

Occasionally there might be a surcharge on certain items or delivery locations. In this case, enter the + sign before the value.

Double-clicking on any intersection in the matrix opens a dialog for that cell, where you can register the following information:

- **Fixed Price** - an alternative base price based on this delivery location
- **Percent Change** - a discount or surcharge on top of the base price by percentage
- **Price Change** - a discount or surcharge on the base price in a fixed amount (currency and value)

- Uncheck the **Can Deliver** checkbox if the selected item cannot be delivered to this location
9. **Save** the matrix. On the top left side of the matrix are two radio buttons: **Net Prices** and **Percentage**. Click either to change the matrix view. The Percentages view shows the final costs on each item after discounts and surcharges.

6.11.5 How Prices and Discounts are Applied

Discounts can be defined at various levels on the same Purchase Contract:

Purchase Contract level - use the Discount tab to apply pricing and discount information across the entire contract regardless of zones and groups. Discounts added here apply in addition to anything added at item or location level.

Zone level - discounts entered on the Delivery Locations tab apply to items delivered to the Zone, sub-zone or location the value is entered on.

Product Group level - click any of the Product Group names in the Contract Items tab to define a discount which will apply to all items in the group, regardless of delivery location.

Case-by-case in Matrix cells - register exceptions to any price on a case-by-case basis. For example, a 5% discount could be applied to a Zone. However, an individual location inside of that zone could have a 10% discount on an entire Product Group or certain items, and so for that Product Group or item you would enter 10% on the intersecting cells in the matrix.

Pricing definitions are always inherited from the highest level down, unless exceptions are defined on a lower level. Information applied to a cell in the matrix will not be overwritten by Contract-wide information. For example: Product Group 1 has a discount of 10% registered, but when any of those items are supplied to Location A, the discount is 15% as defined on the matrix at the intersection of Product Group 1 and Location A.

When AMOS calculates the final item price it verifies if any discounts, surcharges, etc exist. If the following variables are satisfied depending on the pricing information set, the surcharge/discount specified in the matrix is applied:

- **Quantity** - verifies the procurement document purchase quantity, for example if the quantity required for discount is 100 and the purchase order is for more than 100 items, the discount is applied.
- **Price** - verifies the procurement document purchase price, for example if the total price required to receive a discount is met or exceeded, the discount is applied.
- **Minimum Buy Commitment Quantity** - checks the quantity which has already been bought. All forms for this supplier are checked where the contract dates are valid.
- **Minimum Buy Commitment Price** - checks the total price which has already been committed. All forms for this supplier are checked where the contract dates are valid.

6.11.6 Approving and Issuing a Contract

Purchase Contracts in AMOS are Work Flow driven. Using the pre-defined Work Flow, only contracts which have been approved and issued will be available for use with Purchasing forms. When a contract is complete and all of its details are registered, select it in the list:

1. Go to **Options > Approve**. The Approve dialog opens.
2. Click **Grant Approval**, and **OK**.
3. You return to the main window and the contract is now approved. Click **Save**.
4. Once approved, to issue the contract select it again.
5. Go to **Options > Issue**. The Change Issuing dialog opens.
6. Click **Grant Issuing** and **OK**. You return to the main window and the contract is now ready for use.
7. **Save** the issued contract.

Approvals and issuing can be revoked in the same dialogs.

6.11.7 Contracts and Purchasing Forms

After registering and issuing an active contract in the Contracts window, it is ready to be applied to Purchasing Forms in the **Forms window**.

6.11.7.1 Filtering Forms by Contract

To find all order forms linked to a specific contract, lookup the **Contract** number on the **Basic tab** of the Forms filter. AMOS will return a list of forms linked to the contract you have specified.

In the **Advanced tab** of the Forms filter, check the **Forms not linked to a contract, but where the goods line items are found on a contract** checkbox to filter for a list of any registered Forms not yet linked to a contract but containing items which are listed on a valid contract.

6.11.7.2 Applying a Contract

To link a valid contract to an order form:

1. Go to **Purchase > Forms**. The **Forms window** opens.
2. Select a form.
3. Go to **Options > Apply Purchase Contract**. This option is only available if no Purchase Contract is already tied to the form.
4. When no contract has already been linked, you will be presented with a list of contracts to choose from which meet the following criteria:
 - The current date falls within the valid start and end dates of the contract.
 - The contract is Approved and Issued.
 - The vendor on the contract is the same as the vendor on the form.
 - One or more items on the contract are listed on the purchase form as line items.
5. If only one contract fulfils these criteria, you will be prompted to apply it and can click **OK**. Otherwise, a list of contracts appears and you can select one. If no contracts exist you will be informed of that.
6. Once a contract has been applied to a purchase form in the Forms window, that form will appear in the Contract window in the **Purchase Forms tab**. All line items purchased using the selected contract will appear in this window as well in the **Purchased Items tab**.

When you select a contract, it is possible that not all the lime items on the form are also listed as items on the contract. Whether or not you can mix contracted and non-contracted items on the same form for one vendor depends on if the **Allow Non-Contract Item** checkbox on the **Contract General tab** for this contract is checked. If not, AMOS will prompt you to split the non-contracted line items to another form for the same vendor. The contracted items will remain on the original form.

6.11.7.3 Removing a Contract

If a contract has already been applied to a form you can remove it:

1. Go to **Purchase > Forms**. The **Forms window** opens.
2. Select the form.
3. Go to **Options > Release from Contract**.
4. AMOS presents the Release from Contract dialog. Choose which prices to revert to: Quotation Prices, Vendor Prices or Current Line Item Prices. If a Quotation for this form from the selected vendor exists, Quotation Prices is checked by default. If no prices exist, none will be listed.

If you change the vendor...	...on a contract-based purchase order AMOS will remove reference to the contract, issuing a warning first. If a contract is available for the new vendor you will have the option to apply it.
If you change the delivery location...	...on a contract-based purchase order AMOS will warn you that the prices will be updated accordingly. If the vendor does not deliver to the new delivery location according to contract, AMOS will inform you that the contract will be removed from the purchase order, and ask you whether to use Contract, Quotation or Supplier prices.

6.12 Custom Clearance

Using the Custom Clearance module fulfills the particular Custom Clearance operations that are applied in certain countries, where petroleum companies, for example, do not pay any duties for goods imported with a valid contract. These companies obtain government concessions for a set time period, and can then use materials such as equipment and parts, imported from abroad without paying duties. The contracts, forms, declarations, and the process of purchasing, delivering and using the imported goods, must all progress by certain rules. Registering and tracking all related information in the AMOS Custom Clearance module, integrated in the purchasing process, ensures that all procedures are followed and requirements are met. In the Custom Clearance process, it is most important that you can trace the date each step was performed, to have a clear Lead Time Overview (time from placement of purchase order, to item reception). The Custom Clearance (hereafter referred to as CC) process is outlined in the steps below:

1. A CC Contract is created between a buyer and a sub-contractor. It is then submitted to the proper authorities (ie the government office for controlling concessions). When approved and registered, the concession is valid for use. The details should be entered in the AMOS Custom Clearance Contract window.
2. Materials can be purchased abroad under the approved concession, without paying duties, for use by the buyer's sub-contractor. Dates regarding the ordering and purchasing should be entered in the AMOS Custom Clearance Forms window. From this step forward, all information and dates should be updated in the CC Forms window, as the process continues.
3. The vendor sends the purchased material to the buyer, in one or more deliveries. The materials are transferred to a free zone and held there awaiting clearance and 'actual' delivery.
4. Delivery reports, referencing the CC Contract (between buyer and sub-contractor) to which the received goods are under, must be submitted by the buyer to the same government office.
5. If approved under the concession, the government office issues a Custom Declaration (if denied, the buyer must pay the duties).
6. The buyer then submits the Custom Declaration to Custom Authorities.
7. The materials are moved from the free zone and delivered to the destination.
8. At the expiry of the CC Contract, together with the sub-contractor, Custom Authorities will classify the material as Asset or Consumed. This finalises the contract. Material classed as Asset can be re-exported, or transferred to another sub-contractor under another valid contract, or, the duty can be paid on it and it can then be kept. For materials deemed Consumed, no action is taken for those of low value, and for those of high value, loss and damages incurred are reported.
9. The 'Settlement of Finalisation', a document finalising the Custom Declaration, must be created.

6.12.1 Creating a Custom Clearance Contract

A Custom Clearance Contract must be created between a buyer and a sub-contractor and approved by the appropriate governmental authorities before you can begin importing materials for the sub-contractor's use, duty free. When approved and registered, the concession is valid for use. Its details and information can be maintained in this window, until its expiry.

To create a Custom Clearance Contract:

1. Select **Purchase > Custom Clearance Contracts**. The filter appears.
2. If you are looking for an existing contract, enter details here to narrow your search. Otherwise, just click **OK** to proceed to the window.
3. The window opens, containing a list of any existing contracts in the bottom part. Click the **New** button on the toolbar to empty the fields for new data.
4. Fill in the fields on the **General** tab first. Open the **Details** tab to add any further information necessary.
5. Using the buttons in the **Attachment** tab, you can add an external file - for example, a scan of the contract.
6. The **Forms** tab is read-only. It shows the list of forms that are connected to the selected contract, in the case of contracts that already exist. The connected forms are linked to the contract in the Forms window, Additional Info tab (see section 6.3.3). To view a form, select it and click the **View** button. The Form will open in the Forms window.

7. **Save** your information.

6.12.2 Creating a Custom Clearance Form

Custom Clearance Forms contain all the details about the Customs Declaration, and the Custom Clearance Contract and processes, for the sub-contractor. These forms are very important for maintaining records of all the dates involved in the Custom Clearance process.

Upon receipt of a new Customs Declaration, you create a CC Form here, and then open the existing record and enter the date and information applicable to each step of the process: for example, the date the CC Contract is Submitted to the authorities, the date it is Processed, the order forms linked to the contract, the date the items arrive in the Free Zone, etc.

To create a new Custom Clearance Form:

1. Select **Purchase > Custom Clearance Forms**. The filter appears first. If you are looking for an existing form to view or maintain its information, enter details here to narrow your search. You can search by various dates in the process, or by details such as the contract number the form belongs to, etc. Click **OK** to proceed to the window.
2. Any forms that already exist, will be listed in the bottom half of the window. Click the **New** button on the toolbar to empty the fields for new data.
3. Use the **General** tab to fill in all the details as they appear on the Customs Declaration.
4. Click the lookup button to choose the CC contract which this Declaration applies to.
5. Use the **Date** fields to enter the dates applicable to the CC contract so far - the date it was Created, the date it was Submitted to the governmental authorities, etc. You will need to add to these fields each time another step is completed.
6. Use the **Details** tab to add any extra information.
7. The **Attachments** tab is for connecting external attachments, such as a scan of the Custom Clearance Contract, or the Customs Declaration.
8. Remember to **Save** frequently.

6.12.2.1 Adding Forms to a Custom Clearance Form

1. Open the **Forms** tab, and click the **New** button if you have any forms, such as orders or quotations, to attach to the CC Form. The Forms linked here will appear in a read-only list, in the Forms tab of the Custom Clearance Contract window (see section 6.12.1) , for the appropriate contract. To view a form already there, select it and click the **View** button and the Forms window opens.

6.12.2.2 Adding Expenses to a Custom Clearance Form

2. Open the Expenses tab, and click the **New** button to make a new line. Use the drop-down lists to select the **Type** and **Cost** of the Expense(s) related to this Custom Clearance operation - these are derived from the Expense Type register and could include things like Duty, Storage Fees, Transportation, etc.

6.12.2.3 Custom Clearance Forms Workflow

Custom Clearance Forms are Workflow driven, and the Workflow Activities tab displays any workflow operations performed on the selected Custom Clearance Form. Whenever the form progresses to a new stage, ensure that its workflow status is updated.

For example, you have an existing CC Form with status Submit. This indicates that the CC Contract details have been submitted to the appropriate government authorities. Then you receive approval from the authorities for the contract. At this point, you would enter the date in the **Processed Date** field on the General tab, and then change the workflow status:

1. If you have not saved already, **Save** the selected record now.
2. Select **Options > Workflow**. A dialog opens.
3. Choose the appropriate action that leads to the status 'Issued' (for a contract that has been approved). Click **OK**, and the status is updated.

4. The new status appears in the General tab, and the Workflow actions are recorded in the **Workflow Activities** tab.

6.12.2.4 Custom Clearance Items and Finalisation

In the Custom Clearance Forms window, select **Options > Items**, to open the corresponding window. The line items for the selected CC Form are listed here.

Select a line item and use the lookup buttons to enter details regarding the item's:

- **Delivered Date** (date it arrived at the warehouse).
- **Transferred Date** (date it was re-exported, or transferred to a free zone).
- The **Quantity** of the item, Duties Paid (if any), and **Status**.

Note

It is possible to change the Status of more than one item at once. Tag the items to change status for, and select **Options > Set Status for all items**. Proceed to change the status as you would for just one item.

- **High Value** (in the case of loss or damage to an item of high value, reports must be provided to the authorities during Finalisation).

The **Finalised Info** tab contains the Finalisation records for the selected item. One item can have any number of records. Clicking the **Insert** button allows you to enter a new record, when an item is finalised.

To complete a Finalisation record:

1. Select a **Finalise Type** – for example, is it an Asset (re-usable, to be exported again)? Or is it Consumed (damage or used)?
2. **Expense Type** – select the type of expense related to the item (if you have to pay for transportation or duty, on the item, for example).
3. Select the **Quantity** of finalised items, **Currency Code** and **Receiver ID**. The **Unit** field is read-only and comes from the line item record.
4. **Save** the information.

6.13 Typical Purchasing Questions

This section helps you to quickly find the answers to some typical purchase tracking questions.

It is assumed that you have started AMOS and have correctly set the installation and department you want to look at.

Are there goods wanted that have not been requisitioned?

1. Select **Stock > Wanted**.
2. Click **OK** in the filter.
3. In the list at the lower half of the Stock Wanted window, compare the values in the column headed **Wanted** with the values in the column headed Outstanding. You can scroll through the list to see all the values.

Are any requisitions waiting for the purchaser's attention?

Once a purchaser goes to work on a requisition, the form type should normally be changed to query or purchase order, so all you will normally have to do is list the requisitions.

1. Select **Purchase > Forms**.
2. In the Forms filter- Advanced tab, check only form type Requisition Form and all the Form states (Active, Parked, etc.)
3. Click **OK**.

Which purchase orders need to be approved?

Until an authorised person registers their approval of the form, the approval date field is empty. Although the form is normally approved when it has the type purchase order, it is also possible to approve the purchase while the form is set to requisition or query. To list forms that have not yet been approved:

1. Select **Purchase > Forms**.

2. In the Forms filter- Basic tab use the Approval drop down list to select 'Awaiting approval'.
3. In the Forms filter - Advanced tab, check all form types (Purchase Order, Requisition Form and Query) and the Form state Active for each form type.
4. Click **OK**.

Which purchase orders do we need to send?

1. Select **Purchase > Forms**.
2. In the Forms filter - Basic tab use the Approval drop down list to select 'Approved'.
3. In the Forms Filter - Advanced tab, check only form type Purchase Order and the form state Active.
4. Click **OK**.
5. In the Forms window, look at the list in the lower pane. Scroll to the right until you see the **Ordered** column.

If a form does not have a date in the ordered column it is ready for sending.

What deliveries are we expecting?

In AMOS M&P, deliveries are assumed to be from the vendor to an address designated by the central purchasing authority. Deliveries can be expected on purchase orders that are confirmed and active. When an order is confirmed, the vendor informs the purchaser what deliveries to expect, and the purchaser records this information in the Delivery window, creating one line for each delivery. There is a separate delivery window for each purchase form, so deliveries must be checked form by form at this time.

1. Select **Purchase > Forms**.
2. In the Forms filter - Advanced tab, check only form type Purchase Order and the form state Active.
3. Click **OK**.
In the Forms window, the list will display those forms where deliveries can be expected.
4. Select a form in the list and select **Options > Deliveries**.
5. In the list at the lower half of the Quotations window, look for empty spaces in the column headed **Rec. dest.** This indicates that a delivery is expected.
6. Return to the Forms window, select a new purchase order, and so on.

Are there any deliveries we need to plan transport for?

1. Select **Purchase > Transport Documents**.
2. Click **OK** In the filter to list all Transport Documents.
3. From the Transport document window, select **Options > Unconsolidated deliveries**.
The deliveries in the list are those that have not yet been assigned to a transport form.

What orders are waiting for confirmation that goods have been received?

An order can be filed when all the line items it contains have been either cancelled or received.

1. Select **Purchase > Forms**.
2. In the Forms filter - Advanced tab, check only form type Purchase Order and the form state Active.
3. Click **OK**.
4. In the Forms window, scroll to the right until you see the columns marked **Confirmed** and **Recv'd**. Those orders that have a date in the confirmed column, and either none or a blue coloured date in the received column are the ones to take a closer look at.
5. For each form, select **Options > Line Items**.

The header of the Line items window allows you to record the items received or to cancel them.

Note

Dates in the **Received** column that are coloured blue indicate that the form is only partly received.

Are there any orders ready to be filed?

1. Select **Purchase > Forms**.

2. In the Forms Filter - Basic tab use the Receipt Condition drop-down list to select 'Fully Received'.
3. In the Forms Filter - Advanced tab, check only form type Purchase Order and the form state Active.
4. Click **OK**.
5. The Forms window will display all active purchase orders that are now complete and can be filed. Convert the form status to Filed, and save your changes.

Chapter 7 Budgeting

7.1 Introduction

This chapter describes how you can use AMOS M&P to create and follow up a budget.

- Section 7.2 describes the budgeting functions.
- Section 7.3 covers how you create a budget, and section 7.5 the optional feature of using budget specifications.
- Section 7.6 describes how to edit a budget code.
- Section 7.8 explains the various factors that influence the budget.
- Section 7.7 explains the Custom Budget Impact functionality.
- Section 7.10 is an overview of the Budget Hierarchy.

7.2 What Budgeting Can Do for You

AMOS M&P can help you monitor costs compared to the yearly budget. Naturally, you must start by telling the system what the budget is. The budget is set up using budget codes, which may correspond to the various account numbers from the accounting system. Your organisation may also choose to use an optional function to enter budget specifications.

Once the budget codes have been established, and actual amounts have been entered for each one, AMOS M&P may be used to automatically compare the amounts actually spent to the budgeted amounts. The budget is divided into three **Budget Classes**:

- The **Purchase** budget class is used for purchased items, and the amounts for following up the budget are transferred from Purchase Orders.
- The **Stock** budget class is used to track the cost of stock consumed, and amounts from Stock Transactions are transferred to the budget.
- The **Maintenance** budget class is used to track the resource costs spent on maintenance, and amounts are transferred from the Maintenance Log.

7.3 Creating a Budget

This is how you add a new Budget Code:

1. Select **Tools > Configuration > Budget > Budget Codes**. AMOS M&P displays the Budget Codes window:

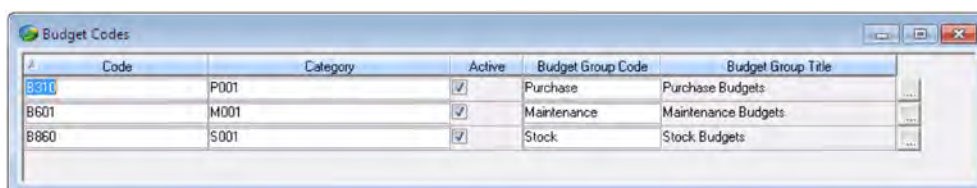


Figure 95 The Budget Codes window

2. Click **New** in the toolbar to create a new budget code.
3. Type the **Code** and **Title** in the relative fields and make sure that the **Active** checkbox is checked.

The **Budget Group** columns are used to create a budget hierarchy. Using budget hierarchies is described in section 7.10.

Note

To be able to use a budget code you must have access to it defined for the group of users to which you belong. This is administered at **Tools > Configuration > Access Control > Groups > Options > Budget Code Access**.

Once you have created the budget code you need to add the details of the budget:

1. Select **Budget > Budget**. AMOS displays the filter window.
2. Click **OK** to list all current codes, or enter details in some fields first if you want to restrict the list to only those codes that are of interest to you. AMOS M&P displays the Budget window.

Note

The Budget window has an associated Options menu. Most of these options are discussed in the following sections, and are also listed in section 8.4.1 of this guide.

3. Click **New** in the toolbar to create a new budget. This will open the Budget Overview window:

Figure 96 The Budget Overview window

4. Use the lookup button to select the required **Budget Code**.
5. Fill in the various fields in the **Budget Overview** window. The main fields of this window are explained below.
6. Remember to save the budget when you are finished. When you close the Budget Overview window you will return to the Budget window:

Figure 97 The Budget window

- The Budget **Category** is the title of the budget you are creating. This is inherited from the Budget **Code** selected from the lookup list.
- The Budget **Warning** field allows you to enter a 'threshold amount'. If the accumulated spending exceeds this amount, a warning is given. A value of 90% will produce a warning when 90% of the specified budget has been spent. A value of 110% will have the program displaying a warning when the budget code has been overspent by 10%. The warning is displayed as an asterisk (*) in the warning column of the budget window.

- Use the **Revised** field to enter the date for a revision of a budget code. Use the **By** drop-down list to specify the user who made the revision.
- The Budget **Model** drop-down list contains three options and you can base different budget codes on separate budget models:
 - **Budgeted Amount** is used to specify a sum for the entire year.
 - **Evenly Allocated** budget distributes the budget sum evenly over each period.
 - **Manually Allocated** budget makes it possible to enter the budget sum directly in the Budget Overview window with separate amounts for each month of the budget year.
- The **Budget Class** drop down list contains the options Purchase, Stock and Maintenance.
- The **Access** drop-down list contains two values: Open and Restricted. Selecting Restricted ensures that only user groups who have been granted access can update the selected budget code.
- If the **Budget Commitment Control** functionality is enabled in your system, the Budget Overview window will contain an extra column called Forecast. Refer to section 7.9 for more information.
- The columns in **Monthly** totals show information about monthly consumption for the budget code.
- The columns in **Accumulated** show accumulated expenses, the corresponding budget figures, and the variance.

7.4 Copying a Budget

to create realistic budgets, AMOS M&P allows you to copy budget information. Select **Options > Copy** in the Budget window to enter the **Copy Budget Codes** dialog box:

- Specify the source and destination for the copying operation in the drop-down lists at the top of the dialog box.
- The two look-up lists in the frame **Range to Copy** are for specifying a range of budget codes to include.
- If you check the **Copy** budget figures box, the field **Adjust budget values by [%]** becomes available. Use this to insert a percentage value by which each amount in the target budget increases compared to the source budget.
- If the original budget contains any notes and/or a template, these will be copied automatically with the budget itself. Uncheck the **Copy the budget details text/template** box if you want to prevent this.

7.5 Using Budget Specifications

AMOS M&P optionally allows your organisation to enter budget specifications for the budget codes. Three system parameters control this option, and they are 'Use Specification for Stock/ Purchase/Maintenance Budget'. If the parameters are set to TRUE, the corresponding budget specifications are used to update budget figures for the respective budget classes.

Note

These parameters are found at **Tools > Configuration > Parameters > Options > Budget**. Find more details about system parameters in the *AMOS Business Suite Reference Manual*.

Note

To use the budget specification functions described in the current section, the Parameter setting for 'Start of Financial Year' must contain the date format.

7.5.1 Entering a Budget Specification

To define a specification for a budget code:

1. Select the **Code** in the Budget window.
2. Select **Options > Specification**.

The Budget Specification window opens. The Budget Specification window is for adding items to be charged to the selected budget code.

Budget Specification [B310 - P001]

Code: B310 Class: Purchase
 Category: P001 Status: Preliminary
 Model: Evenly allocated budget Financial Year: 2010

Budget 2008: 1,102,500.00 Budget 2009: 0.00 Budget 2010: 0.00
 Actual 2008: 0.00 Actual 2009: 0.00

Description	Cost / USD /	Period
2 New PCs	10,000.00	January
2 new printers	1,400.00	February

Figure 98 The Budget Specification window

- In this window, click **New**, and enter one line each time you want to register an item that is to be charged to the selected budget code.

Note

It is only possible to enter and edit these figures in this window.

7.5.2 Setting Budget Status Codes

The **Status** field is used to indicate which status a budget code has reached in the budgeting process.

A budget code may have one of three statuses:

- Preliminary** (the default value for new codes)
- Approved**
- Parked**

A budget code automatically receives the status Preliminary at the time it is created, typically at an early stage in the budget process. The status changes to Approved when this stage is reached. If a budget code is withdrawn from the budget on a temporary or permanent basis, change the status to Parked.

If you have the sufficient access level, you may convert the status of a budget code.

- Select the **Code** in the Budget window. You can change the status of multiple budget codes in the same operation by tagging the desired budget codes. Then select **Edit > Select All** to tag all of the budget codes to batch convert them.
- Select **Options > Convert** to open the Convert Budget Status dialog box:

Convert Budget St

Status: Parked
 OK
 Preliminary
 Approved

Figure 99 The Convert Budget Status dialog box

- Select the new status from the drop-down list.
- Click **OK**, and remember to save the new status when you return to the Budget window.

7.6 Editing a Budget

Once you have created budgets, you may edit them if needed:

1. Open the Budget window.
2. Double-click on a budget code, or select the line of the Budget **Code** and **Category** you want to edit, and go to **Options > Overview**.

Budget Overview [B310 - P001]

Code: B310 Class: Purchase
Category: P001 Status: Preliminary
Warning [%]: 0.00 Forecast: 0.00 Access: Open
Revised: By: System Administrator Financial Year: 2010
Model: Evenly allocated budget
Budget For Year: 6,000.00

	Monthly totals / USD /				Accumulated / USD /		
	Committed	Paid	Total	Budgeted	Total	Budget	Variance
Jan	0.00	0.00	0.00	500.00	0.00	500.00	500.00
Feb	0.00	0.00	0.00	500.00	0.00	1,000.00	1,000.00
Mar	0.00	0.00	0.00	500.00	0.00	1,500.00	1,500.00
Apr	0.00	0.00	0.00	500.00	0.00	2,000.00	2,000.00
May	0.00	0.00	0.00	500.00	0.00	2,500.00	2,500.00
Jun	0.00	0.00	0.00	500.00	0.00	3,000.00	3,000.00
Jul	0.00	0.00	0.00	500.00	0.00	3,500.00	3,500.00
Aug	0.00	0.00	0.00	500.00	0.00	4,000.00	4,000.00
Sep	0.00	0.00	0.00	500.00	0.00	4,500.00	4,500.00
Oct	0.00	0.00	0.00	500.00	0.00	5,000.00	5,000.00
Nov	0.00	0.00	0.00	500.00	0.00	5,500.00	5,500.00
Dec	0.00	0.00	0.00	500.00	0.00	6,000.00	6,000.00

Figure 100 The Budget Overview window (2)

3. Edit the budget code you have selected, and remember to **Save** your changes when you are finished.

7.7 Budget Prognosis

After establishing the original budget there may be need for some adjustments. The Prognosis function enables you to create new, updated versions of the budget based on actual consumption and turnover. To enter the Budget Prognosis window, select a budget code and go to **Options > Prognosis**. The following window opens:

- A Prognosis budget is controlled by the same mechanisms as the regular budget. It uses one of the same three budget modes.
- If the Specification parameters are set to TRUE, specifications amounts are used to calculate a budget prognosis. To calculate, select the prognosis to work with and go to **Options > Specification**. Then enter a specification as for the usual budget.
- You can copy the relevant specifications from previous prognoses. For the first prognosis created, copy data from the budget code itself. For subsequent prognoses, copy data from the previous version. To copy data, select **Options > Copy Specification**.
- You cannot change a budget Prognosis after the status has been set to Approved.

7.8 Elements Which May Affect the Budget

As described above, there are three different budget classes in AMOS M&P: Purchase, Stock, and Maintenance. Depending on which class is selected, the budget is affected in ways described in the sub-sections below. In addition, the system may be set up in such a way that Vouchers automatically influence budget figures. This is described in section 7.8.4.

7.8.1 How Purchase Orders Affect the Budget

Purchase orders contain several options that interact with the budgeting function. If a purchase order has the status Active or Filed, the amounts in certain fields (see below) are automatically transferred in order to monitor expenses compared to the budget. You can read more about working with purchase orders in Chapter 6.

Note

This section describes the Purchase budget class. The two columns **Committed** and **Paid** in the Budget Overview window are only available for the Purchase budget class. The reason is that this budget class is intended for purchases made on a regular basis, where it is possible to estimate the expenses for a period. Thus, you normally select Evenly allocated budget from the Budget Class drop down list for such items.

A purchase order form contains the following fields, which interact with the budget function:



The screenshot shows a 'Purchase Form' with the following fields:

- Budget Date: 02/09/2002
- Budget Code: (empty)
- Cost Overview section:
 - Estimate: USD 0.00
 - Vendor Estimate: USD 0.00
 - Part Paid: USD 300.00
 - SHIPPING: USD 0.00
 - Final Total: USD 0.00
 - Currency: USD (dropdown menu)

Figure 101 The budget fields of a Purchase Form

- Use the lookup to select the **Budget Code** and establish the link between the items purchased on the purchase order and the budget code that has been defined.
- Use the **Estimate** field to estimate the total cost for the selected Budget Code in this purchase order, whereas the **Part Paid** field is for recording payments that have been made. In the example above, the column Committed in the Budget Overview window would show an amount of 800 USD: This amount is calculated by subtracting the Part Paid amount from the Estimate amount.
- If the field **Final Total** is filled in, this will appear both in the **Paid** and the **Total** columns in the Budget Overview window, overriding whatever values are entered in the **Estimate** and **Payments** fields.

7.8.2 How Stock Transactions Affect the Budget

If the budget class Stock is selected for a budget, data is automatically transferred from stock transactions to the budget function. You can read more about working with stock transactions in Chapter 5. A stock transaction contains fields that are relevant to budget follow-up.

The budget code is used to identify the budget category to which the stock transaction amount should be posted.

7.8.3 How the Maintenance Log Affects the Budget

If the budget class Maintenance is selected for a budget code, data is automatically transferred from the maintenance log to the budget function. You can read more about working with maintenance in Chapter 4.

The maintenance log may contain information about resources used in completing a specific maintenance task. AMOS M&P may be set up in two different ways to keep track of such resources:

- The resources may be registered by **Discipline**, like Electrical.
- The resources may be registered by **Employee**, regardless of which task that employee actually performed.

7.8.4 How Vouchers May Affect the Budget

Section 6.8 describes the optional Voucher function in AMOS M&P. If the system parameter Use Vouchers to Update Budget is set to TRUE, amounts registered for vouchers automatically affect the budget to which they are assigned.

7.9 Budget Commitment Control

This functionality is split in two independent parts, described below.

7.9.1 Custom Budget Impact

It is possible to define Purchase Form costs against a budget as a **Forecast**, rather than a Commitment. This means that the form would not yet have an impact on the budget commitment, but it may have one, in the future. This functionality is enabled by its own set of parameters and access rights. When these parameters and access are set accordingly, an additional column appears in the Budget windows, called Forecast. This column appears in addition to the columns **Committed** and **Paid**. The Budget Formula window allows you to define the types and statuses of forms which will impact each of these three columns. The form status can affect the columns in different ways:

- **No impact** (set None) – the selected status will have no effect on the budget at all
- **Forecast** – the selected status will effect the Forecast column in the budget windows
- **Committed** – the selected status will effect the Committed column in the budget windows, and in turn, the Paid column, depending on which field the cost is registered against on the form

To enable this functionality, set the system parameter and access rights below, as follows:

1. Go to **Tools > Configuration > Parameters > Options > Budget > Allow User-defined Impact on Purchase Budget**.
2. The default setting is FALSE. Change it to TRUE by clicking the lookup button and selecting TRUE in the dialog that appears.
3. **Save** the setting. This allows users to custom define which form status (Split, Cancelled, Parked, etc.), affects which budget column (Committed, Paid or Forecast). A new field, Forecast, will appear in the Budget windows and on Budget reports.
4. Close the Parameters window, and go to **Tools > Configuration > Budget > Budget Commitment Formula**. The corresponding window opens.
5. This window contains columns in three groups:
 - **Type** – a list of form types: Purchase Order, Requisition Form and Query.
 - **Status** – the workflow statuses that apply to forms, such as Split, Cancelled, etc.
 - **Impact** – three lists with radio buttons: None, Forecast and Committed.

Note

If Purchase workflow is in use, the system will only provide the workflow status column to register the impact against.

6. Use this window to define whether or not each form/status combination will have an impact on either the Forecast or Committed column in the Budget windows, or no impact at all.
7. **Save** your settings and close the window.

7.9.2 Budget Warnings and Limits

In the Budget Hierarchy, at group level you can define **Approval Warning** percentages, and **Approval Limits**, for each Budget Group within the hierarchy. The percentages apply on the accumulated budget for the group they are registered against.

When Approval Warnings and Approval Limits are defined:

When a user attempts to approve a form, the system will verify the percentage against the accumulated budget for the year for the budget group the budget code on the form belongs to. If the cost of the form plus the outstanding commitments on that budget group exceed the warning percentage of the accumulated budget for the year, the system will provide a warning. If the Limit percentage is reached, the system will not allow the approval.

For example:

1. Your system contains a Budget Group which is accumulated at a value of 10,000. The Commitments against this budget are at 5,000. The Warning percentage for this group is set at 90% and the Limit is set at 95%.

2. This means that when a user tries to approve a form with a value that will bring the amount committed against the budget within 90% of the accumulated budget for the year (in this case, a value of 4,300), he will receive a warning.
3. If he tries to approve a form with a value that will bring the amount committed against the budget within 95% of the accumulated budget for the year (in this case, 4,600 or more), AMOS will not allow the approval.

To enable Budget Warnings, set the parameters and access rights as described below:

1. Go to **Tools > Configuration > Parameters > Options > Budget > Use Budget Control When Approving Forms**. By default this parameter is set to FALSE. Set it to TRUE, by clicking the lookup button and selecting TRUE from the dialog that appears.

This switches on the Budget Warning functionality.

2. Remain in the same window and folder, and go to the parameter **Interrupt Approval Warning/Limit Adjustment When Sub-Group Exists**. The default setting is INTERRUPT. The setting of this parameter indicates if the system should automatically update warning percentages on sub-group levels that may belong to groups, when the percentages are updated at group level. The possible settings are: Suppress with yes, Suppress with no, and Interrupt.

Save your settings, and close the parameters window.

3. Go to **Tools > Configuration > Groups and from the Options menu, select Access Control**.
4. Open the Fields tab of the Access Control window. Scroll down to the Budget section and you will see two settings: **Approval Limit** and **Approval Warning**. Make these fields read-only.
5. In the same window, open the Functions tab. Scroll down to the Purchase section. The first two controls are: **Approve Purchase Order Beyond Budget Control Limit** and **Approve Requisition Form Beyond Budget Control Limit**.
6. Allow the users who belong to groups with access to Commitment Control, to bypass the functionality. These users will then be able to approve forms regardless of the budget values and warning percentages.
7. Save your settings, and close the window.

7.10 Using Budget Hierarchies

With the release of AMOS M&P version 6.0, a Budget Hierarchy was introduced. This was to enable organisations to create a budget hierarchy that reflects their own financial reporting and to enable closer monitoring of budget usage. It is unlikely that you will be authorised to create or modify the budget hierarchy but you may have access to view all or part of it.

The following illustration shows an example of a budget hierarchy:

	Monthly totals / USD /				Accumulated / USD /		
	Committed	Paid	Total	Budgeted	Total	Budget	Variance
Jan	0.00	0.00	0.00	500.00	0.00	500.00	500.00
Feb	0.00	0.00	0.00	500.00	0.00	1,000.00	1,000.00
Mar	0.00	0.00	0.00	500.00	0.00	1,500.00	1,500.00
Apr	0.00	0.00	0.00	500.00	0.00	2,000.00	2,000.00
May	0.00	0.00	0.00	500.00	0.00	2,500.00	2,500.00
Jun	0.00	0.00	0.00	500.00	0.00	3,000.00	3,000.00
Jul	0.00	0.00	0.00	500.00	0.00	3,500.00	3,500.00
Aug	0.00	0.00	0.00	500.00	0.00	4,000.00	4,000.00
Sep	0.00	0.00	0.00	500.00	0.00	4,500.00	4,500.00

Figure 102 An example of the Budget Hierarchy

The hierarchy allows you to view the cumulative budget overview figures at any folder level of the hierarchy. When you select an actual budget (lowest level) the window functions in the same way as the budget overview described in section 7.3.

Section 9.3.6 contains more information about working with a Budget Hierarchy.

7.11 Generate Budget Codes

Note

The Generate Budget Codes function is located in the **Tools > Configuration > Budget >** menu from version 9.0 (M&P version 7.1) onwards.

Generate Budget Codes was introduced for AMOS M&P version 5.4.00 due to alterations in the way the application handles budget codes. If you have already upgraded all your installations to 5.4.00 or above or have begun using the application from this version, you should ignore this menu entry.

Note

It is very important that users of AMOS M&P who are upgrading to 5.4.00 or above from a previous version, should read the relevant release notes for the correct procedures when using this function.

Chapter 8 The M&P Options Menus

8.1 Maintenance Menu Windows

8.1.1 Components Window – Options Menu

- **Maker/Vendor** - once a Maker/Vendor is specified on the General tab, selecting the corresponding option opens the Maker/Vendor Address window.
- **Transaction Codes** - select **Options > Transaction Codes** to connect expenses to a specific budget dimension like Responsible or Project.
- **Stock Transactions** - AMOS keeps track of items moving in stock and purchase transactions. **Options > Stock Transactions** opens the Stock Transactions window showing transactions related to the selected component.
- **Component Status Log** - select **Options > Component Status Log** to open the Component Status Log window. Details of all changes to the selected components' status are displayed in the lower pane.
- **Archive** - select **Options > Archive** to access three different kinds of archive information on components transferred in from other departments (if parameter Create Component Archive on Transfer In is set to TRUE). The three Archive windows contain historical data from departments that previously owned the particular component. Because of this, the windows are Read Only. They show which department created each record.
- **Report Work** - select this option to report on work orders defined for the selected component. You will go to the Report Work window. If there are no work orders for the selected component AMOS assumes the work is Unplanned.
- **Work Flow** - update the work flow status for the selected component.
- **Activity Log** - open the Activity Log for the selected component.
- **Requisition Work** - unexpected work on a specific component is recorded in the Requisition Work window. To open the Requisition Work window, select **Options > Requisition Work**.
- **Copy** - copy an existing Component record.
- **Change Status** - to change the status of the selected component select **Options > Change Status**. Check the **Change status of sub-components also** checkbox to automatically change the status when the status of the parent component is changed. To transfer a component to another department, select Transferred from the **New Status** drop-down list. The Office installation can then transfer the component to its destination department. Changing the component status to Transferred or Scrapped causes AMOS M&P to cancel all outstanding work orders, including round work orders, unless reported as started.

8.1.2 Component Hierarchy Window – Options Menu

Most of the commands in this Options menu correspond to the ones found in the Options menu of the Components window. They are described above in section 8.1.1.

An additional option, **Show Indicators**, is available if you have the correct access and lets you see a linking icon next to every field on the Jobs tab in this window. The icon indicates if the field is affected by updates to the same field at Component Type Job level, or not. The **Link all to Type/Remove all Links** options let you toggle between linked and unlinked on all fields at once. Read about linked fields in section 4.5.

8.1.3 Functions Window – Options Menu

- **Install Component** - select **Options > Install Component** to choose a component to install into the function. See section 9.3.4.1 for more detail.
- **Remove Component** - select **Options > Remove Component** to remove the selected component from the function. See section 9.3.4.1 for more detail.

- **Copy Functions...** - select **Options > Copy Functions** and select from the list of functions those which you wish to copy to a new department. To change the department to which you are copying, click the lookup button to the right of the To Department field.
- **Change Status...** - change the status of a function.

8.1.4 The Function Hierarchy Window – Options Menu

- **Details** - select **Options > Details** to open the Full Description window. There is a corresponding toolbar button.
- **Function Counters** - select **Options > Function Counters** to register counters against functions. You can record cumulative counter readings for a function regardless of the component(s) performing it. Whenever a component installed in the function has its counter reading updated, the function counter increments by the same amount as the component. To view the function counter value Counter Overview window select **Maintenance > Counters > Overview**.
- **Component** - when the selected function in the Function Hierarchy window contains an installed component, the Component sub-menu in the Options menu is available. The commands available in this sub-menu correspond to the ones in the Options menu of the Components window. See section 8.1.1.
- **History** - select **Options > History** to view the history information registered for any component currently installed in the selected function. The History window shows the component number for each history line.
- **Stock Transactions** - select **Options > Stock Transactions** to view stock transaction information registered for any component currently installed in the selected function.
- **Maintenance Log** - select **Options > Maintenance Log** to view information about logged maintenance performed on any component currently installed in the selected function. When you select a line in the maintenance log, the Options menu updates to contain commands that provide access to the logged information such as any registered History, Stock Used, Resources Used and Counter Readings.
- **Archive** - the items available in the **Archive** sub-menu correspond to the ones found in the **Options > Archive** sub-menu of the Components window. They are described in section 8.1.1.
- **Change Status...** -select **Options > Change Status** to change the status of a function.
- **Work Flow** - perform a work flow action on the selected function.
- **Activity Log** - open the log for activity in the function hierarchy.
- **Report Work** - performed maintenance work is reported by registered components. However, you can also use the Functions hierarchy as the starting point for reporting work, if a component is installed in the selected function. When you select Report Work from the Options menu, AMOS M&P knows Function and Component numbers based on which function is selected.
- **Requisition Work** - you can select **Options > Requisition Work** to requisition work on the component currently installed in the selected function.
- **Install/Remove Component** - install or remove a component in/from a function. Selecting these options from the menu opens up a new dialog box.
- **Show Indicators** - this option is available if you have the correct access and lets you see a linking icon next to every field on the **Jobs tab** in this window. The icon indicates if the field is affected by updates to the same field at Component Type Job level, or not. The **Link all to Type/Remove all Links** options let you toggle between linked and unlinked on all fields at once. Read about linked fields in section 4.5. Read about linked fields in section 4.5.

8.1.5 Rounds Window – Options Menu

- **Create Work Order** - select **Options > Create Work Order** in the Rounds window to generate a new work order for the selected round. The new work order is given the status Issued. Work may be reported on a work order with the status Issued.

8.1.6 Work Orders Window – Options Menu

- **Job Description Attachments** - select **Options > Job Description Attachments** to view which work-related attachments are associated with a particular Work Order. You can add and delete related attachments from this window. To view the selected attachment, choose **Options > View Attachment**.

- **Maintenance Log** - record any work performed on work orders in the Maintenance log to keep track of parts and resources used, and progress. There is a separate command for the same log on the main Maintenance menu.
- **Component History** - this menu entry opens the Component History window.
- **Reschedule Log** - record rescheduled work orders in the reschedule log. To use the reschedule log, set the parameter 'Log Job Rescheduling' to True. To record the reason for rescheduling the job set the parameter 'Require Reason For Job Rescheduling' to True.
- **Function** - select **Options > Function** to go straight to the Functions window for the function and linked component that the selected work order is for.
- **Report Work** - open the Report Work window for the selected work order.
- **Issue** - planned work orders are issued from the Work Orders window. You can issue more than one order at a time by checking several at once.
- **Control** - unless a system parameter is set to file completed work orders automatically, you control and file the work orders in the Work Order window. From the Work Orders window, select the work orders to mark as Controlled and go to **Options > Control**, or click the corresponding toolbar button.
- **Copy** - select **Options > Copy** to copy an existing work order. The new work order receives the next available number in the series.
- **Create Sub-Work Order** - select **Options > Create Sub-Work Order** to create one or more sub-work orders from a parent work order. The new sub-work order receives the same number as the parent plus an additional letter, and the parent number is displayed in the main window. When presented with the dialog box, choose whether to copy the required details, parts and/or disciplines when you create the sub-work order. You cannot report a parent work order until all sub-work orders are completed or cancelled.
- **Order** - to purchase a work order as a service, select **Options > Order**. The selection window opens, where you can choose whether to add the work order as a line item to an existing form or to create a new form altogether. Check the checkbox if you want to list affected forms. When a new form is created it receives the next form number in the sequence and the work order details are included as a line item attached to the form. Additionally, you can choose to order parts for the Work Order as well: check the **Required Parts** checkbox and mark either **Quantity** or **Reserved**. AMOS will try to place work orders and their parts onto the same order form, where possible. Parts which have already been placed on a Purchase form, will not be ordered twice. You will be informed if some or all parts have already been ordered.
- **Add to Project** - select **Options > Add to Project** to add the selected work order onto an existing project.
- **Change Status of Permit to Work** - the user must acknowledge permits to work attached to the work order prior to carrying out the job. Select **Options > Change Status of Permit to Work** to open a dialog box where you can select the user to issue the work permit to, and click **OK**. To withdraw a work permit, select the radio button and click **OK**.

8.1.7 Work Planning Window – Options Menu

Note

The Options menu will appear differently depending on your system license. All of the commands are discussed in the following section. Keep in mind that not all these may be available to you.

- **Details** - select **Options > Details** to open a full description for the selected work order.
- **Attachments** - you can add and delete related attachments from this window. To view an attachment, choose **Options > View Attachment**.
- **Job Description** - select **Options > Job Description** to open the View Job Description window.
- **Job Description Attachments** - select **Options > Job Description Attachments** to view which work-related attachments are associated with a particular Work Order.
- **Required Parts** - select **Options > Required Parts** to view the list of parts connected to the selected work order. There is a corresponding toolbar button.
- **Required Disciplines** - to specify additional disciplines for the selected work order, select **Options > Required Disciplines**. There is a corresponding toolbar button.

To add a new line, click the **New** button, select the discipline from the first drop-down list and specify the number of hours. It is also possible to specify the estimated cost in the same window.

- **Included Jobs** - if a round is attached to a work order, the command Included Jobs is available in the Options menu. Select it to access the list of jobs that are included in the round.
- **Permits to Work** - select **Options > Permits to Work** to add, remove, view, acknowledge and print any permits to work attached to the job description associated with the work order.
- **Maintenance Log** - record any work performed on work orders in the Maintenance log to keep track of parts and resources used, and progress.
- **Reschedule Log** - record rescheduled work orders in the reschedule log. To use the reschedule log, set the parameter 'Log Job Rescheduling' to True. To record the reason for rescheduling the job set the parameter 'Require Reason For Job Rescheduling' to True.
- **Report Work** - opens the Report Work window.
- **Issue** - you can Issue Planned work orders here. Issue more than one order at a time by checking several at once. Select **Options > Issue**, or click the corresponding toolbar button to issue the required job(s). In the Issue Work Orders dialog box that appears select the preferred Output Format and how to sort the output.
- **Control** - unless a system parameter is set to file completed work orders automatically, you can control and file the work orders in the Work Planning window. Select the work orders to mark as Controlled and go to **Options > Control**, or click the corresponding toolbar button.
- **Change Status To** - select **Options > Change Status To** to change the selected work order's status to one of the listed alternatives.
- **Change Values...** - when several work orders are grouped into a selected list, you can alter the values of all of them simultaneously. Select **Options > Change Values** to open the Change Values window.
- **Change Status of Permit to Work** - selecting **Options > Change Status of Permit to Work** allows you to select a permit and change its status, by issuing or withdrawing it from selected employees.
- **Scale** - select **Options > Scale > Go to Today** to jump to today's date, regardless of the time scale in use. Selecting **Month**, **Week** or **Day** changes the way the timeline is displayed by altering the amount of time displayed in the timeline window.
- **Settings** - to access the window for setting up the calendar, select **Options > Settings**.
- **Refresh Disciplines** - select **Options > Refresh Disciplines** to refresh the corresponding tab at the bottom of the window without having to close and reopen the Planning window. Alternatively, you can press the **F5** key.
- **Fit to Window** - selecting Fit to Window from the Options menu causes the entire Planning period you are working in to be scaled to fit into your current screen. You can then view the entire period you are planning without scrolling the window.
- **Mark Required Discipline** - select this option to find all the corresponding disciplines for the selected Work Orders, and mark them.
- **Add Dependencies** - jobs can be linked together in Dependency chains in the Component Jobs window, and the resulting work orders are then linked in the same way. Selecting **Options > Add Dependencies** allows you to create new dependencies between work orders or alter existing ones.

8.1.8 Work Planning Maintenance Tasks – Options Menu

Some of the commands on the Options menu for Maintenance Tasks are the same as on the standard Work Planning window Options menu. See the section above for these items.

- **Mark Required Discipline** - select this option to find all the corresponding disciplines for the selected Maintenance Task, and mark them.
- **Delete Maintenance Tasks** - select this option to remove the selected planning. This allows you to re-generate it.
- **Generate Maintenance Tasks** - selecting this option allows you to extend the planning into the future. If you have changed the frequencies for the selected tasks, they will be overwritten. If the frequency remains the same, it will generate new instances of tasks.

- **Order Parts** - if the selected work order or maintenance task requires parts, select **Options > Order Parts** to generate order forms and put these parts on order. This will place all required parts for the selected work order or maintenance task onto a form, without taking current stock levels into consideration.
- **Do not refresh collapsed req. disciplines** - prevents update of disciplines whenever you move a task.

8.1.9 Job Planning Window – Options Menu

- **View Jobs** - selecting **Options > View Jobs** opens the Component Jobs window for the selected Job.
- **Scale** - select **Options > Scale > Go to Today** to jump to today's date, regardless of the time scale in use. Selecting **Month**, **Week** or **Day** changes the way the timeline is displayed by altering the amount of time displayed in the timeline window. There are corresponding toolbar buttons for these options.
- **Settings** - to access the window for setting up the calendar, select **Options > Settings**. The dialog box which opens is used to specify what the timeline should look like.
- **Add Dependencies** - jobs can be linked together in Dependency chains here or in the Component Jobs window, and the resulting work orders are then linked in the same way. Selecting **Options > Add Dependencies** allows you to create new dependencies between jobs or alter existing ones.

8.1.10 Projects Window – Options Menu

When you are in the Projects window the available Options menu contains many of the same choices as the ones found in the Work Orders window and the Work Planning window (see sections 8.1.6 and 8.1.7), with the addition of the following items.

- **Specification** - select to create specification preambles/postscripts with your printed report.
- **Copy Project** - opens up a new dialog where you can select which items to copy from a source project, and lookup an existing project to copy to, or create an entirely new project.
- **Move Project Job** - opens a dialog where you can move the selected job from one section to another. Choose the section from list of available **Destinations**. Move multiple jobs at once by tagging them before choosing the Move Project Job option.
- **Create Job from Job Description** - select a section to insert a job, and then go to this option. The requisition job dialog will open and guide you through.
- **Work Planning** - if the user has access to the Work Planning window, it can be opened from here. Upon opening directly, it will list only Project Jobs for the currently selected Project/Section.
- **Work Flow** - opens the Work Flow dialog for changing status on a project as work is carried out.
- **Order** - if the work order for a project job has its Responsible Discipline set to an external discipline, this option lets you place the work order on a purchase form to order it as a service. You can also choose to order the parts for the work order in this dialog: check the **Required Parts** checkbox and mark either **Quantity** or **Reserved**. AMOS will place the parts onto order forms. Parts which have already been placed on a form will not be ordered twice. You will be informed if some or all parts have already been ordered.
- **Create Project Compendium** - print your project in full with all information (Name, Title, Installation, Dates, Sections, Jobs, etc.) as a Word document.
- **Calculate Cost** - inside the Cost Overview tab, choose your settings and then select this option to automatically calculate and display the cost.

8.1.11 Report Work Window – Options Menu

- **Transaction Codes** - specify proper transaction codes for the work order.
- **Cost Centre/Account Code** - if your license includes the accounting module, you have the option to alter the Cost Centre and Account Code for rounds. The items that can be selected here depend on your access level.

- **Mark All...** - available when reporting on Rounds. Set the **State** for all jobs on the round at once, by choosing **Mark All...**. The dialog which opens allows you to select one of the three Job States - Not Done, Partly Done or Complete - to apply to all jobs at once.

8.2 Stock Menu Windows

8.2.1 Stock Types Window – Options Menu

- **Maker** - select **Options > Maker** to open the Maker Address window. This window is for specifying address and other relevant information for the maker of the stock item.
- **Preferred Vendor** - select **Options > Preferred Vendor** to open the Preferred Vendor window. This window is for specifying address and other relevant information for the preferred vendor of the stock item.
- **Stock Grades** - use the Stock Grades window to add stock grade information to the stock type. The information entered here is copied to order line items on purchase forms and is used to add supplementary information related to the stock item to the purchase form. The categories for stock grades are defined at **Tools > Configuration > Stock Grade Categories** and the stock grades available in each category are defined at **File > Open Register > General > Stock Grades**.
- **Register as Stock Item** - select **Options > Register as Stock Item** to register stock items of a selected type at an installation. The window contains a list of the defined installations and departments. Select one or more from the list and click **OK** to register new stock items of the selected type at the selected installation(s).
- **Link to Component Type** - stock Types can be connected to Component Types from the Component Types register. Select **Options > Link to Component Type** to establish a connection between the selected stock type and a component type.

Once stock types have been connected to component types, the **Used in Components** tab displays a list of the connections that have been made.

8.2.2 Stock Items Window – Options Menu

- **Details** - select **Options > Details** in the Stock Items window to open the Full Description window and enter a full textual description of the stock item. If it is connected to a template, you may be presented with a tailored layout containing fields and formatting.
- **Maker** - select **Options > Maker** in the Stock Items window to open the Maker Address window. This window is for specifying address and other relevant information of the maker of the stock item. In the Products tab you can list the different types of equipment available from a particular Maker.
- **Preferred Vendor** - select **Options > Vendor** in the Stock Items window to open the Preferred Vendor window. This window is for specifying address and other relevant information of the preferred vendor of the stock item. In the Products tab you can list the different types of equipment available from a particular Vendor.
- **In/Out of Stock** - when stock arrives at or is removed from a stock location, the movement is registered in AMOS M&P. Select **Options > In/Out of Stock** in the Stock Items window to open the window to register such movements.
- **Move** - move an item from one location to another.
- **Print Labels** - select **Options > Print Labels** in the Stock Items window to print labels for the selected stock items. The Labels dialog box is for specifying the number of labels to print.
- **Link to Component** - you can connect stock items to components from the Components register. Select **Options > Link to Component** to establish a connection between the selected stock item and a component.
- **Set Expiry Date on Transactions** - allows you to set a dummy expiry date on existing stock items redefined as perishable.
- **Recalculate Supply Time** - used with spare booking in the Jobs window. Recalculate the value in the Median Supply Time field here and the value can be used by AMOS when booking parts in advance.

8.2.3 Stock Wanted Window – Options Menu

- **View Stock Item** - opens the Stock Item window.
- **Show Outstanding Forms** - shows you where items which have been requisitioned but not received, are.
- **Used in Component Types** - view the list of all component types which use the selected stock item.

Add new component associations or delete old ones, according to requirements.

Alter the quantity of a selected stock item in use on a particular component.

Alter the stock item/component drawing number and position number here or in the Components window Parts tab.

- **Generate Forms** - create purchase forms for wanted quantities.
- **Calculate Wanted Quantities** - automatically determine the quantities needed to meet stock level requirements.

8.2.4 Stock Transactions Window – Options Menu

- **Transaction Codes...** - use **Options > Transaction Codes** to connect stock transaction expenses to specific budget dimensions such as a particular project or an individual user.
- **Reverse Transaction...** - select **Options > Reverse Transaction** to reverse a transaction made in error or to return incorrectly delivered goods.
- **Account Log** - select **Options > Account Log** to view the account transactions linked to the selected stock transaction.
- **View Form/Work Order/Component** - opens the related window, if applicable.

8.2.5 Transfer Documents Window – Options Menu

- **Details** - selecting **Options > Details** opens a free text screen to enter details regarding the transfer document.
- **Line Items** - select **Options > Line Items** to open the Transfer Line Items window. Use this window to select which stock items to include in the transfer document. This window has its own Options menu - see section 8.2.5.1.
- **Submit** - submit or reject a transfer document.
- **Change Approval** - approve or revoke approval for a transfer document.
- **Transfer** - transfer the stock (donating installation).
- **Receive** - receive transferred goods (recipient installation).

8.2.5.1 Transfer Line Items Window – Options Menu

Selecting **Options > Line Items** in the Transfer Documents window (above) opens the Transfer Line Items window which has an Options menu of its own:

- **Details** - open a free text area to add to each line item within a transfer document.
- **View Stock Type** - opens the Stock Type window.
- **Show All** - display all line items, including items deleted from the transfer form.
- **Create Order Form** - generate order forms for selected line items with most of the order form information already entered. A separate order form is created for each preferred vendor.

8.3 Purchase Menu Windows

8.3.1 Purchase Forms Window – Options Menu

- **Line Items** - opens the Line Items window for the selected form. This window has its own Options menu. See section 8.3.1.1.

- **Quotations** - opens the Quotations window for the selected form. This window has its own Options menu. See section 8.3.1.2.
- **Deliveries** - opens the Deliveries window for the selected form. This window has its own Options menu. See section 8.3.1.3.
- **Vouchers** - opens the Vouchers window for the selected form. This window has its own Options menu. See section 8.3.1.4.
- **Custom Clearance Contract** - select a form which is marked as belonging to a Custom Clearance contract (a marked checkbox in the **Additional Info tab**). Then select this option to open the corresponding window for the form's CC contract.
- **Budget** - opens the Budget window where you can view the budget details for the selected form.
- **Note to Vendor** - to include a comment or remark to the vendor with the form. A details window opens where you can enter your notes and click **OK** to return to the main window.
- **Note From Vendor** - this is a details window for use with e-Business portals to receive information from the vendor about the purchase form.
- **Terms and Conditions** - this is a details window for use with e-Business portals to receive the vendor's terms and conditions regarding the purchase form.
- **Change Approval** - to grant or revoke approval for a purchase form, select **Options > Change Approval**. The button available in the dialog box which appears depends on the existing approval state of the form: **Revoke Approval** or **Grant Approval**.
- **Receive** - opens the Receive window for the selected form. This window has its own Options menu. See section 8.3.1.5.
- **Convert** - select **Options > Convert** to alter the form status and/or form type. You can convert individual forms, or several forms if they are tagged. The **Created date** field in the Forms window will show the date the form was converted into a new form (rather than the date the original form was created).
- **Estimate Cost** - select **Options > Estimate Cost** to calculate the total value of the selected purchase form based on the quantities, prices and discounts for the line items on the form.
- **Copy** - to copy an existing purchase form instead of having to type all the information in again, select **Options > Copy** and in the dialog which opens, select a **Form Type**, and the **Details** to copy.

To copy the form to a different Department at your own installation, or another Installation altogether, check the required destination(s) in the list. If you copy a form to another department, only free text lines are copied. Line items containing a part number (goods) or a work order number (services) are not copied. Use this function to copy a purchase form for ships provisions from one vessel to another.
- **Print Label** - select **Options > Print Label** to print labels for the line items of a purchase form. There are three options available; **Ordered Quantity** and **Received Quantity** print the correct number of labels depending on the numbers in the appropriate fields of the line items whereas selecting **Quantity** allows you to enter a number manually. If you enter a number manually, that number of labels is printed for every line item in the form.
 - Make your selection and click **OK** to proceed. A window opens displaying a preview of the labels selected for printing. When ready to print, click the **Print** button in the secondary toolbar or select **File > Print**. To cancel the print, close the print preview window.
- **Release from Contract** - if you have a contract set up with a particular vendor, that contract will appear in the forms window when you select the vendor. To keep the vendor on the form but change or remove the contract, select **Options > Release from Contract**.

8.3.1.1 Line Items Window – Options Menu

Selecting **Options > Line Items** in the Forms window (section 8.3.1) opens the Line Items window for the selected form. This window has an Options menu of its own:

- **View Stock Item/Work Order** - (depending if it is a part or a service) opens the Stock Items/Work Orders window for the selected line item.

- **View Component** - opens the Component window for the selected line item.
- **Portal** - for use with e-Business Direct.
- **Stock Grade** - displays the supplementary stock information copied to the line item if specified at Stock Type or Stock Item level. You can alter these codes if required.
- **Show All** - displays all the line items originally included on the form, including cancelled line items and those that have subsequently been split to other forms.
- **Split** - to optimise efficiency, organise the Purchase forms by splitting line items to other forms (new and existing), while retaining the original information for reference purposes.
- **Sort Items** - this facility re-numbers the line items in a purchase form. Use it when cancelling or splitting line orders. To cancel line item number 3 from a list of 5 items, use the Sort Items facility to re-number the cancelled line item to number 5 and close the gap on the remaining Live items by re-numbering them from 1 to 4.
- **Set Component** - use the Set Component feature to set a single component number against multiple line items. Check the line items to set a component for and select **Options > Set Component**. Enter the component number manually or use the lookup button to select the number from a list.
- **Set Budget Code** - set a single Budget Code against several line items. Check the line items and choose **Options > Set Budget Code**.
- **Set Discount** - use the Set Discount feature to set a single discount amount against several line items. Check the line items to set the discount for and then select **Options > Set Discount**. Enter the amount in the **% Discount field** and click **OK**.

8.3.1.2 Quotations Window – Options Menu

Selecting **Options > Quotations** in the Forms window (section 8.3.1) opens the Quotations window for the selected form. This window has an Options menu of its own:

- **Line Items** - opens the **Quotation Line Items** window and displays the same lines as the form to which the quotation belongs. Attach individual prices and delivery times to each line item, enabling AMOS M&P to calculate and compare quotations. The Quotation Line Items window has its own Options menu. See section 8.3.1.2.1.
- **Attachments** - select **Options > Attachments** to connect attachments to the quotation for viewing purposes only.
- **Note To Vendor** - select **Options > Note to Vendor** to open a details window for use with e-portals to send information regarding the quotation to the vendor. The same option is available at form header level. If you enter a note here in the Quotations window, it will be used instead of any notes existing on the form header. To use a note entered at form header level instead of a note entered here, you must check the **Use form header 'Notes to Vendor'** checkbox. Uncheck it to use the note you have entered here. If a Note is added, the **Note to Vendor field** on the Details section of the Quotations window will be updated to **True**.
- **Note From Vendor** - this is a details window intended for use with e-portals to receive information regarding the quotation from a vendor. If a Note is added, the **Note from Vendor field** on the Details section of the Quotations window will be updated to **True**.
- **Terms and Conditions** - this is a details window intended for use with e-portals to receive the terms and conditions of a quotation. If details are added, the **Terms and Conditions field** on the Details section of the Quotations window will be updated to **True**.
- **Calculate** - selecting Calculate from the Options Menu opens a new dialog. AMOS will calculate the combined price of all line items on the quotation and display this amount in the Quotation window.
- **Compare** - opens the Compare Quotations window for the selected form's quotations. This window has its own Options menu. See section 8.3.1.2.2.
- **Select** - choose **Options > Select** to choose the quotation to accept before making a purchase order. Depending on a number of parameters you can set several actions to occur when you select a quotation, including form type conversion, form status conversion and close quotation.

8.3.1.2.1 Quotation Line Items – Options Menu

Selecting **Options > Line Items** in the Quotations window (**Forms > Options > Quotations**) opens the Quotations Line Items window with the following Options menu items available:

- **Convert** - when a quotation is returned with unknown units (Vendor Unit) or no units at all (Vendor Quantity) selecting this option will allow you to convert the unknown or missing information into known units.
- **Order Line** - selecting **Options > Order Line** displays the purchase form order line for the quotation line that you are currently viewing.
- **Show All** - selecting **Options > Show All** displays all the line item originally included on the quotation such as line items that have subsequently been split to other forms.

8.3.1.2.2 Compare Quotations – Options Menu

Selecting **Options > Compare** in the Quotations window (**Forms > Options > Quotations**) opens the Compare Quotations window with the following Options menu items available:

- **Del. Time** - changes the Compare Quotations window to the delivery time comparison function.
- **Price** - changes the Compare Quotations window to the price comparison function.
- **Average Price** - changes the Compare Quotations window to the average price function.
- **Split** - opens the Form Splitting dialog where you can split an order to achieve the best prices.

8.3.1.3 Deliveries Window – Options Menu

Selecting **Options > Deliveries** in the Forms window (section 8.3.1) opens the Deliveries window for the selected form. This window has an Options menu of its own:

- **Line Items** - opens the Delivery Line Items window for the selected delivery, displaying the details of what is included in that delivery. This window has its own Options menu. See section 8.3.1.3.1.
- **View Transport Document** - while adding deliveries to transport documents, select View Transport Document from the Options menu to see the current status, such as weight, number of packages and total cost. This is useful if for example your delivery is restricted due to weight constraints.

8.3.1.3.1 Delivery Line Items – Options Menu

Selecting **Options > Line Items** in the Deliveries window (**Forms > Options > Deliveries**) opens the Delivery Line Items window for the selected delivery. This window has an Options menu of its own:

- **Fill Delivery** - selecting the Fill Delivery option causes the **Quantity** column of the Delivery Line Items window to fill with the purchased quantities. Use this facility to quickly enter the line item quantities if you are certain that they are correct. This is useful if there are many line items.
- **Set ‘Located’...** to update the **Located** field for several line items, select the required lines and then use the dialog box to insert the location.
- **Split Deliveries** - open a dialog where you can split delivery line items onto other new or existing deliveries. This works the same way as splitting quotation/order line items onto new or existing forms.

8.3.1.4 Vouchers Window – Options Menu

Selecting **Options > Vouchers** in the Forms window (section 8.3.1) opens the Vouchers window for the selected form. This window has an Options menu of its own:

- **Line Items** - opens the Voucher Lines window.
- **Calculate Net Amount** - adds together the net amounts of all line items on a voucher.

8.3.1.5 Receive Window – Options Menu

Selecting **Options > Receive** in the Forms window (section 8.3.1) opens the Receive window for the selected form. This window has an Options menu of its own:

- **Quality Check** - the Quality Check window is for making comments about the quality of goods received. Check the checkbox in the print forms window to print reclamation claims to send to the supplier. You can register more than one quality check against each receipt if required.

8.3.2 Transport Documents Window – Options Menu

- **Details** - open the Description window for the selected transport document. This window is for adding general information to a transport document and can also be used in conjunction with a pre-formatted template if required.
- **Additional Info.** - attach extra transportation details to the document.
- **Consolidated Deliveries** - opens the Consolidated Deliveries window for the selected transport document. Consolidated deliveries are purchase form line items that are attached to Transport documents, and are therefore accounted for. Unattached line items are classed as unconsolidated deliveries. This window has its own Options menu. See section 8.3.2.1.
- **Unconsolidated Deliveries** - opens the Unconsolidated Deliveries window for the selected transport document. Unconsolidated deliveries are made up of purchase form line items that have not yet been attached to Transport documents. Attached line items are classed as consolidated deliveries. This window has its own Options menu. See section 8.3.2.2.
- **Recalculate Totals** - when you have altered the contents of a transport document, use the **Recalculate Totals** function to update the **Total Cost** field showing the transportation costs of the shipment.
- **Create Account Transactions** - available if your system is set up to use account transactions. See the *AMOS Business Suite Reference Manual* for more on account transactions.

8.3.2.1 Consolidated Deliveries – Options Menu

Selecting **Options > Consolidated Deliveries** in the Transport Documents window (section 8.3.2) opens the Consolidated Deliveries window for the selected document:

The screenshot shows the 'Consolidated Deliveries' window with the following details:

- General Tab:**
 - Delivery No.: 1
 - Form No.: SH1/01/02/0001
 - Document No.: SH1-02.09.02-001
 - Priority: High
 - Forwarder: SPECTEC
 - Destination: BUK001
 - Sent By: [Dropdown]
- Status:** Active
- Automatically Created Form:** Transport Doc No1
- Insured:** No
- Portal Queue:** [Checkbox]
- Dates:**
 - Advised Ready: 04/09/2002
 - Received Forw.: 05/09/2002
 - Received Dest.: 06/09/2002
 - Sent: [Text Box]
 - Vendor Dispatch: [Text Box]
- Destination Status:**
 - To: [Text Box]
 - From: [Text Box]
- Confirmation:** [Text Box]
- Forwarder:** [Text Box]
- Table:**

Delivery No.	Form No.	Adv. ready	Rec. forw.	Rec. dest.	Destination	Priority
1	SH1/01/02/0001	04/09/2002	05/09/2002	06/09/2002	BUKH	High

Figure 103 The Consolidated Deliveries Window

This window has an Options menu of its own:

- **Line Items** - opens the Delivery Line Items (Consolidated) window displaying the line items included on the purchase form. This window has its own Options menu. See section 8.3.2.1.1.

- **View Form** - this option displays the original purchase form for the selected delivery line item.
- **Remove** - this option removes the selected delivery line item from the transport document listed in **Document No.** and the line item becomes unconsolidated.

8.3.2.1.1 Delivery Line Items (Consolidated) – Options Menu

Selecting **Options > Line Items** in the Consolidated Deliveries window (**Transport Documents > Options > Consolidated Deliveries**) opens the window shown below:

Item	Name	Purchased	Confirmed	Quantity	Unit	Located
2	Joint washer	5.00	5.00	5.00	Pc	port of destination
3	Gasket	5.00	5.00	5.00	Pc	port of destination
4	Gasket	5.00	5.00	5.00	Pc	port of destination
5	Drainplug	5.00	5.00	5.00	Pc	port of destination
6	Joint washer	5.00	5.00	5.00	Pc	port of destination
7	Frame bottom part	4.00	4.00	4.00	Pc	port of destination

Figure 104 The Delivery Line Items Window (Consolidated)

This window has its own Options menu:

- **Fill Delivery** - selecting the Fill Delivery command automatically inserts the purchased amount into the quantities column of all the line items in the delivery.
- **Set Located** - to update the **Located** field for multiple line items, tag the required lines and then use the Set Located option to open a dialog to insert the desired information.

8.3.2.2 Unconsolidated Deliveries – Options Menu

Selecting **Options > Unconsolidated Deliveries** in the Transport Documents window (section 8.3.2) opens the Unconsolidated Deliveries window for the selected document:

Delivery No.	Form No.	Adv. ready	Rec. forw.	Rec. dest.	Destination	Priority
1	SH1/01/02/0002	02/09/2002	06/09/2002	06/09/2002	SPECTEC LTD	Medium

Figure 105 The Unconsolidated Deliveries Window

This window has an Options menu of its own:

- **Line Items** - opens the Delivery Line Items (Unconsolidated) window displaying the line items included on the purchase form. This window has its own Options menu. See section 8.3.2.2.1.
- **View Form** - this option displays the original purchase form for the selected delivery line item.
- **Attach** - this option attaches the selected delivery line item to the transport document listed in **Document No.** and the line item becomes consolidated.

8.3.2.2.1 Delivery Line Items (Unconsolidated) – Options Menu

Selecting **Options > Line Items** in the Unconsolidated Deliveries window (**Transport Documents > Options > Unconsolidated Deliveries**) opens the window shown below:

Item	Name	Purchased	Confirmed	Quantity	Unit	Located
1	Intake valves, Part 01	5.00	5.00	5.00	Pc	

Figure 106 The Delivery - Line Items Window (Unconsolidated)

This window has its own Options menu:

- **Fill Delivery** - selecting Fill Delivery automatically inserts the purchased amount into the quantities column of all the line items in the delivery.
- **Set Located** - to update the **Located** field for multiple line items, tag the required lines and then use the Set Located option to open a dialog to insert the desired information.

8.4 Budget Menu Windows

8.4.1 Budget Window – Options Menu

- **Details** - select **Options > Details** in the Budget window to open the Description window, used for a full text description of the selected budget code. If a default Budget Code layout is specified, the window displays this layout instead.
- **Overview** - select **Options > Overview** in the Budget window to open the Budget Overview window for the selected budget code.
- **Specification** - AMOS M&P's optional functionality allows your organisation to enter budget specifications for the budget codes (Stock, Purchase and Maintenance budgets). Select **Options > Specification** to open the Budget Specification window, for adding items to be charged to the selected budget code.
- **Prognosis** - after establishing the original budget there may be need for some adjustments. The Prognosis function enables you to create new, updated versions of the budget based on actual consumption and turnover. To enter the Budget Prognosis window, select a budget code and go to **Options > Prognosis**.
- **Recalculate** - select **Options > Recalculate** to recalculate the budget while you are working on it. A new dialog appears.

Where available, you can click the lookup button to select a particular department and financial year, and/or a specific budget code, to recalculate. Click **OK** to perform the recalculation for the selections made.

- **Convert** - a user with the sufficient access level can convert the status of one or more checked budget codes in the Budget window. Select **Option > Convert** to enter the Convert Budget Status dialog.
- **Copy** - to create realistic budgets, AMOS M&P allows you to copy budget information. Select **Options > Copy** in the Budget window to enter the Copy Budget Codes dialog.
- **Progress** - select **Options > Progress** to view a graphical representation of your budget spending in the Budget Progress window. The progress is displayed on a meter for each of the three budget classes, at department level, installation level, and system wide.

Chapter 9 Registers, Hierarchies and Reports

This chapter describes how you ensure that the various registers in AMOS are always updated with the correct values.

- Section 8.1 describes the purpose of registers.
- Section 9.2 contains a list of all the various registers to make it easier for you to locate the correct register to update.
- Section 9.3 describes the use of hierarchy windows in AMOS M&P.
- Finally, section 9.4 explains how you can organise and print reports from AMOS.

9.1 What is a Register?

A register is a list of related information entered into a database. For example, a register could be a list of products and the companies that supply them, or the employees in your company and their addresses. This information can be linked to other registers: for example to supplier names and addresses or next-of-kin and addresses, enabling you to search for specific details in the database. Normally this information is entered into the database manually, and the links are created when the program is developed.

9.1.1 Are You Allowed to do This?

The registers are used to create the initial database at the time of the application's installation. Authorised personnel can update these registers as details change. The register is set up at the main office, and the information entered must be distributed to the individual sites before data can be entered and exchanged. The registers used in the M&P application are described in the following sections.

In most organisations, only a few users will be authorised to update registers, and depending on your position and responsibilities you may have access to some without having access to all of them.

If AMOS does not respond when you try to change a register, it is probably because you are not authorised to use the commands in question.

9.1.2 You Know You Need to Update a Register When...

When AMOS is installed locally, for example on a ship or at a factory, the registers already contain the background information for your work, data that does not change very often, and that you will use and re-use; for example currency types, vendor addresses, stock numbers and descriptions, and job descriptions.

When this background information changes you will need to update your registers. For example:

- New currency exchange rates are approved.
- A vendor sends notice that their firm is moving to a new address.
- New equipment is installed at your site, and there are new items to be given numbers and kept in stock.

Or you may notice that you cannot find the value you need in a drop down list or a selection list.

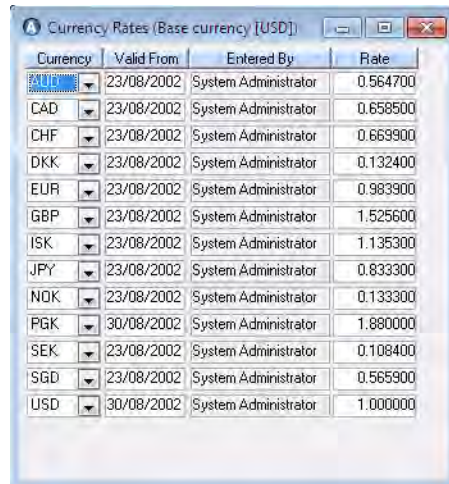
Another reason to get acquainted with the registers is that they have space for information that you use very rarely and never see in other places in AMOS, such as component serial numbers.

9.1.3 Adding Data to a Register

The procedure for adding data to a register is similar for the majority of the registers, though some are more complicated than others.

1. Select **File > Open Register** and choose the register you want to add a new item to. AMOS may display a filter window.
2. When the register opens, click the **New** button in the toolbar, click the right mouse button and select **New Record** from the pop-up menu, press the **CTRL+N** keys on your keyboard or select **Edit > New Record**.

A new line is added to the list.



Currency	Valid From	Entered By	Rate
EUR	23/08/2002	System Administrator	0.564700
CAD	23/08/2002	System Administrator	0.658500
CHF	23/08/2002	System Administrator	0.669900
DKK	23/08/2002	System Administrator	0.132400
EUR	23/08/2002	System Administrator	0.983900
GBP	23/08/2002	System Administrator	1.525600
ISK	23/08/2002	System Administrator	1.135300
JPY	23/08/2002	System Administrator	0.833300
NOK	23/08/2002	System Administrator	0.133300
PGK	30/08/2002	System Administrator	1.880000
SEK	23/08/2002	System Administrator	0.108400
SGD	23/08/2002	System Administrator	0.565900
USD	30/08/2002	System Administrator	1.000000

Figure 107 The Currency Rates register

3. Enter the required information into the appropriate fields, and select information from drop-down lists and selection boxes where necessary.

If you are not sure what to put in the fields ask someone who knows or click on an old item from the list in the window, and observe how the fields were filled out for that record.

Note

Information included in drop-down lists is taken from other registers, so you may need to add data to other registers before you can complete the register you are currently working on.

4. **Save** the register. If you have made a mistake, close the register without saving.

9.1.4 Deleting Data from a Register

The procedure for deleting data from a register is similar for the majority of the registers.

1. Select **File > Open Register** and choose the register you want to add a new item to. When the register opens, click on the line in the list that you wish to delete.
2. Click the **Delete** button on the toolbar, or select **Edit > Delete Record**.
A question box appears asking you to confirm the deletion.
3. Click **Yes** to confirm the deletion or **No** to cancel the deletion and return to the window.
4. **Save** the register. If you have made a mistake, close the register without saving.

Note

If the data you have deleted is used in another window then you will not be allowed to save the changes.

9.2 Finding the Right Register to Update

The following section is a brief description of the registers pertaining to the AMOS M&P module of the Business Suite.

Note

For detailed information about all registers in the system, see also the *AMOS Business Suite Reference Manual*.

Register Name and Location	Description
Addresses File > Open Register > Addresses	This register contains the short code and full address information for anyone you need to contact frequently. Items stored here are used in both maker and vendor fields. Employee addresses are also stored here.
Employees File > Open Register > Employees	This register is for the short code, full name, discipline and availability for each employee.

Locations File > Open Register > Locations	This register contains a list of the available stock locations, in the form of a hierarchy.
Currency Rates File > Open Register > Currency Rates	This register contains a list of conversion factors that AMOS uses when re-calculating prices into your default currency.
Permits to Work File > Open Register > Permits to Work	This register is for listing the available permits to work for use with work orders.
Templates File > Open Register > General > Templates	A template or layout is a design for a customised window, a history, details or additional information window that has been created especially for a maintenance job or a work order. This register lists all available templates.
Disciplines Files > Open Register > General > Disciplines	This register lists the various types of employees available at the installation. The information entered here is used in the maintenance windows to specify who should perform work, or to list work for different groups.
Counter Types File > Open Register > General > Counter and Measure Point Types	The various types of counters and measure points AMOS M&P uses to handle periodic maintenance jobs and Condition Based Maintenance are defined in the Counter and Measure Point Types register. The Max.Per Day field enables you to set a maximum value that AMOS M&P will allow the user to input. This is used to prevent mistakes during counter/measure point updating. It is also possible to create a type of counter called a Composite Counter. This is a counter that is a function of other existing counters linked together, with a formula: Counter1 = Number of Startups Counter2 = Running Hours Counter3 (Composite) = Counter1 * Constant + Counter2 To define a Composite Counter select it as the Type, and then use the lookup button to enter an Expression which defines the Composite Counter. AMOS will read the expression like any other counter.
Product Types File > Open Register > General > Product Types	This register is for listing the types of product categories you have in your system.
Currency Codes File > Open Register > General > Currency Codes	This register is for setting up which currencies AMOS will be able to work with, and the short code for each. Note that exchange rates are in the Currency Rate register.
Quality Codes File > Open Register > General > Quality Codes	This register lists possible quality codes for use when receiving goods. They are used for quality checking purchase form line items when receiving.
Units File > Open Register > General > Units	In this register, you can create unit types (pieces, cases, boxes, etc) that are available in stock or from vendors. They will appear in drop-down lists throughout the system.
Job Classes File > Open Register > General > Job Classes	This register contains the groups that various jobs in the Job Description register can be sorted into: Inspection, Overhaul, etc. It can also define initial work flow status and lock types.
Job Triggers File > Open Register > General > Job Triggers	This register is for defining Job Triggers. These triggers can then be linked to a procedure or component job. Triggers schedule jobs that must be carried out at certain intervals. For example, 'Weekly' may be defined as a trigger for tasks to be carried out every week. They can also be used to schedule jobs which should be handled when a specific event occurs. For example, 'Pilot on Board' may be a trigger for jobs to be carried out when a pilot enters a vessel.
QA Grades File > Open Register > General > QA Grades	This register is a list of the possible values to give the Quality Assurance programs of vendors, manufacturers, etc. in the Addresses register.
Stock Grades File > Open Register > General > Stock Grades	This register contains a list of available grades for adding supplementary stock item information to purchase form line items.

Account Codes File > Open Register > General > Account Codes	The Account Codes register lists the available account codes that can be attached to purchase forms.
Job Descriptions File > Open Register > Maintenance > Job Descriptions	This register contains descriptions of all planned jobs. Depending on the setting of the 'Job Description Revision Control' parameter, there can be multiple revisions of the same job description stored here. At any time, only one revision of any description can have the status Active, and only one draft revision can exist. The job descriptions available when creating new records in component job, component type and requisition work are always of the status Active.
Component Classes File > Open Register > Maintenance > Component Classes	This register is a list of groups that components can be divided into.
Function Criticality File > Open Register > Maintenance > Function Criticality	This register is for designating a degree of criticality on functions. The Function and Function Hierarchy windows contains a Criticality drop-down list. To visibly differentiate between levels of criticality define an Indicator for each one.
Function Criticality Indicator File > Open Register > Maintenance > Function Criticality Indicator	This register is for defining indicators which should be available for selection in the Function Criticality register.
Project Categories File > Open Register > Maintenance > Project Categories	This is a list of possible categories projects can be divided into.
Reschedule Limits File > Open Register > Maintenance > Reschedule Limits	This is for defining the limits within which a selected Maintenance Task can be rescheduled. Each Reschedule Limit is a set amount of days before and after the calculated due date within which a Task can be carried out.
Criteria File > Open Register > Maintenance > Criteria	Use this register to define a list of reasons why maintenance needs to be carried out, such as breakdowns, planned shut-down, etc.
Types File > Open Register > Maintenance > Types	This register contains possible values to be used in work reporting. These fields can also be used for filtering work orders.
Classes File > Open Register > Maintenance > Classes	This register contains possible values to be used in work reporting. These fields can also be used for filtering work orders.
Causes File > Open Register > Maintenance > Causes	This register contains possible values to be used in work reporting. These fields can also be used for filtering work orders.
Failure Modes File > Open Register > Maintenance > Failure Modes	Use this register to create a list of things that can go wrong with a piece of equipment, and cause it to fail.
Failure Effects File > Open Register > Maintenance > Failure Effects	Use this register to maintain a list of Effects that a particular equipment failure could have on the vessel or voyage.
Failure Descriptors File > Open Register > Maintenance > Failure Descriptors	This register is for listing apparent and observed causes of equipment failures.
Failure Detection Methods File > Open Register > Maintenance > Failure Detection Modes	For use with work orders and requisitions created as a result of equipment failure, create a list here of ways in which equipment failure is noticed.
Failure Severity File > Open Register > Maintenance > Failure Severity	Different modes of failure will have different effects on the piece of equipment they occur on. Depending on the failure, the equipment may or may not continue functioning.

Stock Classes File > Open Register > Stock > Stock Classes	This register contains groups that stock items can be divided into.
Price Classes File > Open Register > Stock > Price Classes	This register contains the user defined formulae that can be used to alter the price of a stock item according to international tax rates or transportation costs.
Transfer Reasons File > Open Register > Stock > Transfer Reasons	The Transfer Reasons register contains possible values for transfer of items, used in transfer documents.
Order Priority File > Open Register > Purchase > Order Priority	The Order Priority register lists the available order priorities that can be attached to purchase forms.
Delivery Terms File > Open Register > Purchase > Delivery Terms	This register lists the various delivery terms that can be attached to purchase forms.
Payment Terms File > Open Register > Purchase > Payment Terms	This register contains a list of the various payment terms that can be attached to purchase forms.
Delivery Locations File > Open Register > Purchase > Delivery Locations	The Delivery Locations register contains a list of the various locations that can be attached to purchase forms.
Receipt Status File > Open Register > Purchase > Receipt Status	This register contains the various receipt statuses that can be attached to purchase form line items.
Voucher Category File > Open Register > Purchase > Voucher Category	The Voucher Category register is for defining category groups for vouchers, by code and name. Vouchers are attached to forms in the Vouchers window.
Expense Types File > Open Register > Purchase > Expense Types	This register is available for use with the Custom Clearance module. It is for defining categories of expenses related to CC contracts, for example, Custom Fees, Transportation, Duty, Airport Storage, etc.
Finalise Types File > Open Register > Purchase > Finalise Types	This register is available for use with the Custom Clearance module. It is defining categories of finalisation for CC Contracts, such as Consumed, or Asset.

9.3 Hierarchy Windows

AMOS M&P offers functionality for organising Component Types, Components, Functions, Stock Types and Budgets into hierarchies.

Note

The appearance of these hierarchy screens may differ from the illustrations shown below depending on your level of access within the application.

9.3.1 Working in a Hierarchy Window

The various hierarchy windows are accessed at:

Maintenance > Component Types Hierarchy
Maintenance > Components Hierarchy
Maintenance > Functions Hierarchy
Stock > Stock Types Hierarchy
Budget > Budget Hierarchy

The Hierarchy windows function in the same way as Windows Explorer: each window contains a tree hierarchy list on the left, where you can click a + icon to expand a branch and a – icon to collapse it. Alternatively, you can double-click a folder icon to switch its status between open and closed. A selected element icon is displayed in the form of an opened folder and the area in the right part of the window displays details about the element that is selected in the list on the left.

You can use the standard Windows drag and drop functionality to move an element in a hierarchy. Simply drag a folder and drop it on another folder to which it should be moved. The hierarchy will automatically be updated to reflect the move.

To create a new folder in a hierarchy:

1. Select the folder where you want to place the new folder.
2. Click the **New** button.
3. If you selected a top level folder, a dialog appears asking if you want to create a top level item (root).
4. Click **Yes** to create the new folder on the top level, or click **No** to have the new folder created as a sub-folder in the currently selected folder.

To search a hierarchy for strings of letters and/or numbers, press the **F3** key or select **Options > Find** to open the **Find** window. Selecting **Options > Toggle Numbers** displays the Component Type numbers in the hierarchy, re-arranged in numerical order, or hides the numbers.

The other options on the Component Hierarchy and Function Hierarchy **Options menus** are covered in Chapter 8.

9.3.2 The Component Type Hierarchy

Select **Maintenance > Component Types Hierarchy** to open the Component Type Hierarchy window. An example of the window is shown below:

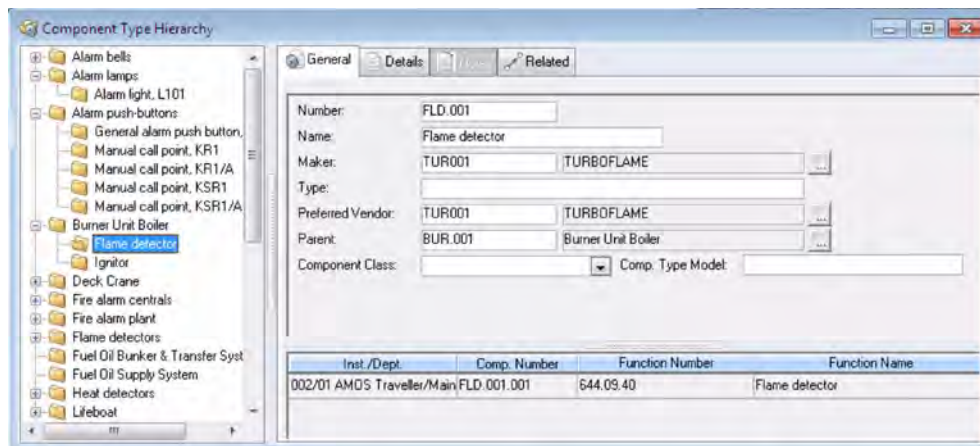


Figure 108 The Component Type Hierarchy Window

The component types are displayed on the left. Click one to see its details on the right. The lower right part of the window displays a list of installations/departments where instances of the selected component type are installed. The **Related** tab contains a list of other Component Types which are related to the one selected in the hierarchy. Component Types can be related to each other in the Component Types window Related tab, and you can also add and delete types in this list using the buttons here in the hierarchy.

9.3.3 The Component Hierarchy

Select **Maintenance > Components Hierarchy** to open the Components Hierarchy window. There is a corresponding toolbar button. An example of the window is shown below:

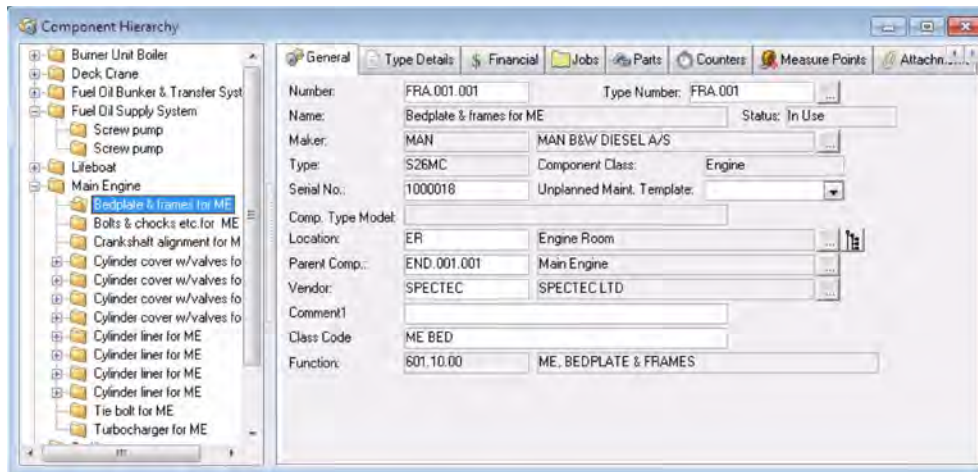


Figure 109 The Component Hierarchy window

The right side of the window contains information from the Components window about the selected component. The tabs contain the relevant component information. The hierarchy is normally displayed in alphabetical order by component name.

Note

The Component Hierarchy window has its own **Options menu**. These options are covered in section 8.1.2. of this guide.

9.3.4 The Functions Hierarchy

Select **Maintenance > Functions Hierarchy** to open the Function Hierarchy window. There is a corresponding toolbar button. An example of the window is shown below:

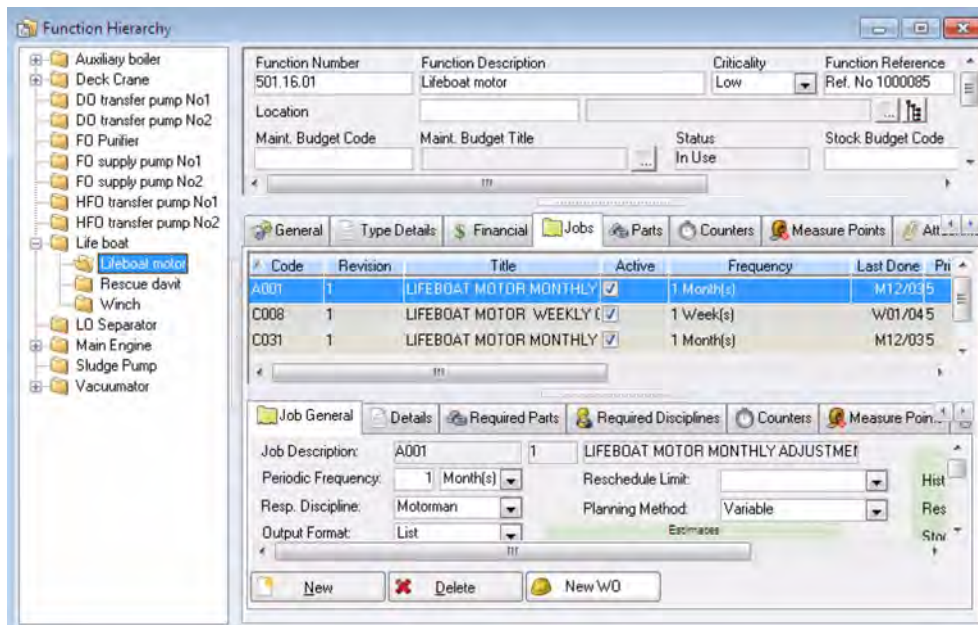


Figure 110 The Functions Hierarchy window

In the illustration above, the function Main engine is selected in the hierarchy. Information about this function is displayed in the top right side of the window. A component is installed in this function, and the tabs on the right side of the window contain all relevant information from the Components register about this component.

The **Criticality** field designates a degree of criticality for the selected function. If criticality indicators are in use in your system, an icon will appear in the hierarchy next to the selected function, to visibly differentiate between the levels of criticality present.

The component installed in a function has the same location as the function. If the function location changes then so will the component location.

Jobs can be linked to Functions in the **Jobs tab** by clicking the **New** button at the bottom of the **Job General tab**. Clicking the **New WO** button in the same tab will directly create a new work order for the selected job with most details included, and then open the Work Order window to display the new record. Read about creating and managing Jobs in section 4.5.

Note

The Functions Hierarchy window has its own **Options menu**. These options are covered in section 8.1.4. of this guide.

9.3.4.1 Installing and Removing Components

Use the Functions hierarchy window to install and remove components on/from functions. There are toolbar buttons for this purpose, as well as Options menu items. If a component is installed already, the **Remove Component** button is available. When no component has been installed, the **Install Component** button is available. Clicking one of these buttons or selecting the item from the options menu opens up a new dialog box.

To install a component on a function:

1. Select the function in the hierarchy and click the button/go to **Options > Install Component**.
2. Lookup your **Component**. Enter any **Details** and click **OK**. You return to the main hierarchy and the component is installed, with its information displayed in the relevant tabs.

To remove a component from a function:

1. Select the function in the hierarchy and click the button/go to **Options > Remove Component**.
2. You can select a new location for the component to be removed to.
3. Checking the **Remove components from sub-functions also** box also removes all components in sub-functions of the currently selected function. Rotation Log entries are made for these components, containing **Status**, **Removed**, **Removed By** and **Details**.
4. There are several reasons to choose from for a removal, which translate effectively into states of the removed component, and the option Remove components from sub-functions also. Select a **Status**: if you choose component Status Scrapped or Transferred, all outstanding work orders are cancelled unless already reported as started. Work can still be reported against already started work orders until they are reported as completed.
5. Use the **Financial Details** checkboxes in conjunction with the Accounting Module. Check them to re-set default values on Component and Component Job financial details. These boxes are only visible if you have a license for the accounting module.
6. Enter **Details** as needed and click **OK**. You return to the main hierarchy and the component is now removed.

The **Details** area at the bottom of the Install/Remove dialog boxes is for entering relevant notes about the component. These Details are viewable on the **Rotation Log tab** and are recorded against each installation or removal of the component.

Note

Round Jobs can depend on Functions: some jobs can be performed as part of a round only if the component the job belongs to is currently installed on a particular function. This means that removing and installing components on functions can affect round jobs. If this is the case, you will be notified that round jobs have been activated or deactivated.

9.3.4.2 Changing the Status of a Function

Go to **Options > Change Status** to change the status of a function.

When a function is no longer required, you cannot delete it in case it has any history or rotation associated with it. Instead, a status can be placed against a function in the same way as against a component, and when the function is set to scrapped, it will not appear in the Functions register or the Function Hierarchy. To set a function to scrapped, if there are any sub-functions, first manually move the sub-functions, or set the sub-functions to be scrapped as well by checking the '**Change status of sub-functions also**' checkbox in the Change Status dialog. Only then can the status of the function be changed to Scrapped.

9.3.5 The Stock Type Hierarchy

Select **Stock > Stock Types Hierarchy** to open the Stock Type Hierarchy window. An example of the window is shown below:

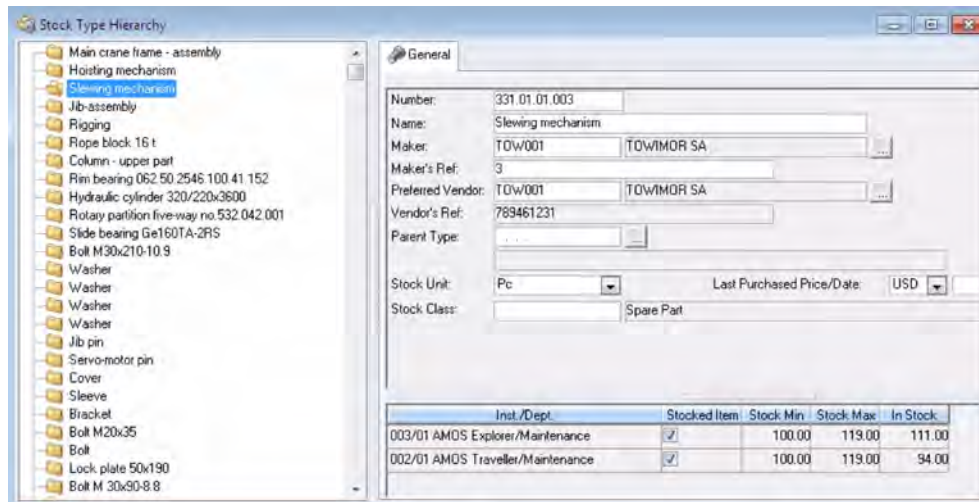


Figure 111 The Stock Type Hierarchy Window

The lower right part of the window displays a list that shows in which installations/departments stock of the selected type is currently available.

9.3.6 Budget Hierarchy

Select **Budget > Budget Hierarchy** to open the Budget Hierarchy window. An example of the window is shown below:

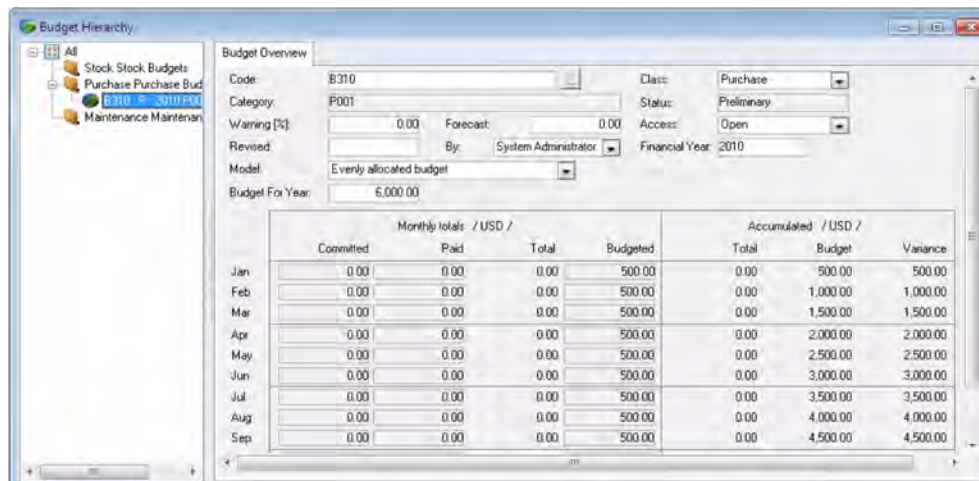


Figure 112 The Budget Hierarchy Window

The budget hierarchy consists of budget groups represented by folder icons, that contain other budget groups or budget codes represented by pie chart icons, forming a hierarchy structure. This structure enables your company to better reflect its organisational budget system. Once the budget hierarchy has been created, you can view the cumulative budget amounts at any folder level.

Select a pie chart icon to view that individual budget's overview in the right hand pane of the window. This window functions in the same way as the budget overview window.

Select a folder to view that budget group's summary overview in the right hand pane of the window. This displays the cumulative amounts for each of the budgets in the budget group. The details at the top of the window are not displayed because you are viewing the figures for multiple budgets. If you select the topmost icon you see the cumulative totals for all budgets.

You can define Budget Group Properties by selecting **Options > Budget Group Properties** or double-clicking on a group folder in the hierarchy. Set the **Display Model** to the budget model you want the selected group's values to show in. Depending on your system settings, you can also set **Approval Warning** percentages and **Approval Limits** for each group within the hierarchy. The percentages apply on the accumulated budget for the group they are registered against. For more on Approval Warnings and Limits, see section 7.9.2.

Note

To expand the budget hierarchy you require at least read access for budget codes in general. Depending on the applied filter and your access rights to individual budgets, certain lowest level groups may appear empty.

9.4 Reports

The AMOS Business Suite contains a set of standard reports, and it is also possible to include user-defined reports (see the *AMOS Business Suite Reference Manual*). The reports are stored in a hierarchy within the Reports browser window. Go to **Tools > Report** to open the Reports window to select the report (pre-defined or user-defined) to be run.

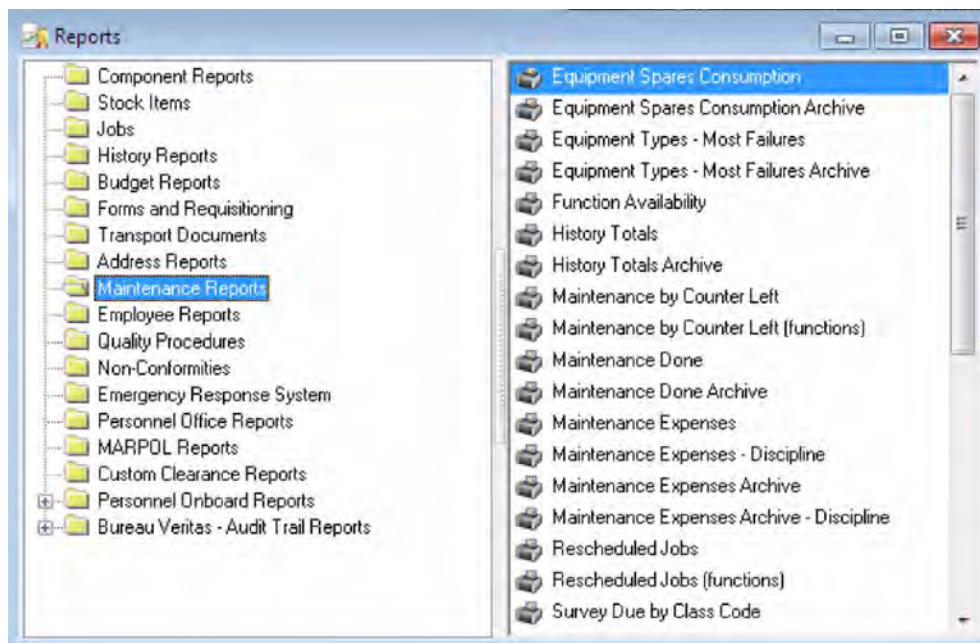


Figure 113 The Reports Window

The reports are structured in folders. Click a folder to view its contents. When a folder is selected, the defined reports of that category are shown in the list on the right.

To run and print a report:

1. Double-click on it. A filter appears, with controls for specifying what the report should contain. The filter is different for each report.
2. Specify the content you want included in your report. After specifying parameters, you can preview the report or print it immediately.
3. Click **Print Preview** on the filter to preview the report on the screen before printing. For example, the preview may look like this:

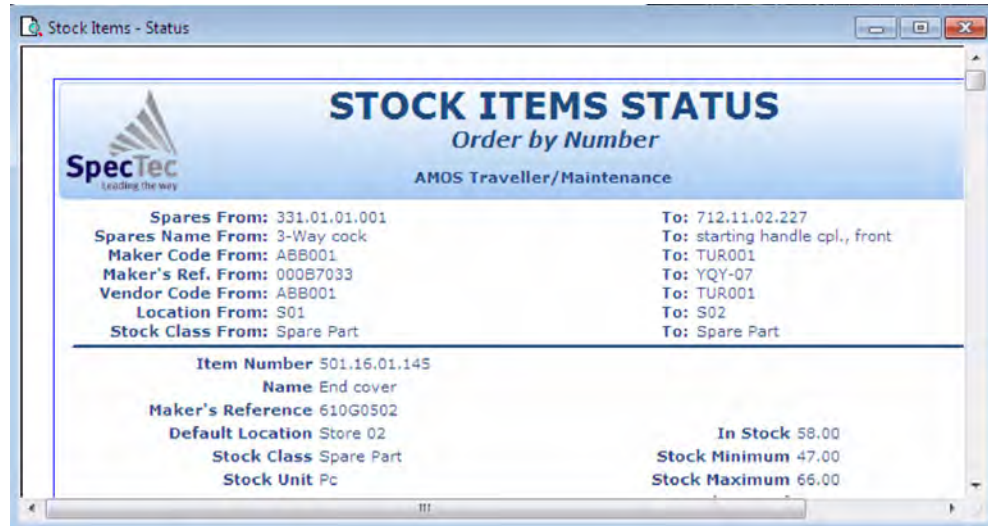


Figure 114 A Typical Report in Print Preview Mode

Click the **Zoom** button to select the zoom level. Use the four buttons to the right of the Zoom button to browse the report pages: First Page, Previous Page, Next Page and Last Page.

After previewing, click the **Print** button on the toolbar.

The **Print dialog** opens, and you can print as usual. Your default **Printer** appears at the top of the dialog. To print to another printer instead, click the **Printer** button. Then select a Printer in the **Printer Setup** dialog. Otherwise, just click **OK** to print the report.

4. To skip the preview and print immediately, double-click on the report and specify your parameters in the filter. Then click **OK** in the filter to go straight to the **Print dialog**. Print to the default printer by clicking **OK** again, or change the printer first using the **Printer** button.

Note

If, in the Reports Preview window, you want to save the report as a PDF file, you will first need to install a secondary 'freeware' program – Ghostscript – on the computer. You can find a list of alternative mirror sites from which you can download the application, on the Ghostscript Web site at:

<http://www.ghostscript.com/doc/gnu/gnu705.htm>

After downloading, run the executable file to install Ghostscript on your system. The default installation folder is **C:\gs**. You can select a different folder and/or choose to install shortcuts to the Ghostscript console and readme file.

9.4.1 PSR Reports

You can create electronic versions of a printed report. To do so, preview the report as described above, and then go to **Edit > Save As**. Select Powersoft Report from the **Save as Type** drop-down list in the **Save As** dialog box.

After saving the preview version of the report, go to **Tools > View PSR Reports** to see the report on the screen once again.

Chapter 10 Defining and Using Attachments

AMOS Business Suite allows you to store files in the maintenance database and connect CAD drawings, photographs, video and other attachments to components, stock items and job descriptions.

10.1 Setting up Attachment Source Tools

Before you can view attachments, you must define which attachment source tools you are going to use for viewing. AMOS offers an internal viewer that can display bitmaps like BMP and PCX, in addition to a number of other formats. You can also define other viewers and Windows programs on your PC as external viewers.

1. Select **File > Open Registers > Attachment> Sources**. The Attachment Sources window opens.

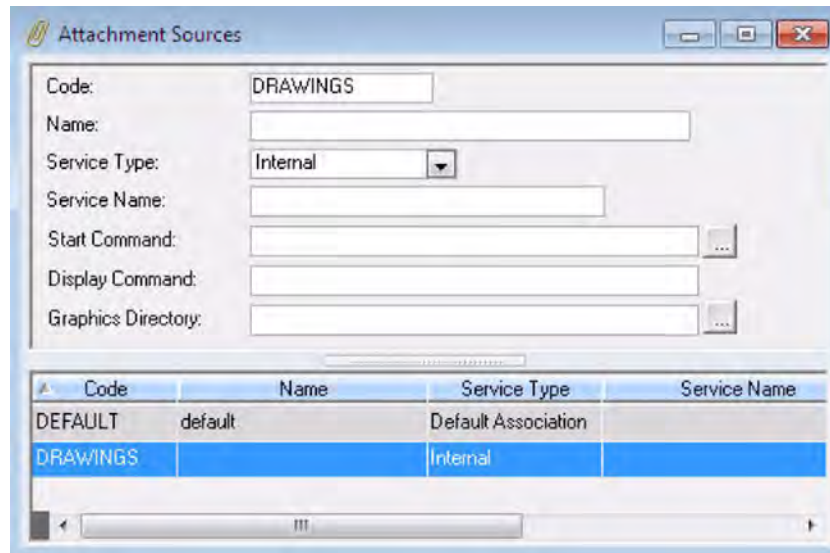


Figure 115 The Attachment Sources window

2. From the **Service Type** drop-down list, select Internal to define the internal viewer as an attachment source, and select External to define a different program. If you select External, fill in the name of the tool in the **Start Command** field including the full path. If you want to use drag and drop to add attachments later, define a source with Service Type Default Association. The Start command must end with the characters **%IMAGE REFERENCE%**. This tells the tool to display the image supplied by AMOS. Use the field **Display Command** to specify a DDE command. It is necessary to know the names and syntax of DDE commands supported by the tool to use this function.

Attachments can be stored by default in the Graphics Directory, or externally outside of AMOS. The **Graphics Directory** is defined in the **Parameters > Directories** window, and if the corresponding field in this window is left blank, attachments opened from this source are retrieved from the defined Graphics Directory. However, to store attachments in multiple directories, you can define an alternate location here using the **Graphics Directory lookup** to browse to a folder in your system, and select it.

10.2 Building a Library of Attachment References

Once the attachment sources have been defined, you can start building a library of attachments in AMOS. When the library has been established, you can connect an attachment reference to one or more relevant components, stock items, and job descriptions.

The attachments you are going to can be stored in a specific folder. Normally, this would be the Graphics sub-folder within the folder where AMOS has been installed. Ensure that the parameter for the **Graphics Directory** contains the name and path of the folder you are going to use for this purpose. If the attachment is stored in a folder other than this directory, the alternate location must be defined on the **Attachment Source** entry (see section 10.1 above).

Go to **File > Open Register > Attachment > References** to enter the following window where you define attachment references:

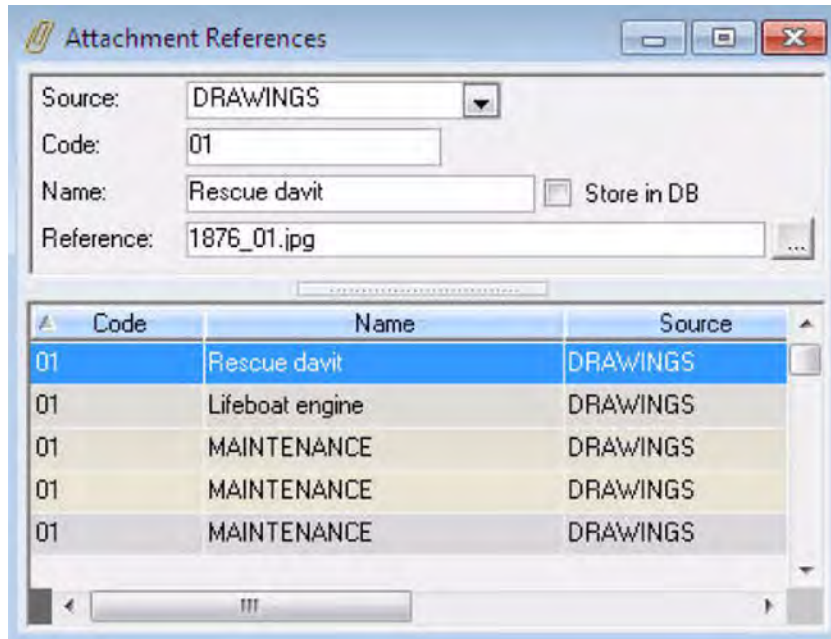


Figure 116 The Attachment References window

For each attachment specify a **Source**, a **Code**, a **Name** and a **Reference**. The Reference is the path to the file for use. Click the **Browse** button to select the reference. You can store attachments in the database for replication purposes by checking the **Store in DB** checkbox.

When an attachment is not stored in the database and a user adds it to a record, AMOS will refer to the setting of the parameter 'Attachment File Stamp' to determine if the date and time on the file should be left as is, or updated to match the date and time found on the database server. If the attachment is not stored in the **Graphics Directory**, you will have the option to **Move** it there, **Copy** it there, or leave it where it is.

Note

When an attachment is stored in the database the original file reference is also stored, enabling you to remove the file at a later date. If the original file is found, the attachment is removed from the database. If the original file is not found a warning is displayed. If you proceeds with the removal after the warning message the attachment file is deleted.

10.3 Adding Attachments

Attachments can be added to records in AMOS using the buttons in the **Attachment tabs**, and using **Drag and Drop**.

Note

To use drag and drop as a method of adding attachments, it is mandatory to first define an Attachment Source with Service Type Default Association.

Inside an **Attachments tab**, clicking the **New** button gives you a blank line with a lookup. Click the lookup and a **Select dialog** opens containing attachments which have already been defined as part of an attachment library. Select one to add and click **OK** to list it in the tab:

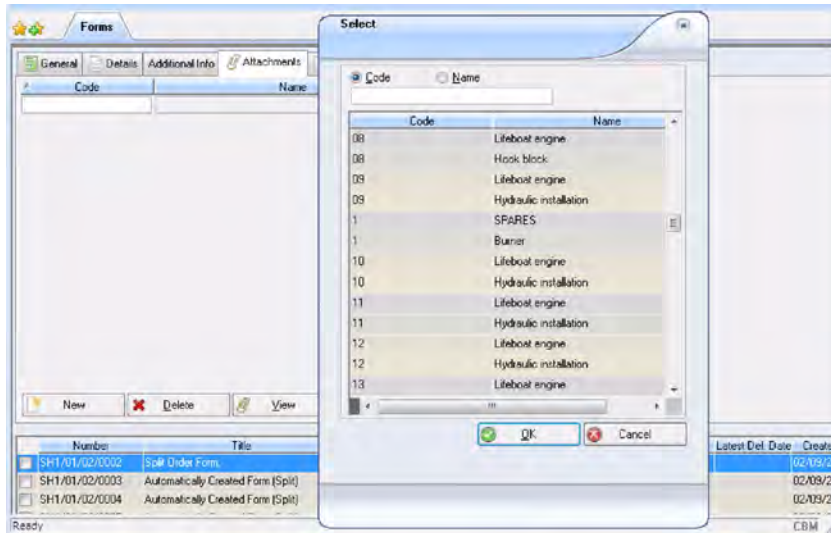


Figure 117 Adding an Attachment to a Purchase Form using the New and Lookup buttons

You can also add attachments from other sources outside of AMOS: for example, a Word document, an email attachment, or even text selected from inside an email or document. Add these files by dragging and dropping them onto the relevant Attachments tab.

When you drag and drop an external file, AMOS will ask you how to handle this new attachment file:

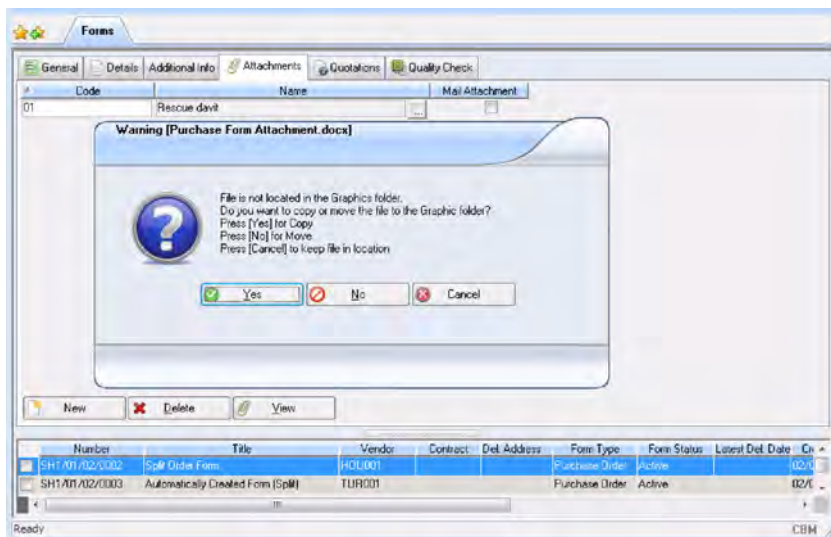


Figure 118 Dragging and dropping an attachment

Choose whether to **Copy** the file to the Graphics folder, **Move** it, or **Leave** it where it is.

Note

The dialog shown above is presented when the parameter 'Attachments File Operation' is set to ASK. If this parameter is set to WARN, you will be warned that the attachment is not in the installation's Graphics folder and the action will be prevented until the file has been moved to the Graphics folder. If this parameter is set to COPY or MOVE, the attachment will be copied/moved to the Graphics folder automatically and no message will be presented.

If the drag and drop is successful, the attachment is added to the tab:

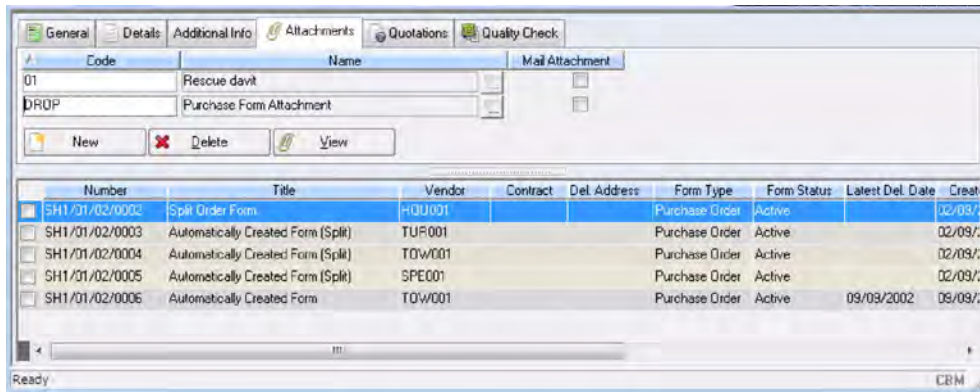


Figure 119 Attachment added successfully

When dragging and dropping from Outlook, the opened email message containing the attachment you want to add to AMOS must be in RTF view mode, which means that the attachment is contained in the text of the mail:

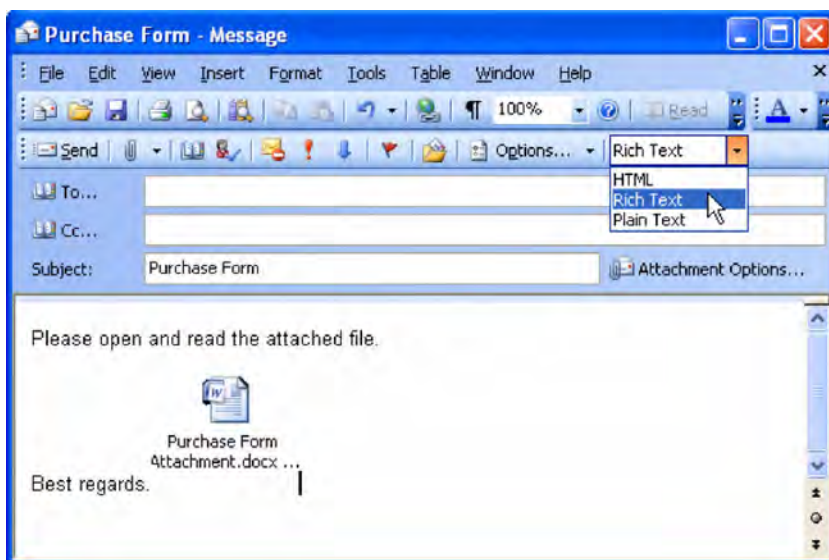


Figure 120 An Email message in RTF format

If the message is not already displayed in RTF format as above, change it by selecting **Rich Text** from the **Format** menu or the drop-down on the toolbar. Add the attachment by dragging and dropping the icon from the email. Hold the **CTRL** key as you drag if you want to copy the file; otherwise, it will be removed from the email.

Note

In Outlook, the message format can only be changed on outgoing emails, and not on emails which have already been received. If you have received an email which is not already in RTF format, click Forward on the mail. When the message opens in a new window for forwarding, you can set the format to RTF and then drag and drop the attachment. Afterwards, close the message dialog without saving it.

10.4 Viewing an Attachment

To view an attachment on the screen:

1. Select one from the library of attachment references.
2. Click the **View Attachment** button. The attachment appears in a new window.

There are three ways to zoom in on an attachment detail:

- Use the cursor to mark the part of the attachment to zoom on. Then click on the button **Zoom Area**,
- or,
- Select **Options > Zoom**,
- or,
- Right click on the attachment. A pop-up menu appears:

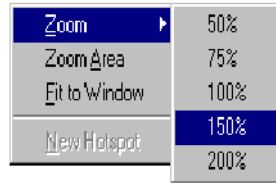


Figure 121 The Zoom sub-menu

Select a specific zoom value from the **Zoom** sub-menu, or select Zoom Area or Fit to Window to zoom in and out.

- To move around in a zoomed attachment:
Use the vertical and horizontal scroll bars.
- To zoom out:
Click the **Fit to Window** button, or select Fit to Window from the pop-up menu. The attachment returns to the overview.
- You can also use the **Options** menu to select **Zoom** commands, or right-click in the attachment. When you select the latter, you get a pop-up menu which contains the most relevant options:

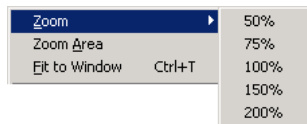


Figure 122 The Zoom sub-menu

You can select a specific zoom value from the **Zoom** sub-menu, or use the commands Zoom Area or Fit to Window, which correspond to the toolbar buttons described above.

10.5 Hotspots on an Attachment

Once you have defined an attachment reference, you may enhance its usability further by adding hotspots on the attachment.

10.5.1 What is a Hotspot?

A hotspot is a user-defined interactive area on an attachment (i.e. a button or some text) which when clicked opens a new window containing more information or another image to provide more details about relevant parts of the main attachment.

Depending on the type of hotspot, select the entity to link to the hotspot.

8. Click **OK**.

Figure 124 shows an attachment with two defined hotspots.

When hotspots have been defined on an attachment, you can click the **Show Hotspots** toolbar button to display the hotspots as shaded areas, and move or re-size them.

You can re-size a button hotspot the same way you re-size other hotspots. However, there is one difference: when the **Show Hotspots** button is not pressed, you will always see the hotspot on the attachment in the form of a button.

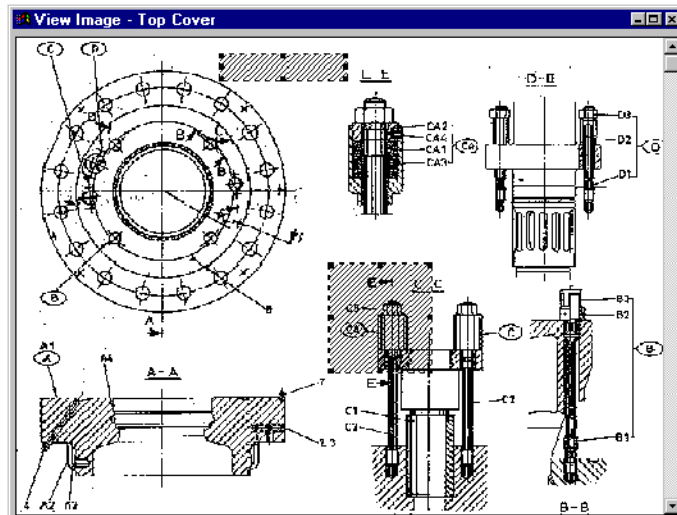


Figure 124 Example of an attachment with hotspots

Without pressing the **Show Hotspots** button, it is still possible to locate the hotspots in an attachment: Move the cursor around the attachment, and when the cursor moves over a hotspot, it turns into a hand with a pointing finger. Click on the hotspot to go to the area to which the hotspot has been linked.

10.6 Browsing Between Attachment Windows

Hotspot-linked attachments open up in the attachment window, replacing the original contents. AMOS M&P tracks the attachments used, and allows browsing between them. Two buttons become available in the tool bar: **Go Back** and **Go Forward**. Use these buttons to browse efficiently through previously viewed attachments.

10.7 The Attachment Workspace

An attachment can contain more than one hotspot. To keep track of the hotspots and their links, click the **Show Workspace** button in the toolbar. The left side of the window opens to show a list of the defined hotspots, as seen in the illustration below:

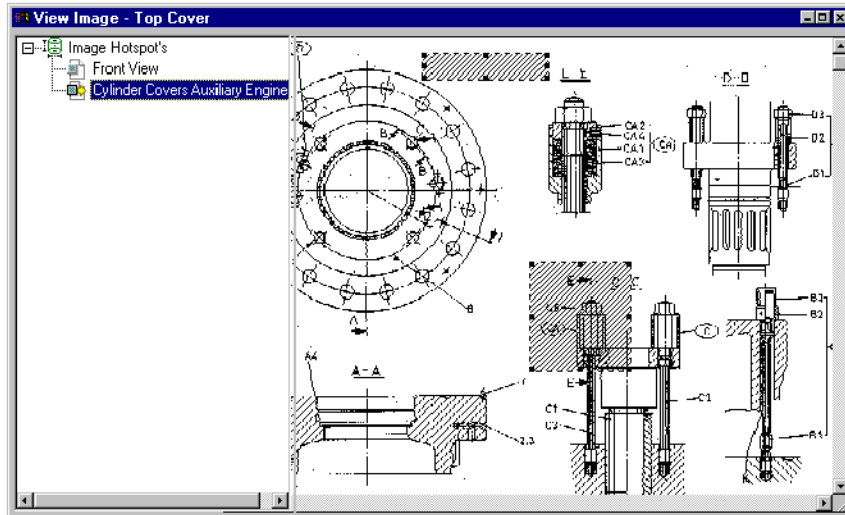


Figure 125 The Show Workspace pane

To see the name of the link for a hotspot, place the cursor on one of the hotspots in the attachment. The corresponding name in the list of hotspots at the left of the window highlights.

Glossary of Terms

This section defines the terms used in this document. The terms are listed in alphabetical order. Words in **Bold** text are described elsewhere in the Glossary.

Component	Any physical unit in the installation on which maintenance tasks must be performed. Examples may include engines, pumps, pipe systems, radar systems etc. A component may be made up of other smaller components or Stock Items .
Component Type	In a centralized database, Components will be registered as Component Types at the head office and exported as necessary to Installations .
Database	The information store. The store comprises a number of tables into which information is typed by the Programmers and Users .
Default	The standard or “manufacturer’s” setting for a Parameter or option.
Filter	A special Window or a particular part of a form into which you can type Search Criteria such that when a Search for information is conducted, only information concerning the specified subject is presented on the screen.
Form	A special type of Window into which you can type or copy information.
Network	A number of Computers that are connected together to enable them to communicate with each other. A network may be small; a few PCs in an office, or it could include thousands of computers located in various places around the world.
Parameter	A system setting that can be changed by someone with the appropriate access authority. Parameters are usually accessed through the Menu system.
Record	A page of information stored in the database. An example would be a page containing the details of a component.
Register	A list of related information that is stored in the Database . The information could be for example a list of products and the companies that supply them, or the employees in the company along with their addresses and other personal details.
Stock Item	Units and spares held in stores so that they are available when needed. Stock items may include spares for machinery, food, clothing, fuel, oil etc. The smallest physical unit in a Component that would normally be replaced in the event of damage.
Stock Type	In a centralized database, Stock items will be registered as Stock Types at the head office and the information will be exported to the Installations as necessary.
Wild Card/Character	A character that you can type into a Field , for example in a Filter , that represents a combination of other characters and spaces.

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