

# TFG4000™

Professional Edition

## Preventive Maintenance

## Users Guide



Version 1.4.5

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## Welcome

The TFG4000 Professional Edition Software Series is a set of business management software applications that offer the robust functionality of an advanced management tool, yet tailored to meet the needs and budget of your growing business. Each TFG4000 Professional Edition application is integrated with other TFG4000 Professional Edition applications to provide you the optimum benefits of business management software.

TFG4000 Professional Edition is an easy-to-learn, user-friendly system that requires only minimal keystrokes for entering information. There are customizable dropdowns, font sizes, and screen colors available, as well as powerful search capabilities and built-in help features to help guide you through the system. With TFG4000 Professional Edition, you have the ability to pull up various summary screens, enter as little or as much data as you need, process a variety of reports - all of which help you save both time and money, which will add directly to your bottom line. For added convenience, TFG4000 Professional Edition also allows you to run the system in either single or multi-user mode, whichever works best for your business. Other features include optional security, as well as data import and export features, which save you the work of re-keying information. In all, TFG4000 Professional Edition is the smart source for business management. A simple solution for a complex process.

## System Requirements

Microsoft Windows XP<sup>®</sup>, Microsoft Windows 2003 Server<sup>®</sup>, or Microsoft Windows 2000 Server<sup>®</sup>, with the latest Service Pack applied.

Pentium<sup>®</sup> class processor, 1 ghz or greater.

100MB free disk space.

256MB of RAM (512MB or more recommended).

Network Interface Card configured to use TCP/IP if installing in multiple user mode (client / server)

# Starting TFG4000 Professional Edition

Perform the following steps to start TFG4000 Professional Edition in either Single or Multiple User Mode:

## Single User

1. Open the "Start" menu, and then select the "Program" or "All Programs" option.
2. Select "TFG4000 Professional V1.4" from the program list.
3. Select "TFG4000 Professional Single V.1.4" to start.
4. The TFG4000 Professional Edition "Welcome" screen is displayed with the "Tip of the Day". You can select "Close" to continue the start up process or select "Next Tip" to view more tips. You can also choose not to have the "Tip of the Day" appear by selecting the check box next to "Don't show Tip of the Day at Startup" located on the Welcome screen. Select the check box again at any time to reinstate the "Tip of the Day" feature.
5. If you see a "User" and "Password" field on your screen, enter the User ID and Password that your System Administrator provided you, and either press "Enter" or click "Sign On".
6. If your screen only displays "Welcome" without any other fields, then click the plus sign ("+") next to the application you want to perform in the "NavTree".
7. Click on the screen you would like to use.



## **Multiple Users** (Not available in the Demo Version)

### **Server Startup**

At installation, the server component is put in the Startup folder of the Program List. It will automatically start at system start up. Perform this procedure only if necessary.

1. Open the "Start" menu, and then select the "Program" or "All Programs" option.
2. Select "TFG4000 Professional V1.4" from the program list.
3. Select "TFG4000 Professional Server V1.4" to start.
4. The "TFG Web Server" screen is displayed. It will display the INI file and the TCP/IP port number being used for the server. This window will display other server messages as needed.

### **Client Startup**

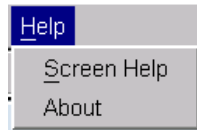
1. Open the "Start" menu, and then select the "Program" or "All Programs" option.
2. Select "TFG4000 Professional V1.4" from the program list.
3. Select "TFG4000 Professional Client V1.4" to start.
4. The TFG4000 Professional Edition "Welcome" screen is displayed with the "Tip of the Day". You can select "Close" to continue the start up process or select "Next Tip" to view more tips. You can also choose not to have the "Tip of the Day" appear by selecting the check box next to "Don't show Tip of the Day at Startup" located on the Welcome screen. Select the check box again at any time to reinstate the "Tip of the Day" feature.
5. If you see a "User" and "Password" field on your screen, enter the User ID and Password that your System Administrator provided you, and either press "Enter" or click "Sign On".
6. If your screen only displays "Welcome" without any other fields, click the plus sign ("+") next to the application you want to perform in the "NavTree".
7. Click on the screen you would like to use.

## Built-in Help

Help is available at the screen, field, and column level, as well as built-in tool tips.

### Screen Level Help

To select screen level help, click "Help" on the "Menu" bar, and then select "Screen Help". Help for the screen is then displayed.



### Field Level Help

To select field level help, right click on the field, and then click "Help" from the pop-up. Help for the selected field is then displayed. You may also press the F1 key to get field help.



### Column Level Help

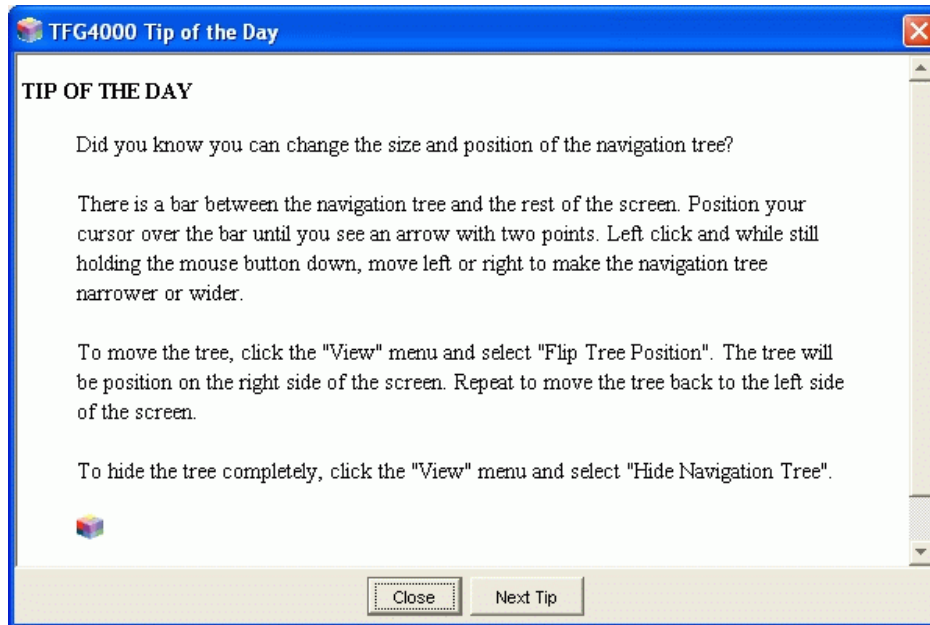
To select column level help, right click on the column heading, and then click "Help" from the pop-up. Help for the selected column is then displayed.



## Tip of the Day

Each time you start TFG4000 Professional Edition, there is a “Tip of the Day” pop-up displayed that describes some of the functionality that is available within the application. To close the “Tip of the Day” pop-up, click the “Close” button. To view another tip, click the “Next Tip” button. This feature can be turned off by clicking the box next to “Don’t Show Tip of the Day at Startup” on the Welcome screen. A check mark will appear in the box indicating the “Tip of the Day” should not be displayed during start up. To reinstate the “Tip of the Day” feature, click the box and the check mark will disappear indicating the “Tip of the Day” should be displayed during start up.

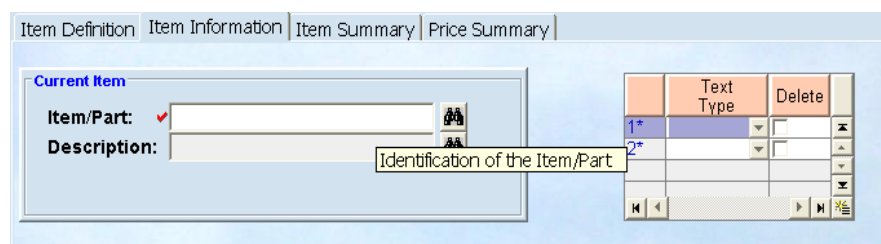
Example Only:



## Tool Tips

Throughout TFG4000 Professional Edition, there are embedded tool tips that help describe certain areas on the screen. You simply roll your mouse (cursor) over the area in question, and a pop-up will describe that specific area. The tool tip pop-up will remain visible for a few seconds, then it will disappear automatically.

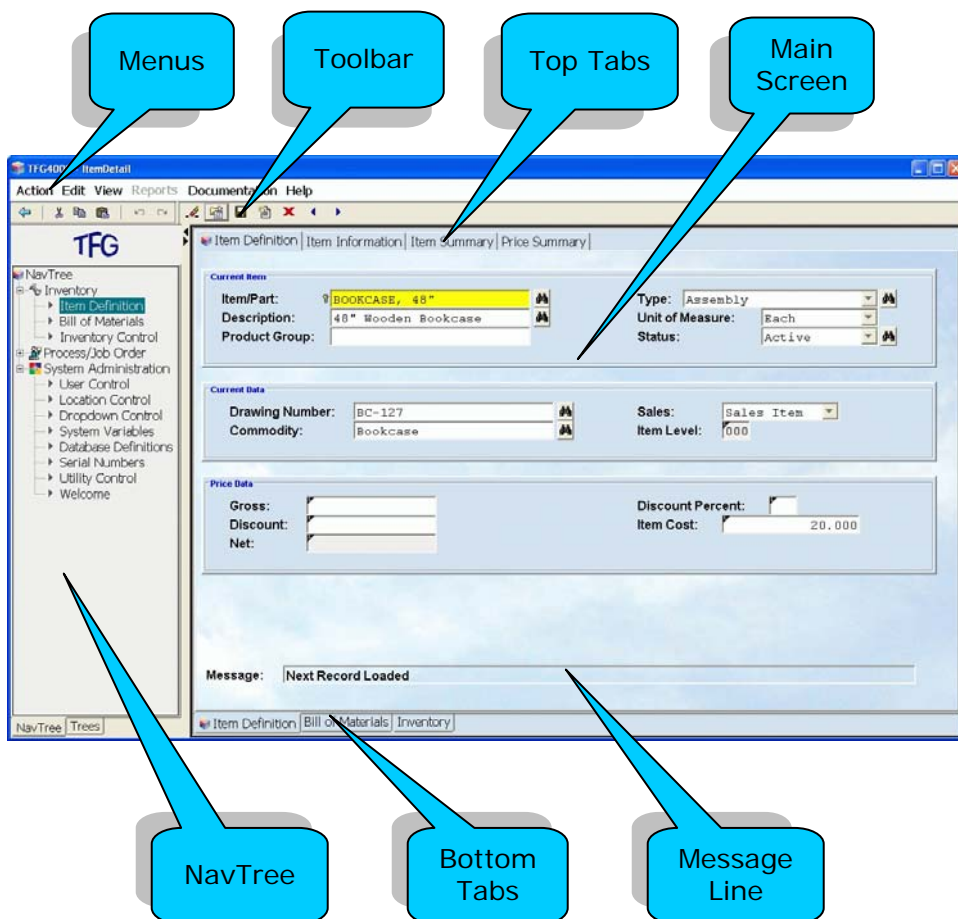
Example Only:



## Using TFG4000 Professional Edition

You can navigate through the TFG4000 Professional Edition screens by using the “NavTree”, the “Goto Screen” section of the “View Menu”, and the tabs on the top and bottom of the screen. For easy use, the toolbar provides a variety of functions for you to choose from as you use the TFG4000 Professional Edition applications. There are buttons located on the toolbar that allow you to perform various functions from each screen, such as opening/displaying data, saving data, etc. The “Menu” provides useful functions as well, such as printing reports, documentation, help, etc.

### Sample Screen



## Menus

Each screen in TFG4000 Professional Edition has various menus available for working with your data. The following describes the purpose of each menu and special features.

### Action

This menu is for printing screens and for exiting TFG4000 Professional Edition. It contains the following menu items:

<b>Print</b>	Prints the entire screen in either portrait or landscape mode.
<b>Print Text</b>	Prints only the text currently displayed on the screen in either portrait or landscape mode.
<b>Exit</b>	Terminates the TFG4000 Professional Edition session.

### Edit

This menu is for performing cut, copy, and paste operations on data. It contains the following menu items:

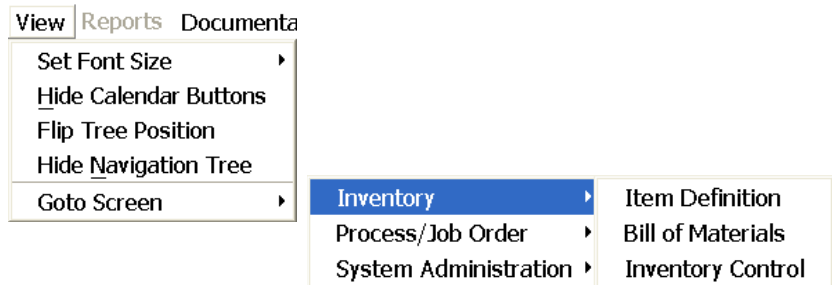
<b>Cut</b>	When you highlight data and use this function, the data is removed from the screen and is available in a clipboard for pasting. Holding the "Ctrl" key and pressing the "X" key will perform the same operation.
<b>Copy</b>	When you highlight data and use this function, the data is copied into a clipboard and is available for pasting. Holding the "Ctrl" key and pressing the "C" key will perform the same operation.
<b>Paste</b>	When you position your cursor in a field and use this function, data you have previously put into the clipboard using the "Cut" or "Copy" operation will be pasted after your cursor. Holding the "Ctrl" key and pressing the "V" key will perform the same operation.

**Note:** If your keyboard is in "insert mode" the data will not overlay data that follows, but if it is not in "insert mode" it will. Press the Insert key on your keyboard to change your insert mode to whichever way you prefer.

## View

This menu allows you to change the way the TFG4000 Professional Edition screens are presented and how you navigate the screens. It contains the following menu items:

- |                              |  |
|------------------------------|--|
| <b>Set Font Size</b>         | You can choose a font size from 10 to 18. With larger font sizes you may have to scroll to see the entire screen.  |
| <b>Hide Calendar Buttons</b> | Toggles whether or not a Calendar button is displayed next to the date fields.   |
| <b>Flip Tree Position</b>    | Changes the position of the "NavTree" to either the left or the right side of the screen.  |
| <b>Hide Navigation Tree</b>  | Hides the "NavTree" from the screen. Click it a second time to display the "NavTree" on the screen.<br><br><b>Note:</b> The dark arrows in the bar between the NavTree" and the main screen perform the same function.   |
| <b>Allow Word Wrap</b>       | Determines how text may be viewed. When it is checked, text may be displayed on multiple lines and can be viewed by scrolling up and down. When it is not checked, text may be viewed by scrolling right and left. Word wrap is allowed only if the system variable <b>Allow_Wrap</b> is set to <b>Yes</b> . |
| <b>GoTo Screen</b>           | Displays the "NavTree" in menu format. You can use this method to navigate the screens at any time but it is particularly useful if you hide the "NavTree".  |



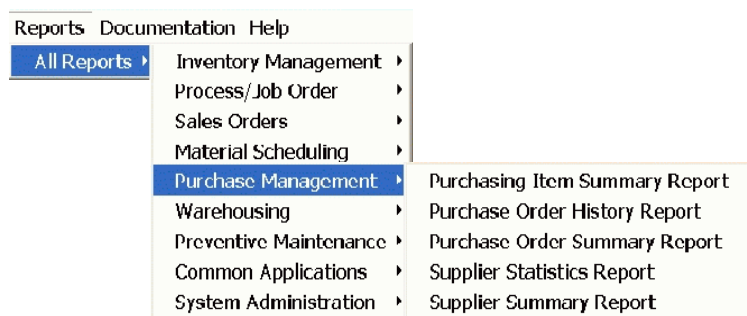
## Reports

This menu shows you the reports or forms available for the screen you are on. There will be various menu items depending on the screen. There is also an "All Reports" menu available from any screen.

**Note:** Forms are structured documents such as Invoices, Packing Slips, Purchase Orders, etc. Though you will see forms in the Reports menu on some screens, you will not see forms in the All Reports menus.

**Specific Reports** Displays reports associated with the screen you are on.

**All Reports** Displays a menu of reports available for all the applications you have installed. This menu does not include Forms.



## Documentation

This menu lets you select the TFG4000 Professional Edition manuals for viewing and printing.

## Help

This menu provides help about the screen you are on and information about TFG4000 Professional Edition. It contains the following menu items:

**Screen Help** Displays information about the screen you are on.

**About** Displays information about TFG4000 Professional Edition.

## Buttons & Icons

Each screen in TFG4000 Professional Edition has various buttons available for working with your data. The following describes the purpose of each button and special features. It also explains other icons you may see on the screens.

### Toolbar Buttons

Use the following buttons to perform TFG4000 Professional Edition application tasks. The buttons displayed change with the screen you are working with.

### Previous screens


Use this button to return to your previous screen. You can go back up to ten screens.

### Cutting, copying and pasting text


You can use "Cut" and "Paste" to move selected text. You can use "Copy" and "Paste" to copy selected text and paste the copy in another place. "Cut", "Copy", and "Paste" can also be selected from the "Edit" menu.

### Working with data

You can perform many different operations by using these buttons:

 Erase

This button clears data from the screen. It does not update any data; it merely clears the data away to make it easier for you to enter something else. It is particularly useful for resetting summary screens for a new search and it may be required when adding new entries on some screens.

 Open (Display)

This button retrieves data that has been previously saved for viewing and/or modifying. The **Enter** key executes this button by default.

 Save

This button stores new data and modified data. If you enter new data or change existing data and do not click this button, the system prompts you to do so.

 Cancel

This button reduces any remaining quantities to zero and changes statuses to "Cancelled".







 Delete

This button deletes previously saved data. On screens indicated as "definition" screens, the delete button deletes related data in addition to the data currently displayed. On all other screens only the data displayed is deleted.

 Previous




This button retrieves data that alphabetically precedes the currently displayed data.



 Next	This button retrieves data that alphabetically follows the currently displayed data.
 Copy	This button copies data from one place to another. It can copy related data in addition to the data currently displayed.
 Print	This button sends your document to the printer to be printed.
 Build	This button extracts eligible data from one place to create a new definition in another place. For example, it can extract customer order data to build a new invoice.
 Refresh	This button rebuilds the data on the screen.
 Split	This button will take lines from one document to create a new document using the lines selected.


## Screen Buttons

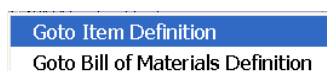
Throughout the screens are buttons that perform functions.











 Search	This button is for finding data you have already entered. When you click this button a search box pops up.
 Calendar	This button provides a pop-up calendar for selecting dates. You can choose the month and the year, and then double-click on the date you desire. Click "Today" to re-position the calendar on the current date. Click "Cancel" if you decide not to select a date. Dates can be entered without using the "Calendar" button if desired. Manually entered dates are verified so a pop-up appears prompting you to correct a date if it is invalid.
 Dropdown	This button provides a "dropdown" list of pre-defined values from various fields that have this button next to it. If you click on one of the values from the dropdown list, that value will appear in the adjacent field.

## Table Buttons

Throughout the tables are buttons that perform functions.




 GoTo/Selection	This button is for either transferring to another screen or selecting data. When you right-click on this button, it displays a menu of related screens and/or a menu of selection activities. To transfer to another screen, click on the screen you desire and that screen is displayed with the appropriate keys already filled in. To select data, such as a component or inventory location, click the action you want.
--	---



 Properties	This button is located at the lower left corner of each table. It allows you to edit the layout of the table. You can use this button to hide or display columns in the table and to restore the original table layout.
 Add Rows	This button appears in the lower right corner of modifiable tables so that you can put more empty rows on the screen for adding data to the table. If you are trying to enter another row in a table and there are not any blank rows to use, click the "Add Rows" button.
 Scroll to the Left	This button allows you to scroll to the left of the table.
 Scroll to the Right	This button allows you to scroll to the right of the table.
 Scroll Up	This button allows you to scroll up the table.
 Scroll Down	This button allows you to scroll down the table.
 Scroll Bottom	This button allows you to scroll to the very bottom of the table.
 Scroll Top	This button allows you to scroll to the very top of the table.
 Scroll Left	This button allows you to scroll to the very left of the table.
 Scroll Right	This button allows you to scroll to the very right of the table.

## Information Icons

Icons on the screen show properties about the field.

 Numeric	This icon in the upper left corner of a field indicates that the field is for a numeric value. You are able to enter only numbers, commas, and decimals in fields containing this icon.
 Key	This icon to the left of a field indicates that the field is a key field and is required for this screen.
 Required	If you try to display or save data without entering a required field, this checkmark icon is displayed next to the missing field.

## Field Colors

The fields on the screens and in screen tables have three different colors that have functional significance.

<b>Gray</b>	A gray field is display only, no entry allowed or necessary
<b>White</b>	A white field is open for entering data
<b>Yellow</b>	A yellow field indicates where the cursor is currently positioned


## Changing Screen Table Properties

Tables that appear on screens can be modified. The columns can be re-sized, re-positioned, hidden, and un-hidden.

To re-size a column move your cursor over the column heading you want to re-size and move to the right until you see an arrow with two heads. Click, then still holding the mouse button down, move the cursor to the right until the column is as wide as you want or to the left until the column is as small as you want.

To re-position a column click on the column heading, then still holding the mouse down, move the column to the where you want it and release the mouse. Some columns are key columns and will not remain where you re-position them.

**Note:** Re-sizing and re-positioning remain in effect for the duration of the current session. The default sizing and positioning is restored when TFG4000 Professional Edition is restarted.

To hide or unhide a column click the Properties button  located in the lower left corner of the table. A red check mark next to the column name indicates the column will be displayed. If there is not red check mark next to the column name it will not be displayed in the table. There may be multiple tabs for the table, so you must click on the tab that contains the column(s) you want. To save the changes you have made, click the "OK" button. To discard the changes you have made, click the "Cancel" button. To reset the properties back to the default properties, click the "Restore Default Visibility" button. Another pop-up will appear asking the range you wish to restore. Use the dropdown provided to select either "All Tabs", which will restore the defaults for the entire table, or "Currently Displayed Tab Only", which will restore the default properties only for the portion of the table indicated by the tab you are viewing. Once you have made your selection click "OK" or "Cancel". That pop-up will disappear and the column visibility properties are reset as requested or the reset action is cancelled. Then you may click either "OK" or "Cancel" to save or discard the property changes.

**Note:** Property changes remain in effect even after TFG4000 Professional Edition is restarted.

## Performing Searches

There are two types of searches in TFG4000 Professional Edition that are similar in appearance, however they have different functionality. The first is a "Search" associated with a field on the screen. The second is a "Search Pop-up" which is found on tables. One of the differences between the two is that a "Search Pop-up" can load multiple table rows to the screen at one time but a "Search" will not. Another difference is that "Search" screen results can be printed but "Search Pop-up" results cannot.

### Search Screen (Fields)

Below is an example of a search screen that may be used to locate information already entered into the system, and/or to automatically populate the fields on the screen that you are currently viewing or editing. When search results are displayed you can move the columns into different places on the search screen so that the values can be viewed in positions different from the default layout. Click the heading of the column you wish to move then drag and drop it into the desired position. Resize columns by moving the cursor over the heading until you see an arrow with two heads. Click, and with the mouse button still down, move the cursor right or left until the column is the desired width. The default layout is restored when the "Search" button is pressed and when you exit the search. In addition, you also have the option to retain search parameters by checking the box located next to "Retain Search Parameters". This option allows you to save the search parameters you used for future searches.



#### Example Only:

The screenshot shows a 'Search' dialog box with the following elements:

- Title:** Search
- Subtitle:** Search for Item Numbers
- Instruction:** Double-Click Search Results to Load Data to Screen
- Search Criteria:**
  - Max Rows To Display: 30
  - Retain These Search Parameters
  - Find Item Numbers: starting with BOOKCASE
  - Buttons: Search, Cancel, Print
- Table:**

Item/Part	Description	Type	Unit of Measure
BOOKCASE, 48"	48" Wooden Bookcase	Assembly	Each
BOOKCASE, 60"	60" Wooden Bookcase	Assembly	Each
BOOKCASE, 84"	84" Wooden Bookcase	Assembly	Each
- Status Bar:** 3 records found

## Using the Search Screen

1. Click the Search button  located directly next to the field you want to search.
2. Enter the maximum number of rows of data you want to display in your results. The default is "30".
3. Select one of the search choices using the dropdown. The default is "starting with".
4. Enter all or part of the value you want to search with. You may leave the search field blank to return all applicable records in the database. If there is a value in the screen field you are searching on, it will be copied to the search field. You can change the search field value on the "Search" screen.
5. Click the Search button .
6. Double click on the row you desire to load the information to the main screen.


## Modifying the View of the Search Results

To modify the view of the search results, do the following:

1. To re-size a column move your cursor over the column heading you want to re-size and move to the right until you see an arrow with two heads. Click, then still holding the mouse button down, move the cursor to the right until the column is as wide as you want or to the left until the column is as small as you want.
2. To re-position a column click on the column heading, then still holding the mouse button down, move the column to where you want it and release the mouse. Some columns are key columns and will not remain where you re-position them.
3. To re-size the window move your cursor over the edges of the window until you see an arrow with two heads. Click, and then still holding the mouse button down, move the cursor to increase or decrease the size of the window.

## Printing the Search Results

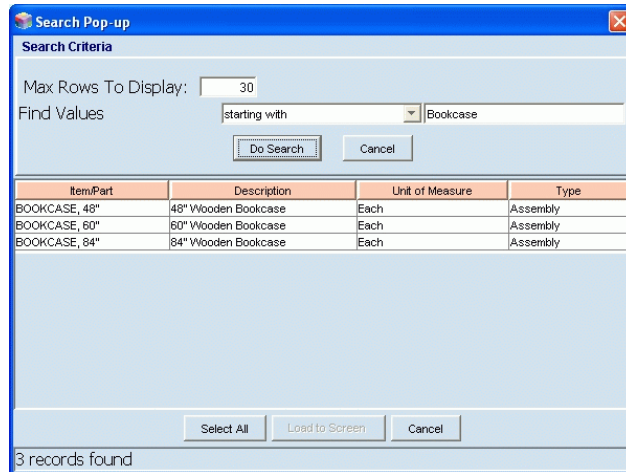
To print the search results, use these steps:

1. Click the Print button  on the "Search" screen.
2. Type or select the appropriate formatting options in the dialog box and then click "OK" to print the report.

## Search Pop-Up Screen (Tables)

Below is an example of a search pop-up screen that may be used to populate columns in the table on the screen that you are currently viewing or editing. When search results are displayed you can move the columns into different places on the search pop-up screen so that the values can be viewed in positions different from the default layout. Click the heading of the column you wish to move then drag and drop it into the desired position. Resize columns by moving the cursor over the heading until you see an arrow with two heads. Click, and with the mouse button still down, move the cursor right or left until the column is the desired width. The default layout is restored when the "Do Search" button is pressed and when you exit the search pop-up.

### Example Only:




The screenshot shows a 'Search Pop-up' dialog box with the following elements:

- Search Criteria:**
  - Max Rows To Display: 30
  - Find Values: starting with Bookcase
  - Buttons: Do Search, Cancel
- Results Table:**

Item/Part	Description	Unit of Measure	Type
BOOKCASE, 48"	48" Wooden Bookcase	Each	Assembly
BOOKCASE, 60"	60" Wooden Bookcase	Each	Assembly
BOOKCASE, 84"	84" Wooden Bookcase	Each	Assembly
- Footer:**
  - Buttons: Select All, Load to Screen, Cancel
  - Status: 3 records found

## Using the Search Pop-Up Screen

1. Click the GoTo/Selection button  in the row you want to search.
2. Enter the maximum number of rows of data you want to display in your results. The default is "30".
3. Select one of the search choices using the dropdown. The default is "starting with".
4. Enter all or part of the value you want to search with. You may leave the search field blank to return all applicable records in the database.
5. Click the "Do Search" button.
6. To select just one entry, double-click on it to populate the fields on your screen.
7. To select more than one entry, hold down the "Control" key while you click on the other selections with your mouse, then click "Load to Screen" to populate the information.
8. To load all of the entries to the screen table, click the "Select All" button and then click the "Load to Screen" button.


## Modifying the View of the Search Results

To modify the view of the search results, do the following:

1. To re-size a column move your cursor over the column heading you want to re-size and move to the right until you see an arrow with two heads. Click, then still holding the mouse button down, move the cursor to the right until the column is as wide as you want or to the left until the column is as small as you want.
2. To re-position a column click on the column heading, then still holding the mouse button down, move the column to where you want it and release the mouse. Some columns are key columns and will not remain where you re-position them.
3. To re-size the window move your cursor over the edges of the window until you see an arrow with two heads. Click, and then still holding the mouse button down, move the cursor to increase or decrease the size of the window.

## Printing the Search Results

To print the search results, use these steps:

1. Click the Print button  on the "Search" screen.
2. Type or select the appropriate formatting options in the dialog box and then click "OK" to print the report.

## Working with Reports

You can view, modify, and print reports by using the "Reports" menu located just above the toolbar.

### To view a report, follow these steps:

1. Click on "Reports" above the toolbar. A menu will drop down indicating which reports can be generated from that screen and a selection for All Reports. Click on the report name that you want.
2. A status window will appear showing that the system is generating the report.
3. You will then see your report displayed on the screen.

### To modify and/or print a report, follow these steps:

1. Click on "Reports" above the toolbar. A menu will drop down indicating which reports can be generated from that screen. Click on the report name that you want.
2. A status window will appear showing that the system is generating the report.
3. You will then see your report displayed on the screen with this toolbar at the top:



#### Printing Options

Allows you to set the Page Number Prefix, number of pages wide, and the Repeat Section Header/Footer settings. Adjust the settings to your specifications and then click "OK".

#### Page Setup

Allows you to adjust page settings such as page orientation and margins. Once finished adjusting the settings, click "OK".

#### Memorize

Allows you to save report settings under a report that you name yourself so you can run the report again with the same settings. You can save settings for a report under different names so you can have multiple versions of the same report formatted different ways. The new report names appear in the Report menu at the top of the main screen (after you go to another screen and come back) and they are available only to you, other users will not be able to see reports you memorized.

#### Print

Allows you to select printer settings and print your report. Once finished with settings, click "OK" to print the report.

#### Preview

Allows you to preview your report layout before you actually print. Once finished previewing, click "Close".



<b>Excel</b>	Allows you to save your report as an Excel document. Once finished naming and specifying where to save your report, click "Save".
<b>Revert</b>	Allows you to discard all layout changes and revert to default settings. Simply click either "Yes", or "No".
<b>Help</b>	Shows the Report Layout Instruction screen.
<b>Close</b>	Click this button to close the report and return to the main screen.

In some reports the selection criteria can be changed in the report window. Adjust the selection criteria as desired, and then click the "Refresh" button to reload the data. When you exit the report you will be asked if you want to update the screen with the refreshed data from the report. Click "Yes" to update the screen or "No" to leave the screen as it was when you started the report.

Report layouts can be modified. Columns can be re-sized, hidden, and un-hidden and sections can be hidden and un-hidden.

**To re-size a column do the following:**

1. Move your cursor over the column heading you want to re-size.
2. Move to the right until you see an arrow with two heads.
3. Click, then still holding the mouse button down, move the cursor to the right until the column is as wide as you want or to the left until the column is as small as you want.

**To hide or unhide a column, do the following:**

1. Right click in the report area or the long, thin "Edit" button on the left side of the report window to get the "Report Layout Options" window.
2. Click the "Column Visibility" tab. A red check mark next to the column name indicates the column will be displayed. If there is not red check mark next to the column name it will not be displayed in the report.

**To hide or unhide a report section, do the following:**

1. Click the tab for the section you want to hide or unhide.
2. Right click in the report area or the long, thin "Edit" button on the left side of the report window to get the "Report Layout Options" window.
3. Click "Do Not Print This Section".

To save the changes you have made, click the "OK" button. To discard the changes you have made, click the "Cancel" button.

To reset the properties back to the default properties, click the "Revert" button located on the report toolbar. A dialog box will appear asking if you want to discard changes and revert

back to default settings. Click either "Yes" to restore the defaults or "No" to keep the changes.

**Note:** Report layout changes remain in effect even after TFG4000 Professional Edition is re-started.

### **Logos on Forms and Reports**

Special forms such as job order forms, customer order forms, packing slips, invoices, and purchase order forms have an area for a company logo. The logo is controlled by system variable **Form\_Logo**.

Reports have an area for a company logo too. The logo is controlled by system variable **Report\_Logo**.

See the System Administration Users Guide for more information about these system variables and how to set them.

### **Working with Summary Screens and Summary Reports**

TFG4000 has many summary screens and reports available for locating data, listing data, and summarizing data. Each summary screen and report has various fields for search criteria that are used in combination with one another. The search criteria fields can use wildcards and other sophisticated SQL search techniques. For more information about wildcard characters that can be used for advanced searching, refer to the following Microsoft website:

<http://msdn.microsoft.com/library/default.asp?url=/library/en-us/off2000/html/acconWildcardCharactersS.asp>

Due to differences between Access and ANSI wildcard characters, when reading this website and using wildcards in TFG4000, substitute as follows:

% for \*  
\_ for ?  
# is not used

Also note that these wildcards cannot be used in searches.

## Initial Setup

TFG4000 Preventive Maintenance is installed with certain features that can be changed. The features are controlled with system variables. There are some system variables you need to understand before you start using Preventive Maintenance. For more information about viewing and changing system variables see the System Variables screen in the System Administration User Guide included on the TFG4000 CD, which is available from the Windows "Start" menu or from the "Documentation" menu within TFG4000. The documentation is also available online.

**Default\_City** (installation default is "**Cumming**" where The Fredrick Group, Inc. is located) – This variable defines the default city used when defining machines. You should change this to your city or blank it out if you do not want a default city.

**Default\_State** (installation default is "**Georgia**" where The Fredrick Group, Inc. is located) – This variable defines the default state used when defining machines. You should change this to your state or blank it out if you do not want a default state.

**Default\_ZipCode** (installation default is "**30040**" where The Fredrick Group, Inc. is located) – This variable defines the default zip code used when defining machines. You should change this to your zip code or blank it out if you do not want a default zip code.

**Job\_Order\_Printer** (installation default is "**HP Laserjet Printer**") – This variable indicates the default printer to be used for job order printing.

**Form\_Logo** (installation default is **Cubelcon.gif**) – This variable contains the name of the logo file to use on special forms such as Job Order Forms, Packing Slips, and Invoices. The recommended logo size is 50x50 pixels. The logo can be smaller or larger and the system will size it to fit. If you would like your company logo to appear on forms, place your logo in .gif format in the \\Server\Images directory and set this variable to the name of the logo. (**Note:** The Report\_Logo variable was used in previous releases of TFG4000 for forms, so you may need to check the setting for this variable).

**Report\_Logo** (installation default is **Cubelcon.gif**) – This variable contains the name of the logo file to use on reports. The recommended logo size is 50x50 pixels. The logo can be smaller or larger and the system will size it to fit. If you would like your company logo to appear on reports, place your logo in .gif format in the \\Server\Images directory and set this variable to the name of the logo.

# Preventive Maintenance Process

## What is Preventive Maintenance?

Preventive maintenance is pre-determined activity necessary to keep equipment in good running order and for safety considerations. Some examples of preventive maintenance activities are: oil changes, cleaning, inspection, safety checks, replacing worn parts, tire rotation, etc.

TFG4000 Preventive Maintenance is a full function system with many implementing options. The following example can be considered a basic implementation of the system. The example after that a more advance implementation.

## Basic PM

The following is an example of how you might implement basic PM functionality:

1. Set up the calendar (identify non-scheduled days)
2. Set up the machine.
  - a. Add information if needed (static data – does not go anywhere)
  - b. Add cost if needed (cost is manual entry in Basic PM)
    - i. If cost is entered on the Job Activities screen (once you have the job order) the system automatically updates the machine cost.
    - ii. If adding machine cost, the system does not update the job order.
3. Set up the schedule
  - a. Define the events
  - b. Set schedule with dates
  - c. Enter event information (notes) if you want them to appear on the job order.
4. The job order is created from the schedule and is printed as soon as it is created.

## Advanced PM

The following is an example of how you might implement more advanced PM functionality:

1. Kitting
  - a. Create item (Item Inventory / Item Definition)
    - i. If an item is not pre-defined, you cannot keep inventory on it or use it in a search.
  - b. Build the kit using the Bill of Material screen
  - c. When creating a schedule, enter the name of the kit using the Part Kits tab on the Machine Schedule screen.
    - i. When the job order is created from the schedule, it finds the kit and puts it in the job order parts list.
2. Process Definition
  - a. Build a process
    - i. Master
    - ii. Standard
    - iii. Custom
  - b. Enter process information (notes) if necessary
  - c. Enter operation information (notes) if necessary
    - i. Both process and operation information (notes) carry over to the job order.
  - d. The job order information comes from the event.
3. Costing
  - a. Set up the Employee
    - i. Enter rates – factor for overtime can be used.
  - b. Enter feedback on the Job Order Activities screen.
    - i. Enter date, employee ID, and material cost.
  - c. When feedback data is entered, the following are updated:  
Job Order table, Job Order Feedback table, Machine Cost
  - d. Job Order cost can be updated and maintained at any time. To correct an existing cost that is incorrect, use a new date with a negative (-) sign.

## Demand PM

TFG4000 Preventive Maintenance also includes Demand PM, or maintenance on demand. With Demand PM you can generate an unscheduled job/work order.

# **Machine**

## **What is a Machine?**

A machine is any kind of equipment you want to perform preventive maintenance on. It can be manufacturing equipment, a vehicle, a tool, a building, etc.

## **Machine Screens**

PM Machine consists of four tabbed screens that are used to enter and maintain machine information. Each screen is used for specific purposes to aid in the entry and maintenance of machines.

### **Machine**

Use this screen to enter basic data for a machine.

### **Information**

Use this screen to create and maintain machine information. This data may be any information you wish to save concerning this machine.

### **Machine Summary**

Use this screen to display a list of machines and associated information based on selection criteria entered.

### **Machine Cost**

Use this screen to enter and display various types of cost information by date for a machine. It displays machine cost attributed to a job order as well.

# Machine Screens Explained

## Machine Screen

This screen is used to enter and maintain machine data. This includes the basic information about the machine.

### Current Machine Data

<u>Field</u>	<u>Explanation</u>
Machine	Unique identification of the machine or equipment.
Type	Defines the machine type.
Description	A short description of the machine or its use.
Status	Identifies the machine status: Active or Inactive.
Model #	Manufacturer model number assigned to a machine.
Serial #	Unique identification number assigned by the manufacturer.

### Current Data


<u>Field</u>	<u>Explanation</u>
Machine Group	Machines associated by a common function such as printers.
Parent	If this machine is part of another machine complex this is the parent machine number for this machine.
Drawing Number	Number associated with the detailed drawings for this machine. This can be an engineering or design drawing.
Account	The general ledger account number to which this machine is assigned.
Manufacture Name	Name of the manufacturer of this machine.
Purchase Order	Purchase order number used when machine was initially purchased.
Commodity	A term that can be applied to groups of machines that are similar in some way. This field is normally used for purchasing data.
Initial Cost	Purchase price when machine was initially purchased.
Purchase Date	Date the machine was purchased.

Asset Number	Internal control number assigned to a machine for asset tracking purposes.
In Service Date	Date the machine was placed in service.
Work Center	Work center to which this machine is assigned.
Out Service Date	The date on which this machine was taken out of service.
Service PO	The purchase order number for the current service contract on this machine.
Warranty Start	The date the warranty starts.
Warranty End	The date the warranty ends.
City	City where the machine is installed.
State	State where the machine is installed.
Zip	Zip Code where the machine is installed

### **Message Line**

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Message	Displays information about the current status of the screen.

### **Accessing the Machine Screen**

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.
- or-
- Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.
2. Click “Machine”. The Machine screen is displayed.
  3. If there is a machine number in the “Machine” field, the machine definition for that machine is displayed on the main screen.




## Using the Machine Screen

### Procedures

Use these procedures to erase the screen, display, update, add, delete, view previous, and view next machines.


### Erasing the Screen

To erase the data from the screen click the Erase button  located on the toolbar.


**Note:** Erasing the screen does not cause any data to be lost; it is merely a way to clean the screen in preparation for another operation.

### Displaying a Machine

To display a machine, perform the following steps:


1. Enter a machine number in the "Machine" field.
2. Click the Open (Display) button  located on the toolbar or hit the Enter key.
3. The machine data is displayed on the main screen.

-or-

1. Use the Search button  next to the "Machine" field or "Description" field to select a machine.
2. Double-click on the "Machine" you would like to display in the "Search" screen table.
3. The machine data is displayed on the main screen.



### Updating a Machine

To update a machine, perform the following steps:

1. Display the machine number you want to change. See "Displaying a Machine" above.
2. Change the desired information on the main screen.
3. Once finished, click the Save button  located on the toolbar.


## Adding a New Machine

To add a new machine:

1. Click the Erase button  located on the toolbar to clear the screen.
2. Enter a unique machine number in the "Machine" field.
3. Enter any of the optional machine data you want.
4. When all of the data has been entered, click the Save button  located on the toolbar.

## Deleting a Machine and its Associated Data


Perform the following steps to delete a machine and all of the data associated with it:

1. Display the machine you wish to delete. See "Displaying a Machine" above.
2. Click the Delete button  located on the toolbar.
3. Click the "Yes" button on the "Confirm Action" pop up message. If you do not want to delete the machine click "No" on the "Confirm Action" pop up message.
4. The machine definition, machine information, and machine cost are deleted.

**Note:** Once a machine is deleted, it can no longer be displayed or updated.


## Copying a Machine

To copy a machine to a new machine, perform the following steps:

1. Display the machine you want to copy. See "Displaying a Machine" above.
2. Click the copy button  located on the toolbar. A pop-up will appear.
3. Enter the new machine number in the "Copy to Machine."
4. Various types of machine data are listed with check boxes next to them. Click a check box to check or uncheck data to be copied. A check mark means it will be copied, No check mark means it will not be copied.
5. Click the "Copy" button to complete the copy or click "Cancel" to cancel the copy operation.


## Displaying the Previous Machine




To display the machine that precedes the machine currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous machine is displayed on the main screen.

## Displaying the Next Machine

To display the machine that follows the machine currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next machine is displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## Machine Information Screen

This screen is used to create and maintain machine information text. This data may be any information you wish to store concerning the machine. Also, you can use this screen to reference any kind of external document such as spreadsheets, diagrams, books, websites, etc.

### Current Machine

<u>Field</u>	<u>Explanation</u>
Machine	Unique identification of the machine or equipment.
Description	A short description of the machine or its use.
Type	Defines the machine type.

### Information Table

<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Text Type	Indicates the type of text information. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration".
Text Information	This is where you enter text information or view text that has already been entered.
Delete	This is a checkbox to indicate you want to delete this text record.


### Reference Table

<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Reference Type	Indicates the type of external reference information. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration".
Reference	Directory and file name for an electronic reference, URL for a website, or description of where to find a physical reference. An electronic reference can be a spreadsheet, a word processor document, or a text file. A physical reference can be the name of a book with the page number.
Delete	This is a checkbox to indicate you want to delete this reference record.

## Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.

## Accessing the Machine Information Screen

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.
- or-
- Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.
2. Click “Machine”. The Machine screen is displayed.
  3. If there is a machine number in the “Machine” field, the machine definition for that machine is displayed on the main screen.
  4. Click the “Information” tab at the top of the main screen. The Machine Information screen is displayed.
  5. If there is a machine number in the “Machine” field, the information and the references for that machine are displayed on the main screen.

## Using the Information Screen

Use these procedures to erase the screen, display, update, add, delete, display the previous, and display the next machine information and references.


### Erasing the Screen

To erase the data from the screen click the Erase button  located on the toolbar.


**Note:** Erasing the screen does not cause any data to be lost; it is merely a way to clean the screen in preparation for another operation.


### Displaying Machine Information and References

To display machine information and references, perform the following steps:

1. Enter a machine number in the "Machine" field and click the Open (Display) button  located on the toolbar or hit the Enter key.


-or-


Use the Search button  next to the "Machine" field, or the "Description" field to select a machine and double-click on the "Machine" you would like to display in the "Search" screen table.

2. The information text types and references for the machine are displayed on the main screen.
3. To display information text, click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to display and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
4. The text will be displayed in a pop-up window.
5. The reference information is displayed in the Reference table. Use the scroll bar on the right to display more rows if necessary.
6. To view electronic references, right click on the reference you would like to display. Choose "Goto External Application" from the menu.

### Updating Machine Information

To update machine information, perform the following steps:

1. Display the machine number that has the data you want to change. See "Displaying Machine Information and References" above.
2. Click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to update and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
3. The text will be displayed in a pop-up window.

4. Change the desired information in the pop-up window and click "Ok" when done.
5. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Information and References at the same time.


### Updating Machine References

To update machine references, perform the following steps:

1. Display the machine number that has the data you want to change. See "Displaying Machine Information and References" above.
2. Enter the new reference in the "Reference" column of the Reference table for the row or rows you wish to update.

-or-


For an electronic reference, right click the reference you want to update. Choose "Select External File". A file selection dialog will appear so you can locate the directory that contains the file you want. Select the file you want and click the "Open" button.

3. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Machine Information and References at the same time.



### Adding Machine Information

To enter machine information, perform the following steps:

1. Display the machine number you want. See "Displaying Machine Information and References" above.
2. Click an empty row in the Information table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the text type you want (type the letter multiple times if there is more than one type that begins with the same letter).

-or-


Using the dropdown list, select the Text Type in the "Info Type" column of the Information table.

4. Click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
5. The text will be displayed in a pop-up window.
6. Enter the desired information in the pop-up window and click "Ok" when done.
7. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Machine Information and References at the same time.

### Adding Machine References

To enter machine references, perform the following steps:

1. Display the machine number you want. See “Displaying Machine Information and References” above.
2. Click an empty row in the Reference table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the reference type you want (type the letter multiple times if there is more than one type that begins with the same letter).


-or-

Using the dropdown list, select the Reference Type in the “Reference Type” column of the Reference table.

4. Enter the reference in the “Reference” column.

-or-


For an electronic reference, right click the reference you want to update. Choose “Select External File”. A file selection dialog will appear so you can locate the directory that contains the file you want. Select the file you want and click the “Open” button.

5. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Machine Information and References at the same time.

### Deleting Machine Information and References

To delete machine information and references, perform the following steps:


1. Display the machine number that has the data you want to delete. See “Displaying Machine Information and References” above.
2. To delete text information, click the checkbox  in the “Delete” column of the Information table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
3. To delete reference information, click the checkbox  in the “Delete” column of the Reference table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
4. Once finished, click the Save button  located on the toolbar.

**Note:** Once machine information is deleted, it can no longer be displayed or updated.




## Displaying the Previous Machine Information and References




To display the machine information and references that precede the machine information and references currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous machine information and references are displayed on the main screen.

## Displaying the Next Machine Information and References

To display the machine information and references that follow the machine information and references currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next machine information and references are displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## Machine Summary

This screen is used to display a list of machines based on the selection criteria entered.

### Selection Criteria

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Machine	Enter or select a machine in this field to display the summary by machine or leave this field blank for all machines.
Type	Enter or select a machine type to display the summary by type or leave this field blank for all types.
Description	Enter or select a machine description to display the summary by description or leave this field blank for all descriptions.
Status	Select a machine status to display the summary by status or leave this field blank for all statuses.
Number of Rows to Display	Controls the number of database rows to retrieve.
City	Enter or select a city to display the summary by city or leave this field blank for all cities.
Show Out of Service Only	Check this box to display only machines that are no longer in service.
State	Enter or select a state to display the summary by state or leave this field blank for all states.
Zip	Enter or select a zip code to display the summary by zip code or leave this field blank for all zip codes.

**Summary Table** (Machine, Address, Dates, Other Data, More, Manufacture, and Orders Tabs)


<b><u>Column</u></b>	<b><u>Explanation</u></b>
Row	The line number of the row in the table.
Machine	Unique identification of the machine or equipment.
Description	A short description of the machine or its use.
Type	Defines the machine type.
Status	Indicates the machine status: Active or Inactive.
Machine City	City where the machine is installed.
State	State where the machine is installed.

Zip	Zip Code where the machine is installed.
Purchase Date	The date the machine was acquired.
In Service Date	The date the machine was put into service (use).
Out Service Date	The date the machine was taken out of service (use).
Warranty Start	Beginning date of the warranty for this machine.
Warranty End	Date the warranty for this machine expires.
Parent Machine	This machine may be part of another machine. If so, the other machine is called the "Parent Machine".
Drawing Number	Drawing number/diagram/schematic associated with this machine.
Commodity	Code or other designation that may be applied to groups of machines that are similar in some way. Usually refers to general function, for example Office Equipment, Manufacturing, Vehicle, etc.
Machine Group	A name or code that can be used to group similar machines together. Usually used to group machines by function, for example Printers, Die Cutters, Delivery Truck, etc.
Asset Number	Internal control number assigned to a machine for asset tracking purposes.
Initial Cost	Price paid for the machine when it was originally purchased.
Manufacture Name	The name of the manufacturer who produced this machine.
Model #	Manufacturer's model number for this machine.
Serial #	Manufacturer's unique identifier for this machine.
Purchase Order	Purchase order number used when the machine was originally purchased.
Service PO	The purchase order number for the current service contract on this machine.
Work Center	Work center to which this machine is assigned.
Account	The general ledger account number to which this machine is assigned.

## Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.



## Accessing the Machine Summary Screen

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.
- or-
- Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.
2. Click “Machine”. The Machine screen is displayed.
3. If there is a machine number in the “Machine” field, the machine definition for that machine is displayed on the main screen.
4. Click the “Summary” tab at the top of the main screen. The Machine Summary screen is displayed.
5. If there is a machine number in the “Machine” field, the machine list is displayed on the main screen.

## Using the Machine Summary Screen

### Displaying the Machine Summary

To view the machine summary, perform the following steps:

1. Enter all or part of a machine number in the "Machine" field, or use the Search button  next to the "Machine" field to select a machine.
2. Enter or select values in the other selection criteria fields as desired.
3. Click the Open (Display) button  located on the toolbar or hit the Enter key.
4. The machine summary results are displayed in the Summary table on the main screen.
5. If the record you are looking for is not displayed in the table, either increase the "Number of Rows to Display" or change the selection criteria.

## Machine Cost Screen

This screen is for entering and displaying various types of cost information by date for a machine. It displays machine cost attributed to a job order as well.

### Current Machine Data

<u>Field</u>	<u>Explanation</u>
Machine	Unique identification of the machine or equipment.
Type	Defines the machine type.
Description	A short description of the machine or its use.
Status	Identifies the machine status: Active or Inactive.
Model #	Manufacturer model number assigned to a machine.
Serial #	Unique identification number assigned by the manufacturer.
Number of Rows to Display	Controls the number of database rows to retrieve during the query. The default value is 30. The more rows retrieved, the longer it takes the query to complete. Use the selection criteria to help control the number of rows retrieved.

### Cost Table (Cost; Material & Labor; Overhead, Setup & External; and Reference tabs)


<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Cost Date	Date of the entry of the associated cost data.
Total Cost	Sum of the costs for this entry.
Cost Level	Type of cost reported, either Actual or Estimated.
Cost Description	A detailed description of the cost entry.
Material Cost	Direct material cost reported for the date indicated.
Labor Cost	Direct labor cost. Employee hourly rates (regular, overtime, holiday) times the number of hours reported.
Labor Time	Labor time reported.
Time Unit	Unit of measure for time: Hours.
Fixed Overhead	Fixed burden cost.
Variable Overhead	Variable burden cost.

Setup Cost	Cost incurred during set up.
External Cost	External cost reported for the date indicated.
Reference	Notes how and from which screen the cost for the row was calculated.
Job Order	The Job Order number associated with the cost reported.

### Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.

### Accessing the Machine Cost Screen


1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.
- or-
- Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.
2. Click “Machine”. The Machine screen is displayed.
  3. If there is a machine number in the “Machine” field, the machine definition for that machine is displayed on the main screen.
  4. Click the “Cost” tab at the top of the main screen. The Machine Cost screen is displayed.
  5. If there is a machine number in the “Machine” field, the machine cost data for that machine is displayed on the main screen.

## Using the Machine Cost Screen


Use these procedures to erase the screen, display, update, add, delete, display the previous, and display the next machine cost.

### Displaying Machine Cost

To display machine cost, perform the following steps:



1. Enter a machine number in the "Machine" field.
2. Click the Open (Display) button  located on the toolbar or hit the Enter key.
3. The machine costs are displayed in the Cost table. Use the scroll bar on the right to display more rows if necessary.

-or-

1. Use the Search button  next to the "Machine" field, "Description" field to select a machine.
2. Double-click on the "Machine" you would like to display in the "Search" screen table.
3. The machine costs are displayed in the Cost table. Use the scroll bar on the right to display more rows if necessary.


### Adding Cost

To add machine cost to a machine:

1. Display the machine you wish to change. See "Displaying Machine Cost" above.
2. Enter the cost data in the table for each of the tabs ("Cost", "Material & Labor", "Overhead, Setup & External", and "Reference").
3. Click the Add Rows button  located on the lower right corner of the table to add more rows for cost if necessary.
4. When all of the cost data has been entered, click the Save button  located on the toolbar.

### Displaying the Previous Machine Cost


To display the machine cost that precedes the machine cost currently displayed, perform the following steps:




1. Click the Previous button  located on the toolbar.
2. The previous machine cost is displayed on the main screen.



## Displaying the Next Machine Cost

To display the machine cost that follows the machine cost currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next machine cost is displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

# Meter

## What is a Meter?

A meter is a measure used to schedule preventive maintenance events. Some examples of meters are: mileage on a vehicle, number of hours a machine has been running, number of cycles a machine has processed.

## Meter Screens

“Meter” consists of four tabbed screens that are used to enter and maintain meter definition data. Each screen is used for specific purposes to aid in the entry and maintenance of meters.

### Meter

Use this screen to define meters associated with a machine. Multiple meters may be defined for a machine.

### Meter Information

Use this screen to create and maintain meter information. This data may be any information you wish to save concerning this meter.

### Meter Summary

This screen can be used to display a list of meters based on the selection criteria you use. Each row in the table represents one meter with its associated data.

### Meter History

Use this screen to display the past activity (history) for the selected meter(s).

## Meter Screen

This screen is used to enter and maintain meter data. This includes the basic information about the meter.

### Current Machine / Meter Data

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Machine	Unique identification of the machine or equipment.
Description	A short description of the machine or its use.
Meter	Unique identification of the meter within the machine.
Description	A short description of the meter or its use.
Type	Defines the meter type.
Status	Identifies the meter status: Active or Inactive.


### Current Data

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Meter Reading	Current reading based on the associated meter unit of measure.
Unit of Measure	Meter unit of measure, for example: Days, Hours, Cycles, Other.  <b>Note:</b> Meter unit of measure entries can be added and changed using the Dropdown Control screen under System Administration.
Reading Date	Date of the current Meter Reading.
Rollover	The numeric value at which the meter rolls over to zero (0).
Rollover Count	The number of times the meter has rolled over. The rollover count starts at zero (0).

### Message Line

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Message	Displays information about the current status of the screen.

## Accessing the Meter Screen

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.

-or-

Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.


2. Click “Meter”. The Meter screen is displayed.
3. If there is a machine number in the “Machine” field and a meter number in the “Meter” field, the meter definition for that machine and meter is displayed on the main screen.

## Using the Meter Screen

### Procedures

Use these procedures to erase the screen, display, update, add, delete, view previous, and view next machine meter.


### Erasing the Screen

To erase the data from the screen click the Erase button  located on the toolbar.



**Note:** Erasing the screen does not cause any data to be lost; it is merely a way to clean the screen in preparation for another operation.

### Displaying a Meter

To display a meter, perform the following steps:


1. Enter a machine number in the “Machine” field.
2. Enter a meter number in the “Meter” field.
2. Click the Open (Display) button  located on the toolbar or hit the Enter key.
3. The meter data is displayed on the main screen.

-or-

1. Use the Search button  next to the “Machine” field to select a Machine.
2. Use the Search button  next to the “Meter” field to select a Meter for the Machine already selected.
3. Double-click on the “Meter” you would like to display in the “Search” screen table.
4. The meter data is displayed on the main screen.



## Updating a Meter

To update a meter, perform the following steps:

1. Display the meter number you want to change. See “Displaying a Meter” above.
2. Change the desired information on the main screen.
3. Once finished, click the Save button  located on the toolbar.


## Adding a New Meter

To add a new Meter:

1. Click the Erase button  located on the toolbar to clear the screen.
2. Enter a machine number in the “Machine” field and a unique meter number in the “Meter” field.
3. Enter any of the optional meter data you want.
4. When all of the data has been entered, click the Save button  located on the toolbar.

## Deleting a Meter


Perform the following steps to delete a meter and all of the data associated with it:

1. Display the meter you wish to delete. See “Displaying a Meter” above.
2. Click the Delete button  located on the toolbar.
3. Click the “Yes” button on the “Confirm Action” pop up message. If you do not want to delete the meter click “No” on the “Confirm Action” pop up message.

**Note:** Once a meter is deleted, it can no longer be displayed or updated.


## Displaying the Previous Meter




To display the meter that precedes the meter currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous machine is displayed on the main screen.

## Displaying the Next Meter

To display the meter that follows the meter currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next meter is displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## Meter Information Screen

This screen is used to create and maintain Meter information text. This data may be any information you wish to store concerning the Meter. Also, you can use this screen to reference any kind of external document such as spreadsheets, diagrams, books, websites, etc.

### Current Meter

<u>Field</u>	<u>Explanation</u>
Meter	Unique identification of the meter within the machine.
Description	A short description of the Meter or its use.
Type	Defines the Meter type.

### Information Table

<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Text Type	Indicates the type of text information. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration".
Text Information	This is where you enter text information or view text that has already been entered.
Delete	This is a checkbox to indicate you want to delete this text record.


### Reference Table

<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Reference Type	Indicates the type of external reference information. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration".
Reference	Directory and file name for an electronic reference, URL for a website, or description of where to find a physical reference. An electronic reference can be a spreadsheet, a word processor document, or a text file. A physical reference can be the name of a book with the page number.
Delete	This is a checkbox to indicate you want to delete this reference record.

## Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.

## Accessing the Meter Information Screen

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.  
  
-or-  
  
Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.
2. Click “Meter”. The Meter screen is displayed.
3. If there is a Meter number in the “Meter” field, the Meter definition for that Meter is displayed on the main screen.
4. Click the “Information” tab at the top of the main screen. The Meter Information screen is displayed.
5. If there is a Meter number in the “Meter” field, the information and the references for that Meter are displayed on the main screen.



## Using the Information Screen

Use these procedures to erase the screen, display, update, add, delete, display the previous, and display the next Meter information and references.

### Erasing the Screen

To erase the data from the screen click the Erase button  located on the toolbar.



**Note:** Erasing the screen does not cause any data to be lost; it is merely a way to clean the screen in preparation for another operation.


### Displaying Meter Information and References

To display Meter information and references, perform the following steps:

1. Enter a machine number in the "Machine" and a meter number in the "Meter" field.


-or-


Use the Search button  next to the "Machine" field to select a Machine, then use the Search button  next to the "Meter" field to select a Meter for the Machine already selected and double-click on the "Meter" you would like to display in the "Search" screen table.

2. The information text types and references for the meter are displayed on the main screen.
3. To display information text, click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to display and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
4. The text will be displayed in a pop-up window.
5. The reference information is displayed in the Reference table. Use the scroll bar on the right to display more rows if necessary.
6. To view electronic references, right click on the reference you would like to display. Choose "Goto External Application" from the menu.

### Updating Meter Information

To update Meter information, perform the following steps:

1. Display the Meter number that has the data you want to change. See "Displaying Meter Information and References" above.
2. Click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to update and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
3. The text will be displayed in a pop-up window.

4. Change the desired information in the pop-up window and click "Ok" when done.
5. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Information and References at the same time.


### Updating Meter References

To update Meter references, perform the following steps:

1. Display the Meter number that has the data you want to change. See "Displaying Meter Information and References" above.
2. Enter the new reference in the "Reference" column of the Reference table for the row or rows you wish to update.

-or-


For an electronic reference, right click the reference you want to update. Choose "Select External File". A file selection dialog will appear so you can locate the directory that contains the file you want. Select the file you want and click the "Open" button.

3. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Meter Information and References at the same time.



### Adding Meter Information

To enter Meter information, perform the following steps:

1. Display the Meter number you want. See "Displaying Meter Information and References" above.
2. Click an empty row in the Information table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the text type you want (type the letter multiple times if there is more than one type that begins with the same letter).

-or-


Using the dropdown list, select the Text Type in the "Info Type" column of the Information table.

4. Click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
5. The text will be displayed in a pop-up window.
6. Enter the desired information in the pop-up window and click "Ok" when done.
7. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Meter Information and References at the same time.

### Adding Meter References

To enter Meter references, perform the following steps:

1. Display the Meter number you want. See “Displaying Meter Information and References” above.
2. Click an empty row in the Reference table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the reference type you want (type the letter multiple times if there is more than one type that begins with the same letter).


-or-

Using the dropdown list, select the Reference Type in the “Reference Type” column of the Reference table.

4. Enter the reference in the “Reference” column.

-or-


For an electronic reference, right click the reference you want to update. Choose “Select External File”. A file selection dialog will appear so you can locate the directory that contains the file you want. Select the file you want and click the “Open” button.

5. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Meter Information and References at the same time.

### Deleting Meter Information and References


To delete Meter information and references, perform the following steps:

1. Display the Meter number that has the data you want to delete. See “Displaying Meter Information and References” above.
2. To delete text information, click the checkbox  in the “Delete” column of the Information table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
3. To delete reference information, click the checkbox  in the “Delete” column of the Reference table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
4. Once finished, click the Save button  located on the toolbar.

**Note:** Once Meter information is deleted, it can no longer be displayed or updated.


## Displaying the Previous Meter Information and References




To display the Meter information and references that precede the Meter information and references currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous Meter information and references are displayed on the main screen.

## Displaying the Next Meter Information and References

To display the Meter information and references that follow the Meter information and references currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next Meter information and references are displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## Meter Summary

This screen is used to display a list of meters based on the selection criteria used.

### Selection Criteria

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Machine	Unique identification of the machine or equipment.
Meter Type	Defines the meter type.
Meter	Unique identification of meter. Entry can be any combination of letters and/or numbers.
Meter Status	Indicates the meter status: Active or Inactive.
Number of Rows to Display	Controls the number of database rows to retrieve during the query. The default value is 30. The more rows retrieved, the longer it takes the query to complete. Use the selection criteria to help control the number of rows retrieved.


### Summary Table (Primary and Secondary Tabs)

<b><u>Column</u></b>	<b><u>Explanation</u></b>
Row	The line number of the row in the table.
Machine	Unique identification of the machine or equipment.
Meter	Unique identification of meter.
Description	A short description of the meter or its use.
Type	Defines the meter type.
Status	Indicates the meter status: Active or Inactive.
Last Reading	Current reading based on the associated meter unit of measure.
UOM	Meter unit of measure
Date	Date of the current Meter Reading.

### Message Line

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Message	Displays information about the current status of the screen.

## Accessing the Meter Summary Screen

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.


-or-

Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.

2. Click “Meter”. The Meter screen is displayed.
3. If there is a machine number in the “Machine” field and a meter number in the “Meter” field, the meter definition for that machine and meter is displayed on the main screen.
4. Click the “Summary” tab at the top of the main screen. The Meter Summary screen is displayed.
5. If there is a machine number in the “Machine” field and a meter number in the “Meter” field, the meter summary is displayed on the main screen.

## Using the Meter Summary Screen


### Erasing the Screen

To erase the data from the screen click the Erase button  located on the toolbar.

**Note:** Erasing the screen does not cause any data to be lost; it is merely a way to clean the screen in preparation for another operation.

### Displaying the Meter Summary

To view the meter summary, perform the following steps (Steps 1, through 5 are optional):

1. Enter all or part of a machine number in the "Machine" field.
2. Select the type of meter you want to display in the "Meter Type" field or leave that field blank to select any type of meter.
3. Enter all or part of a meter number in the "Meter" field.
4. Select the status of the meter you want to display in the "Meter Status" field or leave that field blank to select meters with any status.
5. Enter the number of items you wish to view in the "Number of Items to Display" field.
6. Click the Open (Display) button  located on the toolbar.
7. View the Meter Summary displayed on the screen.

## Meter History

This screen is used to display the past activity for the meters selected.

### Selection Criteria

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Machine	Unique identification of the machine or equipment.
Meter Type	Defines the meter type.
Meter	Unique identification of a meter. Entry can be any combination of letters and/or numbers.
Meter Status	Indicates the meter status: Active or Inactive.
Number of Rows to Display	Controls the number of database rows to retrieve during the query. The default value is 30. The more rows retrieved, the longer it takes the query to complete. Use the selection criteria to help control the number of rows retrieved.

### Meter Table (Meter and Description Tabs)


<b><u>Column</u></b>	<b><u>Explanation</u></b>
Row	The line number of the row in the table.
Timestamp	Identification of the Date and Time that this activity was recorded. This column is in descending order.
Machine	Unique identification of the machine or equipment.
Meter	Unique identification of a meter.
Reading	Current reading based on the associated meter unit of measure.
Units	Meter unit of measure.
Date	Date of the current Meter Reading.
Description	A short description of the machine or its use.
Type	Defines the machine type.
Status	Indicates the machine status: Active or Inactive.

### Message Line

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Message	Displays information about the current status of the screen.



## Accessing the Meter History Screen

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.


-or-

Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.

2. Click “Meter”. The Meter screen is displayed.
3. If there is a machine number in the “Machine” field and a meter number in the “Meter” field, the meter definition for that meter is displayed on the main screen.
4. Click the “History” tab at the top of the main screen. The Meter History screen is displayed.
5. If there is a machine number in the “Machine” field and a meter number in the “Meter” field, the meter history for that meter is displayed on the main screen.

## Using the Meter History Screen


### Erasing the Screen

To erase the data from the screen click the Erase button  located on the toolbar.

**Note:** Erasing the screen does not cause any data to be lost; it is merely a way to clean the screen in preparation for another operation.

### Displaying the Meter History

To view the machine history, perform the following steps (Steps 1, through 6 are optional):

1. Enter all or part of a machine number in the "Machine" field.
2. Select the type of meter you want to display in the "Meter Type" field or leave that field blank to select any type of meter.
3. Enter all or part of a meter number in the "Meter" field.
4. Select the status of the meter you want to display in the "Meter Status" field or leave that field blank to select meters with any status.
5. Enter the number of items you wish to view in the "Number of Items to Display" field.
6. Click the Open (Display) button  located on the toolbar.
7. View the Meter History displayed on the screen.

# Schedule

## What is a Schedule?

A schedule is a pre-determined list of activities you wish to perform for preventive maintenance on a regular basis. Scheduled events can be based on time intervals, completion of a previously scheduled event, or meter readings.

## Schedule Screens

“Schedule” consists of four tabbed screens that are used to enter and maintain schedule definition data. Each screen is used for specific purposes to aid in the entry and maintenance of schedules.

### Schedule

Use this screen to enter the data associated with each PM event or task.

### Skills

Use this screen to enter the specific skills (people), required to complete an event.

### Event Information

Use this screen to enter additional text information describing an event. The data may be any information you wish to store concerning the event and multiple types of information can be stored.

### Parts List

Use this screen to enter parts list information for an event. The items entered in the parts list do not have to be real parts. They can be a checklist or some other supporting items. This parts list is not the same as the PM Kit identified on the Job Order screens; however, these parts are included on the job order parts list as additional items needed to complete the job.

## Schedule Screen

This screen is used to enter and maintain schedule data.

### Current Machine

<u>Field</u>	<u>Explanation</u>
Machine	Unique identification of the machine or equipment.
Description	A short description of the machine or its use.

### Schedule Table (Event, Schedule, Part Kits, Process, Meter 1, and Meter 2 Tabs)

<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Event	Unique identification of event. Entry can be any combination of letters and/or numbers.
Description	Brief explanation of the purpose or function of the event.
Frequency	Frequency of the PM event.  Daily Weekly Bi-Weekly Monthly Bi-Monthly Quarterly Semi-Annually Annually On Demand.
Type	Type of PM event: Custom, Routine, Prevent. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System.
Status	Status of the PM event: Active, Inactive. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System.
Notify Days	Number of days to be notified prior to the next scheduled date for the event.
Delete	This is a checkbox to indicate you want to delete this event record.
Last Schedule	The date the PM event was last scheduled.
Last Completed	The date the PM event was last completed.


Next Schedule	The next date the PM event is scheduled.
Day of Week	The day of the week the PM event is scheduled. Select a specific day or Any.
Schedule Option	The option used to schedule an event: <ul style="list-style-type: none"> <li><b>Complete</b>     Schedule new order when old order is complete.</li> <li><b>Constant</b>    Use last schedule date of previous order to schedule next schedule date.</li> <li><b>Hold</b>            No scheduling.</li> <li><b>Meter</b>          Schedule by meter readings.</li> </ul>
Deliver To	Where to deliver the completed job order.
Kit	Unique identification of the parts kit used in the PM event.
Description	Explanation ranging from a short name or abbreviation to a more descriptive definition of the parts kit.
Quantity	The number of kits that are required for this PM event.
Process	The Process identifies the steps necessary to perform the PM event.
Description	A short description of the process or its use.
Type	Identifies the type of process. The values are: <ul style="list-style-type: none"> <li>Custom</li> <li>Master</li> <li>Standard</li> </ul>
Meter	Unique identification of a meter.
Description	Name of the meter, or an explanation ranging from a short description to a more comprehensive definition.
Type	Identification of the type of meter. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System.
Status	Meter status: Active, Inactive. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System.
Meter Frequency	The value of the Meter Reading when an Event should be scheduled.

Units	Meter unit of measure: Days, Hours, Cycles, Other. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System."
Last Schedule	Meter reading used to schedule the last PM event.
Last Completed	Meter reading when the last PM event was completed.
Next Schedule	The next PM event is scheduled when the meter reaches the reading shown.

### Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.

### Accessing the Schedule Screen


1. Click the plus ("+") next to "Preventive Maintenance" or double-click  "Preventive Maintenance" in the "NavTree".  
  
-or-  
  
Click on the "View" menu. Select "Goto Screen", then select "Preventive Maintenance".
2. Click "Schedule". The Schedule screen is displayed.
3. If there is a machine number in the "Machine" field, the schedule definition for that machine is displayed on the main screen.

## Using the Schedule Screen

### Procedures

Use these procedures to erase the screen, display, update, view previous, and view next schedules.


### Erasing the Screen

To erase the data from the screen click the Erase button  located on the toolbar.


**Note:** Erasing the screen does not cause any data to be lost; it is merely a way to clean the screen in preparation for another operation.

### Displaying Machine Schedules

To display schedules for a machine, perform the following steps:


1. Enter a machine number in the "Machine" field.
2. Click the Open (Display) button  located on the toolbar or hit the Enter key.
3. The schedule data is displayed on the main screen.

-or-

1. Use the Search button  next to the "Machine" field or "Description" field to select a machine.
2. Double-click on the "Machine" you would like to display in the "Search" screen table.
3. The schedule data is displayed on the main screen.


### Updating a Machine Schedule

To update a machine schedule, perform the following steps:

1. Display the machine number you want to change. See "Displaying a Machine" above.
2. Change the desired information in the table on the main screen.
3. Once finished, click the Save button  located on the toolbar.


## Displaying the Previous Machine Schedule




To display the schedule for the machine that precedes the machine currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous machine schedule is displayed on the main screen.

## Displaying the Next Machine Schedule

To display the schedule for the machine that follows the machine currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next machine is displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .



## Skills Screen

This screen is used to enter and maintain skills data for machine events. These are the skills (people) required to complete the event.

### Current Machine

<u>Field</u>	<u>Explanation</u>
Machine	Unique identification of the machine or equipment.
Description	A short description of the machine or its use.
Event	Unique identification of an event.
Description	A short description of the event.


### Skill Table (Description, Time Required tabs)

<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Sequence	Used internally to keep data unique.
Skill	Employee skill needed to perform this PM event. For example: Machinist, Engineer, Operator. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System."
Description	Name of the skill, or an explanation ranging from a short description to a more comprehensive definition.
Delete	This is a checkbox to indicate you want to delete this skill record.
Event Time	Amount of time required to complete this event.
Event Time Unit	Unit of measure for time: Hours.
Setup Time	Amount of time required to prepare for this event.
Setup Time Unit	Unit of measure for time: Hours.

### Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.

## Accessing the Skill Screen

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.
- or-
- Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.
2. Click “Schedule”. The Schedule screen is displayed.
  3. If there is a machine number in the “Machine” field, the schedule definition for that machine is displayed on the main screen.
  4. Click the “Skill” tab at the top of the main screen. The Skill screen is displayed.
  5. If there is a machine number in the “Machine” field and an event number in the “Event” field, the skills for that machine event are displayed on the main screen.

## Using the Skills Screen

### Procedures

Use these procedures to erase the screen, display, update skills for a machine event.



### Erasing the Screen

To erase the data from the screen click the Erase button  located on the toolbar.

**Note:** Erasing the screen does not cause any data to be lost; it is merely a way to clean the screen in preparation for another operation.



### Displaying Machine Event Skills

To display skills for a machine event, perform the following steps:

1. Enter a machine number in the “Machine” field.
  2. Enter an event number in the “Event” field.
  3. Click the Open (Display) button  located on the toolbar or hit the Enter key.
  4. The skill data is displayed on the main screen.
- or-
1. Use the Search button  next to the “Machine” field.
  2. Double-click on the “Machine” and “Event” you would like to display in the “Search” screen table.
  3. The skill data is displayed on the main screen.

## Updating and Adding Machine Event Skills

To update and/or add machine event skills, perform the following steps:

1. Display the machine and event you want to change. See “Displaying Machine Event Skills” above.
2. Click the Add Rows button  located on the lower right corner of the table to add more rows for skills if necessary
3. Change and/or add the desired information in the table on the main screen.
4. Once finished, click the Save button  located on the toolbar.

## Event Information Screen

This screen is used to create and maintain machine event information text. This data may be any information you wish to store concerning the machine. Also, you can use this screen to reference any kind of external document such as spreadsheets, diagrams, books, websites, etc.

### Current Machine/Event

<u>Field</u>	<u>Explanation</u>
Machine	Unique identification of the machine or equipment.
Description	A short description of the machine or its use.
Event	Unique identification of event.
Description	A short description of the event.

### Information Table

<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Text Type	Indicates the type of text information. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration".
Text Information	This is where you enter text information or view text that has already been entered.
Delete	This is a checkbox to indicate you want to delete this text record.

### Reference Table


<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Reference Type	Indicates the type of external reference information. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration".

Reference	Directory and file name for an electronic reference, URL for a website, or description of where to find a physical reference. An electronic reference can be a spreadsheet, a word processor document, or a text file. A physical reference can be the name of a book with the page number.
Delete	This is a checkbox to indicate you want to delete this reference record.

## Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.


## Accessing the Event Information Screen

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.
- or-
- Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.
2. Click “Schedule”. The Schedule screen is displayed.
  3. If there is a machine number in the “Machine” field, the schedule definition for that machine is displayed on the main screen.
  4. Click the “Event Information” tab at the top of the main screen. The Event Information screen is displayed.
  5. If there is a machine number in the “Machine” field and an event number in the “Event” field, the event information for that machine is displayed on the main screen.

## Using the Event Information Screen

Use these procedures to erase the screen, display, update, add, delete, display the previous, and display the next event information and references.


### Erasing the Screen

To erase the data from the screen click the Erase button  located on the toolbar.


**Note:** Erasing the screen does not cause any data to be lost; it is merely a way to clean the screen in preparation for another operation.


### Displaying Event Information and References

To display event information and references, perform the following steps:

1. Enter a machine number in the "Machine" field and an event number in the "Event" field, then click the Open (Display) button  located on the toolbar or hit the Enter key.


-or-


Use the Search button  next to the "Machine" field, to select a machine and event and double-click on the "Machine" you would like to display in the "Search" screen table.

2. The information text types and references for the event are displayed on the main screen.
3. To display information text, click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to display and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
4. The text will be displayed in a pop-up window.
5. The reference information is displayed in the Reference table. Use the scroll bar on the right to display more rows if necessary.
6. To view electronic references, right click on the reference you would like to display. Choose "Goto External Application" from the menu.

### Updating Event Information

To update event information, perform the following steps:

1. Display the event number that has the data you want to change. See "Displaying Event Information and References" above.
2. Click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to update and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.

3. The text will be displayed in a pop-up window.
4. Change the desired information in the pop-up window and click "Ok" when done.
5. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Information and References at the same time.


### Updating Event References

To update event references, perform the following steps:

1. Display the event number that has the data you want to change. See "Displaying Event Information and References" above.
2. Enter the new reference in the "Reference" column of the Reference table for the row or rows you wish to update.

-or-


For an electronic reference, right click the reference you want to update. Choose "Select External File". A file selection dialog will appear so you can locate the directory that contains the file you want. Select the file you want and click the "Open" button.

3. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Machine Information and References at the same time.


### Adding Event Information


To enter event information, perform the following steps:

1. Display the event number you want. See "Displaying Event Information and References" above.
2. Click an empty row in the Information table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the text type you want (type the letter multiple times if there is more than one type that begins with the same letter).

-or-

Using the dropdown list, select the Text Type in the "Info Type" column of the Information table.


4. Click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
5. The text will be displayed in a pop-up window.
6. Enter the desired information in the pop-up window and click "Ok" when done.

7. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Machine Event Information and References at the same time.

### Adding Event References

To enter event references, perform the following steps:

1. Display the event number you want. See “Displaying Event Information and References” above.
2. Click an empty row in the Reference table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the reference type you want (type the letter multiple times if there is more than one type that begins with the same letter).


-or-

Using the dropdown list, select the Reference Type in the “Reference Type” column of the Reference table.

4. Enter the reference in the “Reference” column.

-or-


For an electronic reference, right click the reference you want to update. Choose “Select External File”. A file selection dialog will appear so you can locate the directory that contains the file you want. Select the file you want and click the “Open” button.

5. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Machine Event Information and References at the same time.

### Deleting Event Information and References

To delete event information and references, perform the following steps:


1. Display the event number that has the data you want to delete. See “Displaying Event Information and References” above.
2. To delete text information, click the checkbox  in the “Delete” column of the Information table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
3. To delete reference information, click the checkbox  in the “Delete” column of the Reference table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
4. Once finished, click the Save button  located on the toolbar.



**Note:** Once event information is deleted, it can no longer be displayed or updated.


### **Displaying the Previous Event Information and References**




To display the Event information and references that precede the event information and references currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous Event information and references are displayed on the main screen.

### **Displaying the Next Event Information and References**

To display the event information and references that follow the event information and references currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next machine information and references are displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## Parts List Screen

This screen is used to enter and maintain the parts needed for machine events. The items entered in the parts list do not have to be real parts. They can be a checklist or some other supporting items. This parts list is not the same as the PM Kit identified on the Job Order screens; however, these parts are included on the job order parts list as additional items needed to complete the job.

### Current Machine

<u>Field</u>	<u>Explanation</u>
Machine	Unique identification of the machine or equipment.
Description	A short description of the machine or its use.
Event	Unique identification of event.
Description	A short description of the event.

### Parts Table (Part and Part Description tabs)


<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Prefix	Unique identification of a component in this Bill of Materials. The Prefix may be used to sequence the component within the Bill of Materials or to allow multiple entries for the same component.
Part	Unique identification of an item which is a component of another item on a Bill of Materials. This component identification is usually found on the Item/Part master, but it is not a requirement that the Item/part be on the Item/Part master.
Suffix	Unique identification of a component in this Bill of Materials. The Suffix may be used to sequence the component within the Bill of Materials or to allow multiple entries for the same component.
Quantity	This field is the quantity required to complete the event.
Unit of Measure	Information defining the measurement for one unit of an item, for example "Box", "Dozen", or "Feet". "Each" is used to represent a single thing.
Component Type	Information indicating what type of item this is.
Description	Explanation ranging from a short name or abbreviation to a more descriptive definition. This field may be changed for this specific Bill of Materials without affecting the description of the Item/Part Description in the Item/Part master data.

Delete This is a checkbox to indicate you want to delete this reference record.

## Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.

## Accessing the Parts List Screen


1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.
- or-
- Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.
2. Click “Schedule”. The Schedule screen is displayed.
3. If there is a machine number in the “Machine” field the schedule definition for that machine is displayed on the main screen.
4. Click the “Parts List” tab at the top of the main screen. The Parts List screen is displayed.
5. If there is a machine number in the “Machine” field and an event number in the “Event” field, the parts list for that machine event is displayed on the main screen.

## Using the Parts List Screen

### Procedures

Use these procedures to erase the screen, display, update, view previous, and view next parts list for a machine event.


### Erasing the Screen

To erase the data from the screen click the Erase button  located on the toolbar.


**Note:** Erasing the screen does not cause any data to be lost; it is merely a way to clean the screen in preparation for another operation.

### Displaying Machine Event Parts

To display parts for a machine event, perform the following steps:




1. Enter a machine number in the "Machine" field.
2. Enter an event number in the "Event" field.
3. Click the Open (Display) button  located on the toolbar or hit the Enter key.
4. The parts list is displayed on the main screen.

-or-

1. Use the Search button  next to the "Machine" field, the "Event" field, or one of the "Description" fields to select a machine and event.
2. Double-click on the "Machine" and "Event" you would like to display in the "Search" screen table.
3. The parts list data is displayed on the main screen.


### Adding Machine Event Parts

To add machine event parts, perform the following steps:

1. Display the machine and event parts. See "Displaying Machine Event Parts" above.
2. Click an empty row in the parts table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Enter the desired information in the parts table. You can right-click the selection button  in the "Part" column to select a pre-defined item or you can enter an item number (the item does not have to be pre-defined). If you select an item, the Description, Unit of Measure, and Component Type will default from the item definition. If you do not enter a Quantity it will default to 1.
4. Once finished, click the Save button  located on the toolbar.


## Updating Machine Event Parts

To update machine event parts, perform the following steps:

1. Display the machine and event you want to change. See “Displaying Machine Event Parts” above.
2. Change the desired information in the table on the main screen.
3. Once finished, click the Save button  located on the toolbar.


## Displaying the Previous Machine Event Parts




To display the parts list for the machine event that precedes the machine event currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous machine event parts list is displayed on the main screen.

## Displaying the Next Machine Event Parts

To display the parts for the machine event that follows the machine event currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next machine event is displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## **Process Definition**

### **What is a Process?**

A process is a set of discrete steps necessary to perform an action. They can be as detailed as necessary to convey the information needed. The information screens allow you to enter narrative text for both the overall process and the individual operational steps for the process. In addition, the information screens allow you to attach external references in various forms. For example, it can be in the form of text that explains where the external information can be found such as a book and the page in the book; it can be an electronic document such as a spreadsheet or diagram; it can be a URL to a website, etc.

### **Process Definition Screens**

“Process Definition” consists of three tabbed screens that are used to enter and maintain process definition data. Each screen is used for specific purposes to aid in the entry and maintenance of processes.

#### **Process Maintenance**

Use this screen to define the process and enter the sequence of operations (steps) for the process.

#### **Process Information**

Use this screen to enter text information describing the process. This data may be any information you wish to store concerning the process, and multiple types of information can be stored. In addition, you can attach external references such as spreadsheets, word processing documents, diagrams, URL's, even text that explains where to find external information such as a book and the page in the book. Information text can be selected to print on the job order form. External references may also be selected to print on the job order form; however, only external reference files with a .txt extension can be printed.

#### **Operation Information**

Use this screen to enter and maintain text information for operations associated with a process. This data may be any information you wish to store concerning the operations, such as safety issues, specific tools required, and unique material requirements. You can also attach external references such as diagrams, spreadsheets, URL's, etc. Information text can be selected to print on the job order form. External references may also be selected to print on the job order form; however, only external reference files with a .txt extension can be printed.

#### **Process Summary**

This screen can be used to display a list of processes based on the selection criteria you use. Each row in the table represents one process with its associated data.

# Process Definition Screens Explained

## Process Maintenance Screen

Use this screen to define the process and enter the sequence of operations (steps) for the process, including "Run Time", "Setup", and "Operator Time" data.

### Current Process Data

<u>Field</u>	<u>Explanation</u>
Process	The name of the process. A process identifies the steps necessary to perform maintenance.
Type	Identifies the process type: Custom (Unique), Master (Main Process), and Standard (Valid for Several Processes).
Description	A short description of the process or its use.
Status	Identifies the process status: Active, Future, and Inactive.

### Current Process Table (Run Time, Setup Time and Operator Time tabs)


<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Operation Sequence	The order that the operation should be performed in this process.
Type	Identifies the operation type: Custom (Unique), Master (Main Process), and Standard (Valid for Several Processes).
Description	Short description of the activity or activities involved in this operation.
Run Time	Amount of time required to complete this operation.
Run Time Unit	The measure of time used to define the operation time. The values are: Seconds, Minutes, Hours, Days and Weeks.
Run Time Quantity	Standard quantity that can be accomplished in this operation.
Setup Time	The standard time required to prepare for this operation.
Setup Time Unit	The measure of time used to define the setup time. The values are: Seconds, Minutes, Hours, Days and Weeks.

Work Center	The unique identification of the work center where the operation is to take place.
Machine	The unique identification of the machine on which the operation is to take place.
Operator Time	The manpower (operator) time needed to complete this operation.
Operator Time Unit	The measure of time used to define the operator time. The values are: Seconds, Minutes, Hours, Days and Weeks.
Operator Time Quantity	Standard quantity that can be accomplished in this operation per operator (person)
Delete	This is a checkbox to indicate you want to delete an operation from this process.

### **Message Line**

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Message	Displays information about the current status of the screen.

### **Accessing the Process Maintenance Screen**


1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Process/ Job Order” in the “NavTree”.
- or-
- Click on the “View” menu. Select “Goto Screen”, then select “Process/ Job Order”.
2. Click “Process Maintenance”. The Process Maintenance screen is displayed.
  3. If there is a process in the “Process” field, the process definition for that process is displayed on the main screen.



## Using the Process Maintenance Screen

Use the following procedures to erase the screen, display, update, add, delete, display previous, display next, or copy a process and its operations.


### Erasing the Screen

To erase the data from the screen click the Erase button  located on the toolbar.


**Note:** Erasing the screen does not cause any data to be lost; it is merely a way to clean the screen in preparation for another operation.

### Displaying a Process and its Operations

To display a process and its operations, perform the following steps:



1. Enter a process name in the "Process" field.
2. Click the Open (Display) button  located on the toolbar or hit the Enter key.
3. The process and its operations are displayed on the main screen.

-or-

1. Use the Search button  next to the "Process" field or the "Description" field to select a process.
2. Double-click on the "Process" you would like to display in the "Search" screen table.
3. The process and its operations are displayed on the main screen.





### Updating Operation Data for a Process Definition

To edit operation data for a process definition:

1. Display the process you wish to change. See "Displaying a Process and its Operations" above.
2. Change the operation data as needed. You cannot change the "Operation Sequence" or "Type" for existing sequence steps. When adding or inserting sequence steps, enter the operation data in the first available row in the table. You can use the Add Rows button  located on the toolbar to add additional rows for entry. When the entries are saved, the operation sequences are placed in the correct sequence in the table.
3. When all of the appropriate columns are changed, click the Save button  located on the toolbar.


## Adding a New Process Definition

To add a new process definition:

1. Click the Erase button  located on the toolbar to clear the screen.
2. Enter the name of the process in the "Process" field.
3. Select the appropriate type in the "Type" field, if desired (the default is Standard), and enter an optional process description in the "Description" field.
4. Click the Add Rows button  located on the lower right corner of the table.
5. Enter the operation sequence data in the table for each of the tabs ("Run Time", "Setup Time", and "Operator Time"). You cannot change the "Operation Sequence" and "Type" entries once the data has been saved. Leave gaps in your numbering sequence to allow for the insertion of additional steps.
6. When all of the operation data has been entered, click the Save button  located on the toolbar. You can also enter just the process identifier in the "Process" field, and click the Save button  located on the toolbar. This allows you to create process placeholders and then come back later and complete the process detail. See the "Copying Process Definitions" procedure for more information.


## Deleting Operation Data for a Process Definition

Perform the following steps to delete the operation data for a process definition:

1. Display the process you wish to change. See "Displaying a Process and its Operations" above.
2. Click the "Operator Time" tab in the table.
3. Click the "Delete" checkbox  next to the row(s) you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
4. When all of the appropriate rows are selected, click the Save button  located on the toolbar.

## Deleting a Process Definition and its Associated Data

Perform the following steps to delete the process data for a process definition:


1. Display the process you wish to delete. See "Displaying a Process and its Operations" above.
2. Click the Delete button  located on the toolbar.
3. Click the "Yes" button on the "Confirm Action" pop up message. If you do not want to delete the process click "No" on the "Confirm Action" pop up message.

4. The process definition, process information, process references, operations, operation information, and operation references are deleted.

**Note:** Once a process is deleted, it can no longer be displayed or updated.


### Displaying the Previous Process




To display the process that precedes the process currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous process and its operations are displayed on the main screen.

### Displaying the Next Process


To display the process that follows the process currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next process and its operations are displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

### Copying a Process

To copy a process to a new process, perform the following steps:

1. Display the process you wish to copy. See “Displaying a Process and its Operations” above.
2. Click the copy button  located on the toolbar. A pop-up will appear.
3. Enter the new process in the “Copy to” field and select a “Copy To Type”.
4. Various types of process data are listed with check boxes next to them. Click a check box to check or uncheck data to be copied. A check mark means it will be copied, No check mark means it will not be copied.
5. Click the “Copy” button to complete the copy or click “Cancel” to cancel the copy operation.

## Process Information Screen

Use this screen to enter text information describing the process. This data may be any information you wish to store concerning the process, and multiple types of information can be stored. Also, you can use this screen to reference any kind of external document such as spreadsheets, diagrams, books, websites, etc.

Information text can be selected to print on the job order form. External references may also be selected to print on the job order form; however, only external reference files with a .txt extension can be printed.

### Current Process Data

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Process	The name of the process. A process identifies the steps necessary to perform maintenance.
Description	A short description of the process
Type	Identifies the process type: Custom (Unique), Master (Main Process), and Standard (Valid for Several Processes).

### Information Table

<b><u>Column</u></b>	<b><u>Explanation</u></b>
Row	The line number of the row in the table.
Type	A designation for the type of information stored. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration".
Text Information	This is where you enter text information or view text that has already been entered.
Print Job Order	This is a checkbox to indicate whether or not you want this information text to appear on the job order form.
Delete	This is a checkbox to indicate you want to delete this text record.

### Reference Table


<b><u>Column</u></b>	<b><u>Explanation</u></b>
Row	The line number of the row in the table.

Reference Type	A designation for the type of reference stored. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration".
Reference	Directory and file name for an electronic reference, URL for a website, or description of where to find a physical reference. An electronic reference can be a spreadsheet, a word processor document, or a text file. A physical reference can be the name of a book with the page number.
Job Order Print	This is a checkbox to indicate whether or not you want this external reference to appear on the job order form. Only files with a .txt extension can be printed.
Delete	This is a checkbox to indicate you want to delete this reference record.

### Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.

### Accessing the Process Information Screen


1. Click the plus ("+") next to "Preventive Maintenance" or double-click  "Preventive Maintenance" in the "NavTree".  
  
-or-  
  
Click on the "View" menu. Select "Goto Screen", then select "Preventive Maintenance".
2. If there is a process in the "Process" field, the process definition for that process is displayed on the main screen.
3. Click "Process Information". The Process Information screen is displayed.

## Using the Process Information Screen


Use these procedures to display, update, add, delete, display the previous, and display the next process information and references.


### Displaying Process Information and References

To display process information or references, perform the following steps:

1. Enter a process in the "Process" field and click the Open (Display) button  located on the toolbar or hit the Enter key.


-or-


Use the Search button  next to the "Process" field to select a process and double-click on the "Process" you would like to display in the "Search" screen table.

2. The information text types and references for the process are displayed on the main screen.
3. To display information text, click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to display and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
4. The text will be displayed in a pop-up window.
5. The reference information is displayed in the Reference table. Use the scroll bar on the right to display more rows if necessary.
6. To view electronic references, right click on the reference you would like to display. Choose "Goto External Application" from the menu.

### Updating Process Information

To update process information, perform the following steps:

1. Display the process you want to change. See "Displaying Process Information and References" above.
2. Click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to update and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
3. The text will be displayed in a pop-up window.
4. Change the desired information in the pop-up window and click "Ok" when done.
5. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this information text to appear on the job order document or not. When this box is checked, the text will appear on the job order document. Click the checkbox  again to remove the print flag.

6. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Process Information and References at the same time.

### Updating Process References


To update process references, perform the following steps:

1. Display the process you want to change. See “Displaying Process Information and References” above.
2. Enter the new reference in the “Reference” column of the Reference table for the row or rows you wish to update.

-or-

For an electronic reference, right click the reference you want to update. Choose “Select External File”. A file selection dialog will appear so you can locate the directory that contains the file you want. Select the file you want and click the “Open” button.


3. If necessary, click the checkbox  in the “Print Job Order” column to indicate if you want this reference to appear on the job order document or not. When this box is checked, the reference will appear on the job order document if possible. Click the checkbox  again to remove the print flag.

4. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Process Information and References at the same time.


### Adding Process Information

To enter process information, perform the following steps:


1. Display the process you want to change. See “Displaying Process Information and References” above.
2. Click an empty row in the Information table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the information text type you want (type the letter multiple times if there is more than one type that begins with the same letter).

-or-

Using the dropdown list, select the Text Type in the “Info Type” column of the Information table.

4. Click the Goto/Selection button  in the “Text Information” column of the Text table for the row you want and select “Edit Information Text” on the menu that appears. Use the scroll bar on the right to display more rows if necessary.


5. The text will be displayed in a pop-up window.

6. Enter the desired information in the pop-up window and click "Ok" when done.
7. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this information text to appear on the job order document. When this box is checked, the text will appear on the job order document. Click the checkbox  again to remove the print flag.
8. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Process Information and References at the same time.

### Adding Process References

To enter Process references, perform the following steps:

1. Display the process you want to change. See "Displaying Process Information and References" above.
2. Click an empty row in the Reference table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the reference type you want (type the letter multiple times if there is more than one type that begins with the same letter).


-or-

Using the dropdown list, select the Reference Type in the "Reference Type" column of the Reference table.

4. Enter the reference in the "Reference" column.

-or-

For an electronic reference, right click the reference you want to update. Choose "Select External File". A file selection dialog will appear so you can locate the directory that contains the file you want. Select the file you want and click the "Open" button.






5. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this reference to appear on the job order document. When this box is checked, the reference will appear on the job order document if possible. Click the checkbox  again to remove the print flag.
6. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Process Information and References at the same time.



## Deleting Process Information and References


To delete process information and references, perform the following steps:

1. Display the process information and references you want to delete. See “Displaying Process Information and References” above.
2. To delete text information, click the checkbox  in the “Delete” column of the Information table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
3. To delete reference information, click the checkbox  in the “Delete” column of the Reference table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
4. Once finished, click the Save button  located on the toolbar.

**Note:** Once process information is deleted, it can no longer be displayed or updated.


## Displaying the Previous Process Information and References




To display the process information and references that precede the process information currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous process information and references are displayed on the main screen.

## Displaying the Next Process Information and References

To display the process information and references that follow the process information currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next process information and references are displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## Operation Information Screen

Use this screen to enter and maintain text information for operations associated with a process. This data may be any information you wish to store concerning the operations, such as safety issues, specific tools required, and unique material requirements. For example:

**Work Center Information**  
**Tools Required**  
**Time Analysis Information**  
**Material Information**  
**Detailed Operation Information**  
**Specific Operation Instructions**

In addition, you can attach external references such as text files, spreadsheets, diagrams, URL's to websites, and text that indicates where the external information can be found such as a book and the page in the book.

Information text can be selected to print on the job order form. External references may also be selected to print on the job order form; however, only external reference files with a .txt extension can be printed.

### Current Process Data

<u>Field</u>	<u>Explanation</u>
Process	The process identifies the steps necessary to perform maintenance.
Description	A short description of the process
Operation	The operation number you want.
Type	Identifies the process type: Custom (Unique), Master (Main Process), and Standard (Valid for Several Processes).

### Information Table

<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Type	A designation for the type of information stored. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration".
Text Information	This is where you enter text information or view text that has already been entered.
Print Job Order	This is a checkbox to indicate whether or not you want this information text to appear on the job order form.

Delete This is a checkbox to indicate you want to delete this text record.


## Reference Table

<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Reference Type	A designation for the type of reference stored. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration".
Reference	Directory and file name for an electronic reference, URL for a website, or description of where to find a physical reference. An electronic reference can be a spreadsheet, a word processor document, or a text file. A physical reference can be the name of a book with the page number.
Print Job Order	This is a checkbox to indicate whether or not you want this external reference to appear on the job order form. Only files with a .txt extension can be printed.
Delete	This is a checkbox to indicate you want to delete this reference record.

## Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.

## Accessing the Operation Information Screen


1. Click the plus (" + ") next to "Preventive Maintenance" or double-click  "Preventive Maintenance" in the "NavTree".  
  
-or-  
  
Click on the "View" menu. Select "Goto Screen", then select "Preventive Maintenance".
2. If there is a process in the "Process" field, the process definition for that process is displayed on the main screen.
3. Click "Operation Information". The Operation Information screen is displayed.

## Using the Operation Information Screen


Use these procedures to display, update, add, delete, display the previous, and display the next operation information or references.


### Displaying Operation Information and References

To display operation information or references, perform the following steps:

1. Enter a process in the "Process" field and an operation number in the "Operation" field, then click the Open (Display) button  located on the toolbar or hit the Enter key.


-or-


Use the Search button  next to the "Process" field to select a process and operation number and double-click on the "Operation" you would like to display in the "Search" screen table.

2. The information text types and references for the operation are displayed on the main screen.
3. To display information text, click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to display and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
4. The text will be displayed in a pop-up window.
5. The reference information is displayed in the Reference table. Use the scroll bar on the right to display more rows if necessary.
6. To view electronic references, right click on the reference you would like to display. Choose "Goto External Application" from the menu.

### Updating Operation Information

To update operation information, perform the following steps:

1. Display the operation you want to change. See "Displaying Operation Information and References" above.
2. Click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to update and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
3. The text will be displayed in a pop-up window.
4. Change the desired information in the pop-up window and click "Ok" when done.

5. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this information text to appear on the job order document or not. When this box is checked, the text will appear on the job order document. Click the checkbox  again to remove the print flag.
6. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Operation Information and References at the same time.


### Updating Operation References

To update operation references, perform the following steps:

1. Display the operation you want to change. See "Displaying Operation Information and References" above.
2. Enter the new reference in the "Reference" column of the Reference table for the row or rows you wish to update.

-or-


For an electronic reference, right click the reference you want to update. Choose "Select External File". A file selection dialog box appears so you can locate the directory where the electronic reference is stored. Select the file you want and click the "Open" button.

3. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this reference to appear on the job order document or not. When this box is checked, the reference will appear on the job order document if possible. Click the checkbox  again to remove the print flag.
4. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Operation Information and References at the same time.



### Adding Operation Information

To enter operation information, perform the following steps:

1. Display the operation you want to change. See "Displaying Operation Information and References" above.
2. Click an empty row in the Information table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the text type you want (type the letter multiple times if there is more than one type that begins with the same letter).

-or-


Using the dropdown list, select the Text Type in the "Info Type" column of the Information table.

4. Click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
5. The text will be displayed in a pop-up window.
6. Enter the desired information in the pop-up window and click "Ok" when done.
7. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this information text to appear on the job order document. When this box is checked, the text will appear on the job order document. Click the checkbox  again to remove the print flag.
8. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Operation Information and References at the same time.

### Adding Operation References

To enter operation references, perform the following steps:

1. Display the operation you want to change. See "Displaying Operation Information and References" above.
2. Click an empty row in the Reference table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the reference type you want (type the letter multiple times if there is more than one type that begins with the same letter).


-or-

Using the dropdown list, select the Reference Type in the "Reference Type" column of the Reference table.

4. Enter the reference in the "Reference" column.

-or-






For an electronic reference, right click the reference you want to update. Choose "Select External File". A file selection dialog will appear so you can locate the directory that contains the file you want. Select the file you want and click the "Open" button.

5. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this reference to appear on the job order document or not. When this box is checked, the reference will appear on the job order document if possible. Click the checkbox  again to remove the print flag.
6. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Operation Information and References at the same time.

## Deleting Operation Information and References


To delete operation information and references, perform the following steps:

1. Display the operation information and references you want to delete. See “Displaying Operation Information and References” above.
2. To delete text information, click the checkbox  in the “Delete” column of the Information table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
3. To delete reference information, click the checkbox  in the “Delete” column of the Reference table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
4. Once finished, click the Save button  located on the toolbar.

**Note:** Once operation information is deleted, it can no longer be displayed or updated.


## Displaying the Previous Operation Information and References




To display the operation information and references that precede the operation information currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous operation information and references are displayed on the main screen.

## Displaying the Next Operation Information and References

To display the operation information and references that follow the operation information currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next operation information and references are displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

# Job Order

## Initial Set up

TFG4000 Preventive Maintenance (PM) is installed with certain features that can be changed. The features are controlled with system variables. There are a few system variables you need to understand before you start using PM Job Order. See the System Variables screen in the System Administration User Guide included on the TFG4000 CD, which is available from the Windows "Start" menu or from the "Documentation" menu within TFG4000. The documentation is also available online.

**Job\_Order\_Printer** (installation default is "**HP Laserjet Printer**") – This variable indicates the default printer to be used for job order printing.

**Default\_City** (installation default is "**Cumming**" where The Fredrick Group, Inc. is located) – This variable defines the default city used when defining machines. You should change this to your city or blank it out if you do not want a default city.

**Default\_State** (installation default is "**Georgia**" where The Fredrick Group, Inc. is located) – This variable defines the default state used when defining machines. You should change this to your state or blank it out if you do not want a default state.

**Default\_ZipCode** (installation default is "**30040**" where The Fredrick Group, Inc. is located) – This variable defines the default zip code used when defining machines. You should change this to your zip code or blank it out if you do not want a default zip code.

**Form\_Logo** (installation default is **Cubelcon.gif**) – This variable contains the name of the logo file to use on special forms such as Job Order Forms, Packing Slips, and Invoices. The recommended logo size is 50x50 pixels. The logo can be smaller or larger and the system will size it to fit. If you would like your company logo to appear on forms, place your logo in .gif format in the \\Server\Images directory and set this variable to the name of the logo. (**Note:** The Report\_Logo variable was used in previous releases of TFG4000 for forms, so you may need to check the setting for this variable).

**Report\_Logo** (installation default is **Cubelcon.gif**) – This variable contains the name of the logo file to use on reports. The recommended logo size is 50x50 pixels. The logo can be smaller or larger and the system will size it to fit. If you would like your company logo to appear on reports, place your logo in .gif format in the \\Server\Images directory and set this variable to the name of the logo.

## What is a Job Order (Work Order)?

A job order identifies the need to perform some work or maintenance. A job order can also be described as a work order. Within the job order you can identify the materials needed and the process needed to perform the task.



## **Job Order Screens**

“Job Order” consists of nine tabbed screens that are used to enter job orders and track the job order activity. Each individual screen is used for specific purposes of maintaining job order functions.

### **Job Order**

This screen is used to enter and maintain job order data. This includes the basic information about the job order such as the description, start date, due date, status, and date completed. It also contains the machine to be maintained, the event to be performed, the PM Kit, and the PM process.

### **Information**

This screen is used to create and maintain job order text information. This data may be any information you wish to store concerning the job order, including external references such as text documents, spreadsheets, diagrams, URL's, etc. Information text can be selected to print on the job order form. External references may also be selected to print on the job order form; however, only external reference files with a .txt extension can be printed.

### **Parts**

This screen is used to maintain parts need to complete the job order. A bill of materials is used to list the parts needed. You can add components to the list, change data for existing components, or delete components from the table. Any changes made to the PM Kit are for this job order only and do not affect an existing bill of material (in TFG4000 Inventory Management).

If you do not pre-define items and Bills of Materials in TFG4000 Inventory Management, each parts list is associated with a specific job order. To use the parts list in other job orders it must be copied into the other job orders.

If you pre-define items and Bills of Materials in TFG4000 Inventory Management, the items and bills of materials can be pre-defined and accessed from any job order.

Additionally, parts listed for an event using the Schedule Parts List screen are included in the parts list on the job order.

### **Process**

This screen is used to maintain process operations for the displayed job order. You can change process information specific to the displayed job order. Operation data for the process is displayed in a table. Changes made to the source process (using Process Definition) are not reflected in the job order process unless the process is refreshed in the job order. Also, changes made to the process using the “Job Order Process” screen are not reflected in the source process.

### **Process Information**

Use this screen to enter additional text information concerning the displayed job order. The data may be any information you wish to store concerning the job order process, and multiple types of information can be stored. Changes made to the source process information (using Process Definition) are not reflected in the job order process information,

unless the process is deleted from the job order and then re-accessed. Also, changes made to the job order process information using the "Job Order Process Information" screen are not reflected in the source process information.

The Reference table provides a means to attach or view external documents. You can either view the documents by using the appropriate application or select the path to the file and place it in the Reference table. You can also enter references to physical documents such as books and maps, for example "Book A, page 45".

Information text can be selected to print on the job order form. External references may also be selected to print on the job order form; however, only external reference files with a .txt extension can be printed.

### **Operation Information**

Use this screen to enter text information for operation steps associated with a job order process. This data may be any information you wish to store concerning the operation, such as safety issues, specific tools required, and unique material requirements. Changes made to the source operation information (Using Process Definition) are not reflected in the job order operation information, unless the process is refreshed on the job order. Also, changes made to the job order process information using the "Job Order Operation Information" screen are not reflected in the source operation information.

The Reference table provides a means to attach or view external documents. You can either view the documents by using the appropriate application or select the path to the file and place it in the Reference table. You can also enter references to physical documents such as books and drawings, for example "Drawing 828-1B".

Information text can be selected to print on the job order form. External references may also be selected to print on the job order form; however, only external reference files with a .txt extension can be printed.

### **Job Order Summary**

This screen is used to display a list of job orders associated with the item/part in the "Item/Part" field based on selection criteria entered.

# Job Order Screens Explained

## Job Order Screen

This screen is used to enter and maintain job order data. This includes the basic information about the job order such as the description, start date, due date, status, and date completed. It also contains the machine to be maintained, PM Kit, and the PM process.

### Current Job Order Data

<u>Field</u>	<u>Explanation</u>
Job Order	A manually entered or system generated number that identifies a job order.
Description	A short description of the job order or its use.
Required Start	The calendar date that indicates when the job order should be started.
Required Complete	The calendar date on which the job order is planned to be completed.
Type	Defines the job order type: Demand-PM (manual job order) or Event-PM (scheduled job order).
Status	Identifies the job order status: Active, Closed, and Released.
Deliver To	Where to deliver the completed job order.
Completed	Date the job order was completed.

### Job Order Machine

<u>Field</u>	<u>Explanation</u>
Machine	The unique identification of the machine on which the maintenance is to take place.
Description	A short description of the machine or its use.
Meter	Meter number of the meter that is needed for this maintenance job.
Description	A short description of the meter.
Event	Unique identification of event.
Description	A short description of the event.

## Select PM Kit and Process

### Field

### Explanation

PM Kit	The item number for the Bill of Material to be used for the job order. The item does not have to exist on the Item Master and the Bill of Material can be modified on the job order if necessary without affecting the original Bill of Material. If the PM Kit bill of materials is not pre-defined, the parts kit must be entered manually using the "Parts" screen.
Type	Defines the Bill of Material Item/Part type. The type helps further define an item by giving it a classification. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration". Some examples of types are: "Assembly" something you build, "Service" for a service you provide, "Tool" for something you use in your operation.
Description	The description of the Bill of Material item number to be used for this job order.
Unit of Measure	Defines how the item is counted or measured. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration". Some examples of units of measure are "Ounce", "Pound", and "Hour".
Process	The process identifies the steps necessary to perform the maintenance.
Type	Identifies the process type: Custom (Unique), Master (Main Process), and Standard (Valid for Several Processes).
Description	A short description of the process or its use.


## Message Line

### Field

### Explanation

Message	Displays information about the current status of the screen.
---------	--

## Accessing the Job Order Screen

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.


-or-

Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.

2. Click “Job Order”. The Job Order screen is displayed.
3. If there is a job order in the “Job Order” field, the job order definition for that job order is displayed on the main screen.

## Using the Job Order Screen

The Job Order number is defined by the system and uses the next available job order number.


If the PM Kit bill of materials is not pre-defined in TFG4000 Inventory Management, the PM Kit is only for the associated job order. You must copy the job order using the Copy button  to use the bill of material in other job orders. Once you copy the job order, you can change the bill of material information for the specific job order.

The PM Kit source bill of material can be defined in the database using the Inventory Management “Bill of Materials” screen, and referenced from multiple job orders. Any maintenance to the source bill of material needs to be performed using the Inventory Management “Bill of Materials” screen.

### Procedures

Use these procedures to erase the screen, display, update, add, delete, view previous, view next, copy, and print job orders.


### Erasing the Screen

To erase the data from the screen click the Erase button  located on the toolbar.


**Note:** Erasing the screen does not cause any data to be lost; it is merely a way to clean the screen in preparation for another operation.

### Displaying a Job Order

To display a job order, perform the following steps:


1. Enter a job order in the “Job Order” field.
2. Click the Open (Display) button  located on the toolbar or hit the Enter key.
3. The job order data is displayed on the main screen.

-or-

1. Use the Search button  next to the "Job Order" field, "Description" field, "Status" field, or the "Type" field to select a job order.
2. Double-click on the "Job Order" you would like to display in the "Search" screen table.
3. The job order data is displayed on the main screen.


### **Searching for Job Orders by Machine**

To search for job orders by the machine, perform the following steps:

1. If the job order has type "Event-PM", use the only Search Button, but if the type is "Demand-PM", use the second Search button  next to the "Machine" field in the Job Order Machine section of the screen.
2. Select the type of search you want using the dropdown provided. The default is to search for orders with machines "starting with" the value you entered.
3. Enter the machine you want to use in the field provided or make it blank to search by all machines.
4. Click the "Search" button. The results of your search are displayed in the pop-up.
5. You can re-size the columns and re-size the search window by moving the cursor until a double-headed arrow appears, then clicking and while holding the mouse button down, move the cursor to re-size. You can re-position columns by clicking on them and while holding the mouse button down, move the cursor right or left.
6. Print results by clicking the "Print" button. A standard print dialog box is displayed so you can choose the printer and other print options; click "OK" to print.
7. Double-click an order to display that order on the main screen.

### **Searching for Job Orders by Machine Description**

To search for job orders by the machine description, perform the following steps:


1. If the job order has type "Event-PM", use the only Search Button, but if the type is "Demand-PM", use the second Search button  next to the "Description" field in the Job Order Machine section of the screen.
2. Select the type of search you want using the dropdown provided. The default is to search for orders with machine descriptions "starting with" the value you entered.
3. Enter the machine description you want to use in the field provided or make it blank to search by all machine descriptions.
4. Click the "Search" button. The results of your search are displayed in the pop-up.
5. You can re-size the columns and re-size the search window by moving the cursor until a double-headed arrow appears, then clicking and while holding the mouse

button down, move the cursor to re-size. You can re-position columns by clicking on them and while holding the mouse button down, move the cursor right or left.

6. Print results by clicking the "Print" button. A standard print dialog box is displayed so you can choose the printer and other print options; click "OK" to print.
7. Double-click an order to display that order on the main screen.


### **Searching for Job Orders by PM Kit**

To search for job orders by the process used, perform the following steps:

1. If the job order has type "Event-PM", use the only Search Button, but if the type is "Demand-PM", use the second Search button  next to the "PM Kit" field in the Select PM Kit and Process section of the screen.
2. Select the type of search you want using the dropdown provided. The default is to search for orders with PM Kits "starting with" the value you entered.
3. Enter the PM Kit you want to use in the field provided or make it blank to search by all PM Kits.
4. Click the "Search" button. The results of your search are displayed in the pop-up.
5. You can re-size the columns and re-size the search window by moving the cursor until a double-headed arrow appears, then clicking and while holding the mouse button down, move the cursor to re-size. You can re-position columns by clicking on them and while holding the mouse button down, move the cursor right or left.
6. Print results by clicking the "Print" button. A standard print dialog box is displayed so you can choose the printer and other print options; click "OK" to print.
7. Double-click an order to display that order on the main screen.

### **Searching for Job Orders by PM Kit Description**

To search for job orders by the PM Kit description, perform the following steps:


1. If the job order has type "Event-PM", use the only Search Button, but if the type is "Demand-PM", use the second Search button  next to the "Description" field just below the PM Kit field in the Select PM Kit and Process section of the screen.
2. Select the type of search you want using the dropdown provided. The default is to search for orders with PM Kit descriptions "starting with" the value you entered.
3. Enter the PM Kit description you want to use in the field provided or make it blank to search by all PM Kit descriptions.
4. Click the "Search" button. The results of your search are displayed in the pop-up.
5. You can re-size the columns and re-size the search window by moving the cursor until a double-headed arrow appears, then clicking and while holding the mouse

button down, move the cursor to re-size. You can re-position columns by clicking on them and while holding the mouse button down, move the cursor right or left.

6. Print results by clicking the "Print" button. A standard print dialog box is displayed so you can choose the printer and other print options; click "OK" to print.
7. Double-click an order to display that order on the main screen.


### **Searching for Job Orders by Process**

To search for job orders by the process used, perform the following steps:

1. If the job order has type "Event-PM", use the only Search Button, but if the type is "Demand-PM", use the second Search button  next to the "Process" field in the Select PM Kit and Process section of the screen.
2. Select the type of search you want using the dropdown provided. The default is to search for orders with process names "starting with" the value you entered.
3. Enter the process you want to use in the field provided or make it blank to search by all process names.
4. Click the "Search" button. The results of your search are displayed in the pop-up.
5. You can re-size the columns and re-size the search window by moving the cursor until a double-headed arrow appears, then clicking and while holding the mouse button down, move the cursor to re-size. You can re-position columns by clicking on them and while holding the mouse button down, move the cursor right or left.
6. Print results by clicking the "Print" button. A standard print dialog box is displayed so you can choose the printer and other print options; click "OK" to print.
7. Double-click an order to display that order on the main screen.

### **Searching for Job Orders by Process Description**

To search for job orders by the process description, perform the following steps:


1. If the job order has type "Event-PM", use the only Search Button, but if the type is "Demand-PM", use the second Search button  next to the "Description" field just below the Process field in the Select PM Kit and Process section of the screen.
2. Select the type of search you want using the dropdown provided. The default is to search for orders with process descriptions "starting with" the value you entered.
3. Enter the process description you want to use in the field provided or make it blank to search by all process descriptions.
4. Click the "Search" button. The results of your search are displayed in the pop-up.



5. You can re-size the columns and re-size the search window by moving the cursor until a double-headed arrow appears, then clicking and while holding the mouse button down, move the cursor to re-size. You can re-position columns by clicking on them and while holding the mouse button down, move the cursor right or left.
6. Print results by clicking the "Print" button. A standard print dialog box is displayed so you can choose the printer and other print options; click "OK" to print.
7. Double-click an order to display that order on the main screen.


### Updating a Job Order

To update a job order, perform the following steps:

1. Display the job order number you want to change. See "Displaying a Job Order" above.
2. Change the desired information on the main screen.
3. Once finished, click the Save button  located on the toolbar.
4. If the PM Kit has been changed and there is already a parts list on the job order, a box will pop up asking "The Job Order has a Bill of Material, do you want to delete or replace it?" If you click "Yes" and the new PM Kit has a bill of material, the parts list on the job order is deleted and replaced with a new parts list. If you click "Yes" and the PM Kit does not have a bill of material, the job order parts list is deleted. If you click "No", the PM Kit is not updated on the job order and the parts list is not changed.
5. If the Process has been changed and there are already job order operations on the job order, a box will pop up asking "Job Order has a Process, do you want to replace or delete it?" If you click "Yes" and the new Process has operations, the job order operations are deleted and the new operations are added. If you click "Yes" and the new Process does not have any operations, the job order operations are deleted. If you click "No", the Process name is not updated on the job order and the job order operations are not changed.



### Copying a Job Order

Use this procedure to copy a job order to a new job order.

1. Display the job order you wish to copy. See "Displaying a Job Order" above.
2. Click the Copy button  located on the toolbar. The associated job order data (including job order parts, job order process, job order process information, job order process references, job order operations, job order operation information, and job order operation references) is copied to a new job order number generated by the system. **Note:** Job order information and job order component history are not copied.


## Adding a New Job Order

To add a new job order:

1. Click the Erase button  located on the toolbar to clear the screen.
2. Enter any of the optional job order data you want.
3. When all of the data has been entered, click the Save button  located on the toolbar.

## Deleting a Job Order and its Associated Data

Perform the following steps to delete a job order and all of the data associated with it:

1. Display the job order you wish to delete. See “Displaying a Job Order” above.
2. Click the Delete button  located on the toolbar.
3. Click the “Yes” button on the “Confirm Action” pop up message. If you do not want to delete the job order click “No” on the “Confirm Action” pop up message.
4. The job order definition, job order information, job order parts, job order process, job order process information, job order process references, job order operations, job order operation information, job order operation references, job order picking data, and job order component history are deleted.

**Note:** The job order must have status “Closed” to be deleted and once a job order is deleted, it can no longer be displayed or updated.

## Printing a Job Order


To print a job order form, perform the following steps:

1. Display the job order you wish to print. See “Displaying a Job Order” above.
2. Click the “Reports” menu located on the menu bar at the top of the screen. A menu will appear.
3. Click “PM Job Order Form”.
4. A report window is displayed. Follow the instructions there for printing the form.

**Note:** The logo on the job order form is controlled by system variable **Report\_Logo**. See the “Initial Setup” section of this manual or the **System Administration Users Guide** for more information about this variable and how to change it.


## Displaying the Previous Job Order




To display the job order that precedes the job order currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous job order is displayed on the main screen.

## Displaying the Next Job Order

To display the job order that follows the job order currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next job order is displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## Job Order Information Screen

This screen is used to create and maintain job order information text. This data may be any information you wish to store concerning the job order. Also, you can use this screen to reference any kind of external document such as spreadsheets, diagrams, books, websites, etc.

Information text can be selected to print on the job order form. External references may also be selected to print on the job order form; however, only external reference files with a .txt extension can be printed.

### Current Job Order

<u>Field</u>	<u>Explanation</u>
Job Order	A manually entered or system generated number that identifies a job order.
Description	A short description of the job order or its use.
Status	Identifies the job order status: Active, Closed, and Released.

### Information Table

<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Type	Indicates the type of text information. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration".
Text Information	This is where you enter text information or view text that has already been entered.
Print Job Order	This is a checkbox to indicate whether or not you want this information text to appear on the job order form.
Delete	This is a checkbox to indicate you want to delete this text record.

### Reference Table


<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Reference Type	Indicates the type of external reference information. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration".

Reference	Directory and file name for an electronic reference, URL for a website, or description of where to find a physical reference. An electronic reference can be a spreadsheet, a word processor document, or a text file. A physical reference can be the name of a book with the page number.
Print Job Order	This is a checkbox to indicate whether or not you want this external reference to appear on the job order form. Only files with a .txt extension can be printed.
Delete	This is a checkbox to indicate you want to delete this reference record.

### Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.

### Accessing the Job Order Information Screen


1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.
- or-
- Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.
2. If there is a job order in the “Job Order” field, the job order definition for that job order is displayed on the main screen.
  3. Click “Information”. The Job Order Information screen is displayed.

## Using the Information Screen


Use these procedures to display, update, add, delete, display the previous, and display the next job order information and references.


### Displaying Job Order Information and References

To display job order information and references, perform the following steps:

1. Enter a job order in the "Job Order" field and click the Open (Display) button  located on the toolbar or hit the Enter key.


-or-


Use the Search button  next to the "Job Order" field, "Description" field or the "Status" field to select a job order and double-click on the "Job Order" you would like to display in the "Search" screen table.

2. The information text types and references for the job number are displayed on the main screen.
3. To display information text, click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to display and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
4. The text will be displayed in a pop-up window.
5. The reference information is displayed in the Reference table. Use the scroll bar on the right to display more rows if necessary.
6. To view electronic references, right click on the reference you would like to display. Choose "Goto External Application" from the menu.

### Updating Job Order Information

To update job order information, perform the following steps:

1. Display the job order number that has the data you want to change. See "Displaying Job Order Information and References" above.
2. Click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to update and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
3. The text will be displayed in a pop-up window.
4. Change the desired information in the pop-up window and click "Ok" when done.
5. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this information text to appear on the job order document or not. When this box is checked, the text will appear on the job order document. Click the checkbox  again to remove the print flag.

6. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Information and References at the same time.


### Updating Job Order References

To update job order references, perform the following steps:

1. Display the job order number that has the data you want to change. See “Displaying Job Order Information and References” above.
2. Enter the new reference in the “Reference” column of the Reference table for the row or rows you wish to update.

-or-


For an electronic reference, right click the reference you want to update. Choose “Select External File”. A file selection dialog will appear so you can locate the directory that contains the file you want. Select the file you want and click the “Open” button.

3. If necessary, click the checkbox  in the “Print Job Order” column to indicate if you want this reference to appear on the job order document or not. When this box is checked, the reference will appear on the job order document if possible. Click the checkbox  again to remove the print flag.
4. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Job Order Information and References at the same time.


### Adding Job Order Information


To enter job order information, perform the following steps:

1. Display the job order number you want. See “Displaying Job Order Information and References” above.
2. Click an empty row in the Information table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the text type you want (type the letter multiple times if there is more than one type that begins with the same letter).

-or-

Using the dropdown list, select the Text Type in the “Info Type” column of the Information table.


4. Click the Goto/Selection button  in the “Text Information” column of the Text table for the row you want and select “Edit Information Text” on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
5. The text will be displayed in a pop-up window.

6. Enter the desired information in the pop-up window and click "Ok" when done.
7. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this information text to appear on the job order document. When this box is checked, the text will appear on the job order document. Click the checkbox  again to remove the print flag.
8. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Job Order Information and References at the same time.

### Adding Job Order References

To enter job order references, perform the following steps:

1. Display the job order number you want. See "Displaying Job Order Information and References" above.
2. Click an empty row in the Reference table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the reference type you want (type the letter multiple times if there is more than one type that begins with the same letter).


-or-

Using the dropdown list, select the Reference Type in the "Reference Type" column of the Reference table.

4. Enter the reference in the "Reference" column.

-or-

For an electronic reference, right click the reference you want to update. Choose "Select External File". A file selection dialog will appear so you can locate the directory that contains the file you want. Select the file you want and click the "Open" button.






5. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this reference to appear on the job order document. When this box is checked, the reference will appear on the job order document if possible. Click the checkbox  again to remove the print flag.
6. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Job Order Information and References at the same time.



## Deleting Job Order Information and References


To delete job order information and references, perform the following steps:

1. Display the job order number that has the data you want to delete. See “Displaying Information and References” above.
2. To delete text information, click the checkbox  in the “Delete” column of the Information table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
3. To delete reference information, click the checkbox  in the “Delete” column of the Reference table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
4. Once finished, click the Save button  located on the toolbar.

**Note:** Once job order information is deleted, it can no longer be displayed or updated.


## Displaying the Previous Job Order Information and References




To display the job order information and references that precede the job order information and references currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous job order information and references are displayed on the main screen.

## Displaying the Next Job Order Information and References

To display the job order information and references that follow the job order information and references currently displayed, perform the following steps:


1. Click the Next button  located on the toolbar.
2. The next job order information and references are displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## Parts Screen

This screen is used to maintain PM Kit bill of materials (BOM) component data. A bill of materials is used to list the parts needed to complete the job. You can add components to the list, change data for existing components, or delete components from the table. Any changes made to the bill of materials are for this job order only.

If the PM Kit bill of materials is not pre-defined in TFG4000 Inventory Management, each PM Kit bill of materials is associated with a specific job order. To use the PM Kit bill of materials in other job orders it must be copied into the other job orders.

The items and bills of materials can be pre-defined and accessed from any job order by using TFG4000 Inventory Management. Changes made to the source bill of material in TFG4000 Inventory Management are not reflected in existing job orders; however, the job order bill of materials can be replaced with the updated source bill by using the refresh button  located on the toolbar.

### Current Job Order Data

<u>Field</u>	<u>Explanation</u>
Job Order	A manually entered or system generated number that identifies a job order.
Description	A short description of the job order or its use.
Required Start	The calendar date that indicates when the job order should be started.
Required Complete	The calendar date on which the job order is required to be completed.
Job Order Type	Defines the job order type: Demand-PM (manual job order) or Event-PM (scheduled job order).
Job Order Status	Indicates the job order status: Active, Closed, and Released.

### PM Kit

<u>Field</u>	<u>Explanation</u>
PM Kit	The item number for the Bill of Materials to be used for the job order. The item does not have to exist on the Item Master and the Bill of Material can be modified on the job order if necessary without affecting the original Bill of Material.
Description	The description of the PM Kit item number to be used for this job order.

## Component Table (Components tab)

<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Prefix	Unique identification of a component in this Bill of Materials. The Prefix may be used to sequence the component within the Bill of Materials or to allow multiple entries for the same component.
Component	Unique identification of an item that is a component of another item on a Bill of Materials. This component identification can be pre-defined using Item Definition screens, but it is not a requirement that the component be pre-defined.
Suffix	Unique identification of a component in this Bill of Materials. The Suffix may be used to sequence the component within the Bill of Materials or to allow multiple entries for the same component.
Quantity	This field is the quantity required to complete this job.
Unit of Measure	Defines how the item is counted or measured. Some examples of units of measure are "Bag", "Carton", and "Feet".
Component Type	Information indicating what type of component this is. Some examples of component types are "Assembly", "Industrial Supplies", and "Tool".
Delete	This is a checkbox to indicate you want to delete a component from the job order bill of material.

## Component Table (Description tab)

<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Prefix	Unique identification of a component in this Bill of Materials. The Prefix may be used to sequence the component within the Bill of Materials or to allow multiple entries for the same component.
Component	Unique identification of an item that is a component of another item on a Bill of Materials. This component identification can be pre-defined using Item Definition screens, but it is not a requirement that the component be pre-defined.

Suffix	Unique identification of a component in this Bill of Materials. The Suffix may be used to sequence the component within the Bill of Materials or to allow multiple entries for the same component.
Description	Contains information describing the item. This description can be as short as an abbreviation or a long detailed description of the item.
Manufacture Status	Status of the Manufacturing Bill of Material for the component, either Active or Inactive.
Engineering Status	Status of the Engineering Bill of Material for the component, either Active or Inactive.

**Component Table** (Change Control tab)

<b><u>Column</u></b>	<b><u>Explanation</u></b>
Row	The line number of the row in the table.
Prefix	Unique identification of a component in this Bill of Materials. The Prefix may be used to sequence the component within the Bill of Materials or to allow multiple entries for the same component.
Component	Unique identification of an item that is a component of another item on a Bill of Materials. This component identification can be pre-defined using Item Definition screens, but it is not a requirement that the component be pre-defined.
Suffix	Unique identification of a component in this Bill of Materials. The Suffix may be used to sequence the component within the Bill of Materials or to allow multiple entries for the same component.
Change Order	Most current engineering change number for this item.
Engineering Revision	Most current engineering revision level for this item.
Start Date	Date this component will become effective on this bill of material.
End Date	The last date this component will be effective on this bill of material.

## Component Table (Reference Designator tab)


<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Prefix	Unique identification of a component in this Bill of Materials. The Prefix may be used to sequence the component within the Bill of Materials or to allow multiple entries for the same component.
Component	Unique identification of an item that is a component of another item on a Bill of Materials. This component identification can be pre-defined using Item Definition screens, but it is not a requirement that the component be pre-defined.
Suffix	Unique identification of a component in this Bill of Materials. The Suffix may be used to sequence the component within the Bill of Materials or to allow multiple entries for the same component.
Reference Designator	Indicates where this component is used on the parent item. For example, it can refer to a number or letter on a diagram or it can be the name of a component on a printed circuit board. You can enter multiple reference designators separated by commas in this field.

**Note:** The components can be pre-defined using Item Definition in TFG4000 Inventory Management so that the component information does not have to be entered each time you use the component on a job order.

## Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen

## Accessing the Parts Screen

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.

-or-

Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.


2. If there is a job order in the “Job Order” field, the job order definition for that job order is displayed on the main screen.
3. Click “Parts”. The Parts screen is displayed.

## Using the Parts Screen


Use these procedures to display, update, add, delete, display previous, display next, and refresh parts on the job order.

### Displaying Parts on the Job Order

To display parts for a job order, perform the following steps:


1. Enter a job order in the “Job Order” field.
2. Click the Open (Display) button  located on the toolbar or hit the Enter key.
3. The parts for the job order number are displayed on the main screen.

-or-

1. Use the Search button  next to the “Job Order” field, “Description” field, “type” field or the “Status” field to select a job order.
2. Double-click on the “Job Order” you would like to display in the “Search” screen table.
3. The parts for the job order number are displayed on the main screen.




### Updating Parts on the Job Order

To update parts on the job order, perform the following steps:

1. Display the job order number you want to change. See “Displaying Parts on the Job Order” above.
2. Make changes to the part information in the Components table
3. Once finished, click the Save button  located on the toolbar.


## Adding Parts to a Job Order

To enter parts on a job order, perform the following steps:

1. Display the job order number you want to change. See "Displaying Parts on the Job Order" above.
2. Click an empty row in the Components table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. In the Components table, enter or select the desired information. If the component/item is pre-defined in TFG4000 Inventory Management, you can use the Goto/Selection button  to select a component. The "Description", "Unit of Measure", and "Component Type" columns are filled in when you select an item.
4. Once finished, click the Save button  located on the toolbar.


## Deleting Parts on the Job Order

To delete parts from the job order, perform the following steps:

1. Display the job order number you want to delete. See "Displaying Parts on the Job Order" above.
2. To delete component information, click the checkbox  in the "Delete" column of the Components table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
3. Once finished, click the Save button  located on the toolbar.

## Deleting All of the Parts on the Job Order


To delete all of the parts from the job order, perform the following steps:

1. Display the job order number parts list you want to delete. See "Displaying Parts on the Job Order" above.
2. Click the Delete button  located on the toolbar.
3. Click the "Yes" button on the "Confirm Action" pop up message. If you do not want to delete the parts list, click "No" on the "Confirm Action" pop up message.

**Note:** Once the parts list is deleted, it can no longer be displayed or updated.


## Displaying the Previous Parts List




To display the parts on the job order that precedes the job order currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous job order parts are displayed on the main screen.

## Displaying the Next Parts List


To display the parts on the job order that follows the job order currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next job order parts are displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## Refreshing All of the Parts on the Job Order

This procedure can be used only if TFG4000 Inventory Management is installed. To delete all of the parts on the job order and replace them with parts from the original bill of materials, perform the following steps:

1. Display the job order number parts list you want to refresh. See “Displaying Parts on the Job Order” above.
2. Click the Refresh button  located on the toolbar.
3. Click the “Yes” button on the “Confirm Action” pop up message. If you do not want to refresh the parts list, click “No” on the “Confirm Action” pop up message.

**Note:** The original bill of material must exist in TFG4000 Inventory Management, and it must be referenced by the job order on the “Job Order Maintenance” screen as the “PM Kit” before the parts list can be refreshed. If the bill of materials does not exist or it is not referenced on the job order, the job order parts will be deleted and no parts will be added to replace them.



## Job Order Process Screen

This screen is used to maintain process operations for the displayed job order. You can change process information specific to the displayed job order. Operation data for the job order process is displayed in a table. Changes made to the source process (using Process Definition) are not reflected in the job order process unless the job order process is refreshed. Also, changes made to the process using the "Job Order Process" screen are not reflected in the source process.

### Current Job Order Data

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Job Order	A manually entered or system generated number that identifies a job order.
Description	A short description of the job order or its use.
Required Start	The calendar date that determines when the job order should be started.
Required Complete	The calendar date on which the job order is required to be completed.
Type	Defines the job order type: Demand-PM (manual job order) or Event-PM (scheduled job order).
Status	Indicates the job order status: Active, Closed, and Released.

### Process

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Process	The process identifies the steps necessary to perform maintenance.
Type	Identifies the process type: Custom (Unique), Master (Main Process), and Standard (Valid for Several Processes).

### Operations Table (Primary and Secondary tabs)

<b><u>Column</u></b>	<b><u>Explanation</u></b>
Row	The line number of the row in the table.
Operation	The order/sequence that the operation should be performed in this process. This is also referred to as the operation number.
Type	Identifies the operation type: Custom (Unique), Master (Main Process), and Standard (Valid for Several Processes).

Status	The current status of the operation: Open, Running, or Completed.
Description	Short description of the activity or activities involved in this operation.
Run Time	Amount of time required to complete this operation.
Run Time Unit	The measure of time used to define the operation time. The values are: Seconds, Minutes, Hours, Days and Weeks.
Run Time Quantity	Standard quantity that can be accomplished in this operation.
Work Center	The unique identification of the work center where the operation is to take place.
Delete	This is a checkbox to indicate you want to delete an operation record.
Setup Time	The standard time required to prepare for this operation.
Setup Time Unit	The measure of time used to define the setup time. The values are: Seconds, Minutes, Hours, Days and Weeks.
Operator Time	The manpower (operator) time needed to complete this operation.
Operator Time Unit	The measure of time used to define the operator time. The values are: Seconds, Minutes, Hours, Days and Weeks.
Operator Time Quantity	Standard quantity that can be accomplished in this operation per operator (person)
Machine	The unique identification of the machine on which the operation is to take place.


### **Message Line**

#### **Field**

#### **Explanation**

Message	Displays information about the current status of the screen.
---------	--

## Accessing the Process Screen

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.

-or-

Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.


2. If there is a job order in the “Job Order” field, the job order definition for that job order is displayed on the main screen.
3. Click “Process”. The Job Order Process screen is displayed.

## Using the Job Order Process Screen


Use these procedures to display, delete, view the previous, view the next, and refresh job order processes; and to display, update, add, and delete operations on a job order process.

### Displaying a Job Order Process and its Operations

To display a job order process and its operations, perform the following steps:

1. Enter a job order in the “Job Order” field.
2. Click the Open (Display) button  located on the toolbar or hit the Enter key.
3. The job order process and its operations are displayed on the main screen.
4. The job order operations are displayed in the Operations table. Use the scroll bar on the right to display more rows if necessary.



-or-

1. Use the Search button  next to the “Job Order” field, “Description” field, “Type” field or the “Status” field to select a job order.
2. Double-click on the “Job Order” you would like to display in the “Search” screen table.
3. The job order process and its operations are displayed on the main screen.
4. The job order operations are displayed in the Operations table. Use the scroll bar on the right to display more rows if necessary.

### Adding Job Order Operations


To add operations to a job order:

1. Display the job order process you wish to change. See “Displaying a Job Order Process and its Operations” above.

2. Select the appropriate type in the "Type" field, if desired (the default is Standard), and enter an optional process description in the "Description" field.
3. Enter the operation sequence data in the table for each of the tabs ("Run Time", "Setup Time", and "Operator Time"). You cannot change the "Operation Sequence" and "Type" entries once the data has been saved. Leave gaps in your numbering sequence to allow for the insertion of additional steps.
4. Click the Add Rows button  located on the lower right corner of the table to add more rows for operations if necessary.
5. When all of the operation data has been entered, click the Save button  located on the toolbar.


### Deleting Job Order Operations

Perform the following steps to delete job order operations:

1. Display the job order process you wish to change. See "Displaying a Job Order Process and its Operations" above.
2. Click the "Delete" checkbox  next to the row(s) you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
3. When all of the appropriate rows are selected, click the Save button  located on the toolbar.

### Deleting a Job Order Process Definition and its Associated Data


Perform the following steps to delete the job order process including job order operations, job order process information, job order process references, job order operation information, and job order operation references:

1. Display the job order process you wish to delete. See "Displaying a Job Order Process and its Operations" above.
2. Click the Delete button  located on the toolbar.
3. Click the "Yes" button on the "Confirm Action" pop up message. If you do not want to delete the job order process click "No" on the "Confirm Action" pop up message.
4. The job order process, job order process information, job order process information, job order process references, job order operations, job order operation information, and job order operation references are deleted.

**Note:** Once job order process data is deleted, it can no longer be displayed or updated.


## Displaying the Previous Job Order Process




To display the job order process that precedes the job order process currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous job order process and its operations are displayed on the main screen.

## Displaying the Next Job Order Process


To display the job order process that follows the job order process currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next job order process and its operations are displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## Refreshing Job Order Operations

To delete the operations on the job order and replace them with the operations from the original process, perform the following steps:

1. Display the job order process you wish to refresh. See “Displaying a Job Order Process and its Operations” above.
2. Click the Refresh button  located on the toolbar.
3. Click the “Yes” button on the “Confirm Action” pop up message. If you do not want to refresh the operations, click “No” on the “Confirm Action” pop up message.

**Note:** The process and operations must be defined with the “Process Definition” screen for the job order operations to be refreshed. If the process and/or operations do not exist, the job order operations will be deleted and will not be replaced.

## Job Order Process Information Screen

Use this screen to enter additional text information concerning the displayed job order process. The data may be any information you wish to store concerning the job order process, and multiple types of information can be stored. Changes made to the source process information (using Process Definition) are not reflected in the job order process information, unless the job order process is refreshed. Also, changes made to the job order process information using the "Job Order Process Information" screen are not reflected in the source process.

The Reference table provides a means to attach or view external documents. You can either view the documents by using the appropriate application or select the file and place it in the Reference table.

Information text can be selected to print on the job order form. External references may also be selected to print on the job order form; however, only external reference files with a .txt extension can be printed.

### Current Job Order

<u>Field</u>	<u>Explanation</u>
Job Order	A manually entered or system generated number that identifies a job order.
Description	A short description of the job order or its use.
Status	Indicates the job order status: Active, Closed, and Released.

### Information Table

<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Type	Indicates the type of text information. Additional text types may be added using the Dropdown Control screen.
Text Information	This is where you enter text information or view text that has already been entered.
Print Job Order	This is a checkbox to indicate whether or not you want this information text to appear on the job order form.
Delete	This is a checkbox to indicate you want to delete this text record.

### Reference Table


<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.

Reference Type	A designation for the type of reference stored. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration".
Reference	Directory and file name for an electronic reference, URL for a website, or description of where to find a physical reference. An electronic reference can be a spreadsheet, a word processor document, or a text file. A physical reference can be the name of a book with the page number.
Print Job Order	This is a checkbox to indicate whether or not you want this reference to appear on the job order form. Only files with a .txt extension can be printed.
Delete	This is a checkbox to indicate you want to delete this reference record.

### Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.

### Accessing the Job Order Process Information Screen


1. Click the plus (" + ") next to "Preventive Maintenance" or double-click  "Preventive Maintenance" in the "NavTree".  
  
-or-  
  
Click on the "View" menu. Select "Goto Screen", then select "Preventive Maintenance".
2. If there is a job order in the "Job Order" field, the job order definition for that job order is displayed on the main screen.
3. Click "Process Information". The Job Order Process Information screen is displayed.

## Using the Job Order Process Information Screen


Use these procedures to display, update, add, delete, display the previous, and display the next job order process information or references.


### Displaying Job Order Process Information and References

To display job order process information and references, perform the following steps:

1. Enter a job order in the "Job Order" field and click the Open (Display) button  located on the toolbar or hit the Enter key.


-or-

Use the Search button  next to the "Job Order" field, "Description" field or the "Status" field to select a job order and double-click on the "Job Order" you would like to display in the "Search" screen table.


2. The information text types and references for the job order process are displayed on the main screen.
3. To display information text, click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to display and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
4. The text will be displayed in a pop-up window.
5. The reference information is displayed in the Reference table. Use the scroll bar on the right to display more rows if necessary.
6. To view electronic references, right click on the reference you would like to display. Choose "Goto External Application" from the menu.

### Updating Job Order Process Information

To update job order process information, perform the following steps:

1. Display the job order process you want to change. See "Displaying Job Order Process Information and References" above.
2. Click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to update and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
3. The text will be displayed in a pop-up window.
4. Change the desired information in the pop-up window and click "Ok" when done.
5. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this information text to appear on the job order document or not. When this box is checked, the text will appear on the job order document. Click the checkbox  again to remove the print flag.



6. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Job Order Process Information and References at the same time.


### Updating Job Order Process References

To update job order process references, perform the following steps:

1. Display the job order process you want to change. See “Displaying Job Order Process Information and References” above.
2. Enter the new reference in the “Reference” column of the Reference table for the row or rows you wish to update.

-or-


For an electronic reference, right click the reference you want to update. Choose “Select External File”. A file selection dialog will appear so you can locate the directory that contains the file you want. Select the file you want and click the “Open” button.

4. If necessary, click the checkbox  in the “Print Job Order” column to indicate if you want this reference to appear on the job order document or not. When this box is checked, the reference will appear on the job order document if possible. Click the checkbox  again to remove the print flag.
5. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Job Order Process Information and References at the same time.


### Adding Job Order Process Information


To enter job order process information, perform the following steps:

1. Display the job order process you want to change. See “Displaying Job Order Process Information and References” above.
2. Click an empty row in the Information table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the text type you want (type the letter multiple times if there is more than one type that begins with the same letter).

-or-

Using the dropdown list, select the Text Type in the “Info Type” column of the Information table.


4. Click the Goto/Selection button  in the “Text Information” column of the Text table for the row you want and select “Edit Information Text” on the menu that appears. Use the scroll bar on the right to display more rows if necessary.

5. The text will be displayed in a pop-up window.
6. Enter the desired information in the pop-up window and click "Ok" when done.
7. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this information text to appear on the job order document. When this box is checked, the text will appear on the job order document. Click the checkbox  again to remove the print flag.
8. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Job Order Process Information and References at the same time.

### Adding Job Order Process References

To enter job order process references, perform the following steps:

1. Display the job order process you want to change. See "Displaying Job Order Process Information and References" above.
2. Click an empty row in the Reference table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the reference type you want (type the letter multiple times if there is more than one type that begins with the same letter).


-or-

Using the dropdown list, select the Reference Type in the "Reference Type" column of the Reference table.

4. Enter the reference in the "Reference" column.

-or-






For an electronic reference, right click the reference you want to update. Choose "Select External File". A file selection dialog will appear so you can locate the directory that contains the file you want. Select the file you want and click the "Open" button.

5. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this reference to appear on the job order document. When this box is checked, the text will appear on the job order document if possible. Click the checkbox  again to remove the print flag.
6. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Process Information and References at the same time.

## Deleting Job Order Process Information and References


To delete job order process information and references, perform the following steps:

1. Display the job order reference you want to delete. See “Displaying Job Order Process Information and References” above.
2. To delete text information, click the checkbox  in the “Delete” column of the Information table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
3. To delete reference information, click the checkbox  in the “Delete” column of the Reference table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
4. Once finished, click the Save button  located on the toolbar.

**Note:** Once job order process information is deleted, it can no longer be displayed or updated.


## Displaying the Previous Job Order Process Information and References




To display the job order process information and references that precede the job order process currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous job order process information and references are displayed on the main screen.

## Displaying the Next Job Order Process Information and References

To display the job order process information and references that follow the job order process currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next job order process information and references are displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## Job Order Operation Information Screen

Use this screen to enter text information for operation steps associated with a job order process. This data may be any information you wish to store concerning the operation, such as safety issues, specific tools required, and unique material requirements. Changes made to the source operation information (Using Process Definition) are not reflected in the job order operation information, unless the process is refreshed from the original process. Also, changes made to the job order process information using the "Job Order Operation Information" screen are not reflected in the source operation information.

The Reference table provides a means to attach or view external documents. You can either view the documents by using the appropriate application or select the file and place it in the Reference table.

Information text can be selected to print on the job order form. External references may also be selected to print on the job order form; however, only external reference files with a .txt extension can be printed.

### Current Job Order

<u>Field</u>	<u>Explanation</u>
Job Order	A manually entered or system generated number that identifies a job order.
Description	A short description of the job order or its use.
Status	Indicates the job order status: Active, Closed, and Released.
Operation	The order that the operation should be performed in this process. Also referred to as operation number.

### Information Table

<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Type	Indicates the type of text information. Additional text types may be added using the Dropdown Control screen.
Text Information	This is where you enter text information or view text that has already been entered.
Print Job Order	This is a checkbox to indicate whether or not you want this information text to appear on the job order form.
Delete	This is a checkbox to indicate you want to delete this text record.


## Reference Table

<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Reference Type	A designation for the type of reference stored. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration".
Reference	Directory and file name for an electronic reference, URL for a website, or description of where to find a physical reference. An electronic reference can be a spreadsheet, a word processor document, or a text file. A physical reference can be the name of a book with the page number.
Print Job Order	This is a checkbox to indicate whether or not you want this reference to appear on the job order form. Only files with a .txt extension can be printed.
Delete	This is a checkbox to indicate you want to delete this reference record.

## Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.

## Accessing the Operation Information Screen


1. Click the plus ("+") next to "Preventive Maintenance" or double-click  "Preventive Maintenance" in the "NavTree".  
  
-or-  
  
Click on the "View" menu. Select "Goto Screen", then select "Preventive Maintenance".
2. If there is a job order in the "Job Order" field, the job order definition for that job order is displayed on the main screen.
3. Click "Operation Information". The Job Order Operation Information screen is displayed.

## Using the Job Order Operation Information Screen


Use these procedures to display, update, add, delete, display the previous, and display the next job order operation information and references.

### Displaying Job Order Operation Information and References


To display job order operation information and references, perform the following steps:

1. Enter a job order in the "Job Order" field and a job order operation number in the "Operation" field, then click the Open (Display) button  located on the toolbar or hit the Enter key.

-or-


Use the Search button  next to the "Job Order" field, "Description" field or the "Status" field to select a job order. In the search screen table, double-click on the "Job Order" you would like to display.


Enter a job order operation number in the "Operation" field.

2. The information text types and references for the job order operation are displayed on the main screen.
3. To display information text, click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to display and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
4. The text will be displayed in a pop-up window.
5. The reference information is displayed in the Reference table. Use the scroll bar on the right to display more rows if necessary.
6. To view electronic references, right click on the reference you would like to display. Choose "Goto External Application" from the menu.

### Updating Job Order Operation Information

To update job order operation information, perform the following steps:

1. Display the job order operation you want to change. See "Displaying Job Order Operation Information and References" above.
2. Click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want to update and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
3. The text will be displayed in a pop-up window.
4. Change the desired information in the pop-up window and click "Ok" when done.

5. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this information text to appear on the job order document or not. When this box is checked, the text will appear on the job order document. Click the checkbox  again to remove the print flag.
6. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Job Order Operation Information and References at the same time.


### Updating Job Order Operation References

To update job order operation references, perform the following steps:

1. Display the job order operation you want to change. See "Displaying Job Order Operation Information and References" above.
2. Enter the new reference in the "Reference" column of the Reference table for the row or rows you wish to update.

-or-


For an electronic reference, right click the reference you want to update. Choose "Select External File". A file selection dialog will appear so you can locate the directory that contains the file you want. Select the file you want and click the "Open" button.

3. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this reference to appear on the job order document or not. When this box is checked, the reference will appear on the job order document if possible. Click the checkbox  again to remove the print flag.
4. Once finished, click the Save button  located on the toolbar.

**Note:** You can update Job Order Operation Information and References at the same time.



### Adding Job Order Operation Information

To enter job order operation information, perform the following steps:

1. Display the job order operation you want to change. See "Displaying Job Order Operation Information and References" above.
2. Click an empty row in the Information table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the text type you want (type the letter multiple times if there is more than one type that begins with the same letter).

-or-


Using the dropdown list, select the Text Type in the "Info Type" column of the Information table.

4. Click the Goto/Selection button  in the "Text Information" column of the Text table for the row you want and select "Edit Information Text" on the menu that appears. Use the scroll bar on the right to display more rows if necessary.
5. The text will be displayed in a pop-up window.
6. Enter the desired information in the pop-up window and click "Ok" when done.
7. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this information text to appear on the job order document. When this box is checked, the text will appear on the job order document. Click the checkbox  again to remove the print flag.
8. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Job Order Operation Information and References at the same time.

### Adding Job Order Operation References

To enter job order operation references, perform the following steps:

1. Display the job order operation you want to change. See "Displaying Job Order Operation Information and References" above.
2. Click an empty row in the Reference table. If there are no empty rows click the Add Rows button  in the lower right corner of the table.
3. Type the first letter of the reference type you want (type the letter multiple times if there is more than one type that begins with the same letter).


-or-

Using the dropdown list, select the Reference Type in the "Reference Type" column of the Reference table.

4. Enter the reference in the "Reference" column.

-or-

For an electronic reference, right click the reference you want to update. Choose "Select External File". A file selection dialog will appear so you can locate the directory that contains the file you want. Select the file you want and click the "Open" button.


4. If necessary, click the checkbox  in the "Print Job Order" column to indicate if you want this reference to appear on the job order document. When this box is checked, the reference will appear on the job order document if possible. Click the checkbox  again to remove the print flag.
5. Once finished, click the Save button  located on the toolbar.

**Note:** You can add Job Order Operation Information and References at the same time.



## Deleting Job Order Operation Information and References


To delete job order operation information and references, perform the following steps:

1. Display the job order operation information and references you want to delete. See "Displaying Job Order Operation Information and References" above.
2. To delete text information, click the checkbox  in the "Delete" column of the Information table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
3. To delete reference information, click the checkbox  in the "Delete" column of the Reference table for the row you want to delete. You may select more than one row to be deleted at one time. Click the checkbox  again to remove the deletion flag.
4. Once finished, click the Save button  located on the toolbar.

**Note:** Once job order operation information is deleted, it can no longer be displayed or updated.


## Displaying the Previous Job Order Operation Information and References




To display the job order operation information and references that precede the job order operation currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous job order operation information and references are displayed on the main screen.

## Displaying the Next Job Order Operation Information and References

To display the job order operation information and references that follow the job order operation currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next job order operation information and references are displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## Job Order Summary Screen

This screen is used to display a list of job orders associated with the machine in the "Machine" field.

### Selection Criteria


<b><u>Field</u></b>	<b><u>Explanation</u></b>
Job Order	Enter all or part of a job order number here to view the summary by job order. Leave this field blank for all job orders.
Machine	Enter all or part of the machine or equipment to be maintained or serviced to view the summary by machine. Leave this field blank for all machines.
Type	Enter or select the job order type: Demand-PM (manual job order) or Event-PM (scheduled job order) or leave this field blank for job order of all types.
Status	Enter or select the job order status or leave this field blank for all statuses.
Start Release Date	Enter or select a date for the first release date you want for viewing the summary. Leave this field blank for the oldest release date.
End Release Date	Enter or select a date to limit the summary by release date. Leave this field blank for the most current release date.
Start Due Date	Enter or select a date for the first due date you want for viewing the summary. Leave this field blank for the oldest due date.
End Due Date	Enter or select a date to limit the summary by due date. Leave this field blank for the most current due date.
Number of Rows to Display	Controls the number of database rows to retrieve during the query. The default value is 30. The more rows retrieved, the longer it takes the query to complete. Use the selection criteria to help control the number of rows retrieved.

### Summary Table (Order, Dates, Machine, Meter, Event, Kit, and Process tabs)

<b><u>Column</u></b>	<b><u>Explanation</u></b>
Row	The line number of the row in the table.
Job Order	A system generated number that identifies a job order.
Description	A short description of the job order.

Type	Defines the job order type: Demand-PM (manual job order) or Event-PM (scheduled job order).
Status	Indicates the status of the job order. The values are: "Active", "Closed", and "Released".
Release Date	Date the job order must be released for processing.
Due Date	Date by which job order processing must be completed.
Deliver To	Where or to whom the completed job order is to be delivered.
Completed	Date the job order was completed.
Machine	The machine or equipment to be maintained or serviced.
Description	A short description of the machine or its use.
Meter	The meter needed for this job order.
Description	A short description of the meter.
Event	The event scheduled for this job order. May indicate the type of maintenance that must be performed.
Description	A short description of the event.
PM Kit	Kit that contains a list of the parts/supplies needed for this job order.
Description	A short description of the PM Kit.
Type	Indicates the type of kit needed for the job order.
UOM	Indicates the unit of measure of the kit, e.g. box, case, etc.
PM Process	Name of the process that lists the steps needed to complete this job order.
Type	Indicates the type of process to be used for this job order – Standard, Custom, Master.
Description	A short description of the process.
<b>Message Line</b>	
<b><u>Field</u></b>	<b><u>Explanation</u></b>
Message	Displays information about the current status of the screen.

## Accessing the Job Order Summary Screen

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.

-or-



Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.

2. If there is a job order in the “Job Order” field, the job order definition for that job order is displayed on the main screen.
3. Click “Summary”. The Summary screen is displayed.

## Using the Job Order Summary Screen

### Displaying the Job Order Summary

To view the job order summary, perform the following steps (Steps 1, 2, 3, and 4 are optional):

1. Enter all or part of a Machine in the “Machine” field, or use the Search button  next to the “Machine” field to select a machine.
2. Select the type of job order you want to display in the “Job Order Type” field or leave that field blank to select any type of job order.
3. Select the status of the job orders you want to display in the “Job Order Status” field or leave that field blank to select job orders with any status.
4. Enter the maximum number of rows you wish to view in the “Number of Rows to Display” field.
5. Click the Open (Display) button  located on the toolbar.
6. View the Job Order Summary information displayed on the screen.

## **Job Activities**

### **What is a Job Activity?**

Job activity screens are used for reporting various activities against a job order such as parts used, labor cost, additional costs incurred, etc.

### **Job Activity Screens**

#### **Picking**

This screen is used to issue the quantity of a component used for the job order. Each component needed in the job order is displayed in a table. The "Quantity Required" field shows the remaining quantity needed for the job order. When the "Issue Quantity" field is used, the "Quantity Required" field is decremented by the value in the "Issue Quantity" field and a component history audit trail record is written. Also, if TFG4000 Inventory Management is installed, the on hand inventory for the component is updated and an inventory transaction audit trail record is written.

#### **Feedback**

This screen is used to report additional material cost and labor hours by employee.

#### **Component History**

This screen is used to display the history information for components used in a job order. It shows the activity that has occurred for each component on the job order.

#### **Cost**

This screen is used to report additional material cost, labor cost and labor hours not associated with an employee, overhead, setup, and external costs.

## Picking Screen

This screen is used to display what is still needed to complete the job order and to issue the quantity of a component used for the job order. Each component needed in the job order is displayed in a table. The "Quantity Required" field shows the remaining quantity needed for the job order. When the "Issue Quantity" field is used, the "Quantity Required" field is decremented by the value in the "Issue Quantity" field and a component history audit trail record is written. Also, the on hand inventory for the component is updated and an inventory transaction audit trail record is written.

### Current Job Order Data

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Job Order	A manually entered or system generated number that identifies a job order.
Description	A short description of the job order or its use.
Required Start	The calendar date that determines when the job order should be started.
Required Complete	The calendar date that determines when the job order should be completed.
Type	Defines the job order type: Demand-PM (manual job order) or Event-PM (scheduled job order).
Status	Indicates the job order status: Active, Closed, and Released.

### Picking Table (Primary and Secondary tabs)

<b><u>Column</u></b>	<b><u>Explanation</u></b>
Row	The line number of the row in the table.
Prefix	Unique identification of a component in this Bill of Materials. The Prefix may be used to sequence the component within the Bill of Materials or to allow multiple entries for the same component.
Component	Unique identification of a service, assembly, purchased part, component, facility, tool, material, etc.
Suffix	Unique identification of a component in this Bill of Materials. The Suffix may be used to sequence the component within the Bill of Materials or to allow multiple entries for the same component.
Quantity Required	The number of units of the component remaining to be picked, retrieved, or selected (issued) for this job order.

Location	Identification of the inventory location where inventory is stored for this Component. (Displayed only if the component is defined in TFG4000 Inventory Management and has inventory stored.)
Onhand Quantity	The number of units that are on hand in this inventory location for this Component. (Displayed only if the component is defined in TFG4000 Inventory Management and has inventory stored.)
Issue Quantity	The number of units of the component to be picked, retrieved, or selected (issued) for this job order.
Description	Short description of the item needed to be picked, retrieved, or selected (issued) for this job order.
Job Quantity	The total quantity of the component required to complete this job order.
Unit of Measure	Defines how the item is counted or measured. A dropdown list of values is provided for your convenience. You can use those values or define your own using the "Dropdown Control" screen under "System Administration". Some examples of units of measure are "Ounce", "Pound", and "Hour".
Type	Defines the component type. The type helps further define an item by giving it a classification. Some examples of types are: "Assembly" something you build, "Service" for a service you provide, "Tool" for something you use in your operation.
Return Quantity	Place to enter a quantity to be returned to inventory for this component (added to the inventory location on the row where you enter the return quantity).
Stock Item	Indicates if the component is a Stock Item or not. Components that have Stock Item = "No" can be issued regardless of the on hand balance in inventory and whether or not the inventory balance would go negative. Components that have Stock Item = "Yes" must pass inventory rules before they can be issued.


**Message Line**

**Field**

**Explanation**

Message	Displays information about the current status of the screen.
---------	--

## Accessing the Picking Screen



1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.  
  
-or-  
  
Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.
2. Click “Job Activities”. The Picking screen is displayed.
3. If there is a job order in the “Job Order” field, the job order picking for that job order is displayed on the main screen.

## Using the Picking Screen

Use these procedures to display job order picking data, pick (issue) components for a job order, display the previous job order pick list, and display the next job order pick list.

### Displaying Job Order Picking Data

To display job order picking data, perform the following steps:

1. Enter a job order in the “Job Order” field.
2. Click the Open (Display) button  located on the toolbar or hit the Enter key.
3. The job order picking data displayed on the main screen.  
  
-or-  
  
1. Use the Search button  next to the “Job Order” field, “Description” field, “Type” field or the “Status” field to select a job order.
2. Double-click on the “Job Order” you would like to display in the “Search” screen table.
3. The job order picking data displayed on the main screen.

### Picking Components


To pick (issue) components for a job order, perform the following steps:

1. Display the job order number you need. See “Displaying Job Order Picking Data” above.
2. Enter the quantity you wish to pick for a component in the “Issue Quantity” column of the Picking table

-or-

Click the “Pick All” button to issue the remaining quantity for all components.




3. Once finished, click the Save button  located on the toolbar.
4. The quantity required for this component will be reduced by the quantity issued and if TFG4000 Inventory Management is installed, inventory will be reduced by the quantity issued.

**Note:** Some components may be issued even when they do not have enough inventory. This can happen if the component is defined as Stock Item = No. Also, it can happen if the system variable **Allow\_Negative\_Inventory** is set to Yes.


### Returning Components

To return components back to inventory, perform the following steps:

1. Display the job order number you need. See “Displaying Job Order Picking Data” above.
2. In the row that contains the inventory location where you want to return the inventory, enter the quantity you wish to return in the “Return Quantity” column of the Picking table (located on the “Type” tab).
3. Once finished, click the Save button  located on the toolbar.
4. The quantity required for this component will be increased by the quantity returned and if TFG4000 Inventory Management is installed, inventory will be increased by the quantity returned.


### Displaying the Previous Job Order Picking Data




To display the job order picking data that precedes the job order picking data currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous job order picking data is displayed on the main screen.

### Displaying the Next Job Order Picking Data

To display the job order picking data that follows the job order picking data currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next job order picking data is displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database Start by erasing the screen using the Erase button , then click the Next button .

## Feedback Screen

This screen is used to report additional material and labor hours by employee.

### Current Job Order Data

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Job Order	A manually entered or system generated number that identifies a job order.
Description	A short description of the job order or its use.
Required Start	The calendar date that determines when the job order should be started.
Required Complete	The calendar date that determines when the job order should be completed.
Type	Defines the job order type: Demand-PM (manual job order) or Event-PM (scheduled job order).
Status	Indicates the job order status: Active, Closed, and Released.
Machine	The machine or equipment to be maintained or serviced.
Completed	Date the job order was completed.

### Feedback Table (Material & Hours and Name & Description tabs)


<b><u>Column</u></b>	<b><u>Explanation</u></b>
Row	The line number of the row in the table.
Employee	The employee identification of the person reporting.
Cost Date	Date the feedback was reported.
Material Cost	Additional material cost report by this employee.
Regular Time	Number of regular hours this employee worked on this job on the date indicated. Labor cost reported for the job and the machine is calculated using the hours reported here times the employee's regular time rate. (Total labor cost reported is the sum of the Regular, Overtime, and Holiday time hours multiplied by their respective rates.)
Overtime Time	Number of overtime hours this employee worked on this job on the date indicated. Labor cost reported for the job and the machine is calculated using the hours reported here times the employee's overtime rate. (Total labor cost reported is the sum of the Regular, Overtime, and Holiday time hours multiplied by their respective rates.)

Holiday Time	Number of holiday hours this employee worked on this job on the date indicated. Labor cost reported for the job and the machine is calculated using the hours reported here times the employee's holiday rate. (Total labor cost reported is the sum of the Regular, Overtime, and Holiday time hours multiplied by their respective rates.)
Name	The employee's name.
Cost Description	A brief description or explanation of the feedback reported.

### Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.

### Accessing the Feedback Screen



1. Click the plus (" + ") next to "Preventive Maintenance" or double-click  "Preventive Maintenance" in the "NavTree".  
  
-or-  
  
Click on the "View" menu. Select "Goto Screen", then select "Preventive Maintenance".
2. Click "Job Activities". The Picking screen is displayed.
3. If there is a job order in the "Job Order" field, the job order picking for that job order is displayed on the main screen.
4. Click "Feedback". The Feedback screen is displayed.
5. If there is a job order in the "Job Order" field, the job order feedback for that job order is displayed on the main screen.

## Using the Feedback Screen

Use these procedures to display job order feedback data, enter feedback for a job order, display the previous job order feedback data, and display the next job order feedback data.


### Displaying Job Order Feedback Data

To display job order feedback data, perform the following steps:

1. Enter a job order in the "Job Order" field.
  2. Click the Open (Display) button  located on the toolbar or hit the Enter key.
  3. The job order feedback data is displayed on the main screen.
- or-
1. Use the Search button  next to the "Job Order" field, "Description" field, "Type" field or the "Status" field to select a job order.
  2. Double-click on the "Job Order" you would like to display in the "Search" screen table.
  3. The job order feedback data is displayed on the main screen.


### Reporting Feedback

To report feedback for a job order, perform the following steps:

1. Display the job order number you need. See "Displaying Job Order Feedback Data" above.
2. Enter or select the Employee.
3. Enter the information you wish to report.
4. Once finished, click the Save button  located on the toolbar.
5. The feedback information is logged for the job order and for the machine on the job order.


### Displaying the Previous Job Order Feedback Data




To display the job order feedback data that precedes the job order feedback data currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous job order feedback data is displayed on the main screen.

## Displaying the Next Job Order Feedback Data

To display the job order feedback data that follows the job order feedback data currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next job order feedback data is displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## Component History Screen

This screen is used to display the history information for components used in a job order.

### Current Job Order Data

<u>Field</u>	<u>Explanation</u>
Job Order	A manually entered or system generated number that identifies a job order.
Description	A short description of the job order or its use.
Required Start	The calendar date that determines when the job order should be started.
Required Complete	The calendar date that determines when the job order should be completed.
Type	Defines the job order type: Demand-PM (manual job order) or Event-PM (scheduled job order).
Status	Indicates the job order status: Active, Closed, and Released.

### Component Table (Primary and Secondary tabs)


<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Component	Unique identification of a service, assembly, purchased part, component, facility, tool, material, etc.
Issued Quantity	The number of units of the component that were used or consumed (issued) for this job order.
Returned Quantity	The number of units of the component that were returned to inventory for this job order.
Scrapped Quantity	The number of units of the component that were not usable and could not be returned to inventory for this job order.
Unit of Measure	Defines how the item is counted or measured. Some examples of units of measure are Bag", "Carton" and "Feet".
Status	The most recent activity for this component on this job order. The values are: Issued, Returned, Scrapped, Deleted and Updated.
Description	A short description of the component.
Unit Cost	The cost of one unit of this component.




## Using the Component History Screen

### Displaying Component History

To view component history, perform the following steps:

1. Enter a job order in the "Job Order" field.
2. Click the Open (Display) button  located on the toolbar or hit the Enter key.
3. The job order component history is displayed on the main screen.

-or-

1. Use the Search button  next to the "Job Order" field, "Description" field, "Type" field or the "Status" field to select a job order.
2. Double-click on the "Job Order" you would like to display in the "Search" screen table.
3. The job order component history is displayed on the main screen.



## Cost Screen

This screen is used to report additional material and other costs not directly associated with a particular employee.

### Current Job Order Data

<u>Field</u>	<u>Explanation</u>
Job Order	A manually entered or system generated number that identifies a job order.
Description	A short description of the job order or its use.
Required Start	The calendar date that determines when the job order should be started.
Required Complete	The calendar date that determines when the job order should be completed.
Type	Defines the job order type: Demand-PM (manual job order) or Event-PM (scheduled job order).
Status	Indicates the job order status: Active, Closed, and Released.

### Cost Table (Cost, Material & Labor, and Overhead, Setup & External tabs)


<u>Column</u>	<u>Explanation</u>
Row	The line number of the row in the table.
Cost Date	Date the cost was reported.
Total Cost	Sum of all costs reported for the date indicated.
Cost Level	Defaulted to "Actual"
Cost Description	A brief description or explanation of the cost reported.
Material Cost	Cost of materials used on this job order on the date indicated.
Labor Cost	Cost of labor needed for this job order on the date indicated.
Labor Time	Number of labor hours expended on this job on the date indicated.
Time Unit	Defaulted to hours.
Fixed Overhead	The cost of overhead attributed to a cost source that does not change reported for this job on the date indicated.

Variable Overhead	The cost of overhead attributed to a cost source that is not consistent reported for this job on the date indicated.
Setup	Cost incurred preparing for the work to be done on this job reported for this job on the date indicated.
External Cost	Cost incurred for this job on the date indicated attributed to an entity not considered part of the internal organization.

### Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.

### Accessing the Cost Screen


1. Click the plus (" + ") next to "Preventive Maintenance" or double-click  "Preventive Maintenance" in the "NavTree".  
  
-or-  
  
Click on the "View" menu. Select "Goto Screen", then select "Preventive Maintenance".
2. Click "Job Activities". The Picking screen is displayed.
3. If there is a job order in the "Job Order" field, the job order picking for that job order is displayed on the main screen.
4. Click "Cost". The Cost screen is displayed.
5. If there is a job order in the "Job Order" field, the job order cost data for that job order is displayed on the main screen.

## Using the Cost Screen


Use these procedures to display job order cost data, enter cost for a job order, display the previous job order cost data, and display the next job order cost data.

### Displaying Job Order Cost Data

To display job order cost data, perform the following steps:


1. Enter a job order in the "Job Order" field.
2. Click the Open (Display) button  located on the toolbar or hit the Enter key.
3. The job order cost data is displayed on the main screen.

-or-

1. Use the Search button  next to the "Job Order" field, "Description" field, "Type" field or the "Status" field to select a job order.
2. Double-click on the "Job Order" you would like to display in the "Search" screen table.
3. The job order cost data is displayed on the main screen.


### Reporting Cost

To report cost for a job order, perform the following steps:

1. Display the job order number you need. See "Displaying Job Order Cost Data" above.
2. Enter the information you wish to report.
3. Once finished, click the Save button  located on the toolbar.
4. The cost reported is logged to the job order and the machine on the job order.


### Displaying the Previous Job Order Cost Data




To display the job order cost data that precedes the job order cost data currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous job order cost data is displayed on the main screen.

## Displaying the Next Job Order Cost Data

To display the job order cost data that follows the job order cost data currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next job order cost data is displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## **Load Analysis**

### **What is Load Analysis?**

Using the preventive maintenance scheduled for a machine, TFG4000 will analyze when and for how long a resource will be needed for preventive maintenance.

### **Load Analysis Screens**

"Load Analysis" consists of three tabbed screens that are used to display work loads at different levels. Each screen is used for specific purposes to aid in the analysis of your work loads.

#### **Machine Load**

When and how much time will be needed for preventive maintenance for a particular machine or for all machines.

#### **Work Center Load**

When and how much time will be needed for preventive maintenance for a particular work center or for all work centers.

#### **Skill Load**

When and how much time will be needed for preventive maintenance for a particular skill or for all skills.

## Machine Load Screen

This screen is used to run load analysis for a particular machine or for all machines and to display when and for how long a machine will be needed for preventive maintenance.

### Selection Criteria

<u>Field</u>	<u>Explanation</u>
Machine	Unique identification of the machine or equipment.
Chart Start	The first date to use when charting the results of the load analysis.
Load Process Start Date	The first date to use when performing the load analysis
Max Chart Dates	The maximum number of dates to use when charting the results of the load analysis.
Load Process End Date	The last date to use when charting the results of the load analysis.
Number of Rows to Display	The maximum number of rows to display from the results of the load analysis.


### Load Analysis Table

<u>Column</u>	<u>Explanation</u>
Date	Date the machine will be needed for preventive maintenance.
Hours	Number of hours the machine will be needed for preventive maintenance on the date indicated.

### Message Line

<u>Field</u>	<u>Explanation</u>
Message	Displays information about the current status of the screen.


## Accessing the Machine Load Screen

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.  
  
-or-  
  
Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.
2. Click “Load Analysis”. The Machine Load screen is displayed.
3. If there is a machine in the “Machine” field, the load analysis for that machine is displayed on the main screen.

## Using the Machine Load Screen

Use these procedures to erase the screen, display machine load data, perform machine load analysis, chart the results of machine load analysis, display the previous machine load data, and display the next machine load data.



### Erasing the Screen

To erase the data from the screen click the Erase button  located on the toolbar.

**Note:** Erasing the screen does not cause any data to be lost; it is merely a way to clean the screen in preparation for another operation.

### Displaying Machine Load Data


To display machine load data, perform the following steps:

1. Enter a machine in the “Machine” field.
  2. Click the Open (Display) button  located on the toolbar or hit the Enter key.
  3. The machine load data is displayed on the main screen.
- or-
1. Use the Search button  next to the “Machine” field to select a machine.
  2. Double-click on the “Machine” you would like to display in the “Search” screen table.
  3. The machine load data is displayed on the main screen.

**Note:** You must run machine load analysis before you can display the results.


## Running Machine Load Analysis

To perform load analysis for a machine, perform the following steps:

1. Display the machine you need -- see "Displaying Machine Load Data" above, or leave the machine field blank to run load analysis for all machines.
2. Enter a start date in the "Load Process Start Date" (the default is today's date).
3. Click the Run button  located on the toolbar.
4. You will be warned that the load analysis may take a while to run and you will be given the opportunity to continue or not. Click "Yes" to continue, "No" to cancel the load analysis.


## Charting Machine Load Analysis Results

To chart the results of a load analysis for a machine, perform the following steps:

1. Display the machine you need. See "Displaying Machine Load Data" above.
2. If there are no rows displayed, you may need to run a load analysis – see "Running Machine Load Analysis" above.
3. Enter a start date, number of dates to chart, and an end date if desired.
4. Click the Chart button  located on the toolbar.
5. A chart of the load analysis is displayed on the main screen.
6. Double-click the chart to make it larger.
7. There is a print button on the chart so you can print a copy of the chart if desired.

## Displaying the Previous Machine Load Data


To display the machine load data that precedes the machine load data currently displayed, perform the following steps:




1. Click the Previous button  located on the toolbar.
2. The previous machine load data is displayed on the main screen.



## Displaying the Next Machine Load Data

To display the machine load data that follows the machine load data currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next machine load data is displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## Work Center Load Screen

This screen is used to run load analysis for a particular work center or for all work centers and to display when and for how long a work center will be needed for preventive maintenance.

### Selection Criteria

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Work Center	The work center where machine or equipment will be maintained or serviced.
Chart Start	The first date to use when charting the results of the load analysis.
Max Chart Dates	The maximum number of dates to use when charting the results of the load analysis.
Load Process Start Date	The first date to use when performing the load analysis
Load Process End Date	The last date to use when charting the results of the load analysis.
Number of Rows to Display	The maximum number of rows to display from the results of the load analysis.


### Load Analysis Table

<b><u>Column</u></b>	<b><u>Explanation</u></b>
Date	Date the work center will be needed for preventive maintenance.
Hours	Number of hours the work center will be needed for preventive maintenance on the date indicated.

### Message Line

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Message	Displays information about the current status of the screen.

## Accessing the Work Center Load Screen

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.

-or-


Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.

2. Click “Load Analysis”. The Machine Load screen is displayed.
3. If there is a machine in the “Machine” field, the load analysis for that machine is displayed on the main screen.
4. Click “Work Center Load”. The Work Center Load screen is displayed.
5. If there is a work center in the “Work Center” field, the work center load data for that work center is displayed on the main screen.

## Using the Work Center Load Screen

Use these procedures to erase the screen, display work center load data, perform work center load analysis, chart the results of work center load analysis, display the previous work center load data, and display the next work center load data.


### Erasing the Screen

To erase the data from the screen click the Erase button  located on the toolbar.


**Note:** Erasing the screen does not cause any data to be lost; it is merely a way to clean the screen in preparation for another operation.

### Displaying Work Center Load Data

To display work center load data, perform the following steps:

1. Enter a work center in the “Work Center” field.
2. Click the Open (Display) button  located on the toolbar or hit the Enter key.
3. The work center load data is displayed on the main screen.


-or-

1. Use the Search button  next to the “Work Center” field to select a work center.
2. Double-click on the “Work Center” you would like to display in the “Search” screen table.
3. The work center load data is displayed on the main screen.

**Note:** You must run work center load analysis before you can display the results.


## Running Work Center Load Analysis

To perform load analysis for a work center, perform the following steps:

1. Display the work center you need -- see "Displaying Work Center Load Data" above, or leave the work center field blank to run load analysis for all work centers.
2. Enter a start date in the "Load Process Start Date" (the default is today's date).
3. Click the Run button  located on the toolbar.
4. You will be warned that the load analysis may take a while to run and you will be given the opportunity to continue or not. Click "Yes" to continue, "No" to cancel the load analysis.


## Charting Work Center Load Analysis Results

To chart the results of a load analysis for a work center, perform the following steps:

1. Display the work center you need. See "Displaying Work Center Load Data" above.
2. If there are no rows displayed, you may need to run a load analysis – see "Running Work Center Load Analysis" above.
3. Enter a start date, number of dates to chart, and an end date if desired.
4. Click the Chart button  located on the toolbar.
5. A chart of the load analysis is displayed on the main screen.
6. Double-click the chart to make it larger.
7. There is a print button on the chart so you can print a copy of the chart if desired.


## Displaying the Previous Work Center Load Data




To display the work center load data that precedes the work center load data currently displayed, perform the following steps:

1. Click the Previous button  located on the toolbar.
2. The previous work center load data is displayed on the main screen.

## Displaying the Next Work Center Load Data

To display the work center load data that follows the work center load data currently displayed, perform the following steps:

1. Click the Next button  located on the toolbar.
2. The next work center load data is displayed on the main screen.

**Tip:** You can use the Next button  as a convenient way to locate the first record in the database. Start by erasing the screen using the Erase button , then click the Next button .

## Skill Load Screen

This screen is used to run load analysis for a particular skill or for all skills and to display when and for how long a skill will be needed for preventive maintenance.

### Selection Criteria

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Skill	The skill needed for preventive maintenance.
Chart Start	The first date to use when charting the results of the load analysis.
Max Chart Dates	The maximum number of dates to use when charting the results of the load analysis.
Load Process Start Date	The first date to use when performing the load analysis
Load Process End Date	The last date to use when charting the results of the load analysis.
Number of Rows to Display	The maximum number of rows to display from the results of the load analysis.


### Load Analysis Table

<b><u>Column</u></b>	<b><u>Explanation</u></b>
Date	Date the skill will be needed for preventive maintenance.
Hours	Number of hours the skill will be needed for preventive maintenance on the date indicated.

### Message Line

<b><u>Field</u></b>	<b><u>Explanation</u></b>
Message	Displays information about the current status of the screen.

## Accessing the Skill Load Screen

1. Click the plus (“+”) next to “Preventive Maintenance” or double-click  “Preventive Maintenance” in the “NavTree”.

-or-

Click on the “View” menu. Select “Goto Screen”, then select “Preventive Maintenance”.

2. Click “Load Analysis”. The Machine Load screen is displayed.
3. If there is a machine in the “Machine” field, the load analysis for that machine is displayed on the main screen.
4. Click “Skill Load”. The Skill Load screen is displayed.
5. If there is a skill in the “Skill” field, the skill load data for that skill is displayed on the main screen.

## Using the Skill Load Screen

Use these procedures to erase the screen, display skill load data, perform skill load analysis, and chart the results of skill load analysis.


### Erasing the Screen

To erase the data from the screen click the Erase button  located on the toolbar.

**Note:** Erasing the screen does not cause any data to be lost; it is merely a way to clean the screen in preparation for another operation.

### Displaying Skill Load Data

To display skill load data, perform the following steps:


1. Select a skill using the skill dropdown in the “Work Center” field.
2. Click the Open (Display) button  located on the toolbar or hit the Enter key.
3. The skill load data is displayed on the main screen.

**Note:** You must run skill load analysis before you can display the results.

### Running Skill Load Analysis


To perform load analysis for a skill, perform the following steps:

1. Display the skill you need -- see “Displaying Skill Load Data” above, or leave the skill field blank to run load analysis for all skills.
2. Enter a start date in the “Load Process Start Date” (the default is today’s date).

3. Click the Run button  located on the toolbar.
4. You will be warned that the load analysis may take a while to run and you will be given the opportunity to continue or not. Click "Yes" to continue, "No" to cancel the load analysis.

### **Charting Skill Load Analysis Results**

To chart the results of a load analysis for a skill, perform the following steps:

1. Display the skill you need. See "Displaying skill Load Data" above.
2. If there are no rows displayed, you may need to run a load analysis – see "Running Skill Load Analysis" above.
3. Enter a start date, number of dates to chart, and an end date if desired.
4. Click the Chart button  located on the toolbar.
5. A chart of the load analysis is displayed on the main screen.
6. Double-click the chart to make it larger.
7. There is a print button on the chart so you can print a copy of the chart if desired.



## Advanced Installation

TFG4000 Professional Edition provides some advanced installation functionality such as: font sizes, system variables, server start up options, BAT file options for single user and multi user modes.

Please refer to the System Administration User Guide for more information.

## Documentation

TFG4000 documentation (in PDF format) is available online at [www.tfg4000.com](http://www.tfg4000.com), through the "Documentation" menu on each screen, and from the Windows "Start" menu. Simply click "Start", then "Programs", then "TFG4000 Professional V1.4", and then "Documentation".

**Note:** PDF files require Adobe® Acrobat® Reader. The reader is available at [www.adobe.com](http://www.adobe.com) free of charge.

## Registration

**Quick & Easy Online:** After installation, you can go to our web page at [www.tfg4000.com](http://www.tfg4000.com) to register the product. Click on "Register" and follow the instructions.

## Suggestions

We are eager to improve TFG4000 Professional Edition, and we urge you to tell us what you think of the software and how it could be improved to better suit your needs. We have taken many suggestions from our customers and incorporated them into our products. If you have suggestions or comments, please send an e-mail to [tfg4000@fredrickgroup.com](mailto:tfg4000@fredrickgroup.com). We want to hear from you!

## Services

The Fredrick Group, Inc. offers assistance in data conversion. For more information, contact The Fredrick Group, Inc. directly by either:

**E-mail** Send an e-mail to [tfg4000@fredrickgroup.com](mailto:tfg4000@fredrickgroup.com), with 'Services' in the subject line.

**Phone** Call **770-844-8516** between 9:00 AM - 5:00 pm Eastern Time Monday through Friday (except holidays)

## Support

**Note:** You must be registered in order to receive support.

### Initial Installation Support

The Fredrick Group, Inc. provides free initial installation support via e-mail. Installation support is available for 30 days, and is activated when you send your first message. You may also receive installation support by calling, but you must pay the cost of the call. Technicians are available on a limited basis Monday through Friday (except holidays) from 9:00 am to 5:00 pm Eastern time. The TFG4000 Professional Edition product technical support number is **770-844-8516**.

### Pay-As-You-Go Support

Additional fee-based support is available. You pay the cost of the call plus an additional fee. Credit card information must be provided and confirmed before a call is accepted. Technicians are available on a limited basis Monday through Friday (except holidays) from 9:00 am to 5:00 pm Eastern time. The TFG4000 Professional Edition product technical support number is **770-844-8516**.

Contact The Fredrick Group, Inc. at [tfg4000@fredrickgroup.com](mailto:tfg4000@fredrickgroup.com) for more details.

### Other Support Options

Other support options are available.

Contact The Fredrick Group, Inc. at [tfg4000@fredrickgroup.com](mailto:tfg4000@fredrickgroup.com) for more details.

**Note:** Support plans and fees are subject to change without notice.

For more information go to [www.tfg4000.com](http://www.tfg4000.com).