User Manual

PLUS version

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1. What Is CWorks?

CWorks is a computerized maintenance management system, which delivers various benefits to organizations by delivering information to maintenance engineers and managers. These benefits include:

- Easy analysis of work order status.
- Simplified management decisions with the availability of equipment maintenance history.
- Simplified and documented process for Supplier Management.
- Readily available equipment preventive maintenance schedules.
- Automatically generated preventive maintenance work orders.
- Efficient and time-saving maintenance activities with CWorks's centralized database and communication.

1.1 How Is It Used?

CWorks is used to keep track of all aspects of maintenance performed on assets, equipment, locations and other items that make up your facility. It is flexible and easily customizable to meet your needs. You decide how you want CWorks to track your maintenance;

- Use it to store information about the things you maintain (e.g., equipment or locations) and the resources used to maintain them (e.g., labor and parts.)
- Use it to assign and schedule maintenance on your facility using the stored information.
- Most importantly, use it to track the history and cost of maintenance performed on your facility.

1.2 What Should You Do Before Starting?

1. Gather information about your maintenance facility based on the Masters list required by the system. For examples assets, locations and etc.
2. Organize your assets according to a hierarchical structure if required.
3. Enter your basic data into CWorks. You do not have to set everything up at once, but certain information must be entered before you can issue a work order.
4. Other information can be added on as you use CWorks.
5. Now you are ready to use CWorks to manage your maintenance.

Remember that maintenance management involves significant amounts of data. We advise that you do not try to do everything at once.

1.3 How Does CWorks Work?

1.3.1 CWorks Main Menu

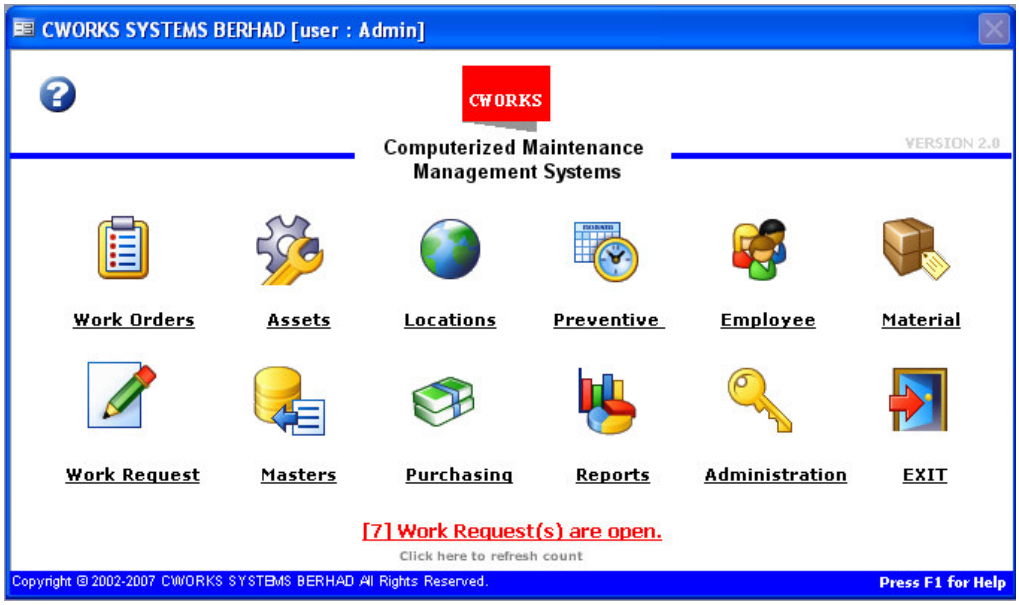


Figure 1: Main Menu

1.3.2 Description of CWorks Modules

1.3.2.1 Work Orders

The work order module provides the ability to view and manage all maintenance activities. It provides an accurate basis for work order costing, analysis and management of site activities. The work order module is integrated with the Planned Maintenance module in order to integrate scheduled preventive maintenance work with ad-hoc breakdown work. Work orders can also be raised for non-asset activities, such as changing a light bulb, repairing a leaking roof or plumbing problems. The module enables the capture of all Material used and labour costs and utilization.

1.3.2.2 Assets

The Asset module provides the facility to record and manage your organization's assets. It stores data on every asset that you want to maintain a record of maintenance activities. The following screens are available in the Asset module;

- Asset List Summary
- Current Asset Register
- New Asset Registration
- Parts List – Spare parts for the selected asset can be itemized in this section.
- Additional Info. – Information about the registered asset can be listed in this section.
- Relationship – Enables an asset tree to be built using the parent-child relationship.
- Work Order History – List of all work orders opened on an asset.

1.3.2.3 Location

The Location module provides the facility to record and manage your facility's physical locations. It stores data on every location that you want to maintain a record of maintenance activities. The following screens are available in the Location Register;

- Location List Summary
- Current Location Register
- New Location Registration

1.3.2.4 Preventive

This Preventive Maintenance module describes how to schedule and generate preventive maintenance work orders within CWorks. A preventive maintenance (PM) master and schedule specifies work to be performed based on an elapsed time interval or by metered / condition monitoring. PM schedules can be set-up for either an asset or a physical location.

1.3.2.5 Employee

The employee module provides the facility to record and manage your employee data. It stores data for every personnel employed in your company and records maintenance activities performed by employee. You can also view assets for which an employee is authorized/trained to operate and maintain.

1.3.2.6 Material

The Material module provides the tool for managing all spare parts and consumables, which make up the maintenance program. It is Material Management System, which controls and documents the transactions of spare parts and consumables (or stock items) within a store. The Material module aids maintenance departments in identifying;

- The type of spare parts and consumables available in the store.
- The balance quantity of spare parts and consumables.
- Total cost of holding stock and of individual stock items.
- The location of individual stock items.
- Shortage of stock items and re-order quantities.

The Material module is integrated with the Work Order module to provide parts and consumable usage and cost for individuals work orders. A set of reports are available in the Material module.

1.3.2.7 Work Request

The work request module provides you with the ability to request for work to be done on a particular asset or location.

1.3.2.8 Purchase Order

This module enables the generation of purchase orders. Order, purchase and receiving information recording for inventory items, purchased services and direct issues can be easily managed through the use of this module. The purchase module is integrated to work orders and inventory modules to allow for seamless recording and reporting of order, purchase and receiving of all externally supplied goods and services.

1.3.2.9 Reports

This module provides a wide range of management reports. Reports produced by CWorks is a combination of related data contained in the system. Reports are used for management information purpose, documentation and accounting of the productivity and performance of the maintenance departments.

1.3.2.10 Masters

This module captures all your basic maintenance data which is required to start your CWorks.

1.3.2.11 Administration

This module can only be accessed by the system administrator (default username: admin, password: admin). This module allows the administrator to change the default administrator password and to set-up the access levels of each user to modules within CWorks CMMS.

1.3.2.12 Help File

CWorks help file

1.3.2.13 Exit

To close or exit from CWorks program.

1.4 How To Log Into Cworks?

Upon launching the CWorks application file, the screen below would pop-up. The system will automatically refresh the database link. To change the database, refer to How To Change The Database Source File.

Figure 2: Connect to Database

CWorks logon screen would pop-up.

Enter UserID & Password

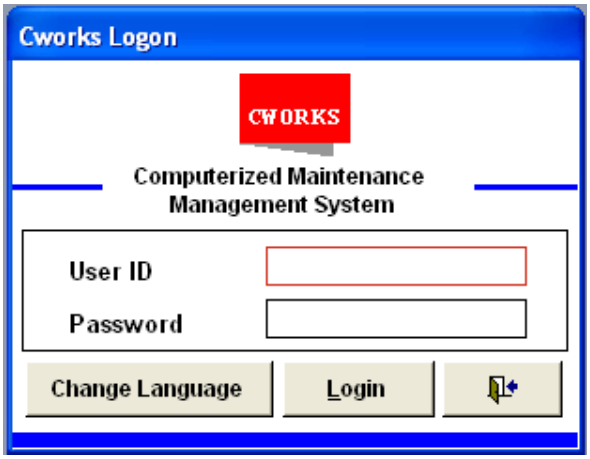


Figure 3: Logon Menu

1. For first time access enter the following UserID and Password;
   UserID: admin
   Password: admin

2. Click on "LOGIN". The employee details will be displayed as confirmation.
3. Click on "START CWORKS" to access the application.

To switch between users without exiting the application, go to "File" on the applications menu bar and click "Log Off". Upon confirmation, the application will close all active windows and launch the CWorks LogOn screen.
If the system cannot find the database file (CWorksPlus_db) or (CWorksPlus_Sample_db.mdb) a message box would pop-up for user to provide a valid link.

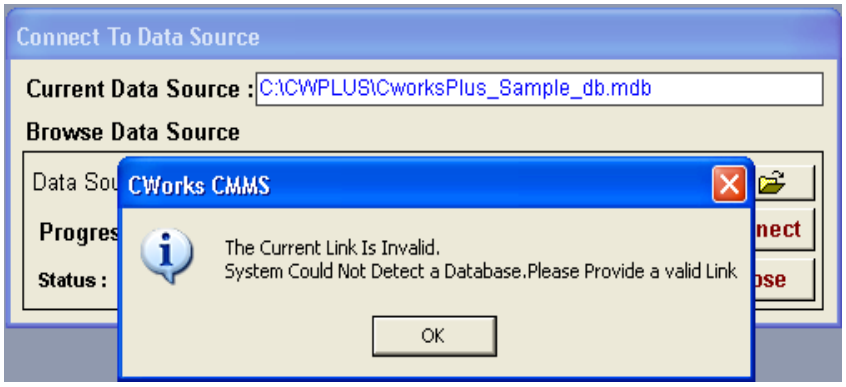
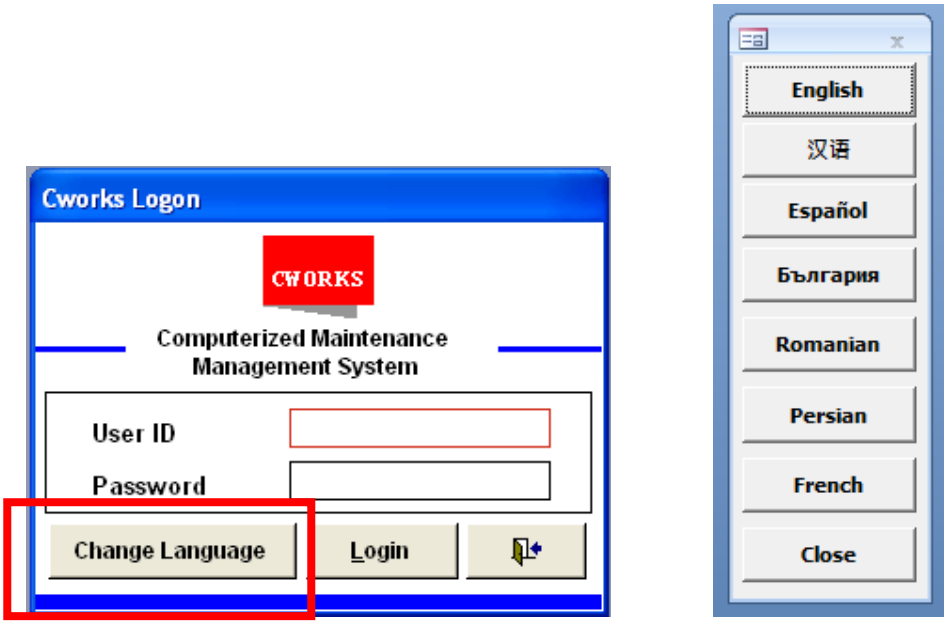


Figure 4: Invalid Link

1.5 How To Change Language In CWorks?



WORK ORDER MODULE

2. Work Orders

2.1 What Are Work Orders?

Work orders are written records of maintenance activities. They are used to assign maintenance to the areas and equipment that make up your maintenance program.

Work orders contain information about a maintenance activity, such as where and how it is to be done, who is supposed to do it and supplies needed to complete the task. They keep track of your maintenance activities and store valuable time and cost information that is used in reports. All tracked maintenance histories in CWorks are based on the information stored in your work order records.

Creating work orders for all your maintenance activities is the key to an efficient maintenance program.

Work Orders are created for two primary reasons:

1. Unscheduled work that is requested by tenants, customers, employees, and supervisors.
2. Regularly scheduled or preventive maintenance that is performed on a routine basis.

CWorks can create both types of work orders.

2.2 How To Open A New Work Order?

A work order can be opened on an asset, a physical location or when services are required.

Click  icon on the Main Menu page (see Figure 1). The Work Order List page (as seen below) will be displayed. The list view column can be rearranged to the users choice.

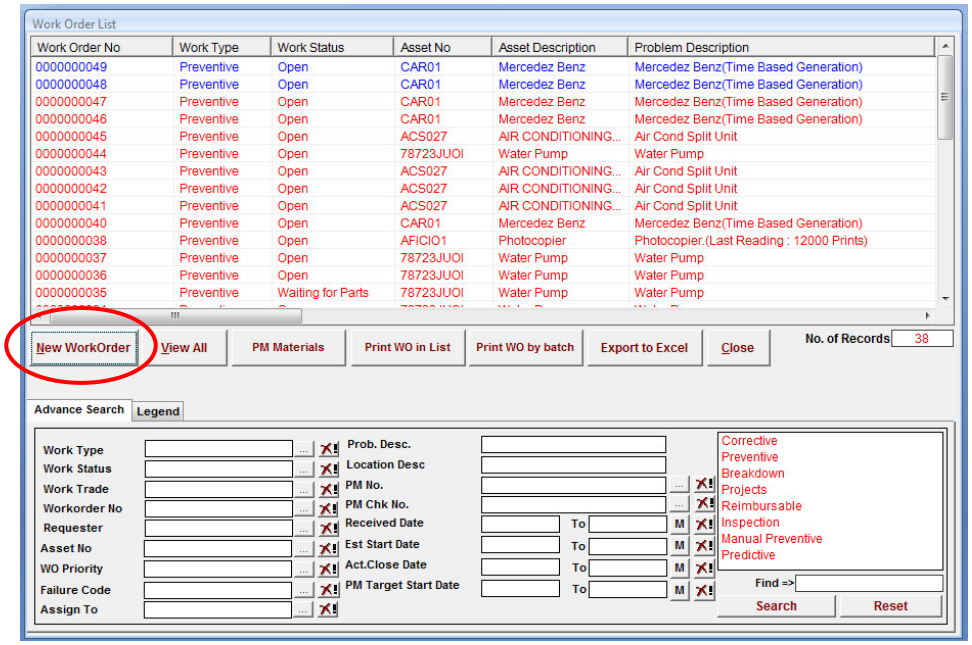


Figure 5: Work Order List

Click the "New WorkOrder" button. This will bring you to a blank Work Order form as shown in Figure 6. A New Work Order screen can also be activated in the Current Work Order screen by clicking the same button.

2.3 How To Fill In A New Work Order?

Upon activation of the New Work Order screen, the Work Order # will display 000000000. Only upon saving the work order the system will generate a work order number.

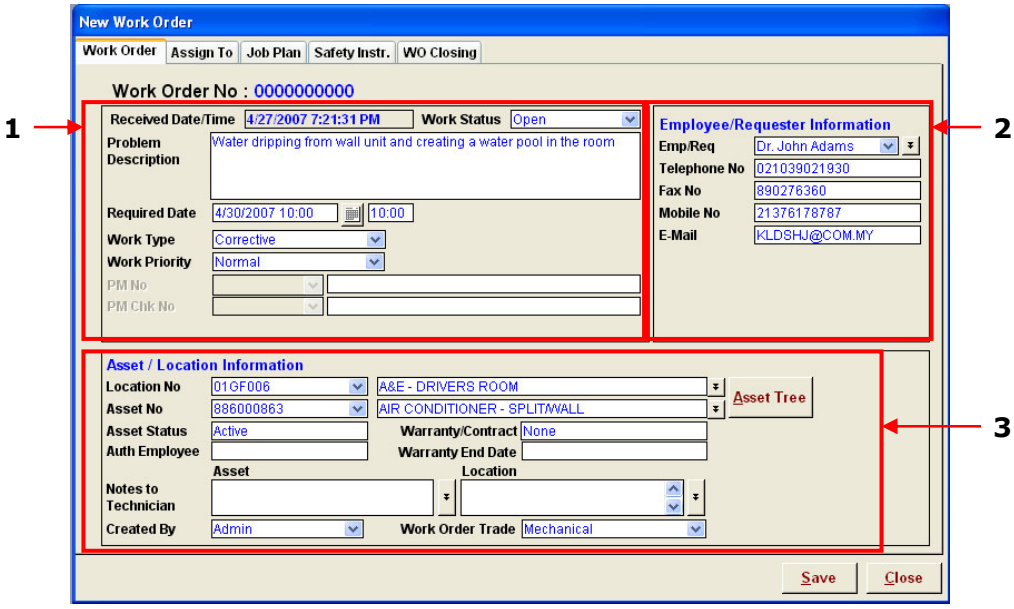


Figure 6: Sample Of A Saved Work Order

1. Fill up all the fields in the first section. Fields are described below:

Fields	Description
Work Order #	Automatically generated by the system upon saving the record.
Received Date/Time	System date and time.
Work Status	System defaults status to "Open". The current work order status describes which stage the work is in.
Problem Description	Describe the details of the problem for this particular work order.
Required Date	Enter a required date and time if applicable.
Work Type	Select a work type for the work order. Additional work types can be defined in the Master module (Miscellaneous – Work Type.)

Fields	Description
Work Priority	Define the level of urgency assigned to a particular job. This data is set in the Master module. The system-default data are as follows. They can be added but cannot be removed. Normal, Urgent, Emergency, Routine, Safety
PM No.	Identifier of the PM Schedule master record.
PM Task No.	Identifier of the PM Task master record.

- Fill up all the fields in the Employee/Requester Information section. Fields are described below:

Fields	Description
Emp/Req. Name	Select the person who requested for the work order /service from the list. The person could be an employee of the organisation or a customer to the organisation. Users can also view a list of employees/requesters, obtain details, amend current employees/requester data and add a new employee/requester into the master database by clicking on this right button, , which is located to the right of the field. To add new employee, refer to How To Add A New Employee/Requester for the field explanation.
Telephone No	Default based on data set in employee/requester master.
Fax No	Default based on data set in employee/requester master.
Mobile No	Default based on data set in employee/requester master.
E-mail	Default based on data set in employee/requester master.

- Fill up all the fields in the Asset/Location Information section. Fields are described below:

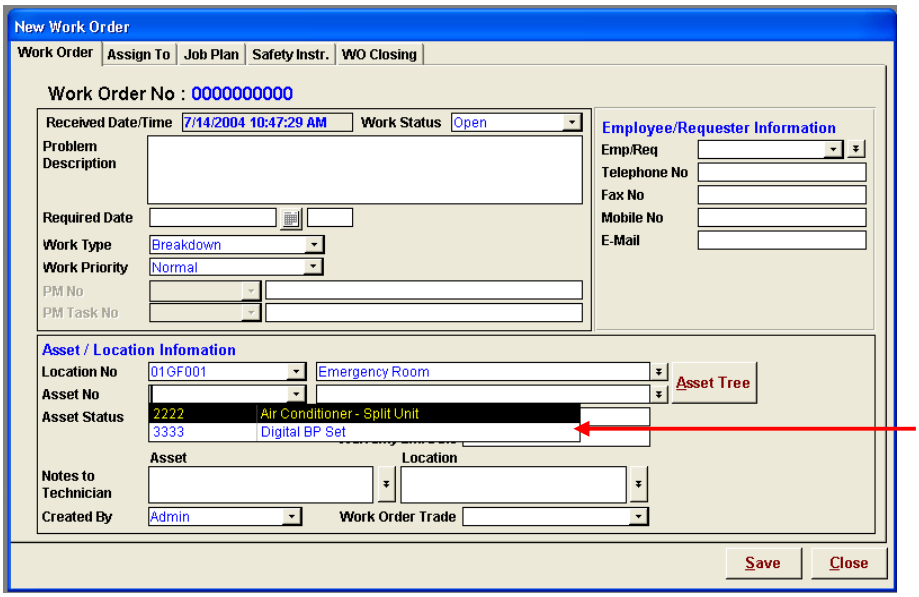
Fields	Description
Location No	Select the location where the problem is originating from. Work orders can be created based just on a location.
Asset No	There are two methods to select the asset. See "How To Select Asset Number"
Asset Status	Default based on data set in asset master. This field describes the status of the asset.
Warranty/Contract	Default based on data set in asset master. This field specifies whether the asset maintenance is under warranty or contract.

Fields	Description
Auth Employee	Employee given rights and accountability to the asset, populated based on the asset chosen, where the information is set during asset registration
Warranty Expiry Date	Default based on data set in asset master. This is the warranty expiry date.
Notes to Technician	Asset (See Figure 9) Default based on data set in asset and line master. Field is used to describe additional important information pertaining to the asset. Location (See Figure 10) Default based on data set in asset master. Field is used to describe additional important information pertaining to the location.
Created By	Defaults to the log-in person who created the work order.
Work Order Trade	Trade or section that is primarily responsible for the work. This data is set in the Misc.- masters.
Save	Click on this button to save any changes
Close	Click on this button to close the screen without saving the record

2.3.1 How To Select Asset Number?

2.3.1.1 Method 1:

Filter the asset list according to Location No. by selecting a Location No. The Asset No. list will only display assets in the selected location.



Asset list will be filtered by the location. If no location is selected, all assets will be displayed for selection

Figure 7: New Work Order

2.3.1.2 Method 2:

Open the asset tree by clicking Asset Tree. Browse the asset tree and click on the required asset. Click the "Add to WO/WR" button to select the asset for the work request.

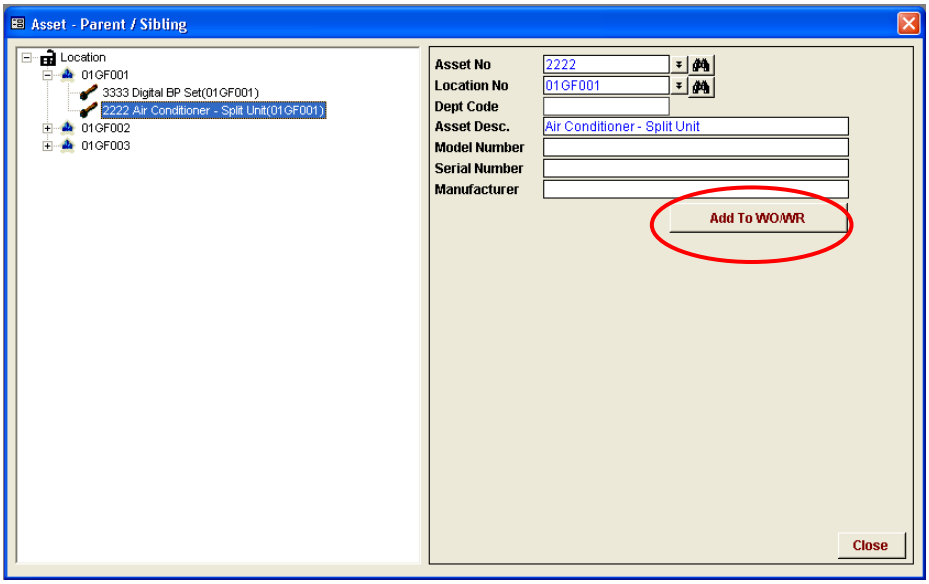


Figure 8: Parent/Sibling Relationship

2.3.2 How To Enter Notes To Technicians?

2.3.2.1 Notes to Technician: Asset

This field is used to describe additional important information pertaining to the asset. This field can be updated by clicking on button. The screen below would pop-up. Users can change the data here and the system will automatically update the asset master record.

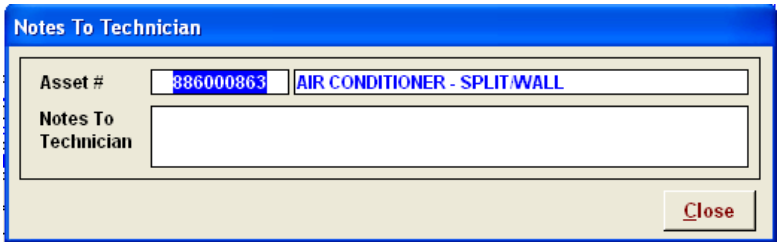


Figure 9: Notes to Technician - Asset

2.3.2.2 Notes to Technician: Location

This field is used to describe additional important information pertaining to the location. This field can be updated by clicking on button. The screen below would pop-up. User can change the data here and the system will automatically update the line master record.

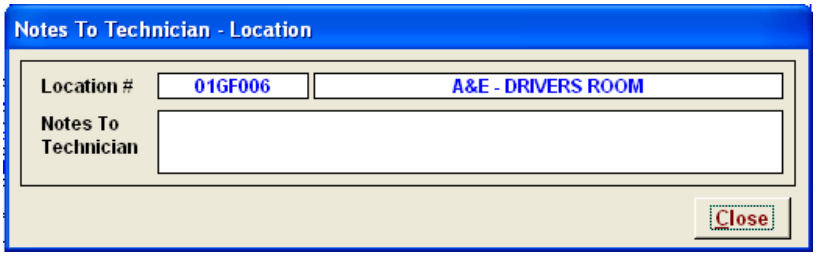


Figure 10: Notes to Technician - Location

2.4 How To Assign A Work Order To An Employee?

Work orders are assigned to employees in the Assign To tab. An unlimited number of employees can be assigned for each work order. This is not a mandatory field.

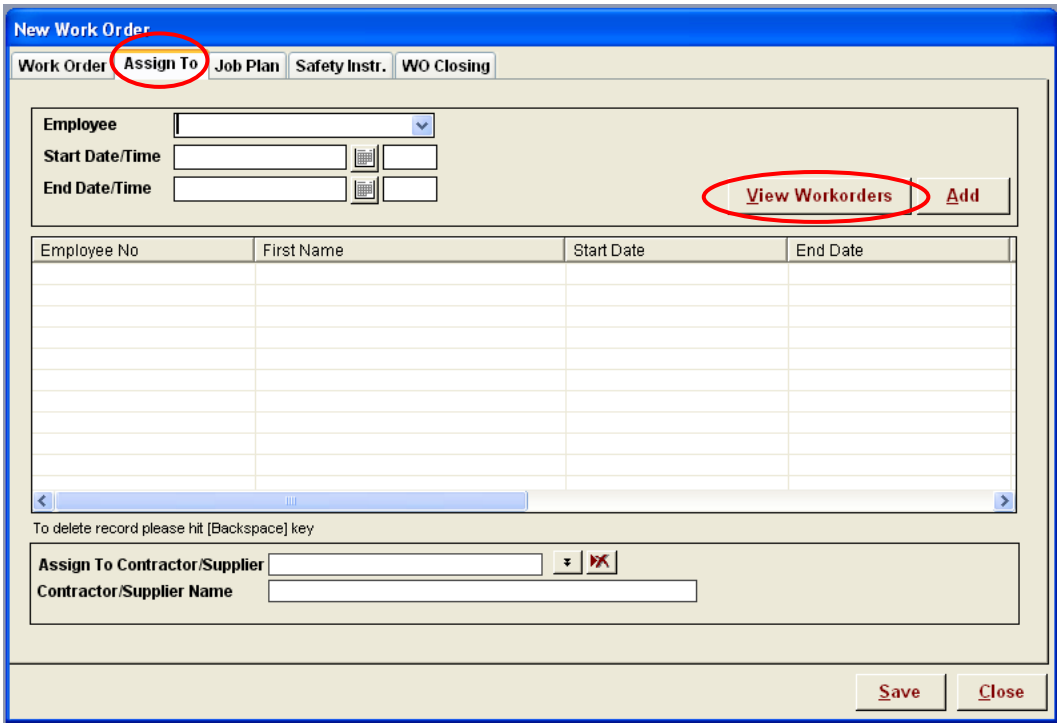


Figure 11: Work Order – "Assign To" Tab

Fields	Description
Employee No / Name	Select from the drop down box (either by employee no or name).
Est. Start Date	Estimate date and time when to start the work.
Est. End Date	Estimate date and time when to end the work.
View WorkOrders	To view a list of work assigned to a particular employee, select an employee and click the "View Work Order" button.

2.4.1 How To View Work Orders Assigned To An Employee?

To view a list of work assigned to a particular employee, select an employee and click the "View Workorders" button, see Figure 11. The Work Orders by Employee screen will pop up. The screen displays all work orders assigned to the particular employee which are still pending (e.g. work order status not Closed or Cancelled).

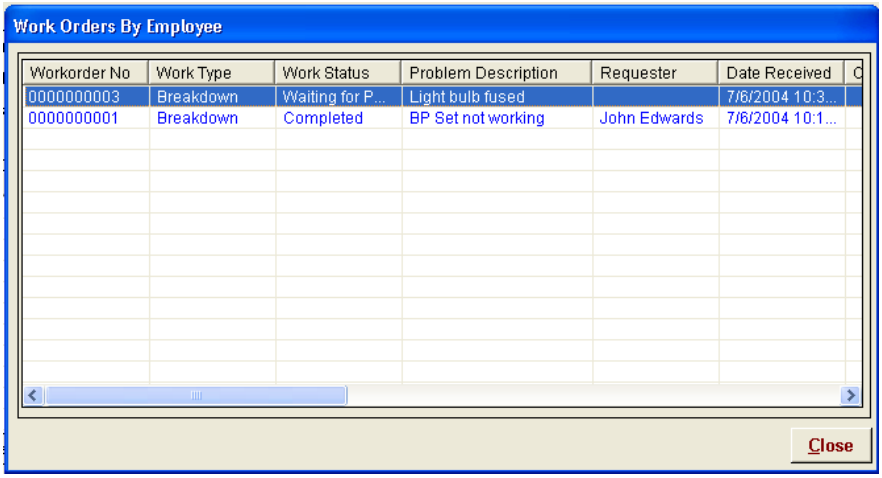


Figure 12: Work Orders By Employee

To delete an entry in the Assign To list, highlight the record to be deleted by clicking once on it. Hit the "Backspace" key to delete the record.

2.4.2 How To Assign A Work Order To A Contractor?

Work orders can also be assigned to a Contractor/Supplier in the Work Order "Assign To" tab. At the bottom of the "Assign To" tab, a supplier field is provided. Click to select a supplier from the supplier list form.

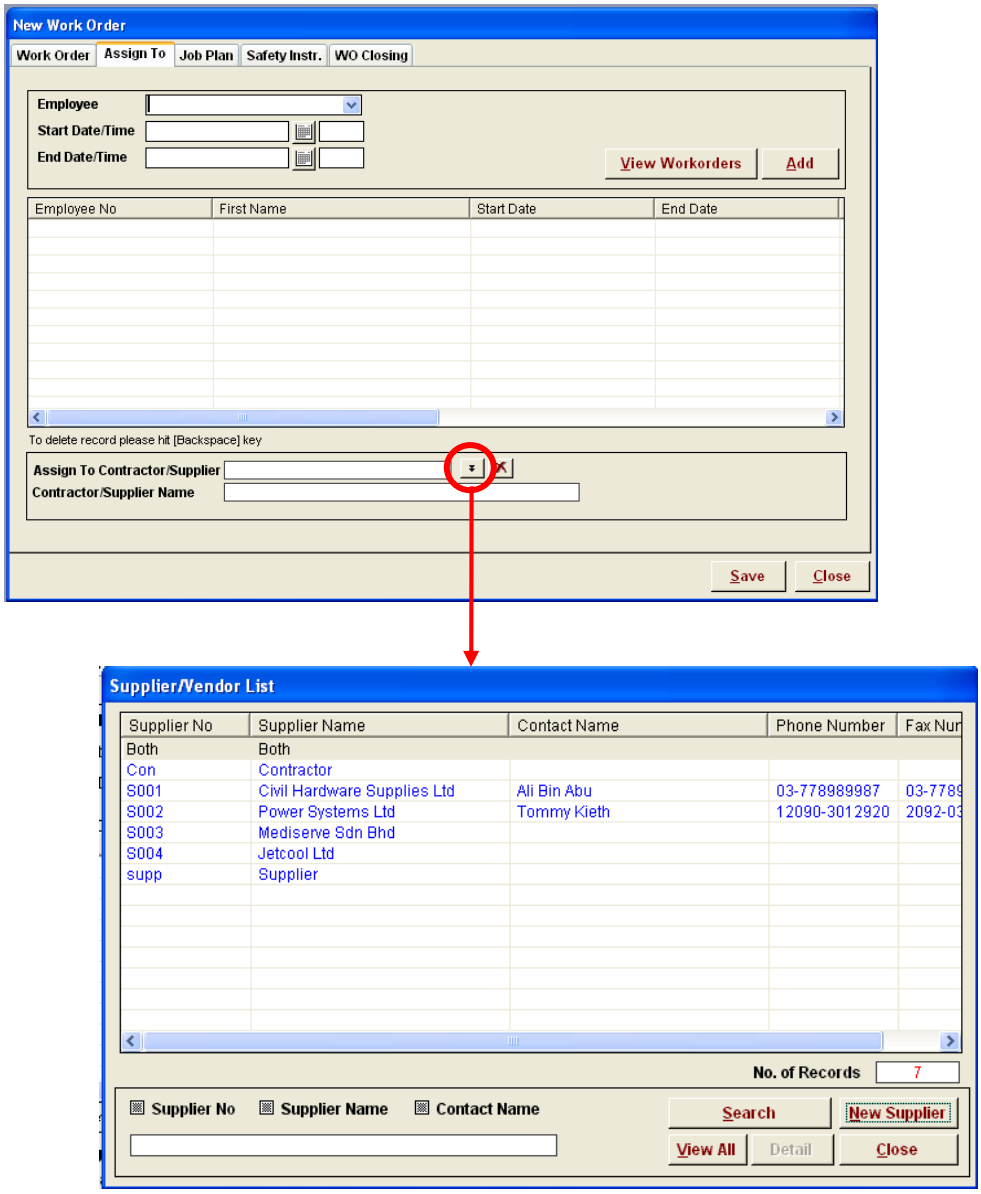


Figure 13: Supplier/Vendor List

Search for the required supplier from the list form and double-click on the required record to select the supplier. To delete a supplier from the field, click . Double-click on the required record to select a Supplier / Contractor.

2.5 What Is A Job Plan?

A Job Plan is created to specify a set of steps or work instructions for a technician to carry out when executing a work. Job plans are created and saved in the Job Plan Master.

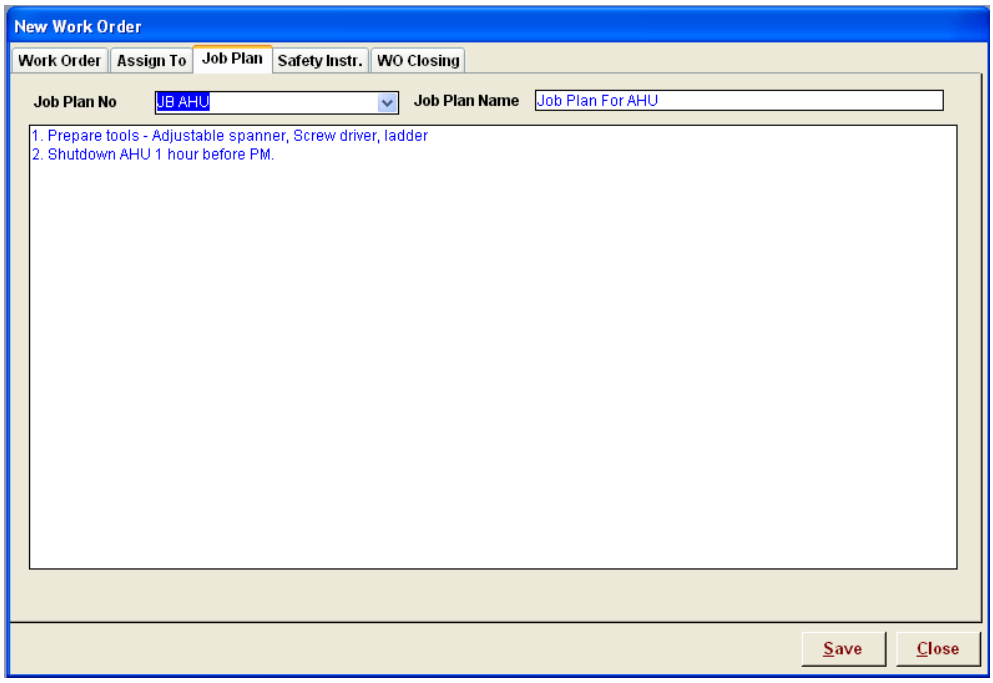


Figure 14: Work Order – "Job Plan" Tab

Select the applicable Job Plan from the pick list in the Job Plan tab. Once a Job Plan is selected, the contents of the job plan is copied over to the memo field below. The content Job Plan can be amended here without affecting the Job Plan master.

2.6 What Are Safety Instructions?

As in the Job Plan Tab, safety instructions can be defined for a work order using the Safety Instructions tab. Safety Instructions are created and saved in the Safety Instruction Master.

Select the applicable Safety Instructions from the pick list in the Safety Instructions tab. Once a Safety Instructions is selected, the contents of the Safety Instructions are copied over to the memo field below. The content Safety Instructions can be amended here without affecting the Safety Instructions master.

2.7 What Is Work Order Closing?

When a work order is created, its default status is "Open" and cannot be changed. The work order closing tab can be used when first opening a work order. This tab allows users to enter additional remarks or to establish the estimated start / end dates to complete the work order. Entering estimated start dates are useful as they can assist in monitoring and planning work orders. Work order estimated start dates can be searched in the work order list form.

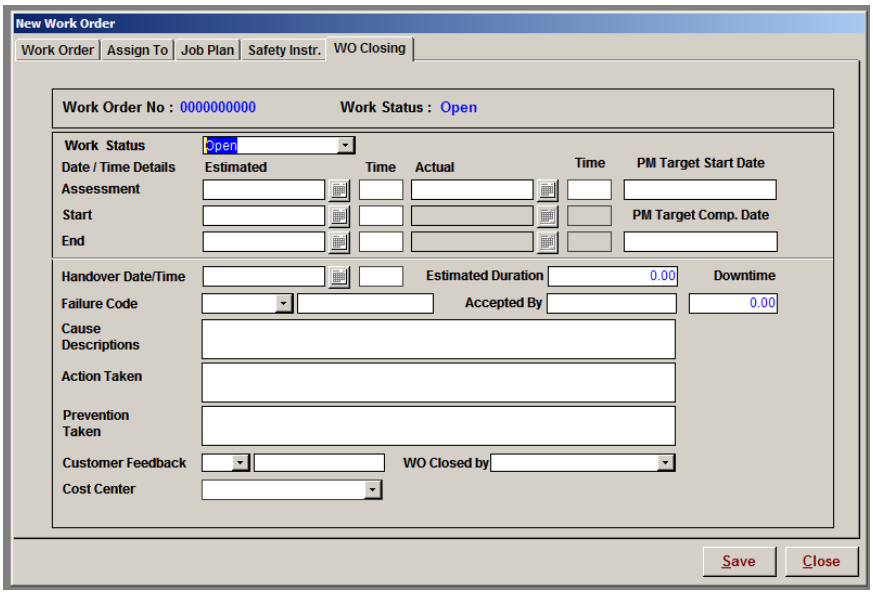


Figure 15: Work Order – "WO Closing" Tab

2.8 How To View And Modify Existing Work Orders?

Click the work order icon in the main menu (see Figure 1), and a Work Order list form would pop-up. The Work Order list form displays only open work orders (work order where the status is not "Closed or "Cancelled). To view all work orders in the list form, click the "**View All**" button.

Double-clicking on any of the work order will activate the Current Work Order screen, see Figure 17. Users will be able to view and modify the detail on the particular work order in this screen.

Note - Closed work orders cannot be modified.

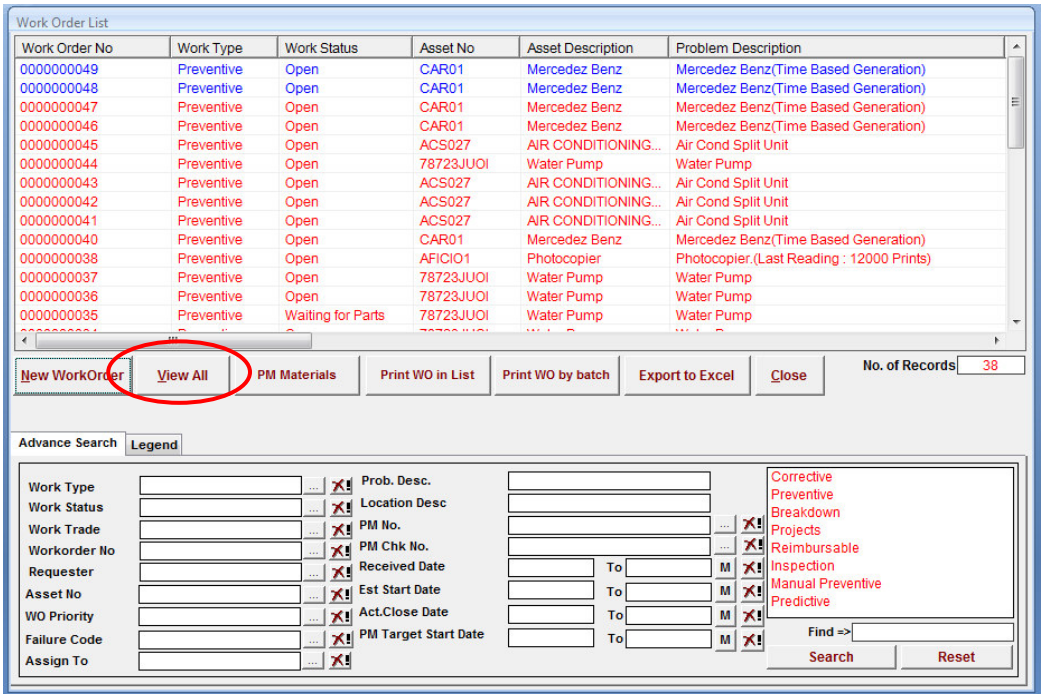


Figure 16: Work Order List

The Current Work Order screen is shown below. To modify the data, just type over the current data and upon closing the form the system will prompt user whether you wish to save the changes. Click Yes to save the changes and Exit or No to exit the screen without saving the changes.

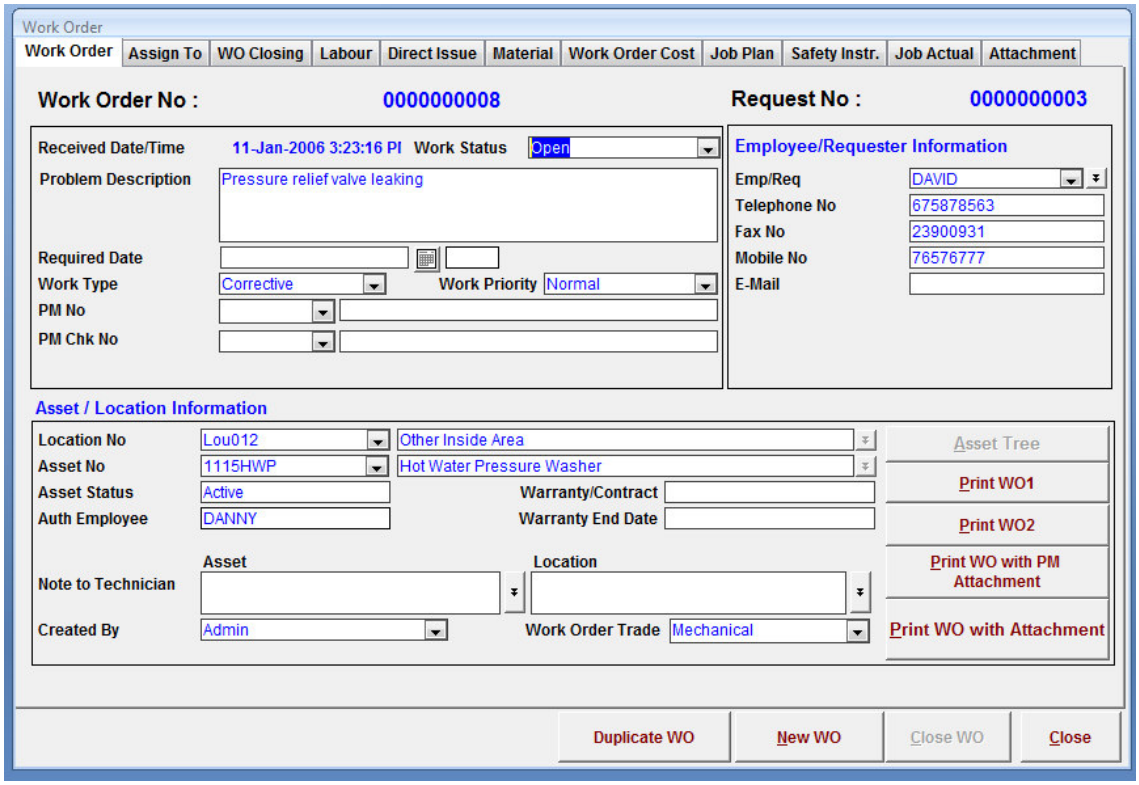


Figure 17: Sample Work Order

2.9 How To Use Advance Search Function?

An Advance Search option is available in the Work Order List form. Its function is to enable filtering of work orders by a combination of parameters defined by the user. In the screenshot example below, work orders are filtered by Work Type "Breakdown" and Work Status "Open."

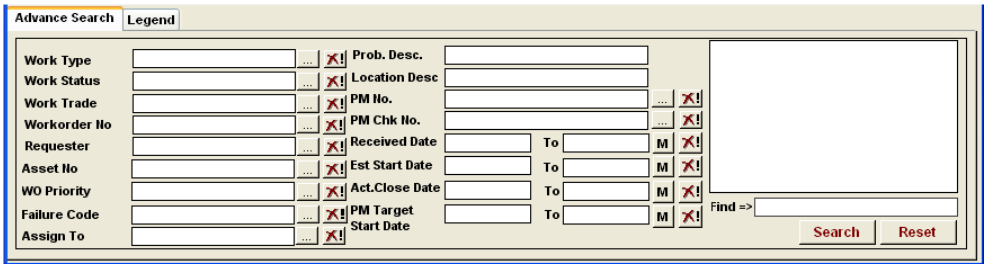


Figure 18: Advance Search

To select a parameter in a field, click .... The available options for the parameter will be displayed on the far right hand side of the screen (above the search button). Select the parameter by clicking once on the text. More than one parameter can be selected (example: Open & Closed) by just clicking on another parameter text.

2.10 What is Legend in WO List?

The Work Order list changes colour upon breaching the target date. This applies to both planed and unplanned Work Orders. Detailed information can be viewed from the legend tab on the Work Order List refer Figure 19. For example PM work orders in the list would turn red when the "PM Target Complete Date" is equal or exceeds current date. As for non-PM work order the application refers the "Required Date" field.

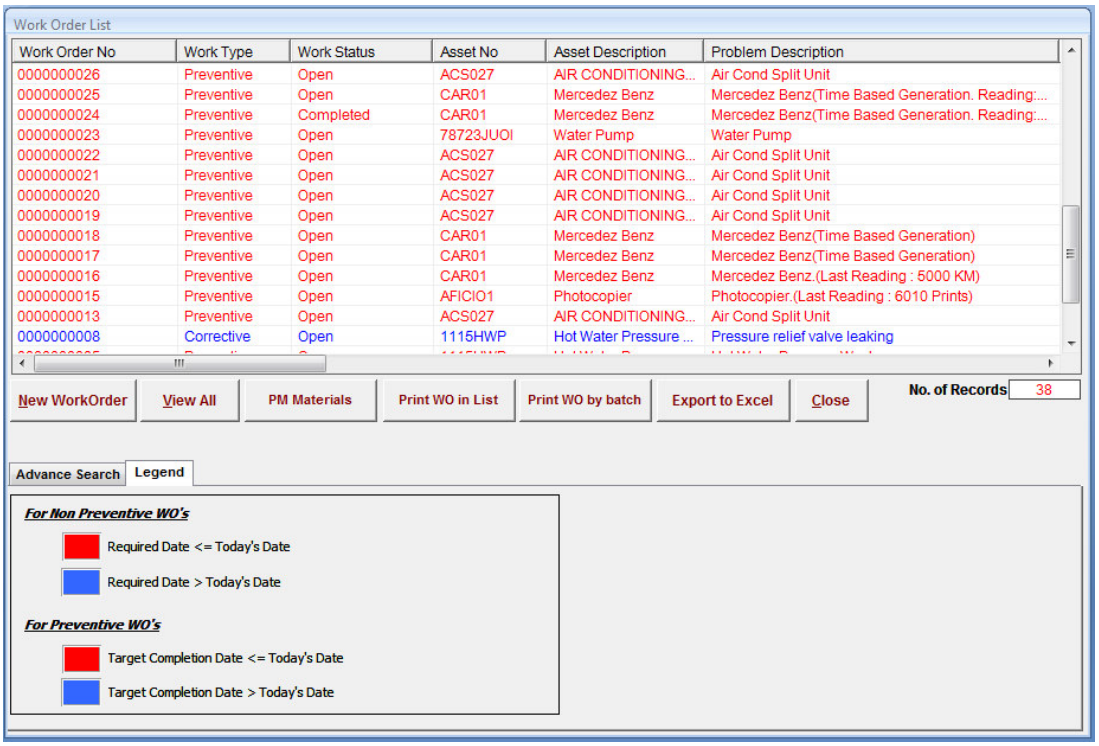


Figure 19: Work Order list – Exceeding Target Date

2.11 How To Sort The Work Order List?

Data in the work order list form can be sorted in ascending or descending order by clicking the relevant column header.

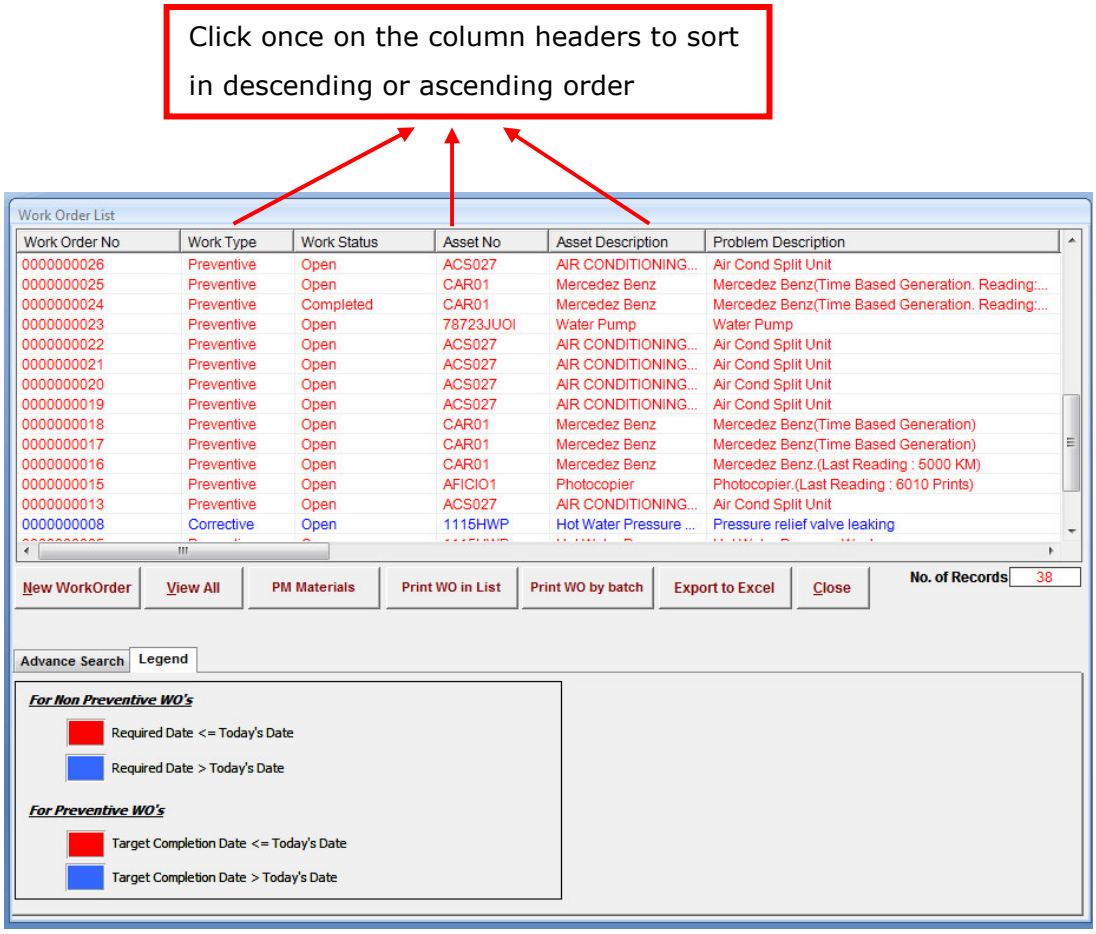


Figure 20: Sorting Work Order List

2.12 How To Close A Work Order?

When a job is completed, the work order in the system has to be closed.

To close a work order, click Work Order button on the Main Menu. Double-click on the work order user wish to close from the list. Click on Work Order Closing tab and change the Work Status to "Closed".

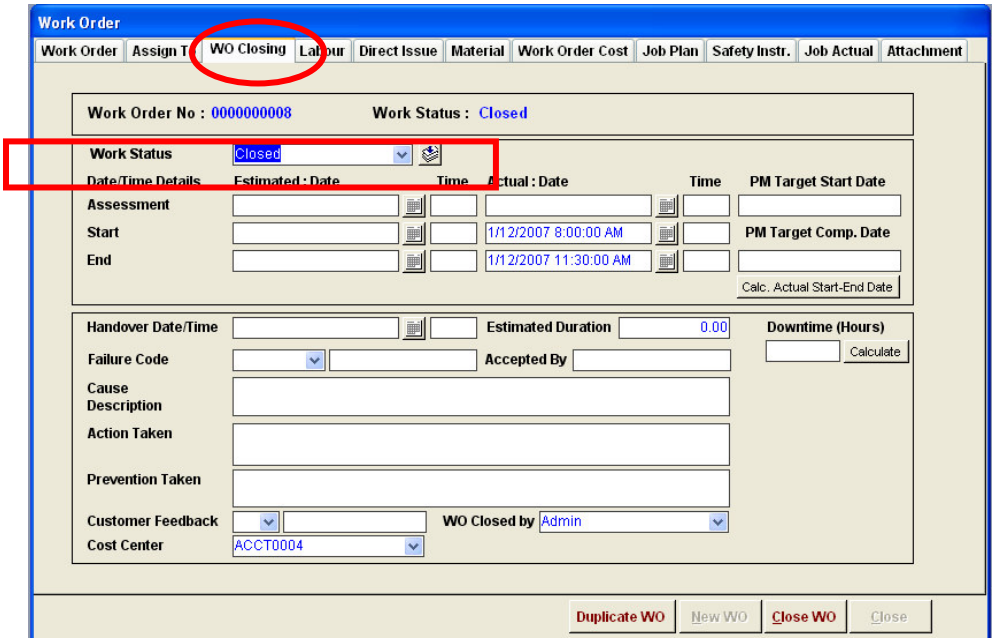


Figure 21: Work Order – "WO Closing" Tab

Fields	Description
Work Status	Upon completion of work order, set status to "Closed"
Estimated:	
Assessment Date/Time	Estimated date and time the work order is assessed.
Start Date/Time	Estimated date and time work start.
End Date/Time	Estimated date and time work completed.
Actual:	
Assessment Date/Time	Actual date and time that work was attended to.
Start Date/Time	Actual date and time of start work order. *Mandatory field.*
End Date/Time	Actual date and time work order completed. *Mandatory field.*
PM Target Start Date	Target start date of a preventive maintenance work order.
PM Target Comp. Date	Target complete date of a preventive maintenance work order.

Fields	Description
Accepted By	Requester who acknowledged the closed work order.
Handover Date/Time	Specify a handover date for the work.
Estimated Duration	Estimated duration time for the work order to complete.
Failure Code	Choose from the list. A unique code can be assigned for each breakdown work order. Failure codes are defined in the masters.
Failure Description	Default base on failure code data set in the masters.
Cause Description	Memo field to describe the cause of the problem.
Action Taken	Memo field to describe the action taken.
Prevention Taken	Memo field to describe the prevention taken.
Customer Feedback	A rating of services based on customer feedback (if applicable).
WO Closed by	Name of the person who closed the work order in CWorks. The field is locked and defaults to the user who logged on and closed the work order.
Cost Centre	Capture the Cost Centre to be used for the work order.
Downtime	Asset or equipment downtime in hours. Clicking the "Calculate" button next to the field will calculate the difference between the Actual Start and End Date/Time. The field can be manually modified if needed.
Close WO	Click on this button to close the work order. You will be prompted whether you wish to save the changes. Click Yes to save the changes and exit or No to exit the screen without saving the changes. Note: Users cannot modify a closed work order.

2.13 How To Re-open Closed Work Order?

To re-open a closed work order, click on "Re-Open This Work Order" button. Only authorized user can re-open a work order. Authorization can be set in ADMINISTRATION MODULE. To see audit trail for work order status click on the icon next to the Work Status field.

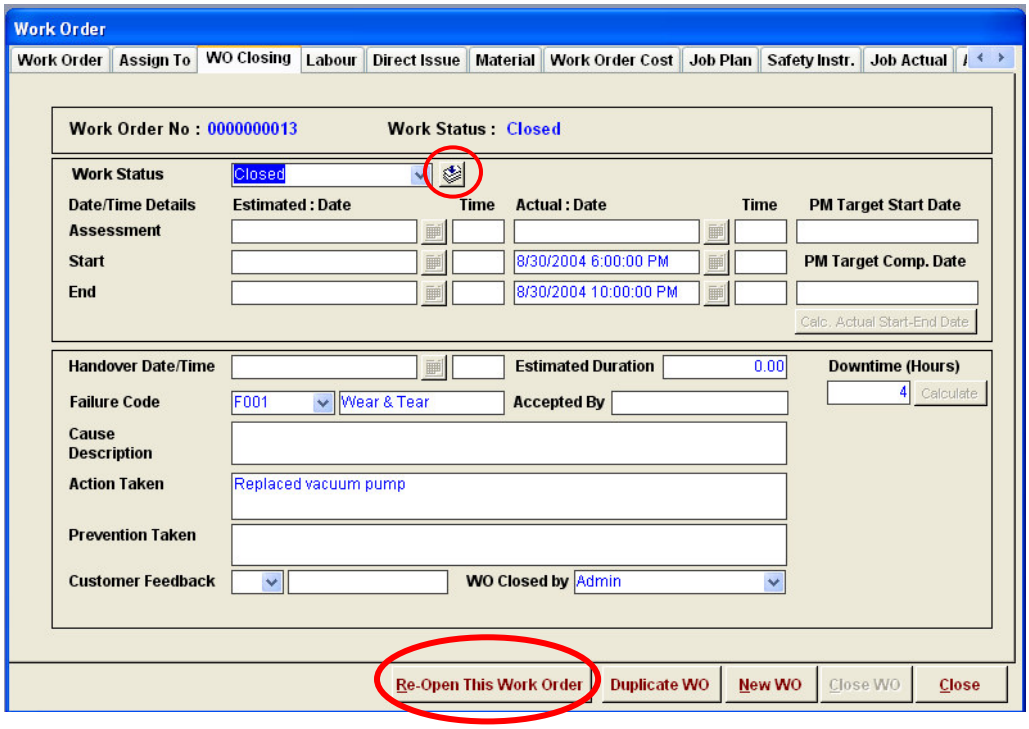


Figure 22: Work Order – "Work Closing" Tab

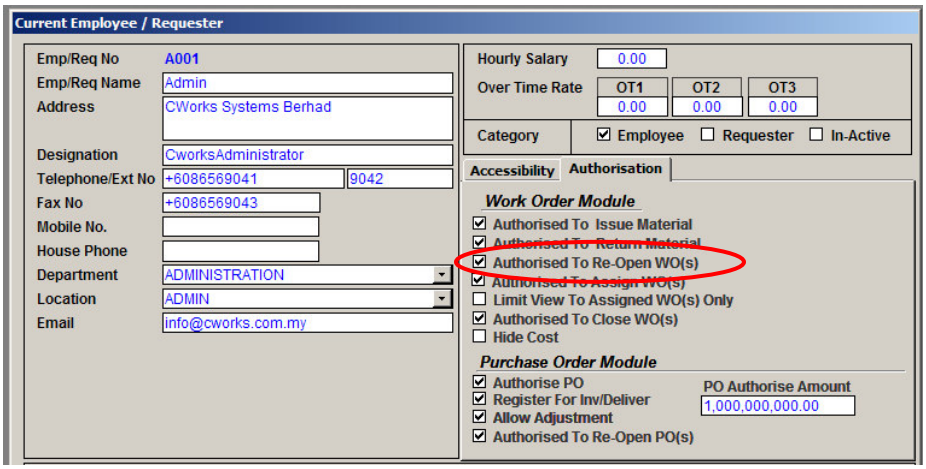


Figure 23: Administration Module

2.14 How To Add Labour In The Work Order?

Employee and man-hour details are entered in the Labour tab of the Work Order form. Click on "Work Order – Labour" tab to enter labour details.

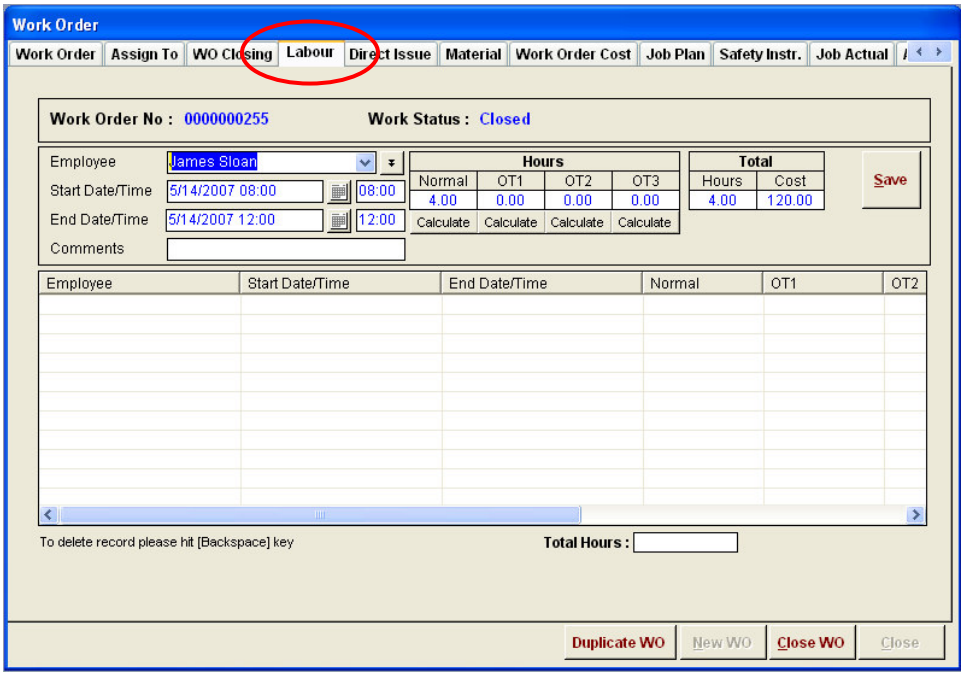


Figure 24: Work Order – "Labour" Tab

Fields	Description
Employee	Choose from the list. Names of employees who executed the job. Users can also add a new employee to the master database by clicking on the Employee button, which is located to the right of the field.
Start Date/Time	Date and time the employee started on the work order.
End Date/Time	Date and time the employee finished on the work order
Comments	Any comment written by the employee.
Hours	Click "Calculate" button to calculate the hours automatically from the date and time entered or key-in the hours manually.
Normal	Normal working hours
OT1, OT2, OT3	Over time hours
Total	
Hours	Total hours for each employee
Cost	Total Cost for each employee depending on the rates set in the employee masters.

Fields	Description
Save	Click on save button to save the record.
Delete	To delete an erroneous entry, select the record by clicking once on it and hit the "Backspace" key.

2.15 How To Add Direct Issue In The Work Order?

Parts or services without a part no assigned in the Materials Module and are used in a work order can be defined in the Direct Issues tab. The Direct Issue tab allows users to key in details and parts used or services used without any pre-definitions. Click on the "Work Order – Direct Issue" tab.

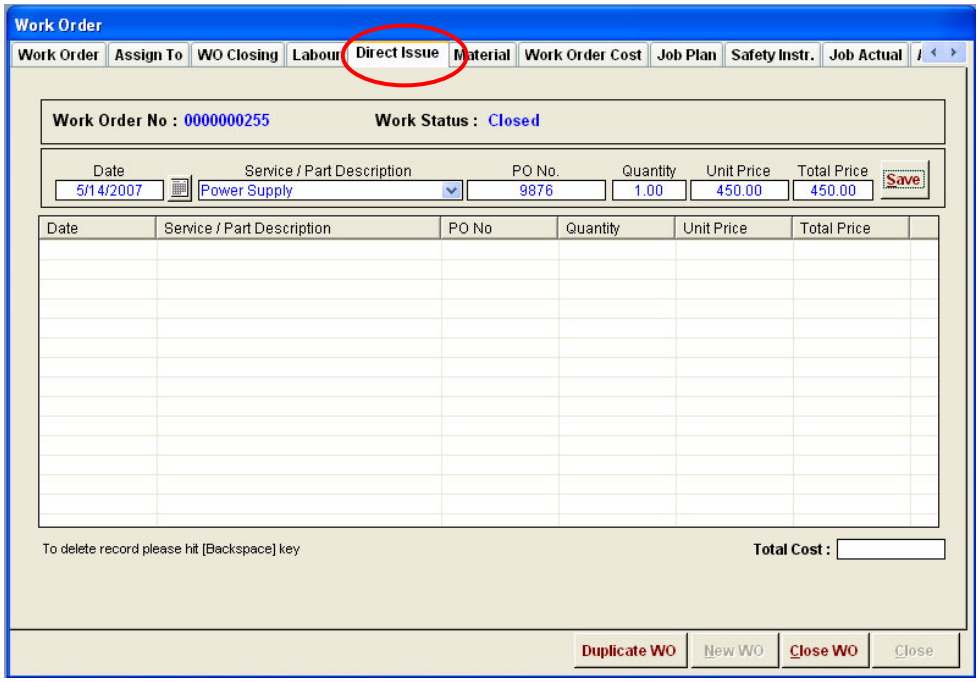


Figure 25: Work Order – "Direct Issue" Tab

Fields	Description
Date	Date when the transaction took place.
Service/Part Desc.	Part used on the work order not from the Material module
PO No	Purchase order number.
Quantity	Quantity part used
Unit Price	Price for the part

Fields	Description
Total Price	Automatically calculated by the system. Formula = Qty * Unit price
Save	Click on the save button to save the record.
Delete	To delete an erroneous entry, select the record by clicking once on it and hit the "Backspace" key.

2.16 How To Issue and Return Material In The Work Order?

For parts or items which are used in a work order and have a part no. defined in the Materials Module, it can be issued directly from the work order Material tab. Issuing and returning parts from the work order Material tab is the same as an Issue and Return transaction in Materials Module and will reduce/increase the stock balance of the part. Only authorized user can carry out the transaction. The authorization can be set in ADMINISTRATION Module. Click on "Work Order – Material" tab.

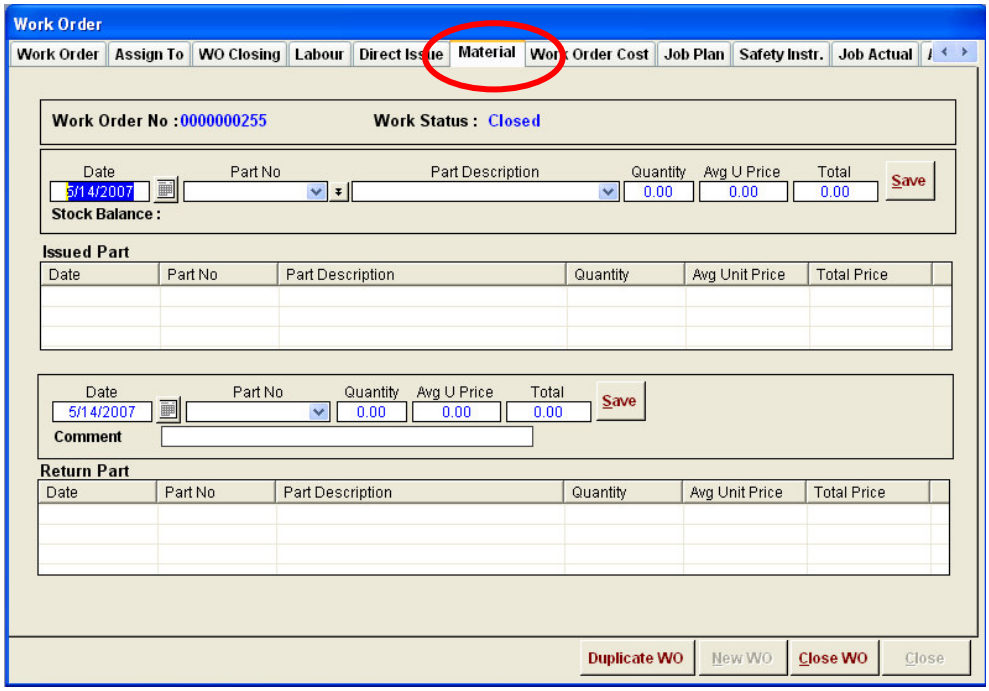


Figure 26: Work Order – "Material" Tab

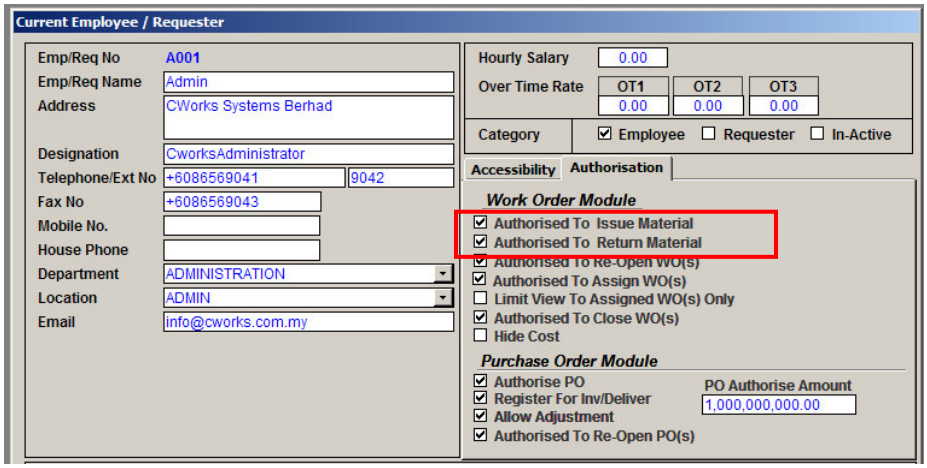


Figure 27: **Authorization**

Fields	Description
Date	Date when the transaction took place.
Part No.	Choose from the list. Part used on the work order from the Material (Warehouse.)
Part Description	Choose from the list. Part used on the work order from the Material (Warehouse.)
Quantity	Quantity part used
Average Price	System calculates the price (from Material Module).
Total	Automatically calculated by the system. Formula = Qty * Average price
Save	Click on the save button and the system will give you the total parts used on a work order.

2.17 How to View Total Cost Of A Work Order?

This section displays the total cost of a work order in local currency. This includes labour cost, direct issue cost and parts cost. Click on "Work Order – Work Order Cost" tab. Cost of a Work Order could be blocked by user, refer Figure 137.

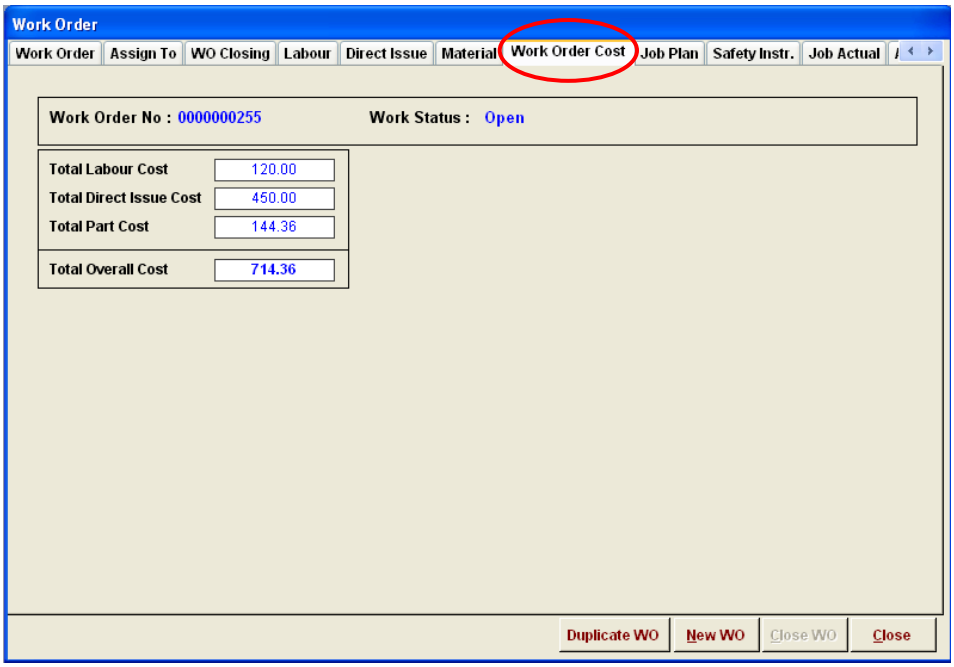
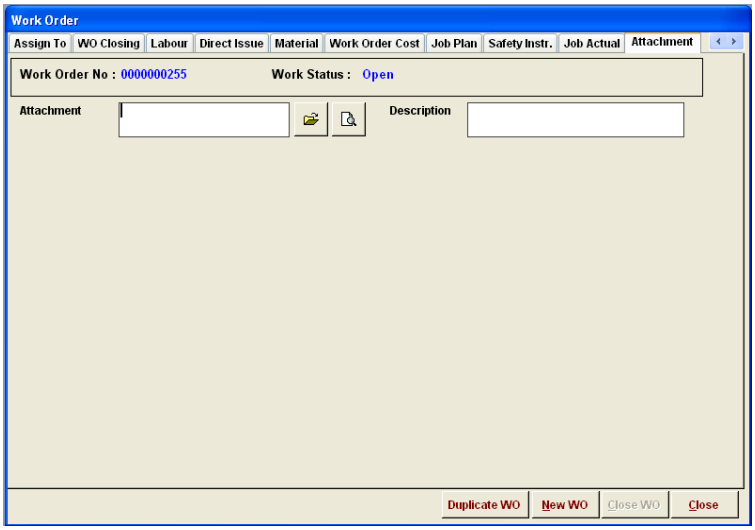


Figure 28: Work Order – "Work Order Cost" Tab

Fields	Description
Total Labour Cost	The system will automatically display the total. The data is from Labour tab.
Total Direct Issues Cost	The system will automatically display the total. The data is from direct issue tab.
Total Part Cost	The system will automatically display the total. The data is from Material tab.
Total Overall Cost	Total cost for the particular work order. The system will automatically display this figure. Labour Cost + Direct Issues Cost + Part Cost = Overall cost

2.18 How To Attach External Document to A Work Order?

The Attachment tab in the Work Order screen enables the user to attach a hyperlink to an external document or file for viewing. Typical files which can be attached include troubleshooting guide, picture and manual.



Click to browse and select a file to be attached.

Click to view the file.

Figure 29: Attach Document to a Work Order

2.19 How To Print A Work Order?

A work order form can be printed out from the system for reporting and operational purposes. There are 3 ways of printing Work orders.

1. Print individual work order. (Refer to Figure 31)
2. Print work order by batch. (Refer to Figure 35)
3. Print work order after filtering. (Figure 37)

Select by double clicking on work order the user wish to print.

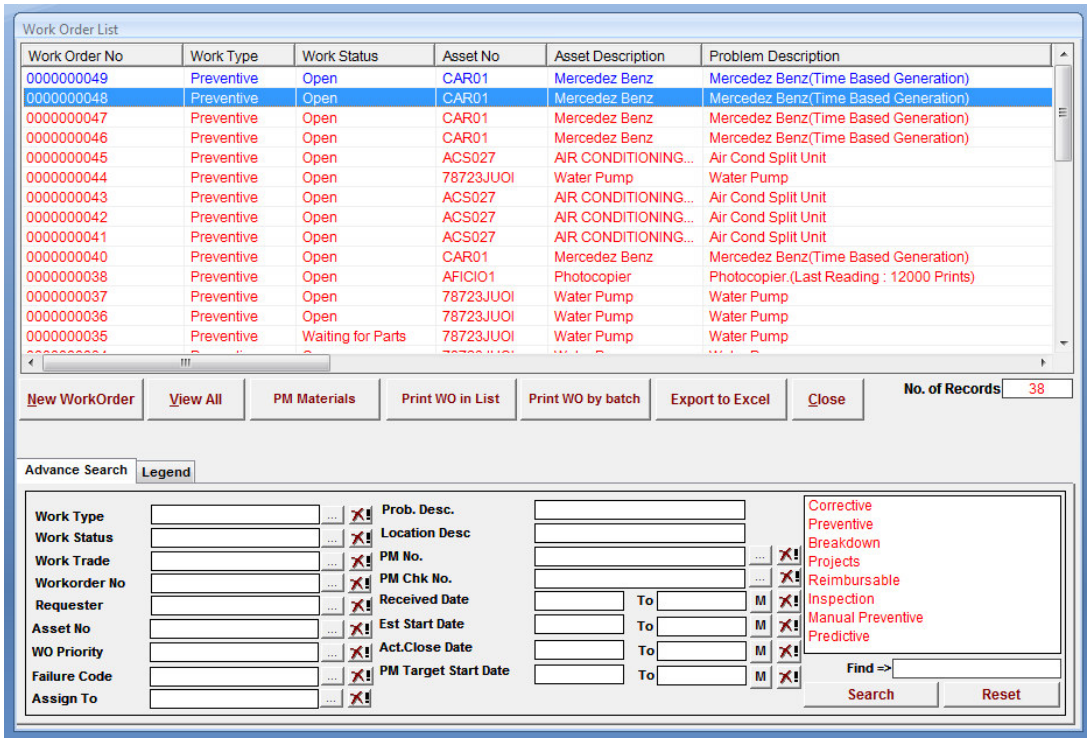


Figure 30: Selecting Work Order for printing

The current work order form would pop-up. Refer to screenshot below.

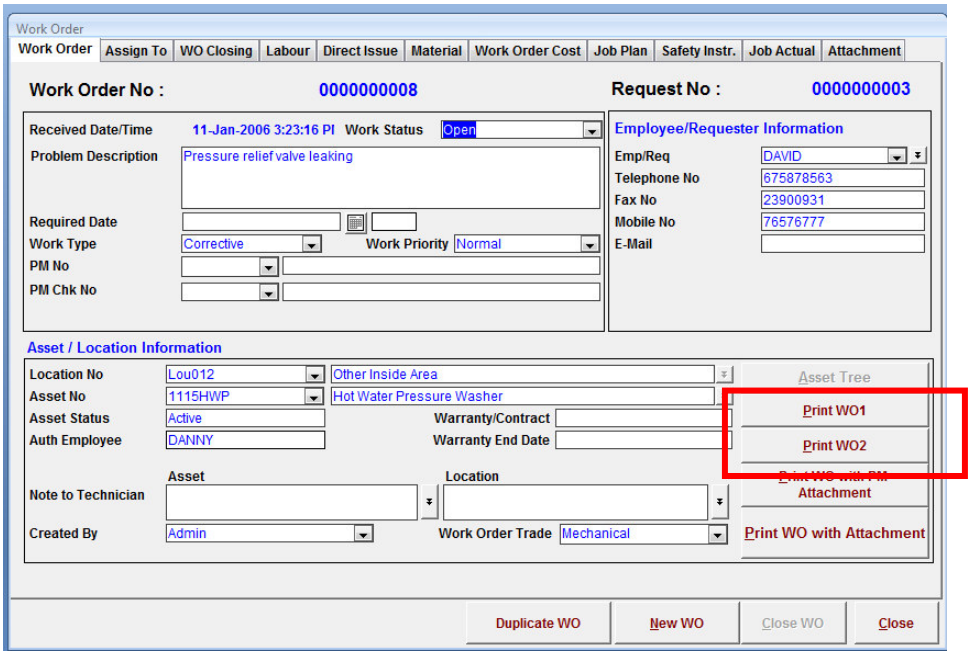


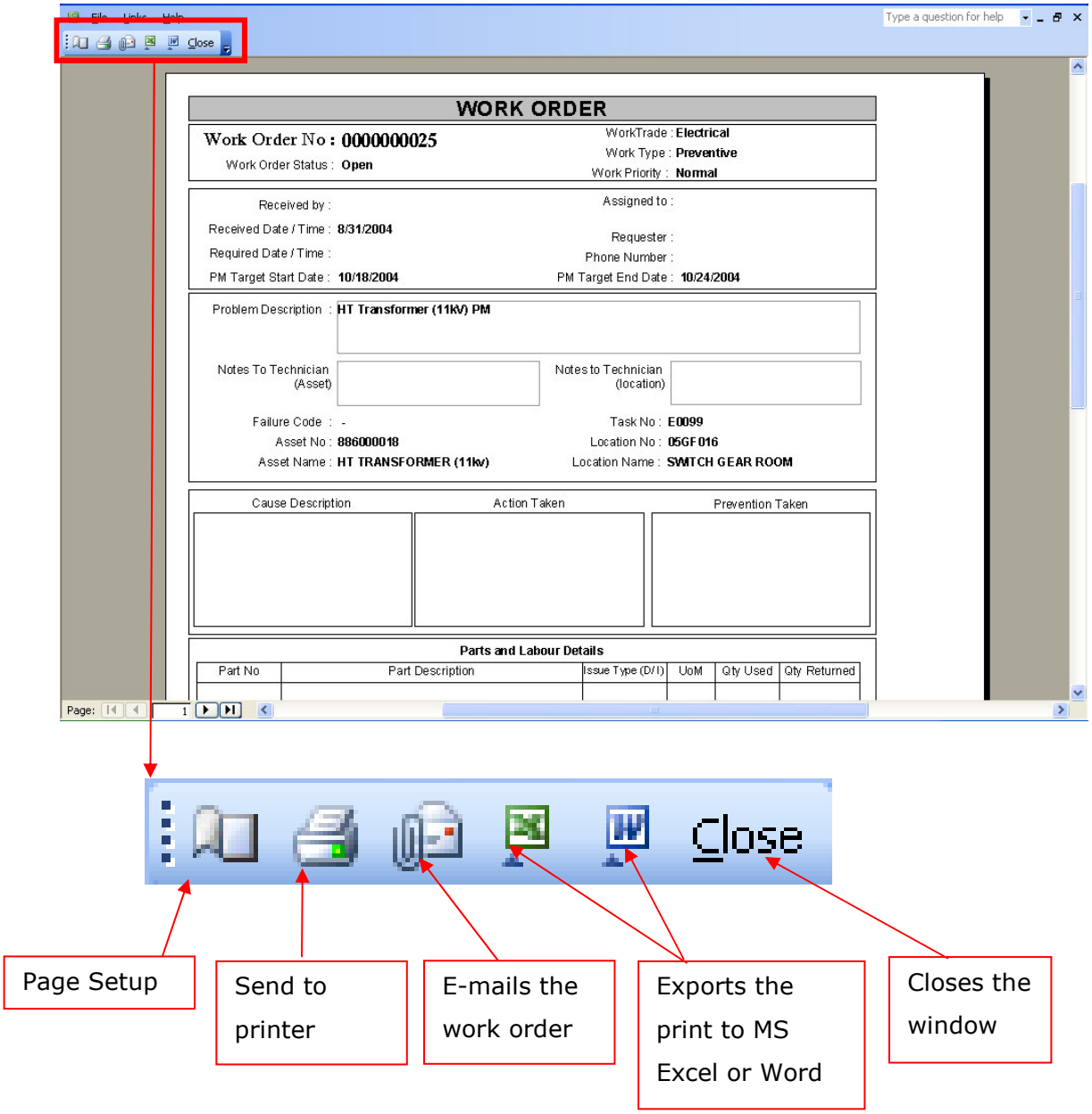
Figure 31: Printing a Work Order

Click the **"Print WO1"** button to print preview the work order form without Assigned To, Labour and Materials / Direct Issue Details. A print form in this format is typically used when distributing new work orders to employees.

Click the **"Print WO2"** button to print preview the work order form with Assigned To, Labour and Materials / Direct Issue Details.

In the print preview screen, the paper margins can be adjusted by clicking the Page Setup button in the print toolbar.

To print the work order, click the printer button on the toolbar.



Page Setup

Send to printer

E-mails the work order

Exports the print to MS Excel or Word

Closes the window

Figure 32: Toolbar - Printing

2.20 How To E-Mail Work Orders?

Work Orders (and reports) can be e-mailed from the Work Order Print Preview screen. Select a work order from the work order list form and double click the work order record in order to open the Current Work Order form. Click any of the Print WO buttons. At the work order print preview window, click the E-mail button on the toolbar (refer screenshots below.)

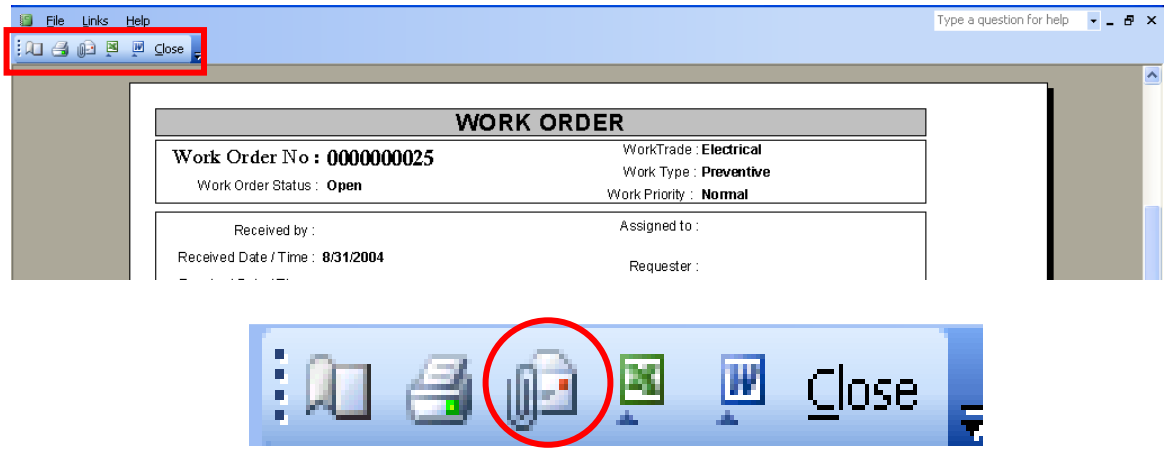


Figure 33: Toolbar - Email

The window below would pop-up upon clicking the e-mail button.

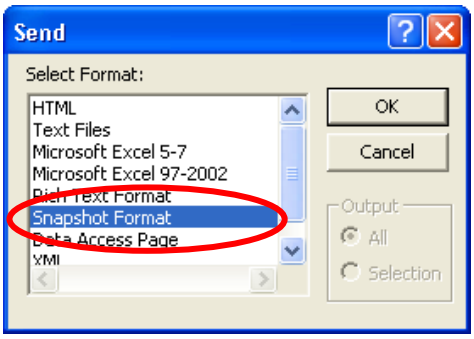


Figure 34: Format of Work Order

Users can select the preferred format to e-mail the work order. It is recommended that the "Snapshot Format" be selected as it preserves the format work order print form the best. Click "OK" and the system will launch the users **default** e-mail program's Send Message window to dispatch the work order format.

2.21 How To Print A Batch Of Work Orders?

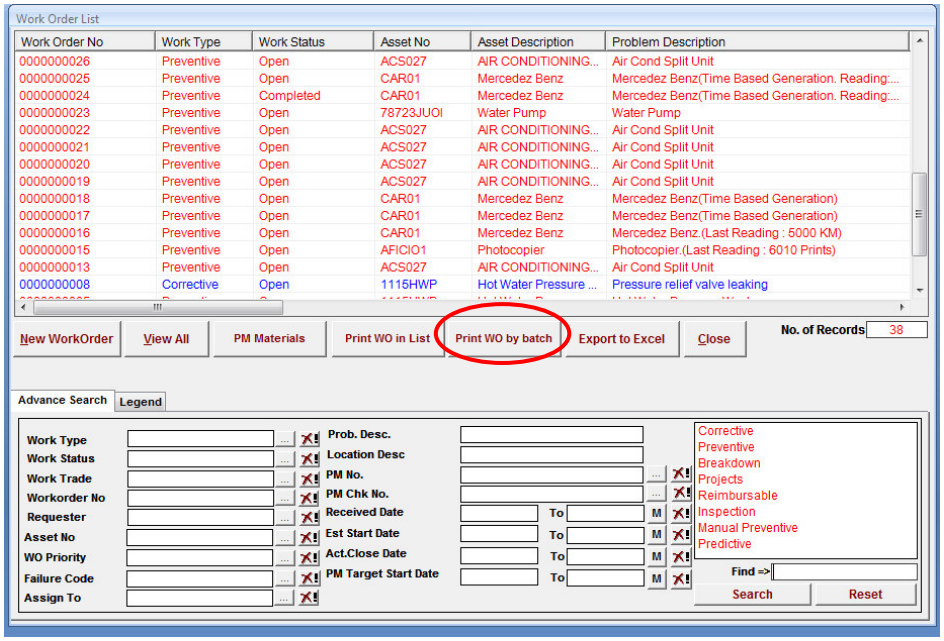


Figure 35: Printing Work Order By Batch

The screen below would pop-up and users can specify the range of work order number to print.

Figure 36: Batch Printing

Click on  to view the work order forms.

2.22 How to Print Batch Work Order in List After Search?

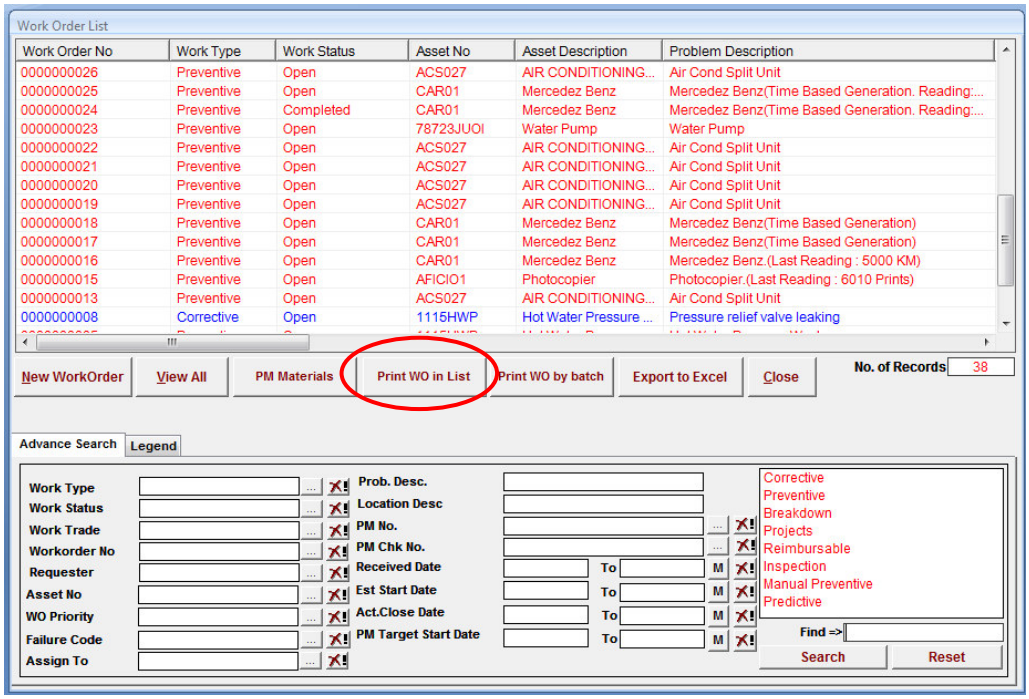


Figure 37: Printing Work Orders from a refined search

Click on 

to print Work Order form in the refined list of work orders.

2.23 How To Export Work Order List To Microsoft Excel?

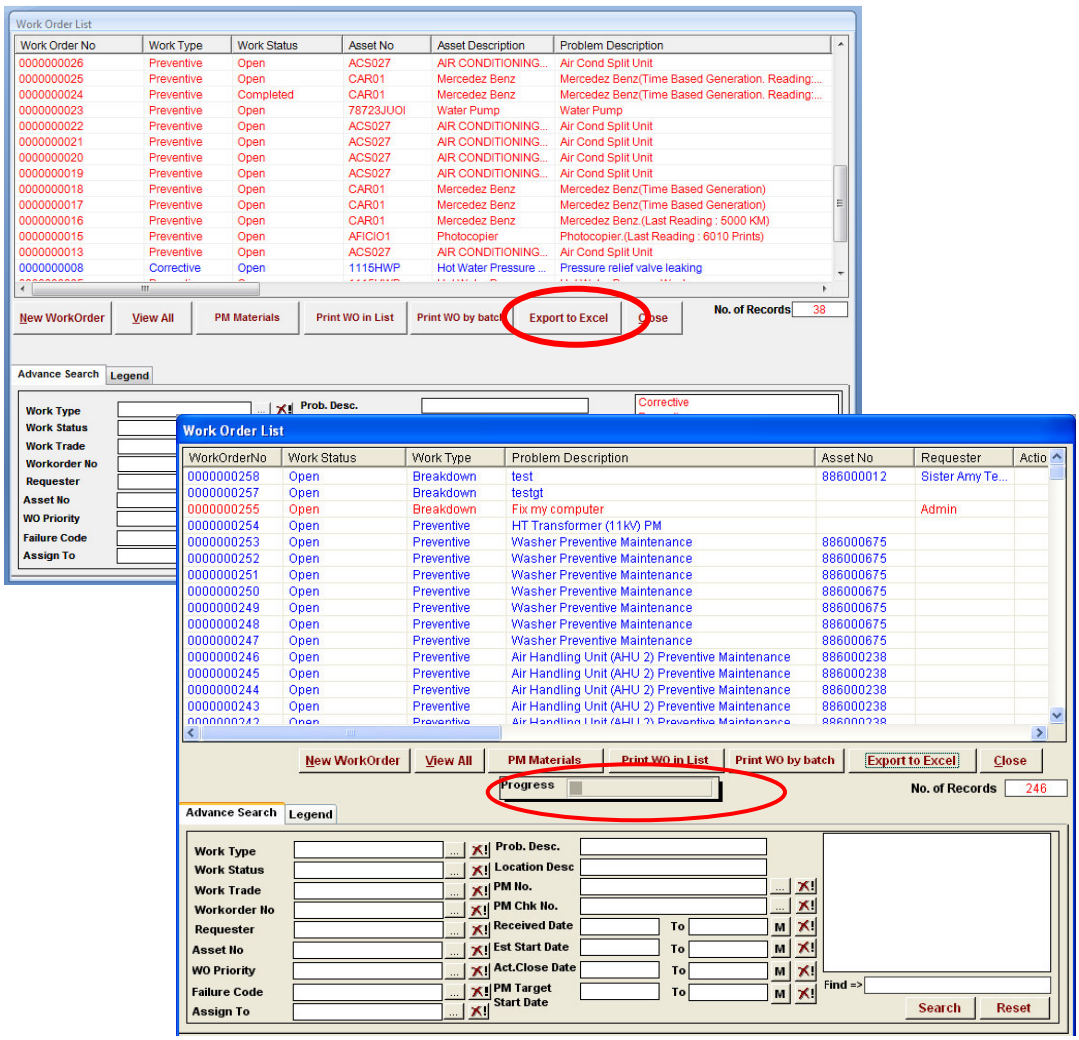


Figure 38: Export to Excel

Filter the work order list form to display the required output. To export data from listing, click on **"Export to Excel"** and a progress bar would appear as it populates the data into the excel sheet, see Figure 38.

ASSET MODULE

3. Assets

3.1 How To Add A New Asset?

Click on  icon on the Main Menu, see Figure 1. A listing would pop-up.

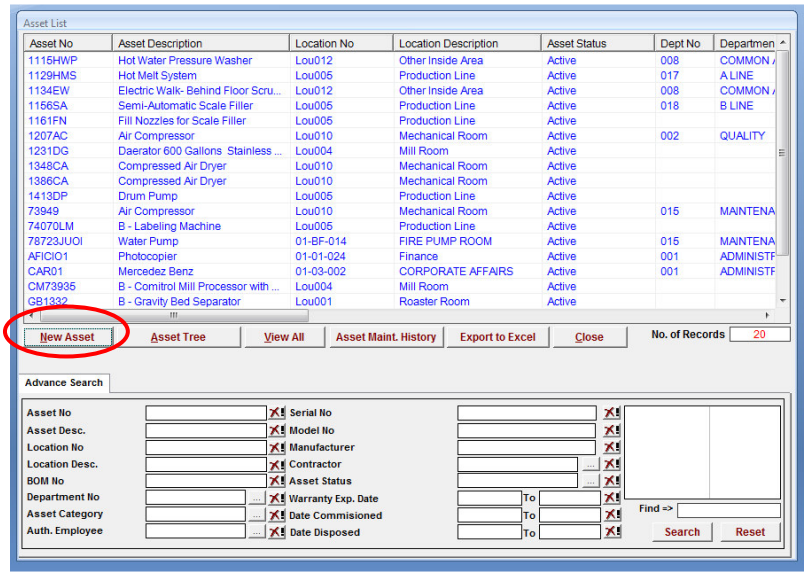


Figure 39: Asset List

To add new assets, click New Asset button. A New Asset screen would pop-up.

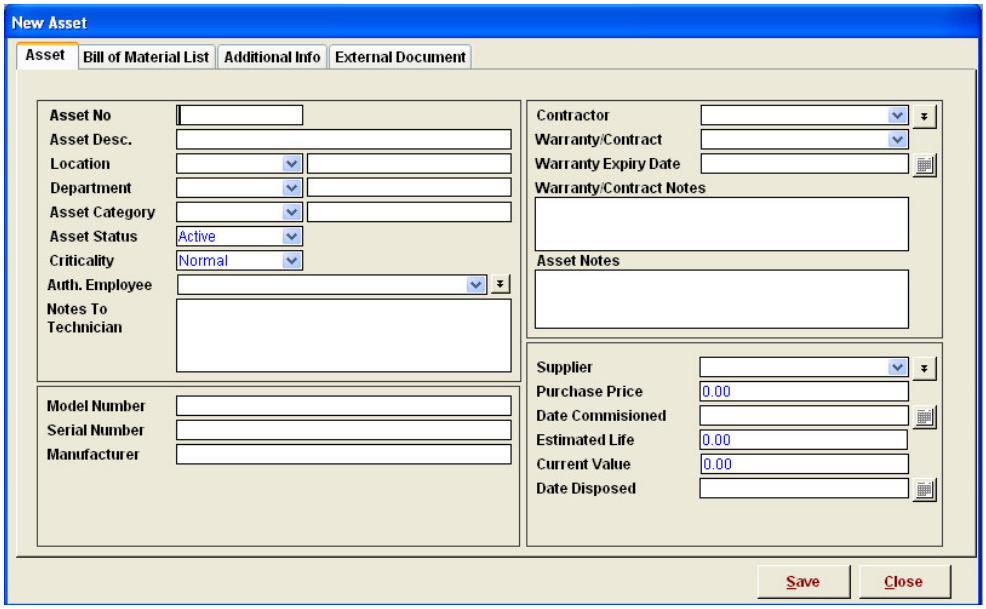


Figure 40: New Asset

Fields	Description
Asset No	A unique number assigned to an asset.
Asset Description	Enter a description of the asset
Location	Choose from the list. Code assigned to a location and its description. This data is set in the masters.
Department	Choose from the list. Code assigned to a department and its description. This data is set in the masters.
Asset Category	Choose from the list. Different types of assets are grouped together under an asset category. This enables easy management of asset data and retrieval. This data is set in the masters.
Asset Status	Choose from the list. The current asset status describes which operational state the asset is in. A code assigned to an asset status and its description. This data is set in the masters. Options are: *Active* = an asset which is currently in service and on site *In-active* = an asset which is not in service. *Disposed* = an asset which has been taken out of service permanently. *Lost* = an asset which cannot be accounted for in an audit, therefore no disposable details. *In-storage* = an asset which is currently in service but not kept on site. Note : If there is any OPENED PM work order, system will prompt a message when user wants to change the status.
Criticality	Choose from the list. Defines the criticality depending on the usage of the equipment. A code assigned to a criticality and its description. This data is set in the masters.
Auth. Employee	Choose from the list. Authorised Employee is an employee which has been given the rights and accountabilities for that particular asset. A code assigned to an employee with its description. This data is set in the masters. User can also add a new employee to the master database by clicking on the button, which is located to the right of the field.
Notes to Technician	This field is used to describe additional important information pertaining to the asset. User is allowed to update this field from the work order.
Model Number	Enter the model number of the asset which can be obtained from the warranty card or on the asset nameplate.
Serial Number	Enter the serial number of the asset which can be obtained from the warranty card or on the asset nameplate.
Manufacturer	Enter the manufacturer of the asset in this field.

Fields	Description
Contractor	Choose from the list. A contractor is an external company which is authorized to service and maintain an equipment. A unique code assigned to a contractor and its description. This data is set in the masters.
Warranty/Contract	Choose from the list. A unique code assigned to a warranty/contract and its description. This data is set in the masters. Options are: *Warranty* = assets which are within the manufacturer warranty period. *Contract* = assets which are under service contracts
Warranty Expiry Date	Enter the date of the warranty expiry.
Warranty/Contract Notes	Enter additional notes on the warranty or contract, if applicable.
Asset Notes	Enter additional notes on the warranty or contract, if applicable.
Supplier	Choose from the list. A supplier is a company which supplier assets. A unique code assigned to a supplier and its description. This data is set in the masters. User can also add a new supplier to the master database by clicking on the button, which is located to the right of the field.
Purchase Price	Enter the purchase price of the asset.
Date Commissioned	Enter the date the asset was commissioned.
Estimated Life	Enter the estimated life of the asset in years.
Current Value	Calculated field based on a linear depreciation rate. Current Value = Purchase Price – [{(Todays Date) – (Date Acquired)} / Estimated Life]
Date Disposed	Enter the date when the asset was disposed (if applicable)
Activate All PMs	This button will appear when user In-active an asset which has active PMs.
Deactivate All PMs	This button will appear when user In-active an asset which has active PMs.
Save	Click on this button to save any changes
Close	Click on this button to close the screen without saving the record

Note: Once an asset has been registered, the system would not allow removal of the asset number. However, details on the asset can be modified.

3.2 How To Add The Bill Of Material For A Particular Asset?

A Bill Of Material compiles a list of parts or items associated with the particular asset.

Click on "Assets - Bill of Material List" tab,

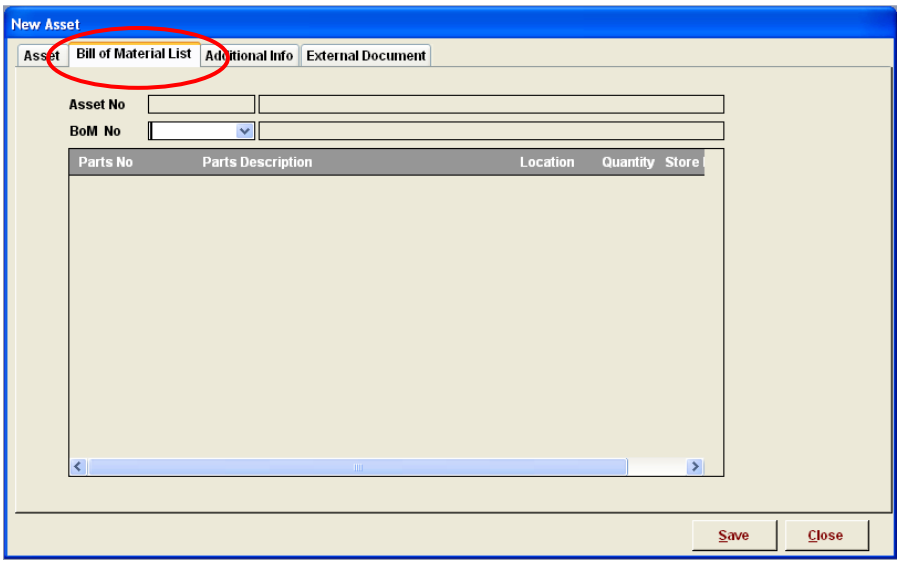


Figure 41: Asset – "Bill of Material" Tab

Fields	Description
Bill of Material No	Choose from the list. A unique code assigned to a bill of Material no and its description. This data is set in the masters.
Parts No	Choose from the list. A code assigned to a part no and its description. This data is set in the masters
Parts Description	Data will be displayed as per parts number
Quantity	Displays the quantity of the particular part within the asset as defined in the BOM masters
Store Balance	Stock balance in the warehouse

3.3 How To Add Additional Information For A Particular Asset?

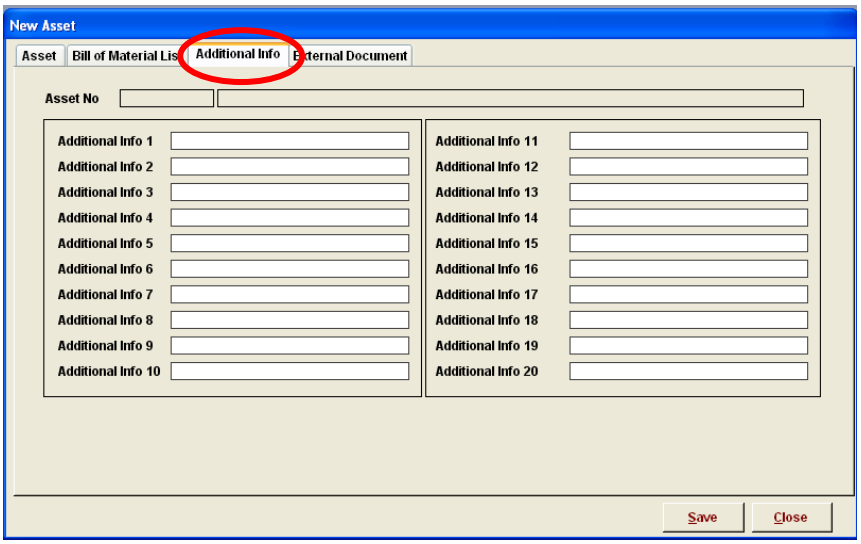
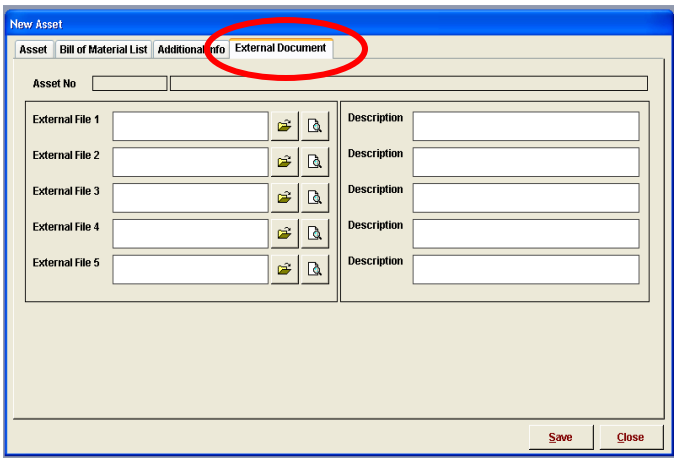


Figure 42: Assets – "Additional Info" Tab

Click on "Assets – Additional Info tab. Using the fields Additional Info 1 through 20, enter any additional information regarding the particular asset which the customer may require. These fields can be used for customizing the information to be stored for your assets.

3.4 How To Attach An External Document To An Asset?

The External Document tab in the Asset screens enables the user to attach a hyperlink to an external document or file for viewing. Typical files which can be attached include troubleshooting guides, pictures and manuals.



Click  to browse and select a file to be attached.

Click  to view the file.

Figure 43: Assets – "External Document" Tab

To assign a hyperlink, click on the External Document tab.

Note: The hyperlink file application (e.g. MS Word for a Word document) must be preinstalled on the client PC.

3.5 How To View and Modify Existing Assets?

CWorks allows the user to view existing assets in the system. If the user finds any incorrect data or wishes to change any of the fields, they can actually modify the data as required.

Click  icon on the main menu (see Figure 1). An asset listing would pop-up. It will show the user a list of all the assets in the database.

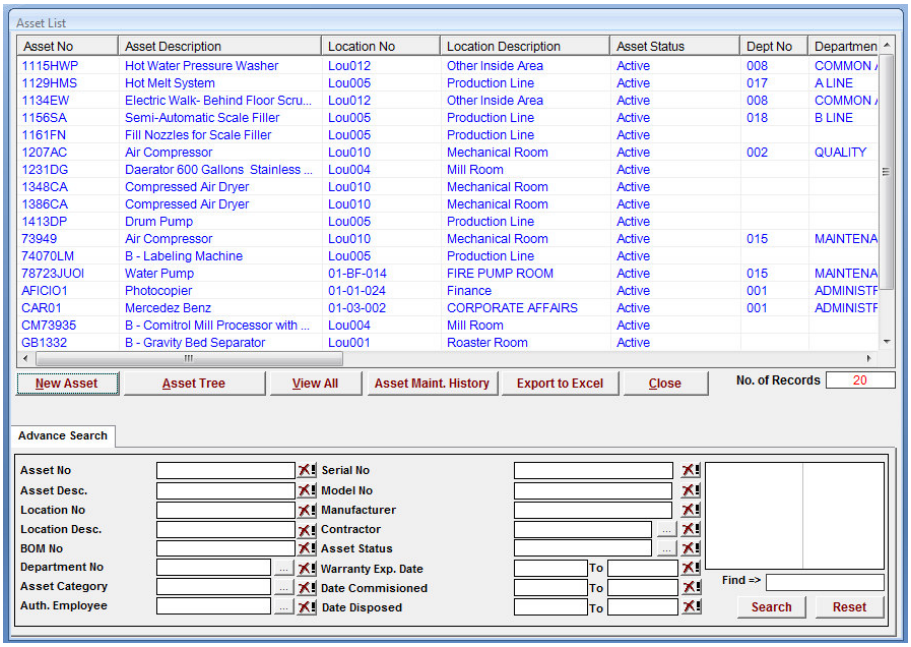


Figure 44: Asset List

Double-click on any of the assets to view and modify details on the particular asset. The screen below will appear, see Figure 45.

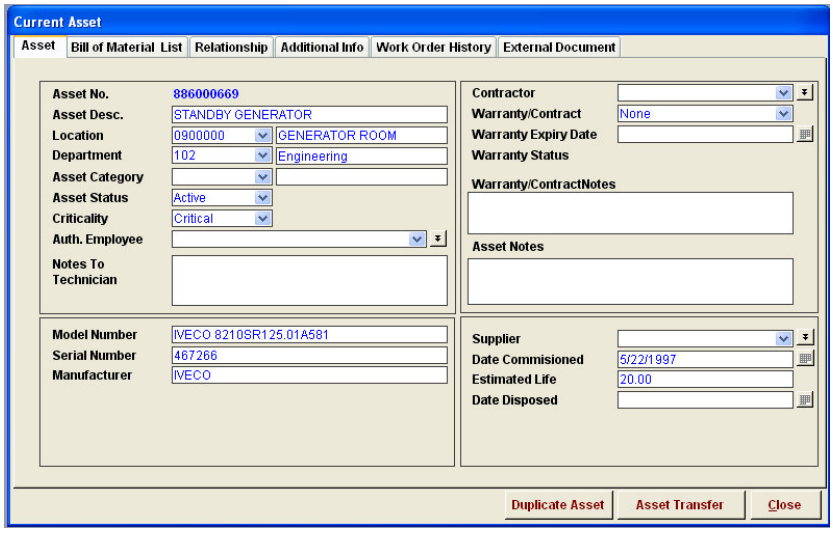


Figure 45: Sample of Current Asset

To modify the fields in any tabs, simply put in the changes and click  . A message box would pop-up requesting confirmation. Click Yes to save the changes or No to close without changes.

Current Asset allows user to create a duplicate record from the existing record where information in is copied over to a new asset registration form. Every data in the Asset and External Document tab except Asset No is copied over. This feature comes in handy during registration of similar asset.

3.6 How To Add The Relationships Of A Particular Asset To Other Assets?

Some assets may be part of a hierarchy, in that it is the child of one asset and a sibling of another. This information is particularly important when an equipment breaks down, it can be replaced by a similar asset in the hierarchy. It can also be used to describe a system (refer to example below).

Following is an example of a Relationship tree and how it is handled in CWorks.

EXAMPLE:

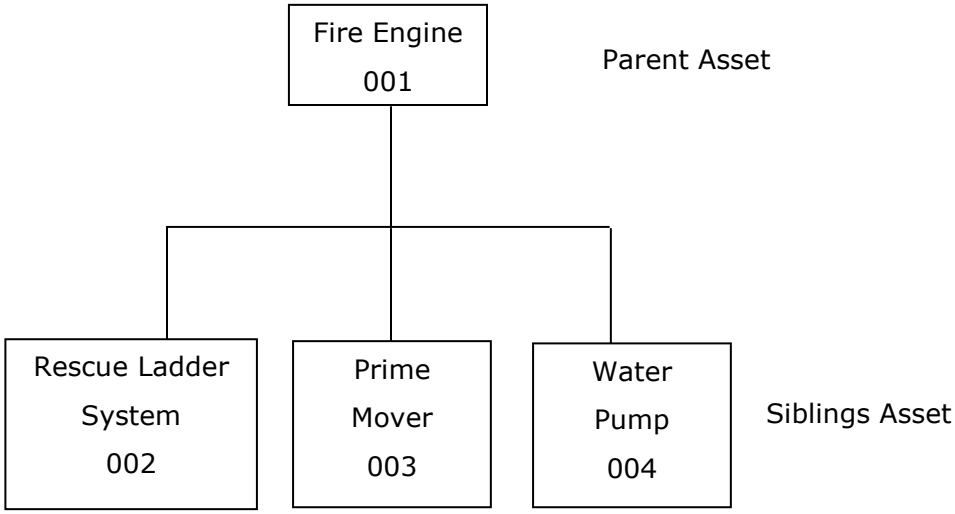


Figure 46: Example of Asset Relationships

CWorks Screen Representation: Assets 002, 003 & 004 are saved as Siblings to the Parent (001)

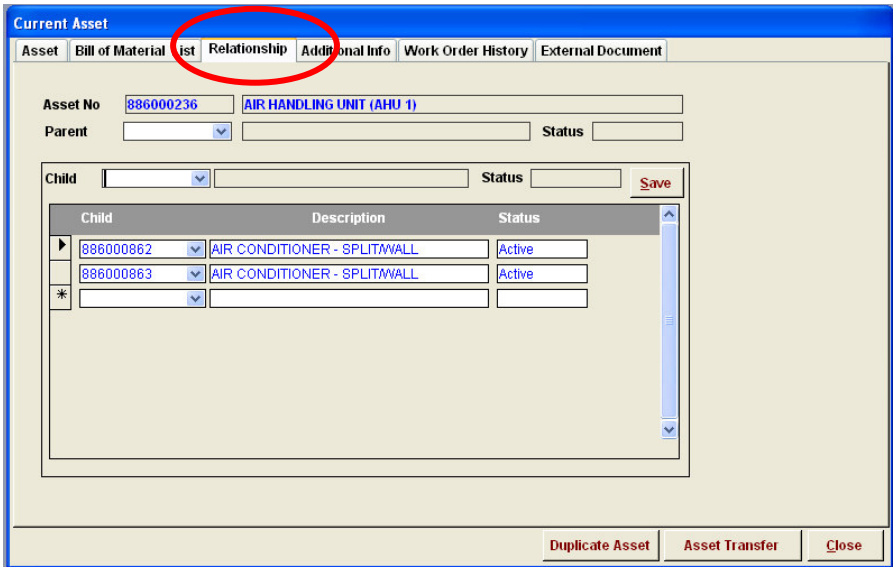
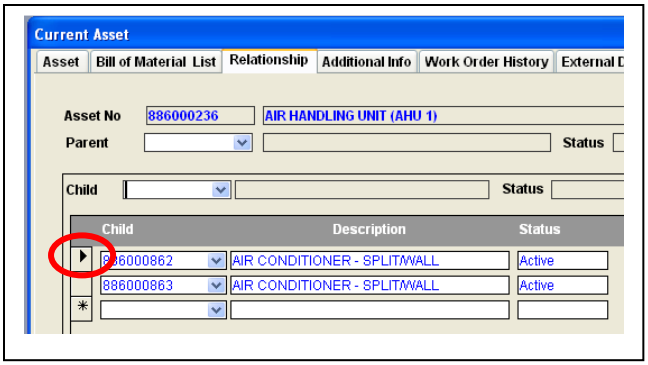


Figure 47: Current Asset - Relationship

Asset No 001 - Fire Engine, will appear automatically as the "Parent" asset when in any of the sibling Asset Forms. Note form below, see Figure 48. This avoids erroneous assigning of Relationships.



Note: To delete an entry, click the icon and hit the "Delete" key.

Figure 48: Deleting Relationship

Fields	Description
Parent	Automatically.
Sibling	Choose from the list. A code assigned to an asset and its description. This data is set in the masters. This asset is of parallel relation to the asset picked.
Status	Displays the status of the asset

3.6.1 How To View Child History?

When a work order is raised on a specific child asset, the system will automatically display all work orders related to the child asset. This is very useful when trying to generate a history of all work done on a child asset. A list of all work orders raised on the child asset will be displayed. Among other information displayed are work order status, received date, start date, end date, Total Part Cost, Total Direct Issue Cost, Total Labor Cost, Grand Total and Total Man Hrs. It can also be exported to Excel.

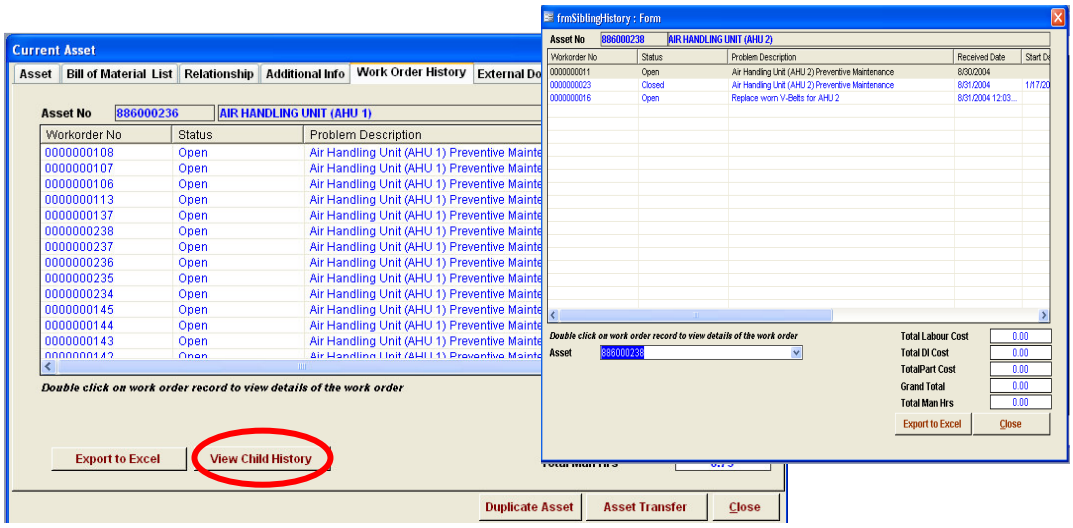


Figure 49: View Child History

3.6.2 How To View And Modify Relationship On A Particular Asset?

Refer to 3.6 "How To Add The Relationships Of A Particular Asset To Other Assets"

3.7 How To View And Modify Additional Info On A Particular Asset?

From the Current Asset page (see Figure 50), select the Additional Info tab. To modify any field in the page above, simply put in the changes and click Close. A message box would pop-up requesting for confirmation. Click Yes to save the changes or No to undo all changes.

3.8 How To View And Modify Bill Of Material List On A Particular Asset?

From the Current Asset page (see Figure 50), select the Bill of Material List tab. To modify any field in the page above, simply put in the changes and click Close. A message box would pop-up requesting confirmation. Click Yes to save the changes or No to undo all changes.

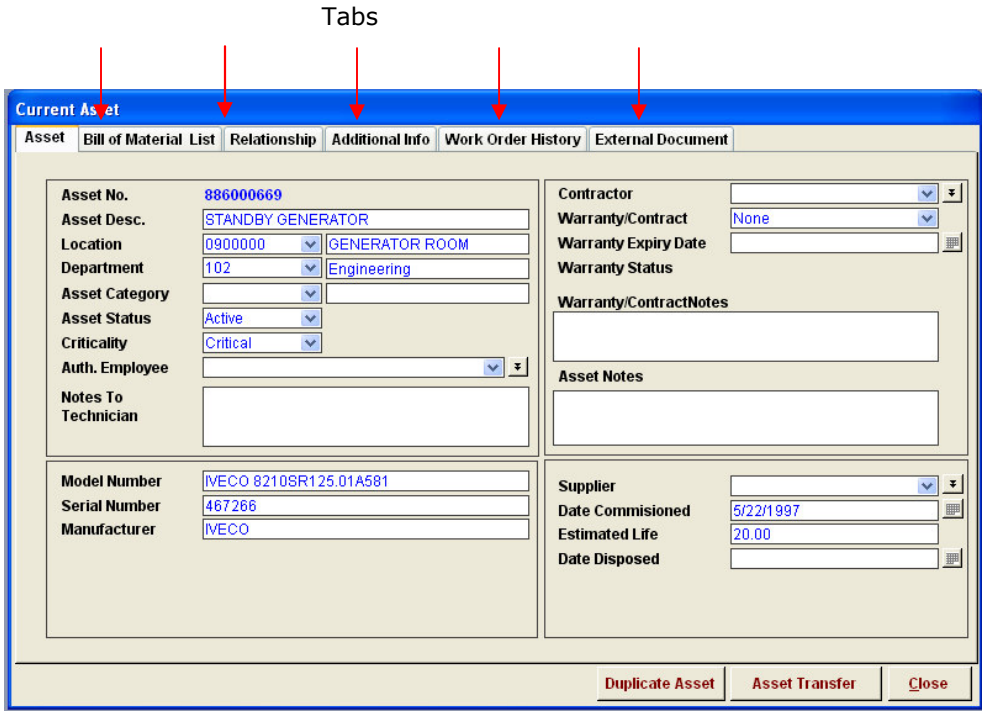


Figure 50: Current Asset

3.9 How To View Work Order History On A Particular Asset?

When a work order is raised on a specific asset, the system will automatically display all work orders related to the asset. This is very useful when trying to generate a history of all work done on an asset. Click on any registered assets and select the Work Order History tab (see Figure 51).

A list of all work orders raised on the asset will be displayed. Among other information displayed are work order status, received date, start date, end date, Total Part Cost, Total Direct Issue Cost, Total Labor Cost, Grand Total and Total Man Hrs.

Asset Work Order history can also be obtained from Asset list form by clicking the "Asset Maint History" button. This data can be exported to Excel by clicking the "Export to Excel" button, see Figure 55.

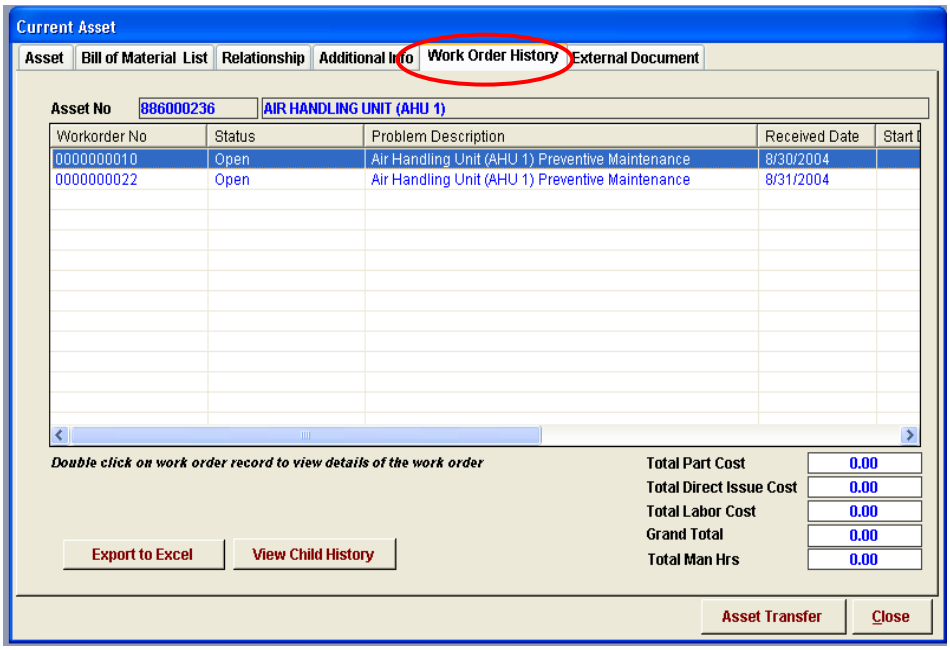


Figure 51: Work Order History

3.10 How To Transfer An Asset?

When moving an asset, the Asset Transfer form is used. Assets can be transferred to either a Location or to an asset as child asset. The transfer history is also maintained in this screen.

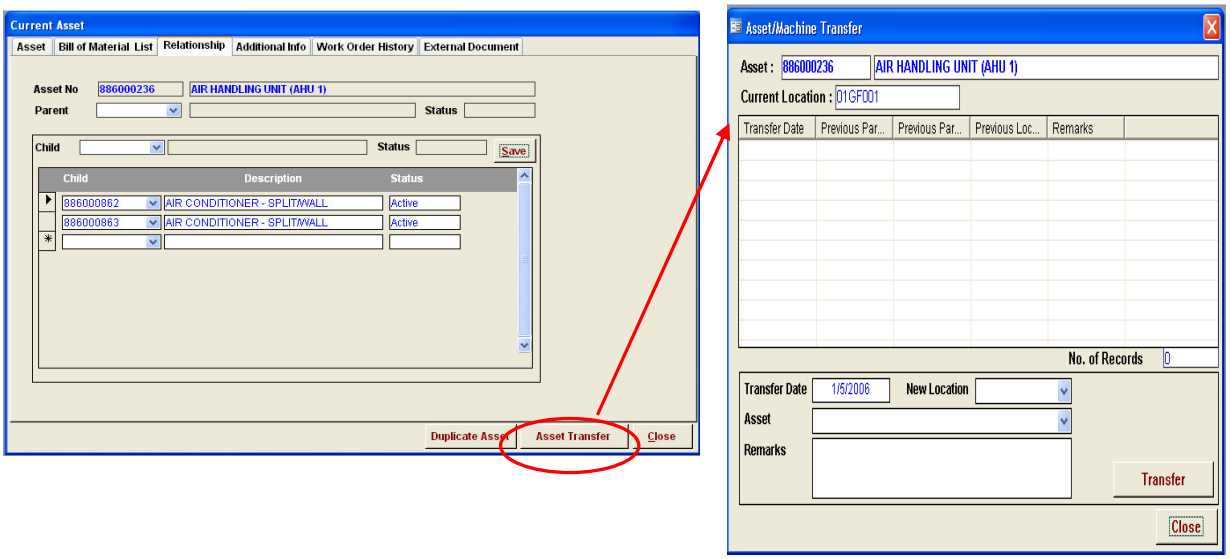


Figure 52: Asset Transfer

3.11 How to View Assets Represented as a Hierarchy?

To view the asset list in the form of a asset tree or hierarchy, click 

in the asset list form. The Asset Tree View form would pop-up.

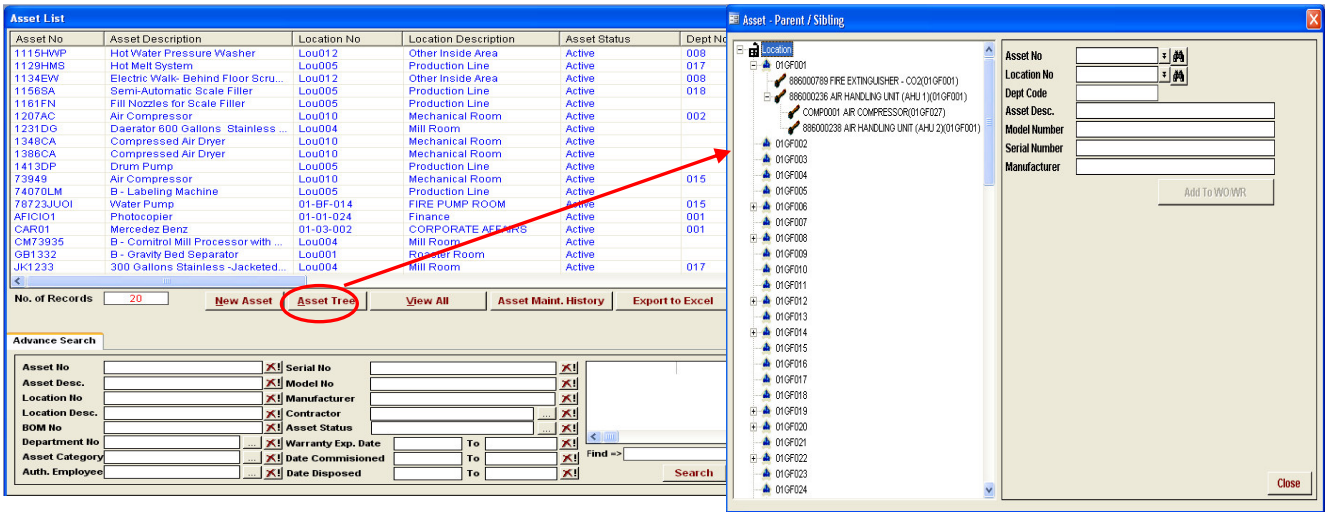


Figure 53: Asset Tree

From this form, users are able to view the assets in relation to its parent asset and location. Upon selecting an asset in the tree, the basic details of the asset will be displayed on the right hand corner of the form. To view further details of the selected asset (via the current asset form) click on  .

3.12 How To Do Advance Search On Asset Information?

An Advance Search option is available in the Asset List form. Its function is to enable filtering of assets by a combination of parameters defined by the user.

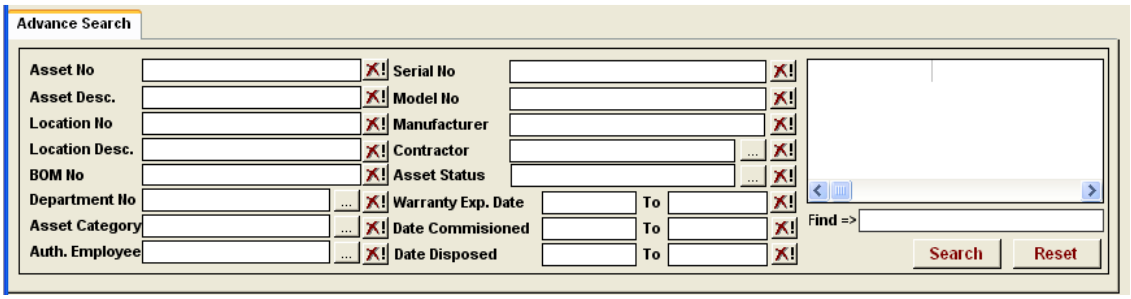


Figure 54: Advance Search

To select a parameter in a field, click ... . The available options for the parameter will be displayed on the far right hand side of the screen (above the search button). Select the parameter by clicking once on the text. More than one parameter can be selected (example: open and closed) by just clicking on another parameter text.

Click to clear all the selected parameter in the field. To clear all the filter options, click the "Reset" button.

3.13 How To Export Data To Excel?

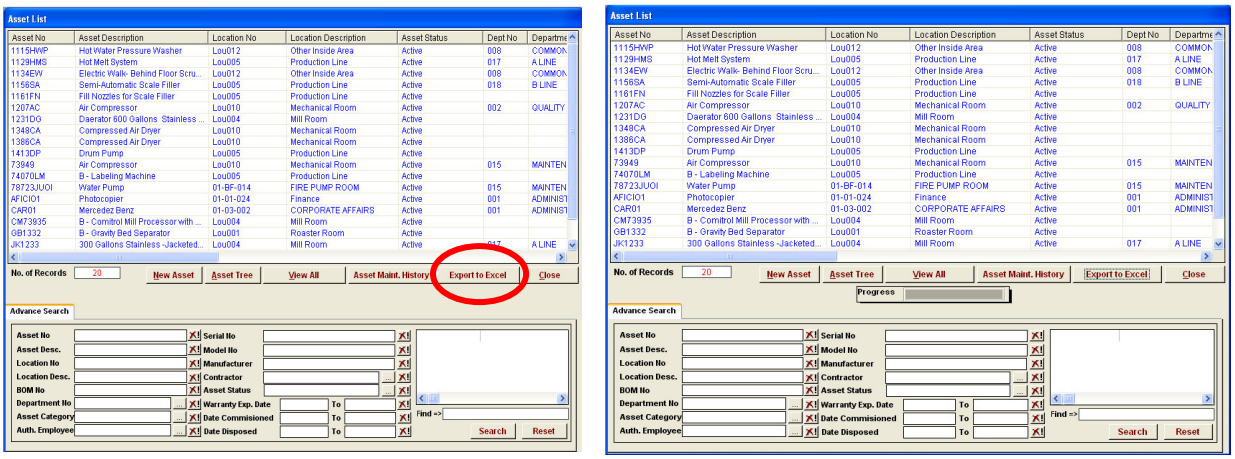


Figure 55: Export to Excel

To export data from listing, click on **"Export to Excel"** and a progress bar would appear as it populates the data into the excel sheet.

LOCATION MODULE

4. LOCATION

4.1 How To Add A New Location?

Locations can be organised by assigning codes. This would help users locate buildings, floors and rooms easily. Users can also use location codes to raise service work order.

Click on  icon in the Main Menu, see Figure 1. Location listing would pop-up.

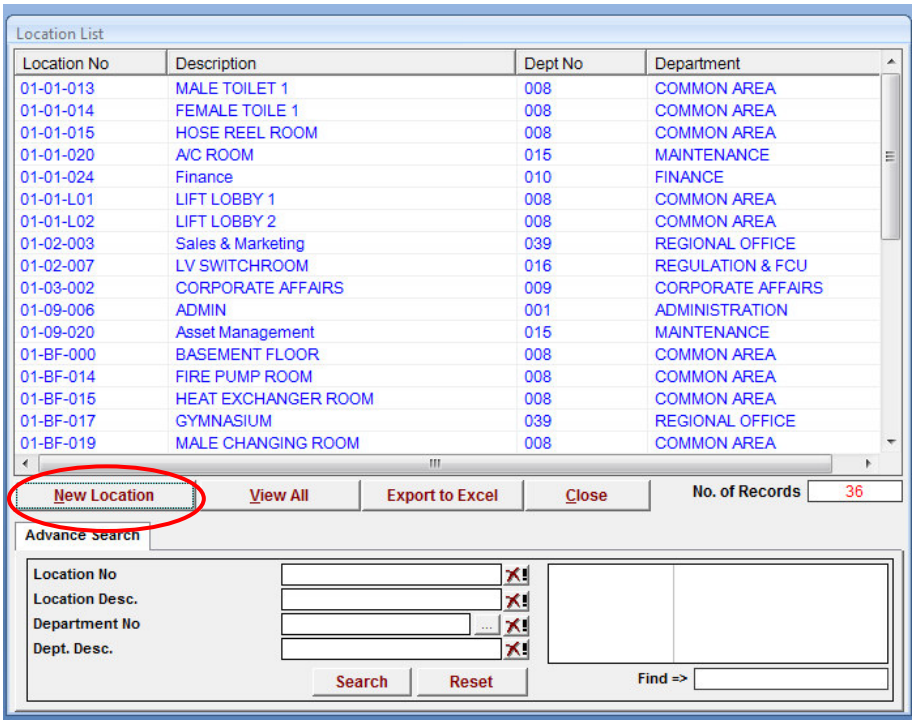


Figure 56: Location List

To add a new location, you need to click **New Location** button. A New Location screen would pop-up.

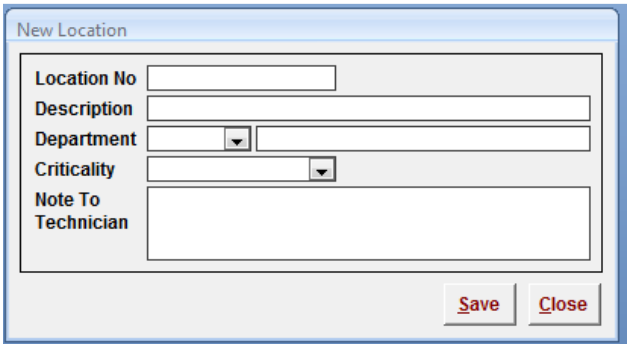


Figure 57: New Location

Fields	Description
Location No	Assign a unique number to the new location you wish to register.
Description	Enter a description of the location.
Department	Choose from the list. User could assigned a department to a location. This data is set in the department - masters.
Criticality	Select the Criticality (Normal or Critical) of the location from the drop down list.
Notes To Technician	This field is used to describe additional important information pertaining to the location.
Save	Click on this button to save any changes.
Close	Click on this button to close the screen without saving the record.

4.2 How To View And Modify A Location?

Click  icon on the main menu, a Location List would pop-up. It will show you a list of all the locations in your database. Once a location has been registered, the system would not allow removal of the location number. However, details on the location can be modified.

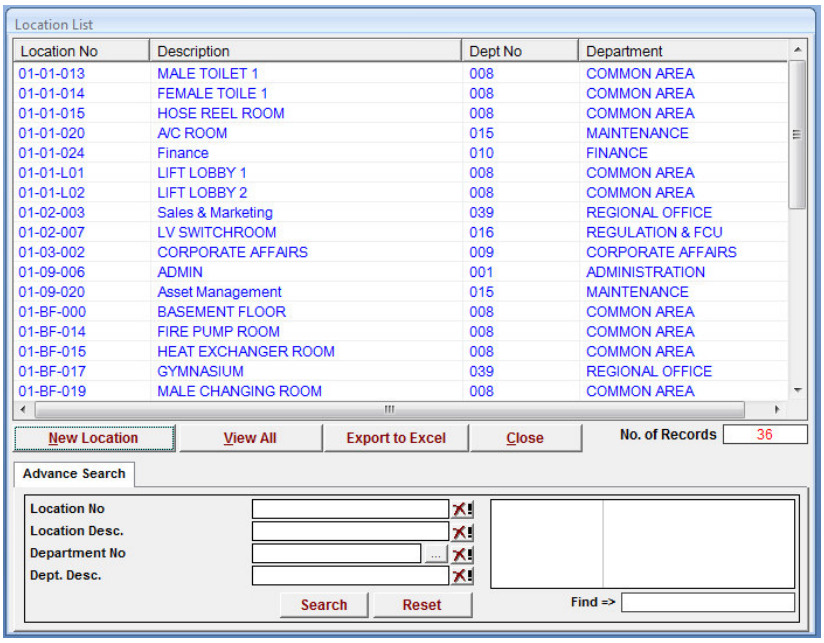


Figure 58: Location List

Double-click on any of the locations and you are able to view and modify details on the particular location. The Current Location screen, see Figure 59, would pop-up. Modify the fields in the form and click Close. You will be prompted whether you wish to save the changes. Click Yes to save the changes and exit or No to exit the screen without saving the changes.

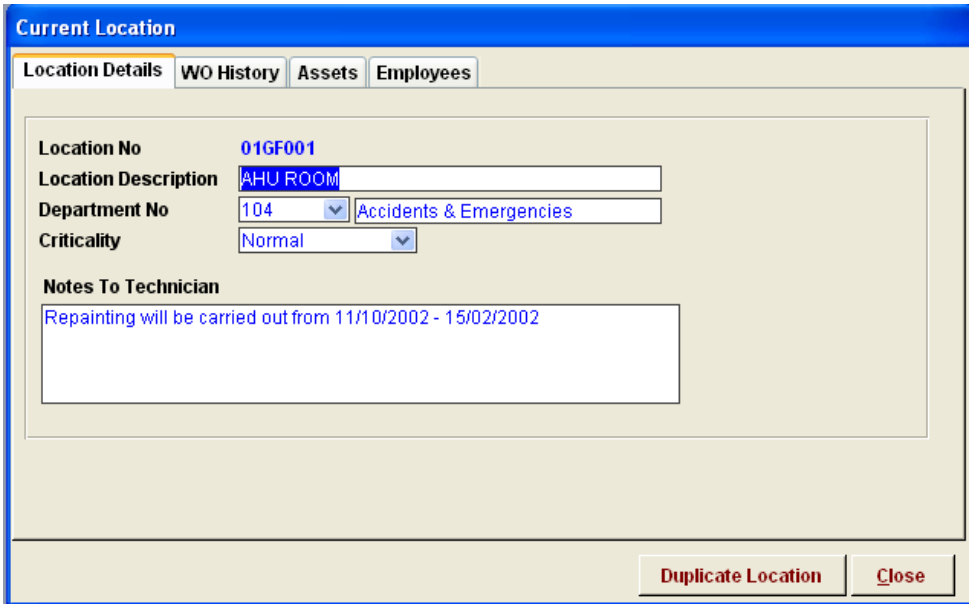


Figure 59: Current Location

Users are able to view the WO History, Asset and Employees that are attached to a particular location. The list of employees attached to the location can be set in the employee module (Refer to 6.1 "How To Add A New Employee/Requester").

The Duplicate Location button allows to user to reuse the information of a current location for a new location registration. All the information in The Location tab will be copied over to the New Location Registration form except for Location No.

4.3 How To Filter Out Location Information?

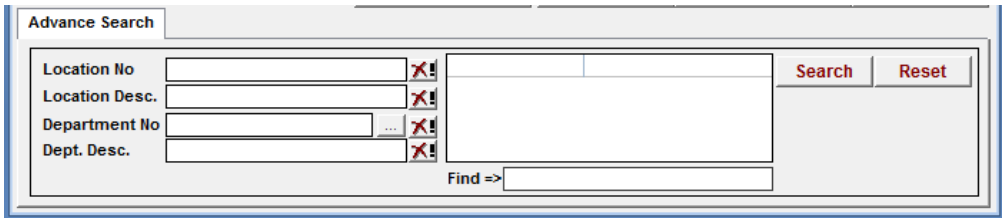


Figure 60: Search Options

To select a parameter in a field, click ... . The available options for the parameter will be displayed on the far right hand side of the screen (above the search button). Select the parameter by clicking once on the text. More than one parameter can be selected (example: open and closed) by just clicking on another parameter text.

Click to clear all the selected parameter in the field. To clear all the filter options, click the "Reset" button.

To do a search, click on the field of choice, enter the field contents and click on the Search button.

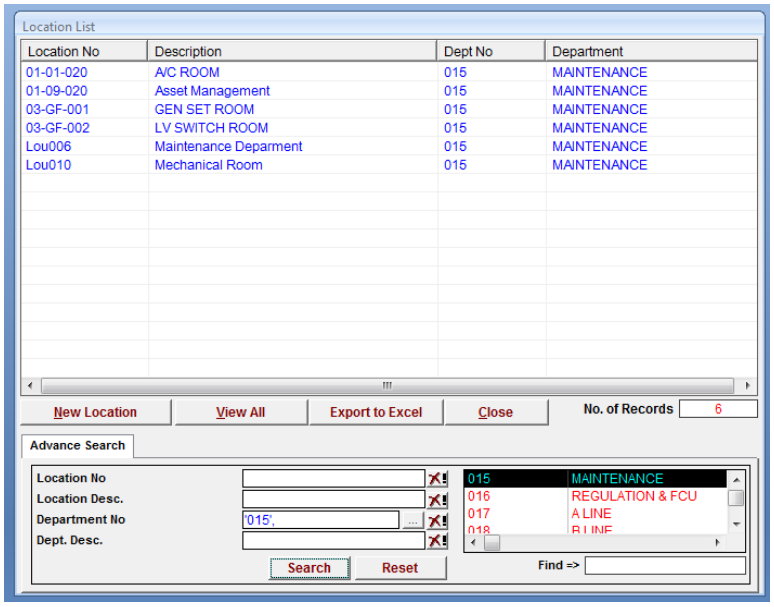


Figure 61: Search Results

User can also sort a search results, ascending or descending order, by clicking on the column headers.

PREVENTIVE MAINTENANCE PLAN MODULE

5. Preventive Maintenance

Preventive Maintenance activities in CWorks can be scheduled either by fixed time intervals or by meters / condition monitoring. The following components are available in the Preventive Maintenance Screen.

- PM Task List – Displays the PM Task List master. New PM Tasks can be added and existing PM Tasks can be viewed or modified in this section.

- PM Schedule (Time) - Displays the master list of fixed time based PM Schedules. New PM schedules can be added or existing PM schedules can be viewed or modified in this section. There are 3 types of scheduling :-

a) Fixed Time Interval
b) Fixed Day And Week
c) Fixed Date / By Month

- PM Schedule (Meters) - Displays the master list of metered PM Schedules. Metered PMs can be scheduled either by incremental or threshold type meters. New PM schedules can be added or existing PM schedules can be viewed or modified in this section.

- PM Generation - Automatic generation of fixed time based PM Work Orders is accomplished via this screen.

- PM Man Hours - To view the entire year PM man hours base on the man hours set in the checklist.

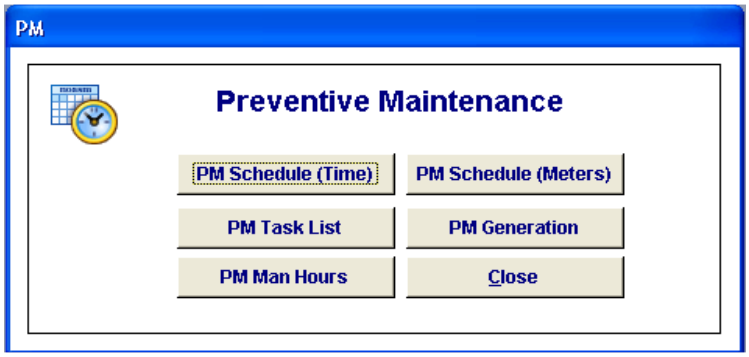


Figure 62: PM Main Menu

5.1 How To Register a New PM Task?

Click on the Preventive icon in the main menu, see Figure 1. Click on PM Task List in the PM main-menu, see Figure 62. The PM Task screen (as seen below) would pop-up.

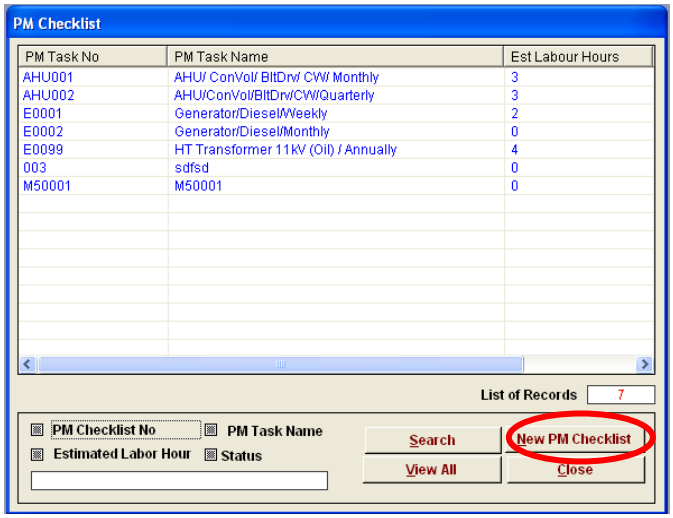


Figure 63: PM Task List

Click on New PM Checklist the PM Task List screen to activate the New PM Task screen.

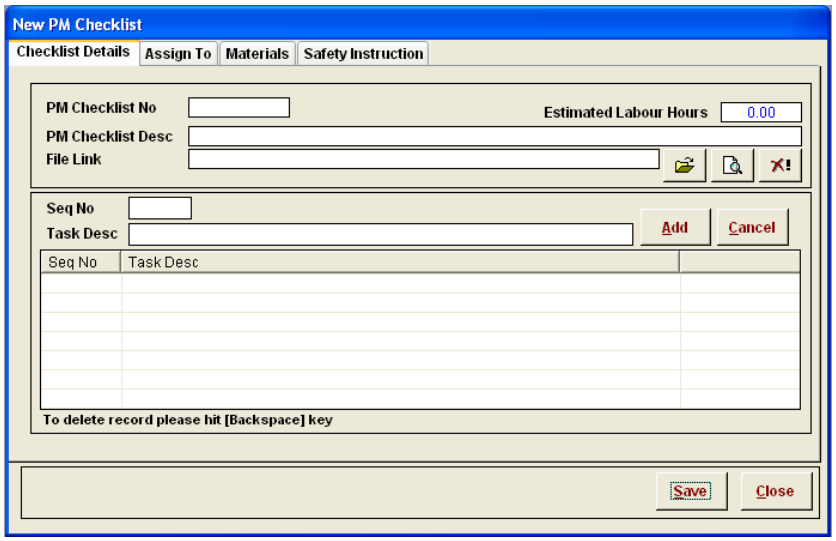


Figure 64: New PM Task

Fields	Description
PM Task No	Identifier of the PM Task master record.
PM Task Name	Description of the PM Task master.

Fields	Description
Estimated Labour Hours	The estimated labour hours to complete the PM Task.
File Link	Create a hyperlink to an external document to a PM Task. Click on the Browse button, choose the file to hyperlink. To view the file click on button to view the file. To delete the hyperlink click on button to clear.

5.1.1 How To Enter PM Task Line Items?

PM Tasks are entered and saved in sequential order in this form. Users have to enter a sequence no (Seq No) and a description of the task. The Seq no of the tasks are automatically sorted by the system. To add an entry to the list, click the "Add" button, see Figure 64.

To amend a Task entry in the list, just double click on the task record. The contents of the task will be carried over to the data entry fields. Make the necessary amendments and click the "Add" button to save the changes.

Fields	Description
Seq No	Task sequence number
Task Description	Description of the PM task to be carried out
Save	Click on this button to save any changes
Close	Click on this button to close the screen without saving the record

5.1.2 How To View And Modify An Existing PM Task?

Click on "Preventive" button on the CWorks main menu, a PM main menu would pop-up.

Click on PM Task List. The PM Task screen would pop-up. It will show you a list of all the PM Tasks in your database.

Note: Once a PM Task has been registered, the system would not allow removal of the PM Task number. However, details on the PM Task can be modified.

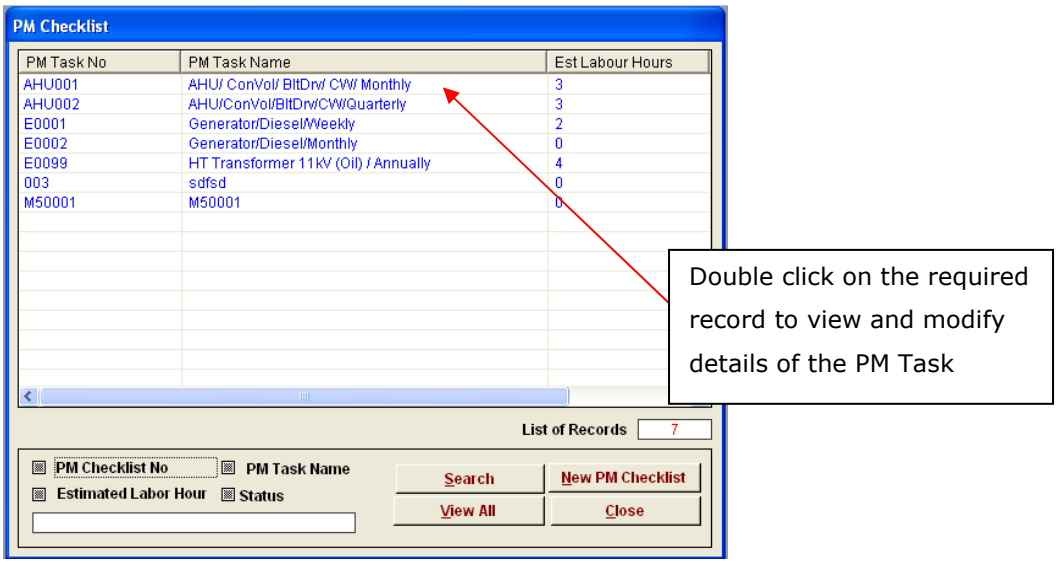


Figure 65: PM Task List

To modify an existing PM Task, double click on the required record in the PM Task List screen. The Current PM Task screen will appear, see Figure 66. Modify the fields in the form and click Close.

5.1.3 How To Modify PM Tasks?

To modify the task descriptions, double click on the record to be amended, see Figure 66. The contents of the record will be displayed in fields above the list. Make the necessary modifications in the Seq No or Job Description fields and click the "Save" button. Clicking the "Cancel" button will clear the Seq No and Job Desc. fields.

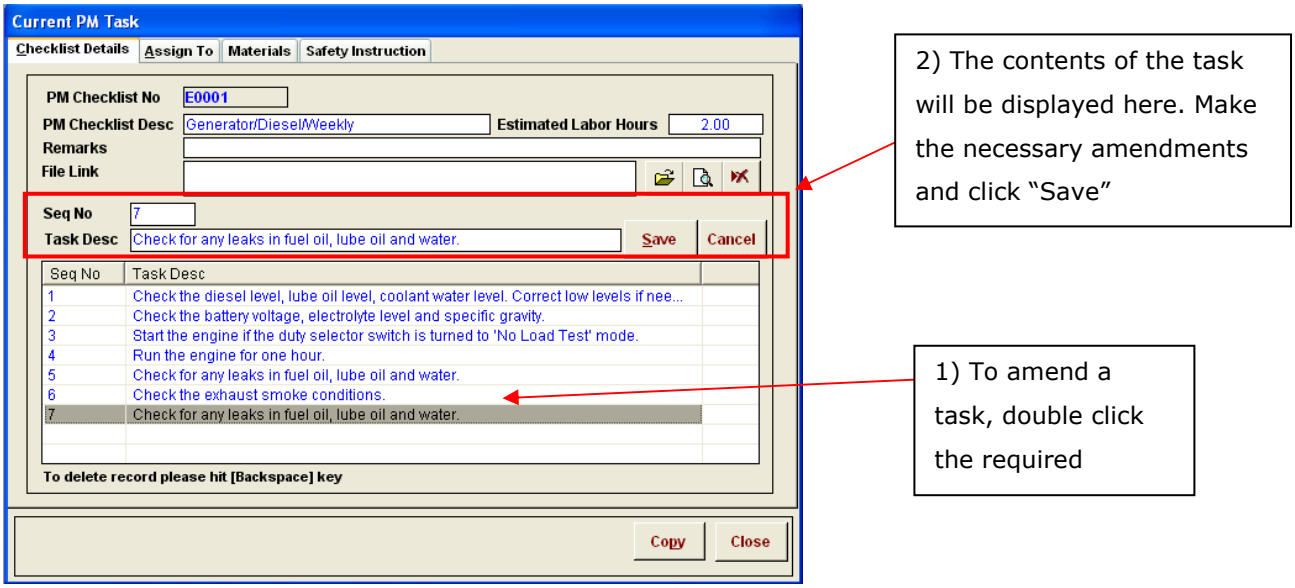


Figure 66: Current PM Task

5.1.4 How To Enter Additional PM Tasks?

To enter additional PM Tasks, simply key in the new Seq no and Job Desc, and click the "Save" button. The Tasks will be automatically sorted according to the Seq no field.

Note: The Seq No field cannot be amended. Users are advised to use Seq nos which allow for additions. Example (10, 20, 30 so if a task needs to be added between 10 & 20, Seq no 15 can be entered).

5.1.5 How To Delete A PM Task?

Select the PM Task to be deleted by clicking once on it. Hit the "Backspace" key to delete the Task.

5.2 How To Assign PM Tasks To Specific Employees?

Employees can be assigned to a Task in a PM Task master. At the New or Current PM Task forms, click on the "Assign To" tab.

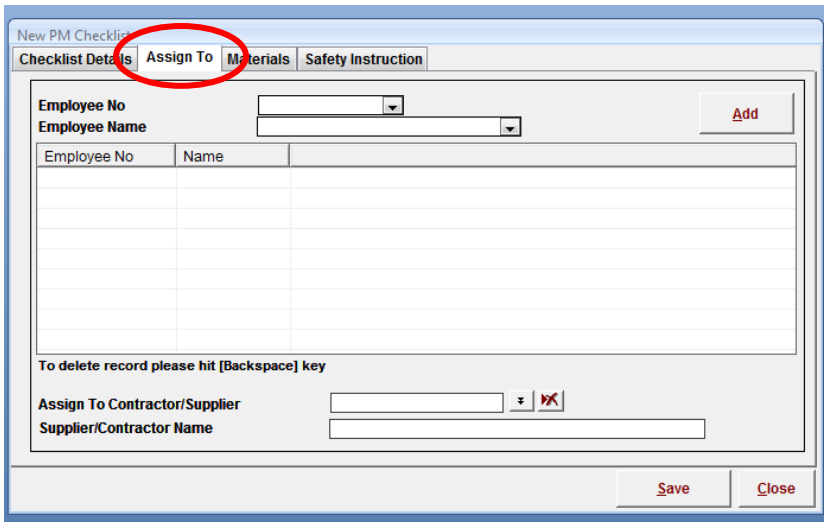


Figure 67: PM Task – "Assign To" Tab

Select an Employee to assign to the Task and click the "Add" button (in New PM Task form, see Figure 64) or the "Save" button (in the Current PM Task Form, see Figure 66) under the Employee Name field. An unlimited number of employees can be assigned per PM Task

To delete a saved employee, select the employee record to be deleted by clicking on it once. Hit the "Backspace" key.

When preventive maintenance work orders are generated using a PM Task with employees assigned, the assigned employees names will be saved in the work order "Assigned To" tab, see Figure 67.

5.3 How To Add Materials To A PM Task?

Materials can be assigned to a PM Task in order to forecast material requirements based on PM work orders. At the New or Current PM Task forms, click on the "Materials" tab.

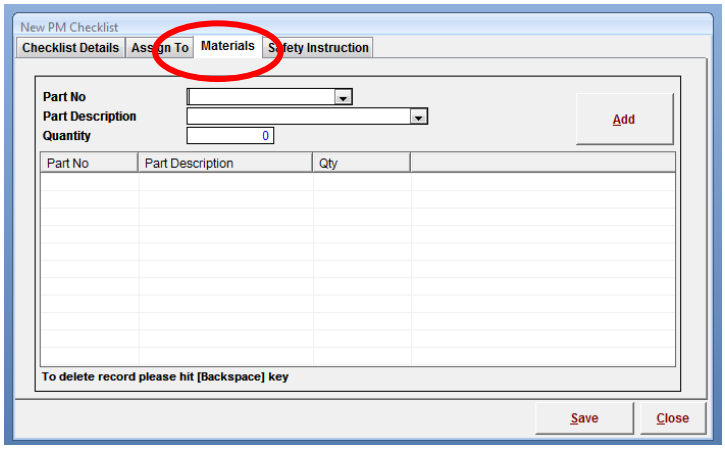


Figure 68: PM Task – "Materials" Tab

Select a Part to assign to PM Task, specify the quantity required for the PM Task and click the "Add" button (in New PM Task form) or the "Save" button (in the Current PM Task Form) under the Part Description field. An unlimited no of Parts can be assigned per PM Task.

5.4 How to Add Safety Instruction?

Safety Instruction can be assigned to a PM Task in order to add a safety instruction based on PM work orders. At the New or Current PM Task forms, click on the "Safety Instruction" tab.

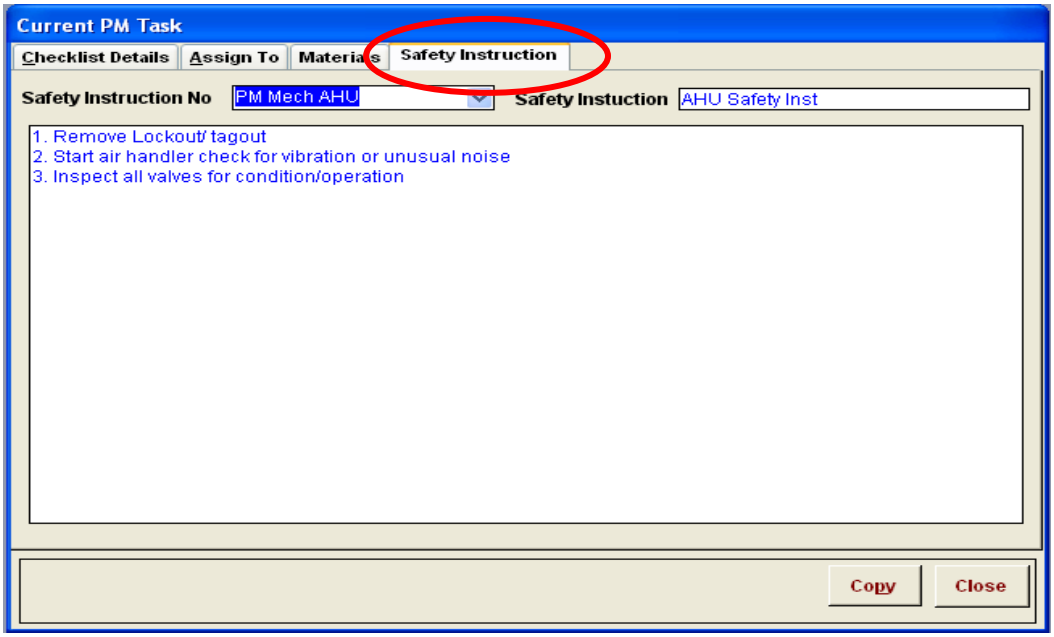


Figure 69: Safety Instruction

Select a Safety Instruction to assign to PM Task a warning message prompting you click "Yes" to add the safety Instruction.

5.5 How To View Material Requirements For PM Work Orders?

PM materials requirements for PM type work orders can be viewed via the Work Order List form. At the Work Order List form, click the "PM Materials" button. The PM Material List form would pop-up. The List displays a summary of materials required for generated PM work orders. Items highlighted in red indicate that there is a shortage.

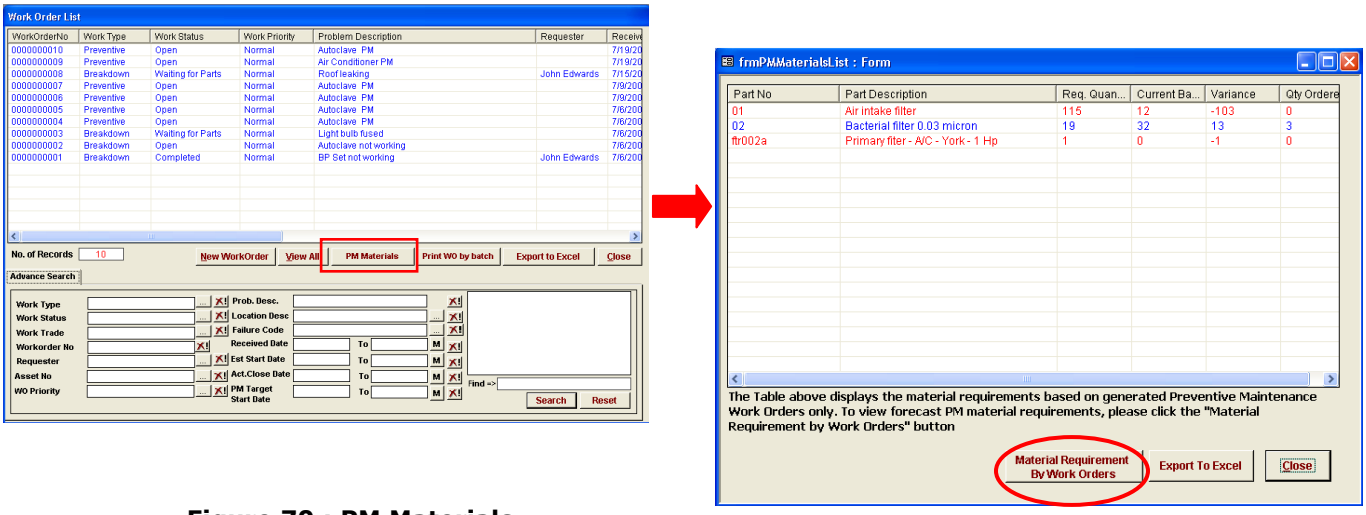


Figure 70 : PM Materials

To view the PM material requirement list by PM No. for a defined PM Target Start Date Range, click the "Materials Requirement by Work Orders" button. The form below would pop-up.

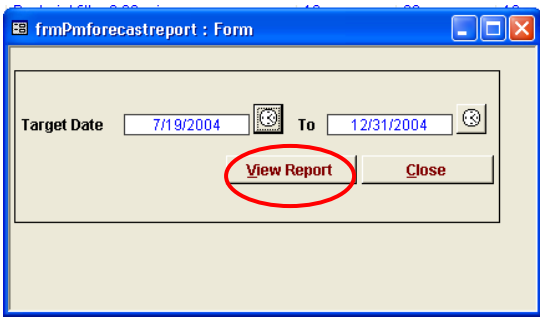


Figure 71: Report Range

Enter the Target Start Date Range and click "View Report". A report detailing the material requirement by the PM No and target start date will be generated.

5.6 How To Filter A PM Task?

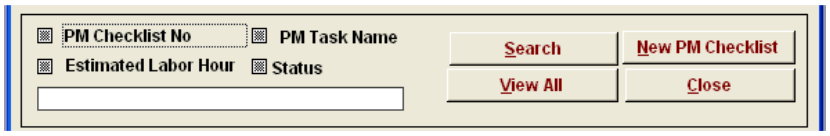


Figure 72: Search Options

Below the PM Task listing screen, there is a bar which will allow users to filter or narrow down the search result. The options are:

- PM Checklist No
- PM Task Name
- Estimated Labour Hours

To do a search, click on the field of choice, enter the field contents and click on the Search button. User can also sort a search results, ascending or descending order, by clicking on the header in the list form.

5.7 How To View PM Man Hours?

To view the entire year PM man hours, click on PM Man Hours button in the PM main Menu. Enter the year and click on View to view the PM man hours for that particular year. These man hours are set in PM checklist and assigned to the PM schedule.

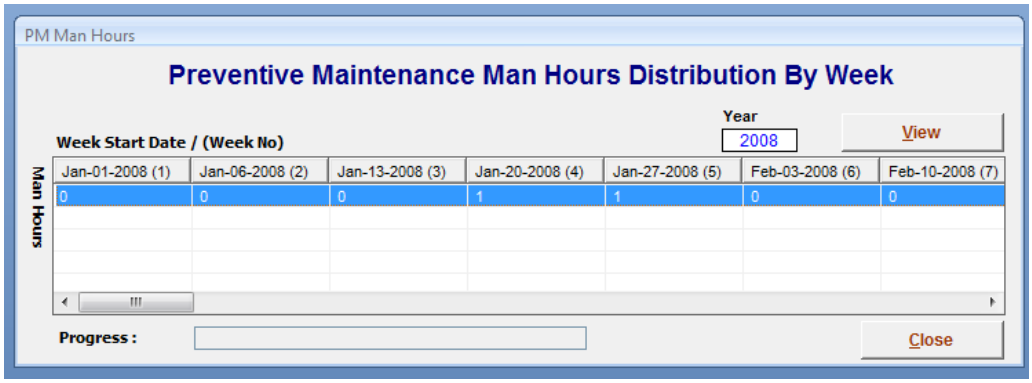


Figure 73: PM Man Hours

5.8 Preventive Maintenance – Time Based

5.8.1 How To Create A PM Fixed Time Interval Schedule Master?

Click on PM Schedule (Time) in the main PM menu, see Figure 62, to select fixed time interval based PMs. A sub-PM menu screen would pop-up.

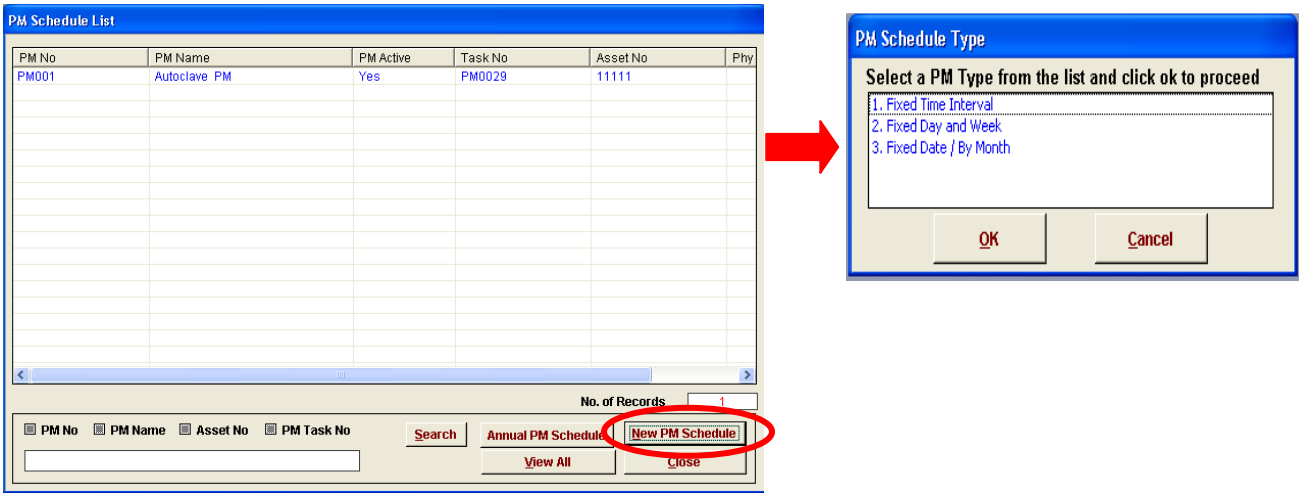


Figure 74: Selecting PM Type

Select Fixed Time Interval PM Type and click "OK". This will activate new PM Schedule screen as below.

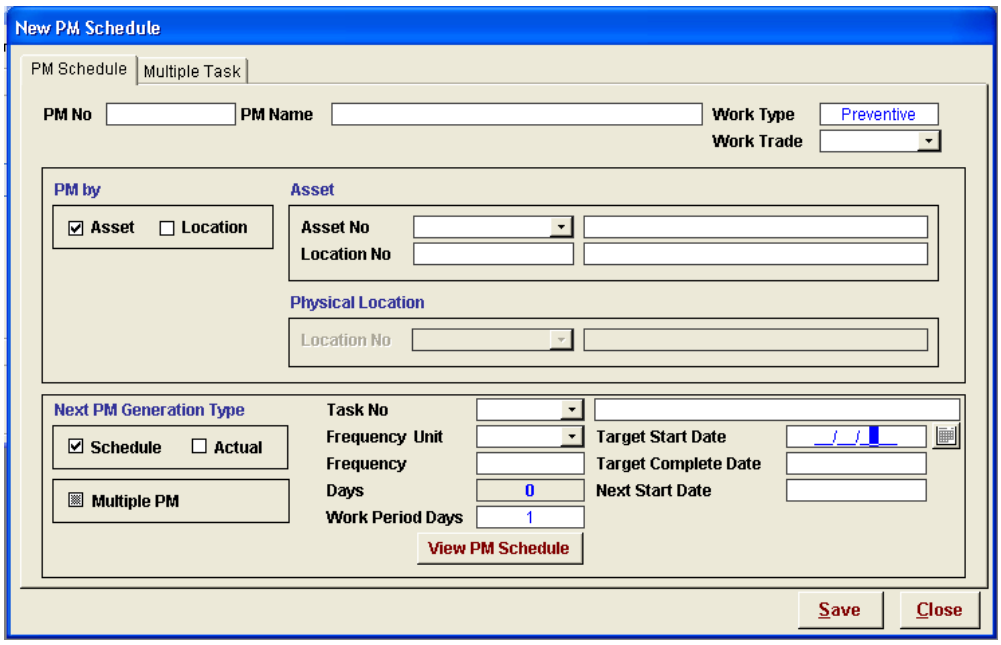


Figure 75: New PM Schedule

Fixed time interval based PM Schedules for assets or physical locations are created in the New PM Schedule screen. Upon completing all fields in the screen, click on Save to save the record or Close to exit without saving the record.

Fields	Description
PM No	Identifier of the PM Schedule master record.
PM Task Name	Description of the PM Schedule master record.
Work Type	Classification of type of work order. Defaults to Preventive. *Read only field.*
Work Trade	The trade or section that is primarily responsible for the work (obtained from the Work Trade Master)
PM by – Asset or Location	Selection option of whether the PM Schedule is to be scheduled by Assets or Physical Locations.
Asset – Asset No & Description, Location No & Description	Defines the asset on which the preventive maintenance is to be done. The Location No identifies the location of the asset as defined in the Asset Master. The asset must be registered in the Asset Master for preventive maintenance scheduling. The Asset & Location Descriptions are displayed from the Asset & Location masters respectively. Select the asset no from the drop down list.
Location No & Description	Defines the physical location on which the preventive maintenance is to be done. The physical location must be registered in the Location master for preventive maintenance scheduling. Select the location no from the drop down list.
Next Generation Type (tick boxes)	Defines whether the next generation of the preventive maintenance work order shall be by the scheduled date or by actual work order completion date.
Multiple PM (tick box)	A tick box to indicate whether the PM consists of multiple tasks. Selecting this will activate the Multiple PM feature.
Task No	Defines the first preventive maintenance task to be assigned for the schedule. The tasks are selected from the drop down list which displays all registered tasks in the PM Task master.
Frequency Unit	Defines the frequency unit of the PM. Available units are Day (1 day), Week (7 days) and Month (28 days).
Frequency	Defines the factor for which the Frequency Unit is multiplied to provide the number of days that should elapse between generation of PM work orders.

Fields	Description
Days	The number of days that should elapse between generation of PM work orders. This is a read only field and is automatically calculated. Formula: Days = Frequency Unit (in Days) x Frequency
Work Period Days	Defines the number of days, which shall be taken to complete the PM Task. Defaults to 1 day.
Target Start Date	Defines the first Target Start Date of the PM record. The date defined by the user must be greater than the last PM Generation date.
Target Complete Date	This is a read only field, which is automatically calculated. It displays the target completion date of the PM work order. Target Complete Date = Target Start Date + (Work Period Days – 1 day)
Next Start Date	This is a read only field, which is automatically calculated. It displays the next target start date for the PM schedule. <u>For first generation</u> Next Start Date = Target Start Date + Days <u>For subsequent generation (in the Current PM Schedule Form)</u> *for Next PM Generation by Scheduled Date;* Next Start Date = Target Start Date + Days **for Next PM Generation by Actual Date;** Next Start Date = Last PM WO Complete Date + Days (Note: No Next Start Date will be displayed until the concerned PM work order is closed)

5.8.1.1 Next PM Generation Types

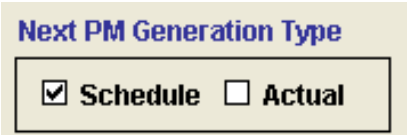


Figure 76: Next PM Generation Type

The Next PM Generation Type option allows users to specify the criteria for the Next PM Start Date. Two options are available;

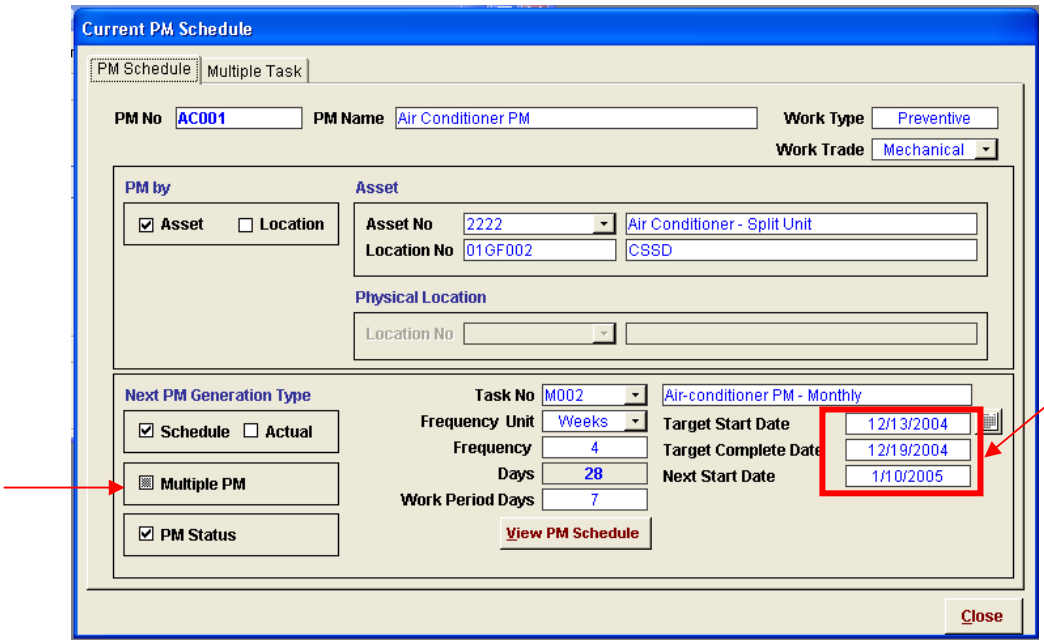
1. Schedule – the Next Start date will be based on the last PM work order Target Start Date, irrespective of the work order status (Target Start Date + Frequency in Days).
2. Actual – the Next Start date will be based on the last PM work order Actual End Date. No PM work orders can be generated until the last PM work order is closed. The Next Start Date = Last PM WO Complete Date + Frequency in Days.

The default Next PM Generation Type is "Schedule". To select Actual type, just click on the Actual tick box in the New PM Schedule form. Once Actual type PM is selected, users will note that no other Next Start Date will be given in the form. The Next Start Date will be calculated and displayed only after the last PM work order for the schedule is closed.

Note that the Next PM Generation Type ***cannot*** *be amended once a PM schedule has been saved. It can only be defined when a new PM schedule is created.*

5.8.2 How To Create Multiple PM Tasks?

Multiple PM Tasks enable more than one PM Task to be scheduled per asset or physical location. It allows the creation of PM Tasks of a higher frequency to take precedence in the PM work order generation when the conditions set for generation are met. By assigning multiple PMs to each PM Schedule, you can indicate to the system which PM Task to select during the work order generation process.
To create Multiple PM Tasks for a PM Schedule master, tick on "Multiple PM" on PM schedule.



Note: The Target Start, Target Complete and Next Dates displayed in this form shows the next set of generation dates. For details, please refer to the field descriptions in the "How to Create a New PM Schedule Master" section.

Figure 77: Create Multiple PM Task

Click on the Multiple PM tab in the New PM Schedule screen.

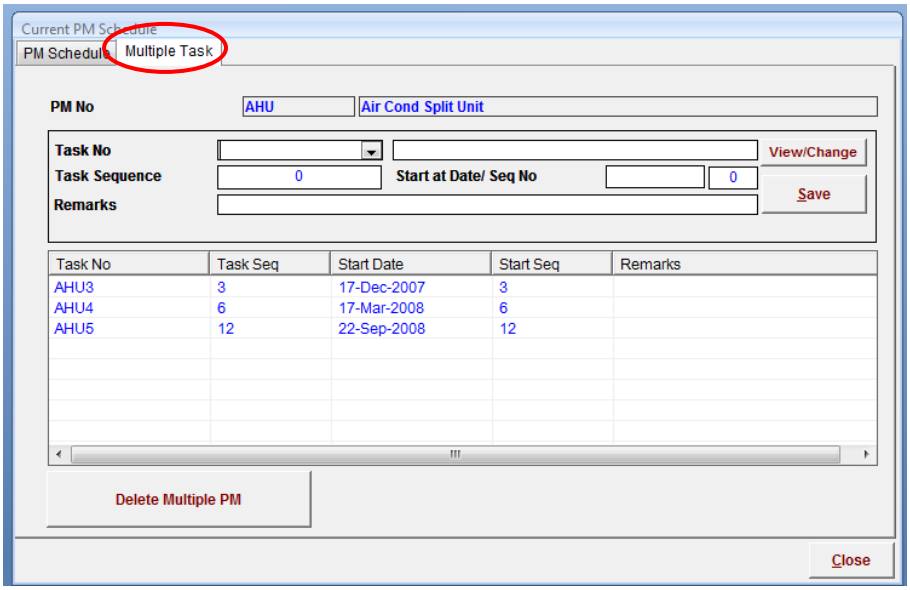


Figure 78: Multiple PM Task Details

Fields	Description
PM No & Description	Identifier of the PM Schedule record carried over from the PM Schedule tab.
Task No & Description	Defines the multiple PM task. The Task No. is selected from the drop down list.

Fields	Description
Task Sequence	Defines the PM count at which the defined task will be used. Example, 2 means that the Task will be generated 2 times the PM is generated, 12 means every 12 times etc.
Start at Date / Seq. No	Defines the start date / PM count no. of the PM Task. The date field is read only. The start PM count can be amended by either changing the Seq No. or by clicking on the View/Change button to activate the PM Plan Forecast screen and double clicking on the required PM count.
Remarks	A remarks field to log any comments regarding the multiple tasks.
Save at Multiple PM Task details	Upon completing the Multiple PM Task details (Task No, Task Sequence, Start at Date / Seq. No fields) click Save button at the multiple task details. The record will be saved as a multiple PM for this PM No.
Save at bottom of screen	Click on this button (at the bottom of the screen) to save the PM record.
Close	Click on this button to close the screen without saving the PM record.

5.8.3 How To Delete A PM Task?

To delete a saved multiple task in the New PM Schedule screen, click on the "Deleted Multiple PM".

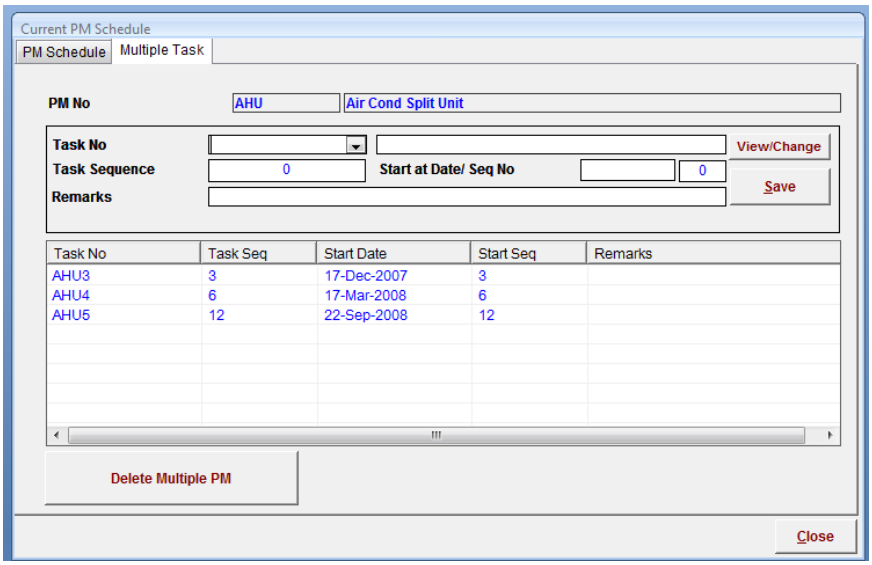


Figure 79: Deleting A PM Task No

5.8.4 How To Delete Multiple PM Task?

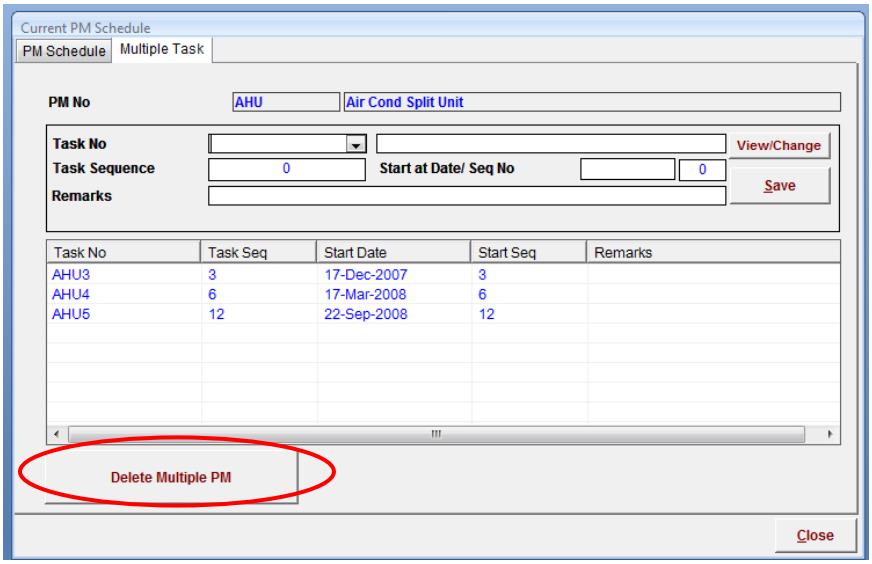


Figure 80: Deleting Multiple PM Task

Click on the Delete Multiple PM button The Multiple PM records will be deleted upon user confirmation.

Note: All the saved multiple PM records will be deleted when this function is selected.

5.8.5 How To View PM Plan Forecast Screen?

Click on PM Schedule – Multiple Task tab and click on **View/Change** button.

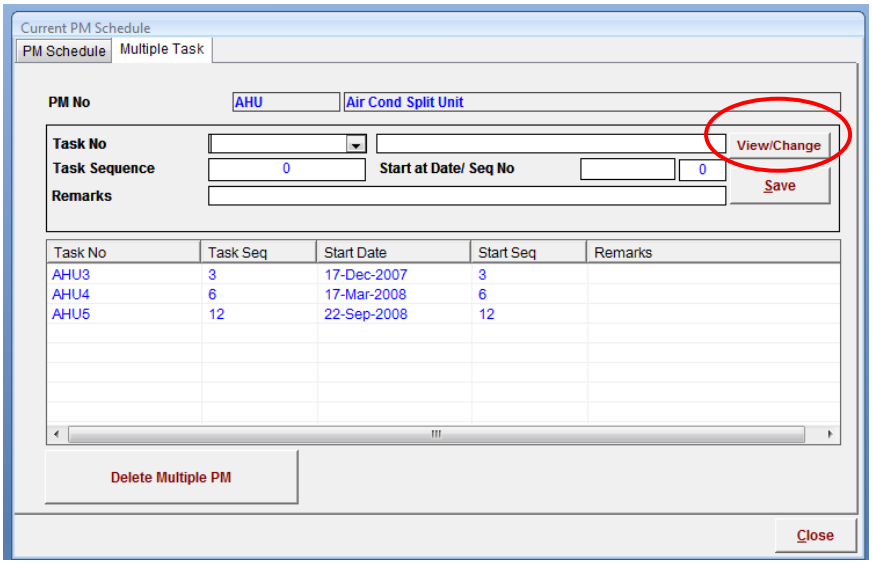


Figure 81: Accessing PM Plan Forecast

The PM plan forecast would pop-up as below.

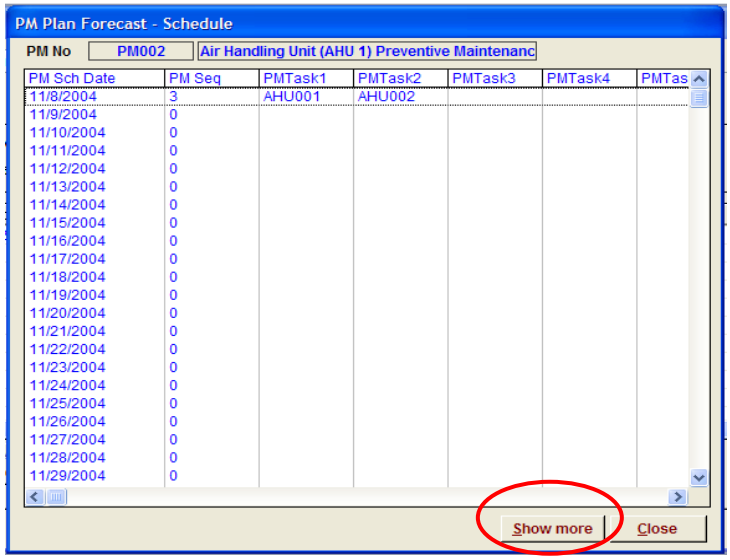


Figure 82: PM Plan Forecast

The PM Plan Forecast screen displays the forecast PM work order Target Start Dates for the PM plan for all tasks (for a period of 1 year). In the above example, at PMCount 2 (PM Target Start Date 30/09/2002), two tasks coincide. However, only the work order for the larger task (PMTask2) will be generated by the system.

Note: If the complete 1 year schedule does not display in the form, click on the Show more button.

5.8.6 How To Filter Preventive Maintenance Schedules?

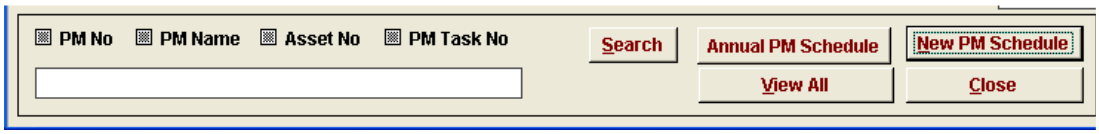


Figure 83: Search Options

Below the PM Schedule listing screen, there is a bar which will allow users to filter or narrow down the search result. The options are:

- PM No
- PM Name
- Asset No
- PM Task No

To do a search, click on the field of choice, enter the field contents and click on the Search button. User can also sort a search results, ascending or descending order, by clicking on the header of the column.

5.8.7 How To Modify An Existing PM Schedule?

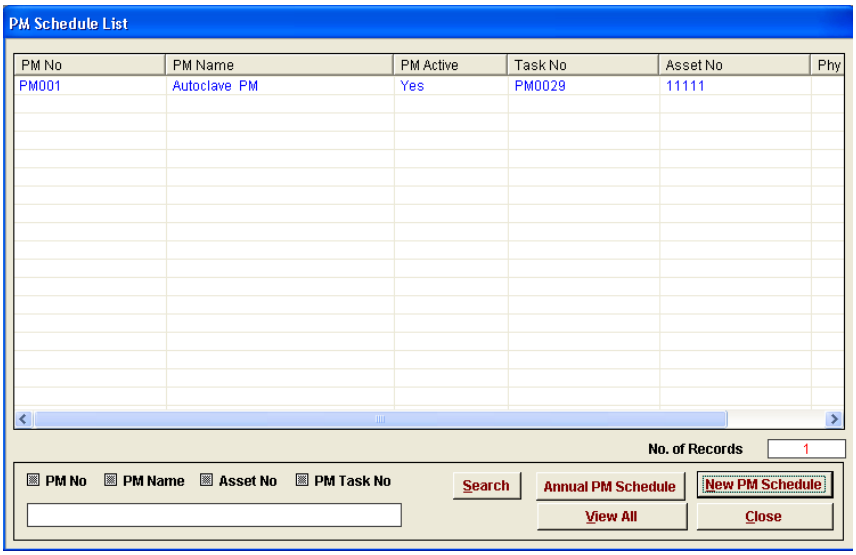


Figure 84: PM Schedule List

In the PM Schedule List screen as above, double click on the PM record to be amended. The Current PM Schedule screen, see Figure 85 will be activated.

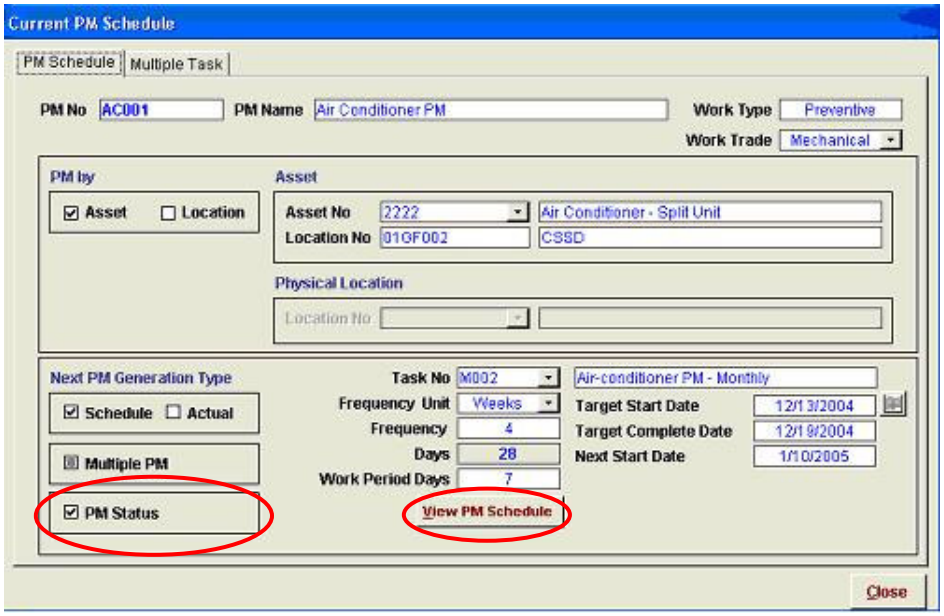


Figure 85: Current PM Schedule

5.8.7.1 How To Disable An Existing PM Schedule?

To disable an existing PM schedule, click the PM Status tick box 

to remove the tick. This will disable the PM schedule from further work order generation.

5.8.7.2 Amending The PM Schedule And Task

Make the necessary amendments to the Asset/Location No, Task No, Frequency fields and the work period. To amend or shift the next PM work order generation date, the following fields need to be edited;

5.8.7.2.1 For Scheduled Completion Date Type PM Generation:

Change the **Target Start Date.** The next PM work order will be generated according to the edited Target Start Date.

5.8.7.2.2 For Actual Completion Date Type PM Generation:

Change the **Next Start Date.** The next PM work order will be generated according to the edited Next Start Date. *The last PM work order for the particular PM Schedule must first be closed before amendments to the Next Start Date can be made.*

Notes:

1. The amended dates must be larger than the last PM Generation "To" date.
2. An existing PM Schedule next PM generation type (scheduled or actual completion dates) cannot be amended in the Current PM Screen. To change the generation type, the existing PM schedule shall have to be disabled and a new PM schedule created.

Click Close to exit the form. You will be prompted whether you wish to save the changes. Click Yes to save the changes and exit or No to exit the screen without saving the changes.

5.8.7.3 Viewing The PM Schedule

Click on View PM Schedule in the PM Schedule tab, see Figure 85 to view the PM schedule forecast from the last PM work order generation date.

5.8.8 How To Generate Fixed Time Interval Based PM WO?

To generate PM work orders, click on PM Generation button in the PM Main Menu. The PM Generation screen will be activated.

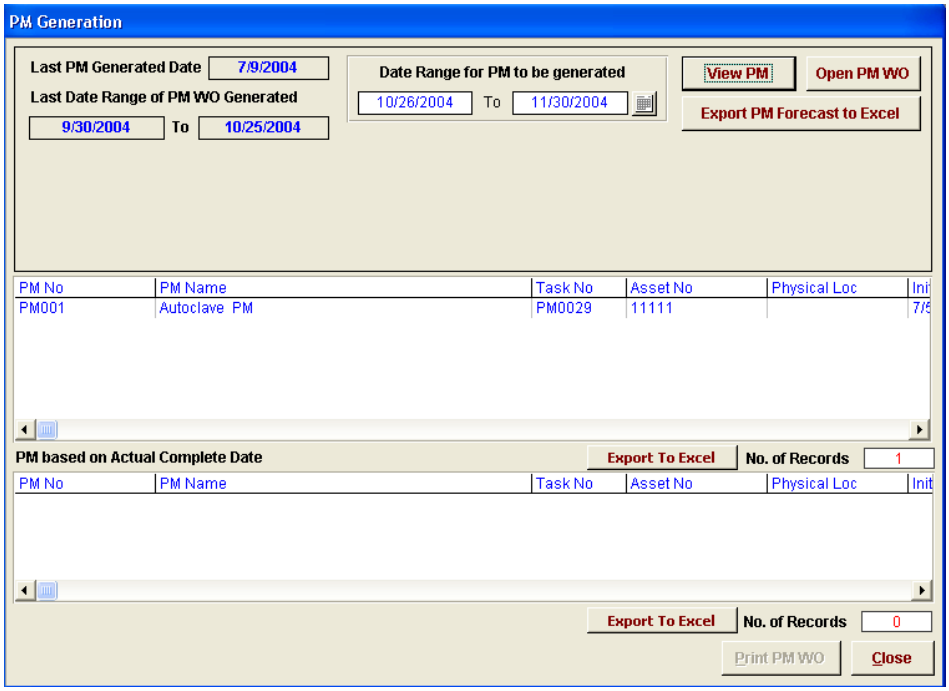


Figure 86: PM Generation

Fields	Description
Last PM Generation Date	Displays the last PM work order generation date (read only field).
Last Date Range of PM WO Generation (From – To)	Displays the Target Start Date range of the last PM work order generation (read only field)
Date Range for PM to be generated (From – To)	Fields to input the next range of Target Start Dates. Any PM record which next PM Target Start Date falls within this range will be identified for generation

Enter a date range and click on View PM to view the PMs which next Target Start Dates fall within the defined range. Click on Open PM WO to generate the work

orders. The PM list will be updated with the work order number displayed for reference. To print hardcopies of the generated PM work orders, click the button. The view list of PM records can be exported to MS Excel by clicking the "Export to Excel" button below the respective view list. Click Close to exit from the screen.

Note: Before PM generation is done, the system will automatically backup the current database. The folder name is "DBBACKUP". These files can be deleted every month.

5.8.9 How To View PM Work Order Forecasts?

In the PM Main Menu, click on the PM Generation button. Key in a date range of the forecast to be viewed and click the "View PM" button. A of preventive maintenance list will be generated by the system. To view the forecast table, click on the "Export PM Forecast to Excel" button.

CWorks will export the PM list to Microsoft Excel and formats the data into a pivot table. Refer to the sample screenshot below;

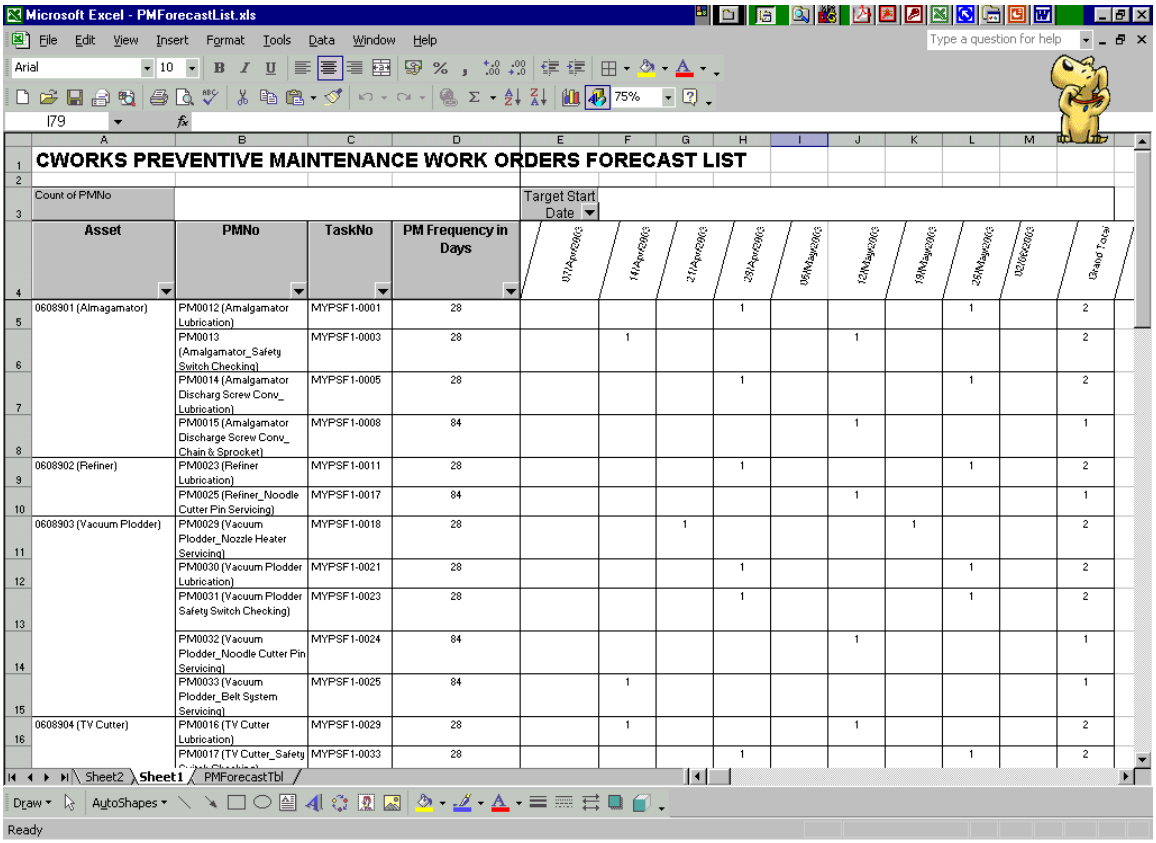


Figure 87: PM Forecast List

5.9 Fixed Day And Week -Preventive Maintenance

In addition to scheduling PMs by a fixed time interval, the following scheduling methods have are available in CWorks;

1. Scheduling by specific week and day of the week for each month.
2. Scheduling by a specific date of each month.

5.9.1 New PM Scheduling By Specific Day And Week

Select PM Schedule (Time) in the main PM menu and click New PM Schedule in the PM Schedule List form. A sub-PM menu screen would pop-up (refer screenshots below).

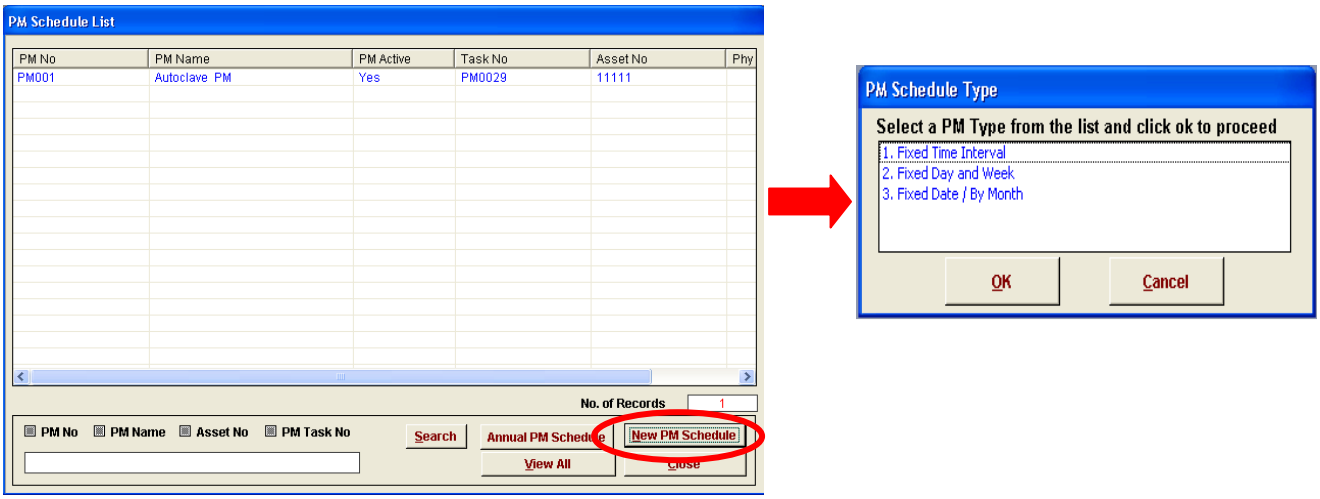


Figure 88: Selecting PM Type

Select Fixed Day and Week Type and click "OK". This will activate New PM Schedule screen, see Figure 89.

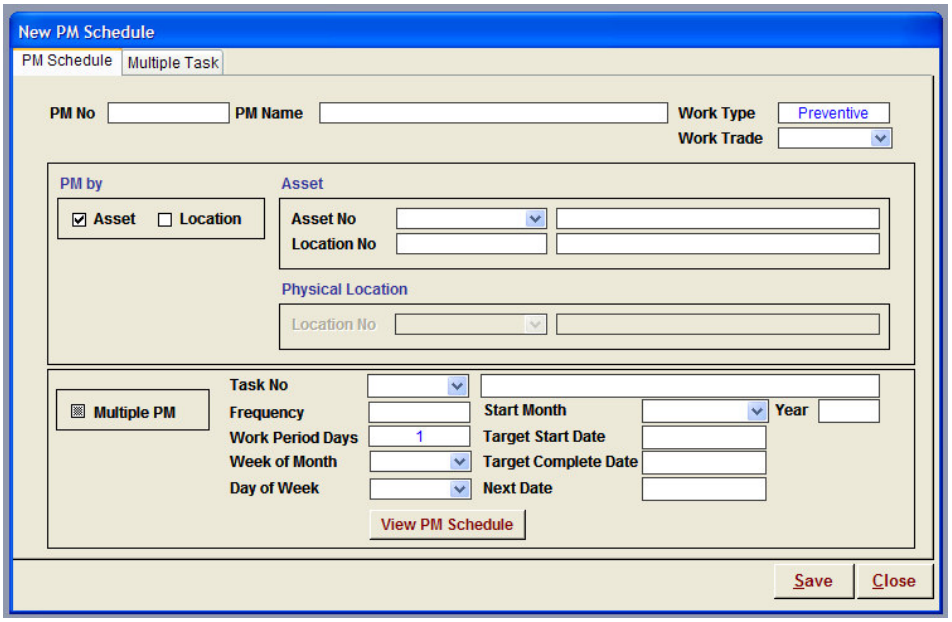


Figure 89: New PM Schedule

The changes are in the scheduling procedure of the PM schedule master. The table below lists the functions of the modified fields;

Fields	Description
Frequency	Defines the frequency of the Preventive Maintenance (PM) work order generation in number of months.
Work Period Days	Defines the number of days, which shall be taken to complete the PM Task. Defaults to 1 day.
Week of the Month	Select the specific week (first, second, third, fourth or last week) of the month for the PM work order to be generated.
Day of the Week	Select the specific day of the week (Monday – Sunday) for the PM work order to be generated.
Start Month and Year	Specify the starting month and year of the PM schedule. Note: The combination of Start Month, Week of Month and Day of Week must be larger than the current date and the last PM Generation date.
Target Start Date	This is a read only field which is automatically calculated. It displays the target start date of the PM work order based on the selected combination of week, day and start month and year.
Target Complete Date	Target Complete Date = Target Start Date + (Work Period Days – 1).

Fields	Description
Next Start Date	This is a read only field which is automatically calculated. It displays the next target start date for the PM schedule based on the scheduling criteria.
Multiple PM	Click the Multiple PM tick box to activate the Multiple PM tab. The method of scheduling Multiple PMs is the same as doing it in the conventional PM schedule screens.

5.10 Fixed Date / By Month -Preventive Maintenance

Select PM Schedule (Time) in the main PM menu and click New PM Schedule in the PM Schedule List form. A sub-PM menu screen would pop-up (refer screenshots below).

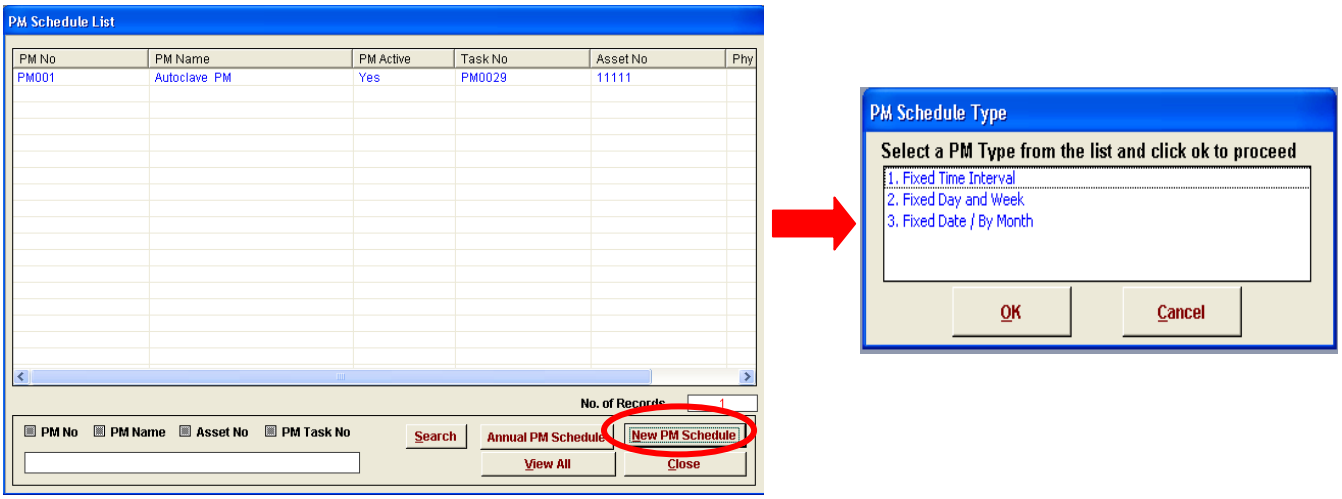


Figure 90: Selecting PM Type

Select Fixed Day Type and click "OK". This will activate New PM Schedule screen, see Figure 91.

5.10.1 New PM Scheduling By Specific Day

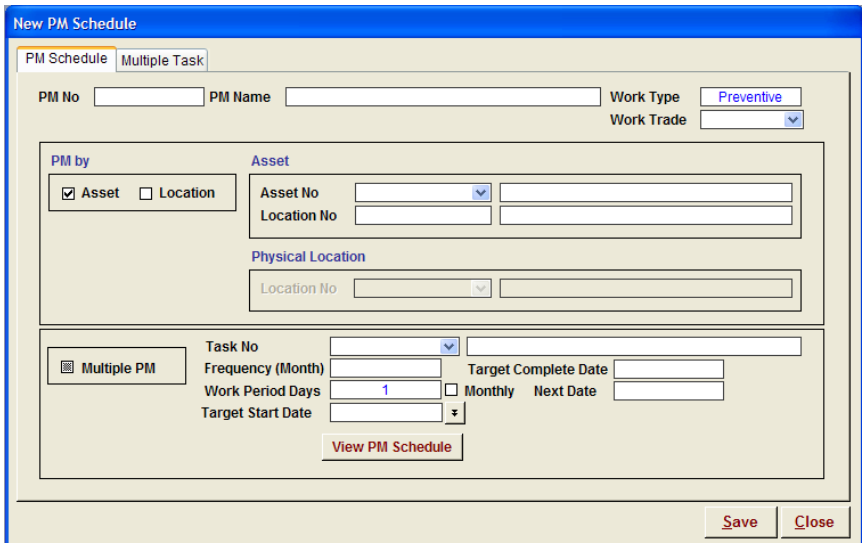


Figure 91: New PM Schedule

Fields	Description
Frequency	Defines the frequency of the Preventive Maintenance (PM) work order generation in number of months.
Work Period Days	Defines the number of days, which shall be taken to complete the PM Task. Defaults to 1 day.
Target Start Date	Click on the command button and select a target start date from the calendar. Note: The selected target start date must be larger than the current date and the last PM Generation date. The PM work orders will be generated on the selected date of each month in accordance to the preset frequency.
Target Complete Date	Target Complete Date = Target Start Date + (Work Period Days – 1).
Next Start Date	This is a read only field which is automatically calculated. It displays the next target start date for the PM schedule based on the scheduling criteria.
Multiple PM	Click the Multiple PM tick box to activate the Multiple PM tab. The method of scheduling Multiple PMs is the same as doing it in the conventional PM schedule screens.

Note: Fixed Day / Week and Fixed Date type Preventive Maintenance work orders are generated simultaneously with the Fixed Time Interval type PM work orders in the PM Generation form.

5.11 Metered / Condition Monitoring Based -Preventive Maintenance

5.11.1 Introduction

Preventive maintenance masters based on metered readings and time on a which ever comes first basis are created in this module. Metered preventive maintenance work orders can be generated based on a combination of metered and time based conditions.

5.11.2 How To Create A Metered PM Schedule Master?

Click on PM Schedule (Meters) the main PM menu to select Metered Preventive Maintenance schedules. A Meter List screen would pop-up as below.

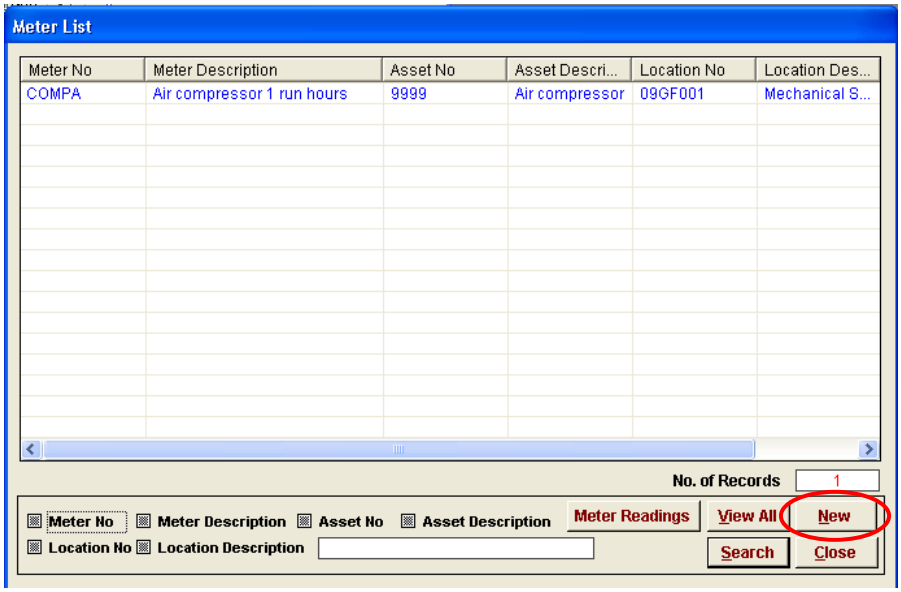


Figure 92: Meter List

Click on New, the New PM by Meters screen would pop-up (refer to screenshot below).

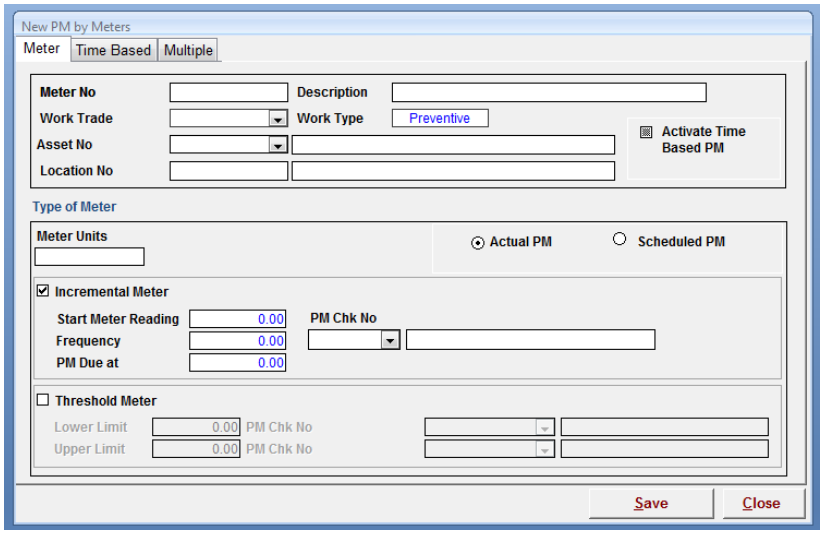


Figure 93: New PM by Meters

5.11.3 Types Of Metered Preventive Maintenance

Metered PMs in CWorks CMMS can be established according to;

1. Threshold meters (upper and lower limits).
2. Incremental meters (fixed meter interval)
3. Incremental meter (Multiple meter task)
4. Incremental meters and time based (which ever comes first basis).

Metered PM schedules for assets are created in the New PM by Meters screen. The type of meter, its PM Tasks and time interval for generation (if applicable) is saved in this screen. The list fields to be entered and their description are listed below. Upon completing all fields in the screen, click on Save to save the record or Close to exit without saving the record.

Fields	Description
Meter No	A unique number to identify of the meter. Duplicate meter numbers are not allowed.
Meter Description	A description of the meter.
Work Trade	The trade or section that is primarily responsible for the work (obtained from the Work Trade Master)
Work Type	Defaults to type Preventive

Fields	Description
Asset No & Description	Select the asset number which the meter is associated to and which the PM Task shall be generated against.
Location No & Description	Displays the location of the asset. Default data based on the selected asset
Activate Time Based PM	Tick box. Activates the Time Based PM tab for scheduling of by time intervals. Time based PMs can only be activated for Incremental type meters.
Meter Units	Enter the meter units. Alphanumeric field up to 50 characters.
Type of meter – Threshold	Threshold type metered PMs are typically used in condition monitoring. PM Tasks are generated when the meter value exceeds or is below the set upper and lower limits defined in this record. Tick threshold type meters to activate Upper and Lower Limit fields.
Lower Limit	Specify the lower limit of the meter. Any logged meter reading below the lower limit will flag for a PM work order to be generated.
Upper Limit	Specify the upper limit of the meter. Any logged meter reading above the upper limit will flag for a PM work order to be generated.
PM Task No (Lower Limit)	Specifies the PM Task to be generated when the logged meter reading is below the Lower Limit defined in this record.
PM Task No (Higher Limit)	Specifies the PM Task to be generated when the logged meter reading is above the Higher Limit defined in this record.
Type of meter - Incremental	Tick Incremental type meters to activate the start meter reading and frequency fields. Incremental type PMs are PMs which are generated based on meter readings reaching a preset increment from the last meter reading for which a PM work order is flagged for generation (such as a standby generator run hours). Multiple PM tasks can be scheduled, for example; Task No 001 every 150 hours / 30 days and Task No 002 every 450 hours / 90 days.
Start Meter Reading	Enter the last PM meter reading. The next PM Due reading is calculated based on this reading.
Frequency	Enter the meter interval which the PM work order is to be flagged for generation.
PM Due at	Calculated field - Start Meter Reading + Frequency. Indicated when the PM work order will be flagged for generation.
PM Task No (Incremental)	Specifies the PM Task to be generated when the logged meter reading is equal or higher than the calculated PM Due at field.

Fields	Description
Actual PM / Scheduled PM	Defaults to Actual PM. It determines the way the next PM work order is generated for Incremental Type meters. For Actual PM type (default type), the next PM work order is based on the work order actual end date and meter reading entered when closing the work order. Next PM Due = Meter Reading After PM (at current work order screen) + meter frequency Next Target Start Date = WO Actual End Date (when closed) + Frequency in days. For Scheduled type PM, the PM Work Order will based on the following; Next PM Due = Meter Reading at PM Generation + meter frequency Next Target Start Date = PM WO Generation Date + Frequency in days.

Select Activate Time Based PM, see Figure 93, to enable Incremental type meter PMs to be scheduled by both meter readings and fixed time intervals. Ticking the Activate Time Based PM tick box will enable the Time Based tab as seen below.

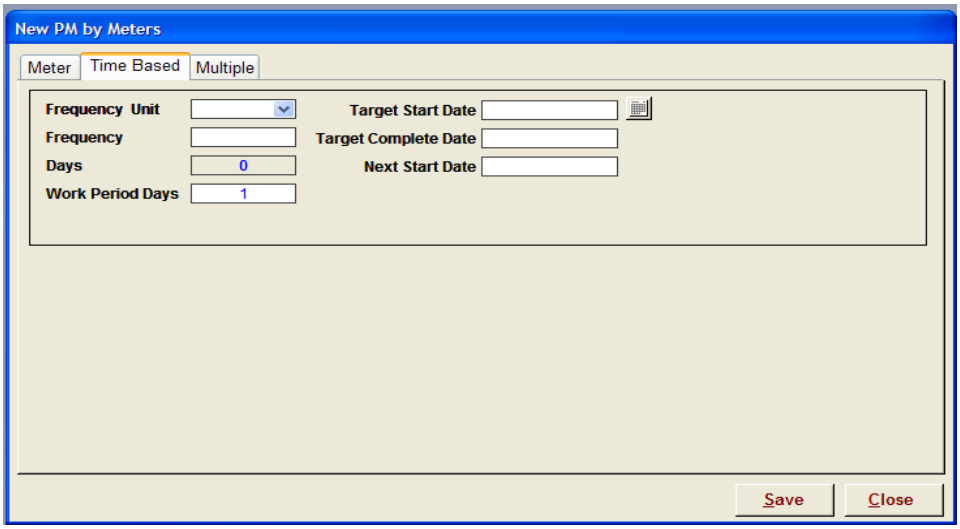


Figure 94: Time Based PM

Fields	Description
Frequency Unit	Defines the frequency unit of the PM. Available units are Day (1 day), Week (7 days) and Month (28 days).

Fields	Description
Frequency	Defines the factor for which the Frequency Unit is multiplied to provide the number of days that should elapse between generation of PM work orders.
Days	The number of days that should elapse between generation of PM work orders. This is a read only field and is automatically calculated. Formula: Days = Frequency Unit (in Days) x Frequency
Work Period Days	Defines the number of days, which shall be taken to complete the PM Task. Defaults to 1 day.
Target Start Date	Defines the date that the first PM work order is scheduled to be generated. Use the calendar to select a date.
Target Complete Date	This is a read only field, which is automatically calculated. It displays the target completion date of the PM work order. Target Complete Date = Target Start Date + (Work Period Days – 1)
Next Start Date	This is a read only field, which is automatically calculated. It displays the next target start date for the PM schedule. Next Start Date = Target Complete Date + Days
Save	Click Save to save the record.
Close	Click Close to exit the screen without saving the record.

5.11.4 How To Add Multiple Tasks?

Multiple PM Tasks can be specified for metered PMs. The PM tasks are specified by task sequences. For example, if a metered PM task is specified to be generated every 150 hours, then entering a multiple PM task of sequence 4 will result in the multiple PM task being generated every 600 hours (150 x 4).

To specify multiple PM tasks, click the Mutliple tab in the New or Current PM by Meters form (refer to screenshot below).

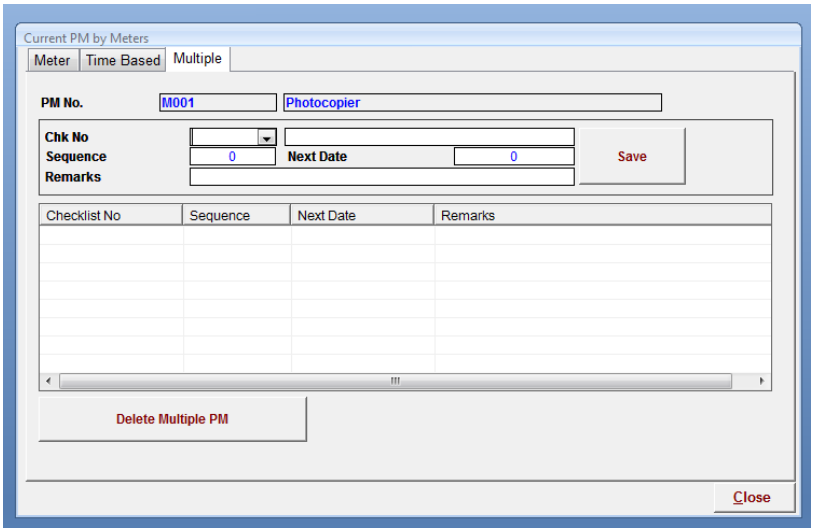


Figure 95: Current PM by Meters

Fields	Description
Task No	Defines the multiple PM task. Select a Task No from the list. This is a mandatory field
Task Sequence	Defines the PM count at which the defined task will be generated. Example, 2 means that the Task will be generated every 2 times the PM is generated, 12 means every 12 times etc. Hence if the first PM task frequency is every 100 hours, then if a Multiple Task No of Task Sequence of 4 is specified, the Multiple Task will be generated every 400 hours. This is a mandatory field.
Remarks	A remarks field to log any comments regarding the multiple tasks.
Next Date	The Next Date field displays the next PM date for the multiple PM Task based on the Target Start Date defined in the Time Based tab. A date will be displayed only if the Time Based PM is activated. This is a read only field.
Save	To save a multiple task record, click the "Save" button next to the Next Date field.
Delete Multiple PM	To Delete the saved schedule, click the "Delete Multiple PM" button.

5.11.5 How To Log Meter Readings And Generate PM Work Orders?

Select PM Schedule (Meters) from the Preventive Maintenance main menu, see Figure 62 . A meter list screen would pop-up (refer below).

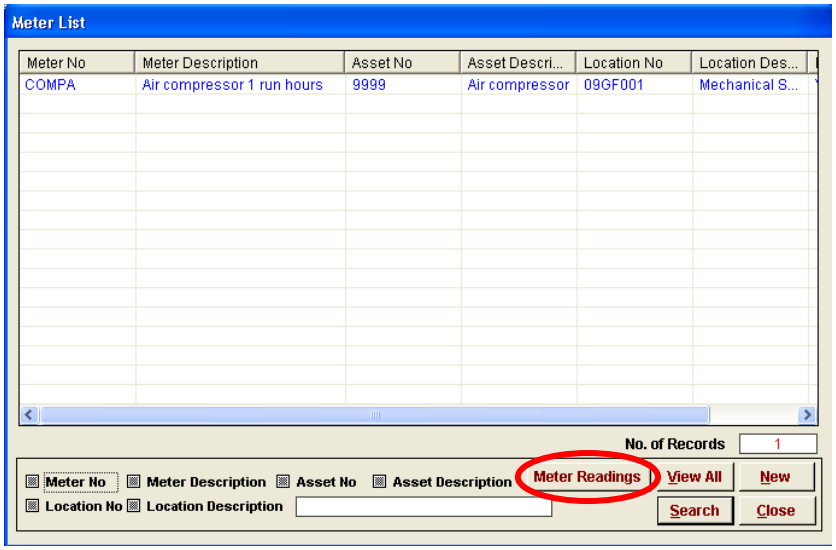


Figure 96: Meter List

Select 

. The Meter Readings screen would pop-up.

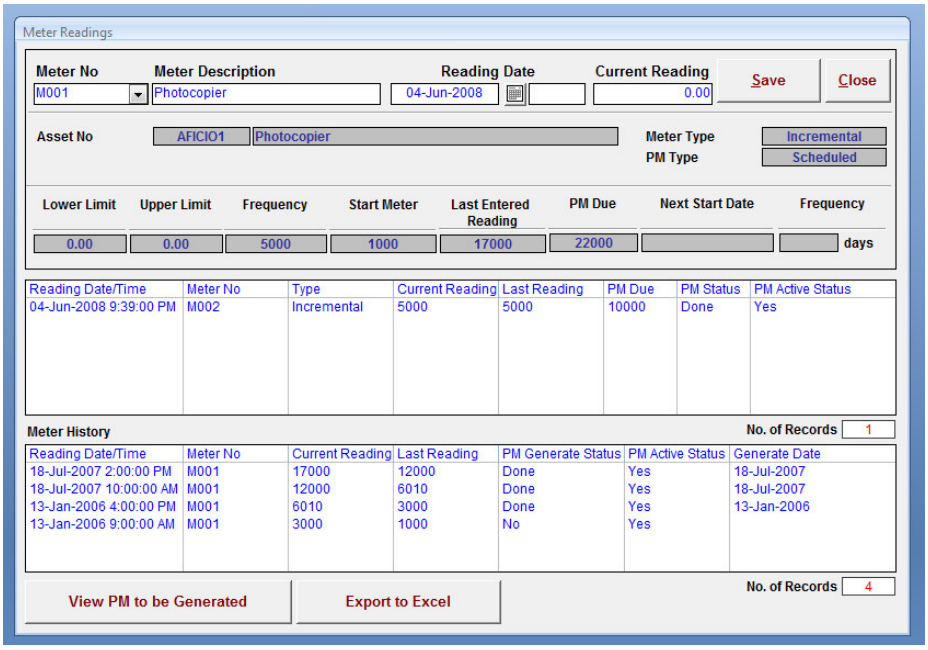


Figure 97: Meter Readings

Logged meter readings are keyed into the system via this screen. PM work orders for metered PMs are also generated here.

Fields	Description
Meter No	Key-in the meter no or select from the list the meter which the reading was logged from the field for input into the system.
Meter Description	Description of the Meter from the Meter master record.
Reading Date / Time	The date and time the meter reading was logged from the field.
Current Reading	Enter the logged meter reading in this field.
Asset No & Description	Read only field. Displays the Asset No & Description of the asset for which the PM work order shall be raised. The data is carried over from the registered Meter master.
Meter Type	Read only field. Describes the type of meter, ie. Incremental or Threshold.
PM Type	Indicates whether the PM type is Actual or Scheduled. This is only applicable for Incremental type meters.
Lower & Upper Limit	Read only field. Lower and Upper Limit values for Threshold type meter. Values are carried forward from the registered Meter master.
Start Meter	The initial meter reading as registered in the Meter master (for Incremental type meters only).
Frequency	The difference between the last PM meter reading and current reading which will result in a PM work order being flagged for generation (for Incremental type meters only).
Last Reading	The last reading which was logged into the system for the selected meter (for Incremental meters only)
PM Due	The meter reading at which a PM work order will be flagged for generation.
Next Start Date	Read only field. Displays the next PM due date.
Frequency	Read only field. Displays the frequency in days for generation of each time interval based PM work order.
Save	To save a meter reading.
Close	To exit the screen or to exit without saving the a meter reading.

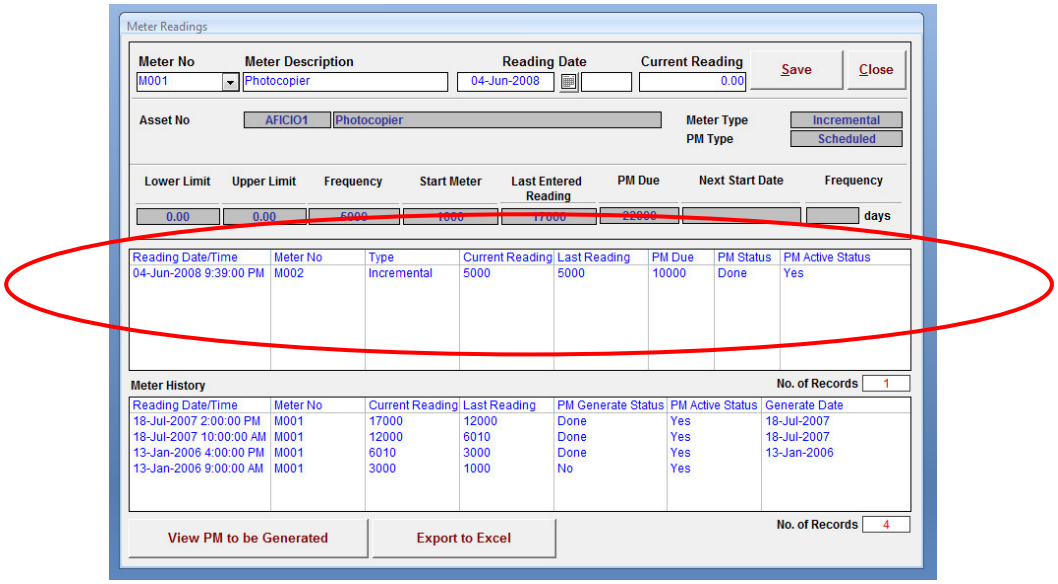


Figure 98: Meter Readings

The table highlighted in the above screenshot displays the list of meter readings keyed into the system at the current system date. In the above example, the system date is 12th November 2002, hence all meter readings entered on this date will be displayed in the table. If the form is opened on the following day, ie 13th November 2002, the table will be empty unless more meter readings are keyed into the system on the 13th Nov.

The Meter History table displays the logged meter reading history of the selected meter. This history can be exported to excel by clicking "Export to Excel" button.

5.11.5.1 Generating Metered PM Work Order

A preventive maintenance (PM) work order is flagged for generation when the logged meter reading meets the preset condition for work order generation. A "Yes" at the PM Status field indicates that the conditions for a work order generation has been met (refer below). Upon work order generation the PM Status will change to "Done".

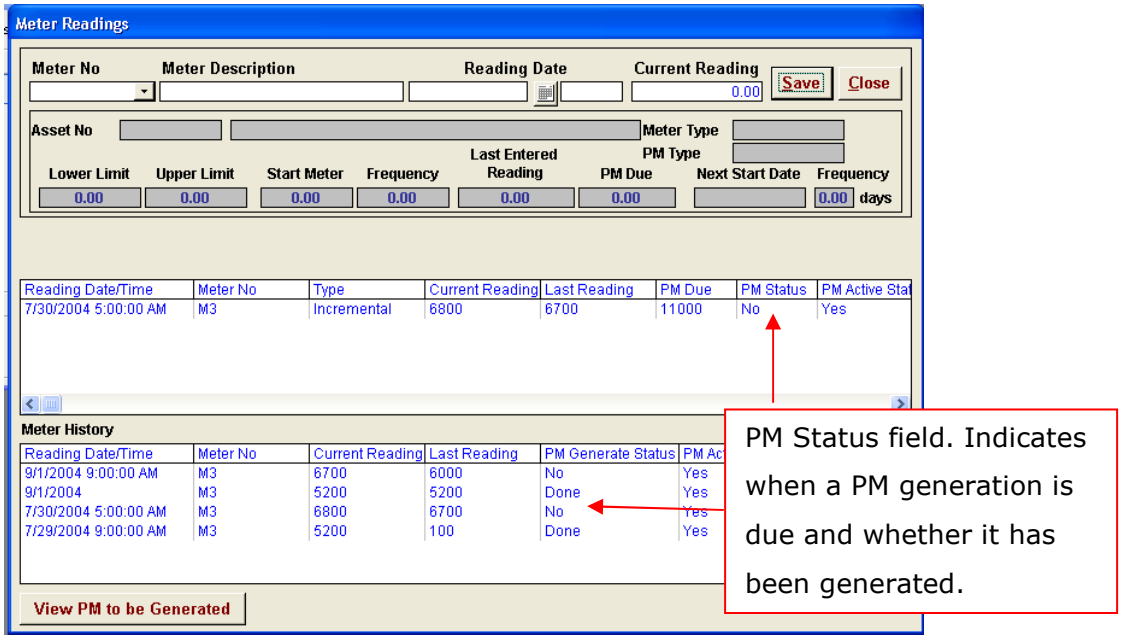


Figure 99: PM Status

To generate due PM work orders, click on 

The PM Meter Generation screen would pop-up.

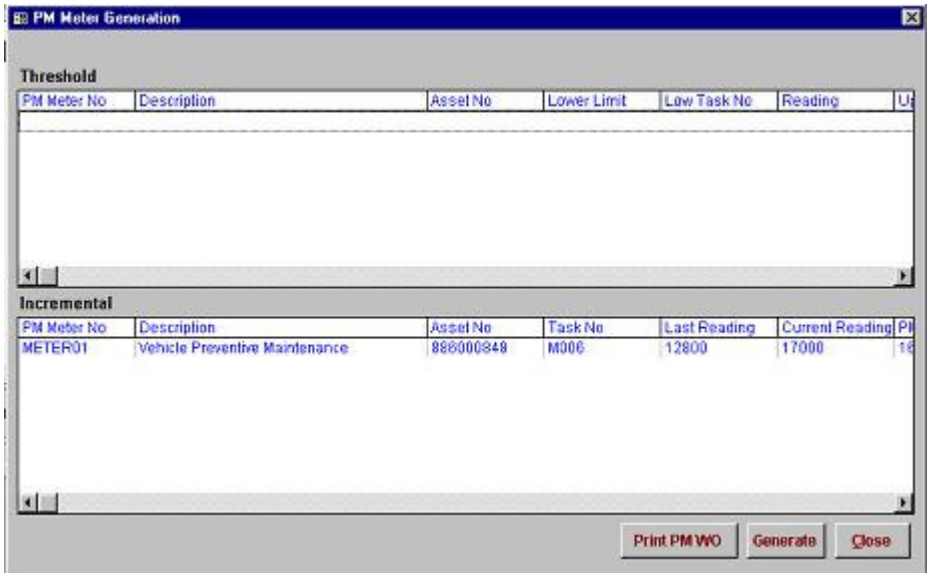


Figure 100: PM Meter Generation

To generate the work orders, click 

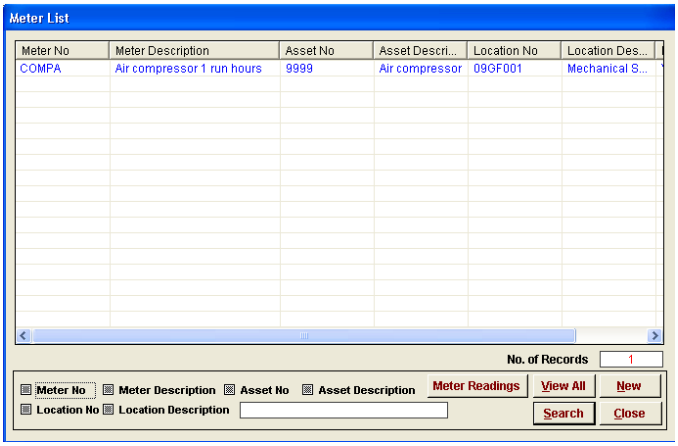
To print the generated work orders click 

5.11.5.2 Closing Incremental Based Actual Type PM WO's

When closing a PM work order which Incremental based and Actual Type, a Meter Reading After PM field has to be specified. This reading and the work order Actual End Date will be used as the basis of the next PM Due reading and Next Target Start date respectively. No next PM Due or Next Target Start Date can be given until the work order is closed.

5.11.6 How To Amend The Meter Master?

Open the Meter List screen (select PM Schedule (Meters) from the Preventive Maintenance main menu). Double click on the meter to be amended from the list and the Current PM by Meters would pop-up.



Meter List Screen: Select from the meter listing the meter to be amended and double click on the record.

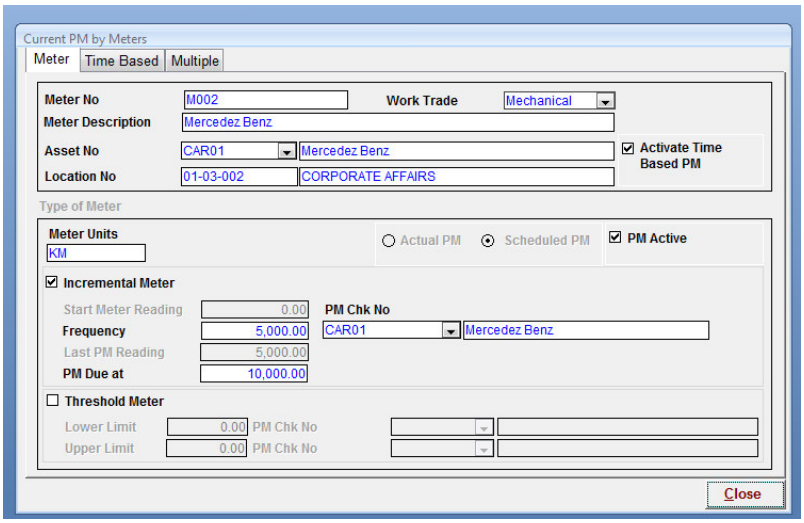


Figure 101: Amends To Meter Master

The meter details can be amended in this screen. The available amendments are as follows (all other fields are locked).

- Meter Description – Text field to change the meter description
- Meter Units – Text field to change the meter units
- Threshold Meter – The Lower & Upper Limits and the corresponding PM Task Nos can be amended here.
- Incremental Meter – The Frequency, PM Task No and PM Due At fields can be amended here. All others fields are locked.
- To inactivate a particular metered PM, click the PM Active tick box to remove the tick. No PM work orders will be flagged for generation when the tick at the PM Active tick box is removed. However, meter readings can still be keyed in at the Meter Readings screen.
- Actual / Scheduled PM – this option cannot be modified.
- To inactivate the time based PM, click the Activate Time Based PM tick box to remove the tick. This will remove the time based PM schedules.
- To amend the time based PM, select the PM by Time Based tab (refer above screenshot) on the Current PM by Meters screen. The schedule can be amended by changing the Frequency Units, Frequency, Work Period Days and the Next Start Date fields.

Note : Upon login, the system will automatically check for PM by meters for time based. If there are PMs due based on the time based criteria, the system would pop-up a reminder to generate PM work orders for meter.

EMPLOYEE MODULE

6. Employee

6.1 How To Add A New Employee/Requester?

Click on Employee icon on the Main Menu, see Figure 1. An employee listing would pop-up.

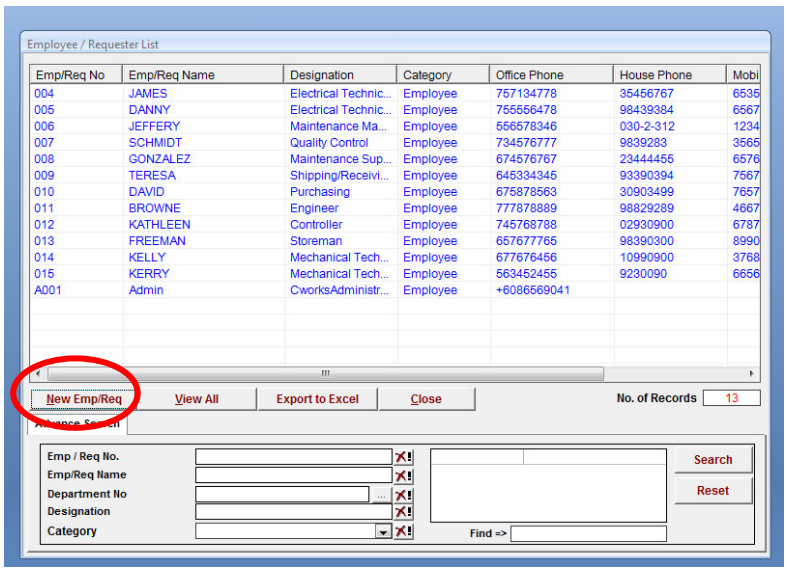


Figure 102: Employee/Requester List

To add a new employee / requester, 

button. A New Employee/Requester screen will be displayed.

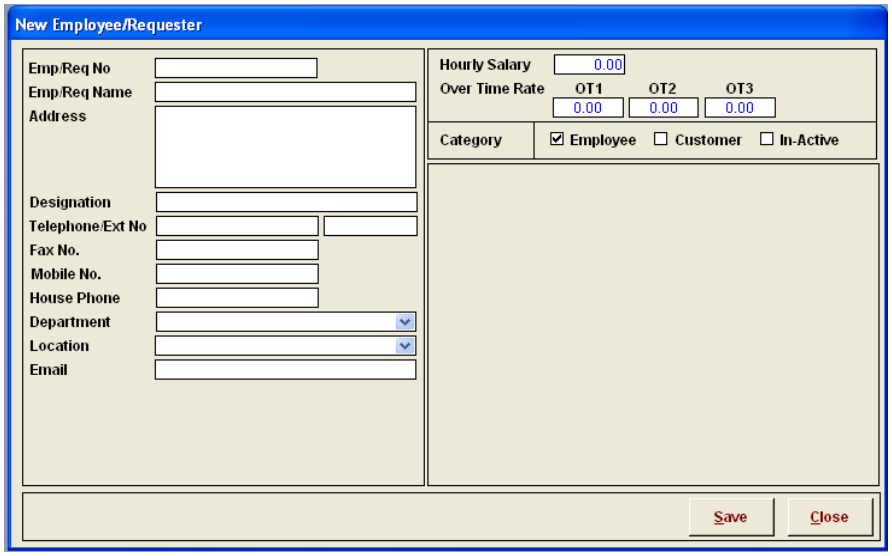


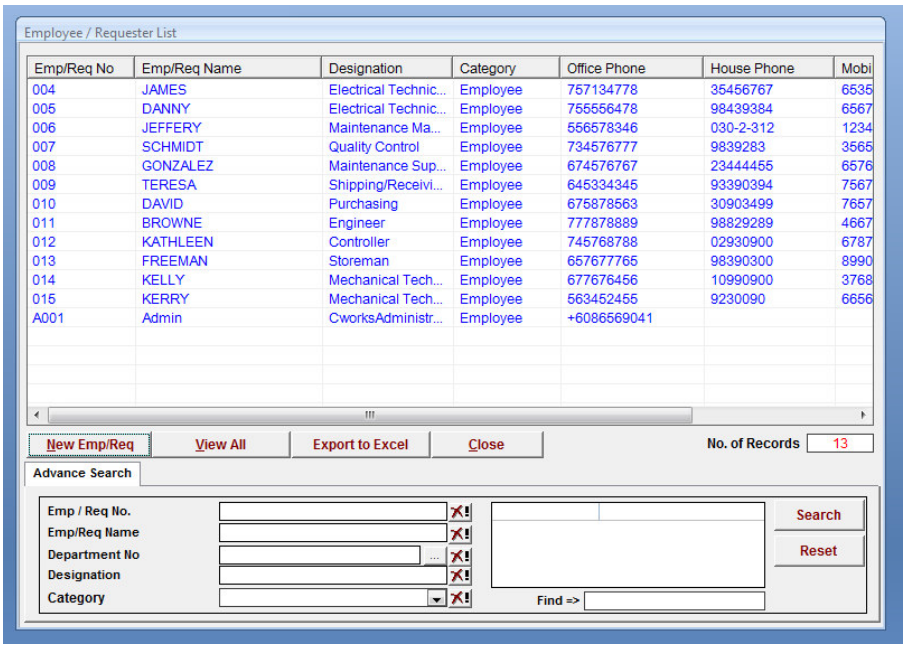
Figure 103: New Employee/Requester

Fields	Description
Employee No	Assign a unique number to the new employee or requester you wish to register.
Name	Enter the name of the employee or requester
Address	Enter the address of the employee or requester
Designation	Enter the job or work designation of the employee or requester
Telephone Ext No	Enter the office phone number and phone extension where employee or requester can be contacted
Fax No	Enter the facsimile number of the employee or requester
Mobile No.	Enter the mobile phone number of the employee or requester
House Phone	Enter the home phone number of the employee or requester
Department	Choose from the list. A unique code assigned to a department and its description. This data is set in the masters.
Office Location	Enter the office location of the employee or requester
Email	Enter the email address of the employee or requester
Hourly Salary	Enter the wage rates per hour for the employee or requester
Over Time 1-3	Enter the overtime rates for the employee or requester
Category ☑ Employee ☐ Customer ☐ In-Active	When user ticks on "Employee" means that he/she is part of the maintenance organisation / department. When user ticks on "Customer" means that he/she is not part of the maintenance organisation / department and functions as a customer to the maintenance organisation. The person could also be an employee of the organisation or a customer to the organisation. The "In-Active" field means the Emp/Req is not attached with organization anymore.
Save	Click on this button to save any changes
Close	Click on this button to close the screen without saving the record

Note: Once an employee has been registered, the system would not allow removal of the employee number.

6.2 How To View And Modify An Employee/Requester Data?

Click the Employee button on the main menu, an Employee / Requester List would pop-up, see Figure 104. It will show you a list of all the employees or requesters in your database. Double-click on any of the employees/ requesters and the Current Employee/Requester screen would pop-up. The user will be able to view and modify the Employee/Requester details in this screen.



Emp/Req No	Emp/Req Name	Designation	Category	Office Phone	House Phone	Mobi
004	JAMES	Electrical Technic...	Employee	757134778	35456767	6535
005	DANNY	Electrical Technic...	Employee	755556478	98439384	6567
006	JEFFERY	Maintenance Ma...	Employee	556578346	030-2-312	1234
007	SCHMIDT	Quality Control	Employee	734576777	9839283	3565
008	GONZALEZ	Maintenance Sup...	Employee	674576767	23444455	6576
009	TERESA	Shipping/Receivi...	Employee	645334345	93390394	7567
010	DAVID	Purchasing	Employee	675878563	30903499	7657
011	BROWNE	Engineer	Employee	777878889	98829289	4667
012	KATHLEEN	Controller	Employee	745768788	02930900	6787
013	FREEMAN	Storeman	Employee	657677765	98390300	8990
014	KELLY	Mechanical Tech...	Employee	677676456	10990900	3768
015	KERRY	Mechanical Tech...	Employee	563452455	9230090	6656
A001	Admin	CworksAdministr...	Employee	+6086569041		

Figure 104: Employee/Requester List

Apart from the employee data, you are able to view the assets assigned to the employee, see Figure 105, as defined in the Asset Register. Modify the fields in the form and click Close. You will be prompted whether you wish to save the changes. Click "Yes" to save the changes and exit or "No" to exit the screen without saving the changes.

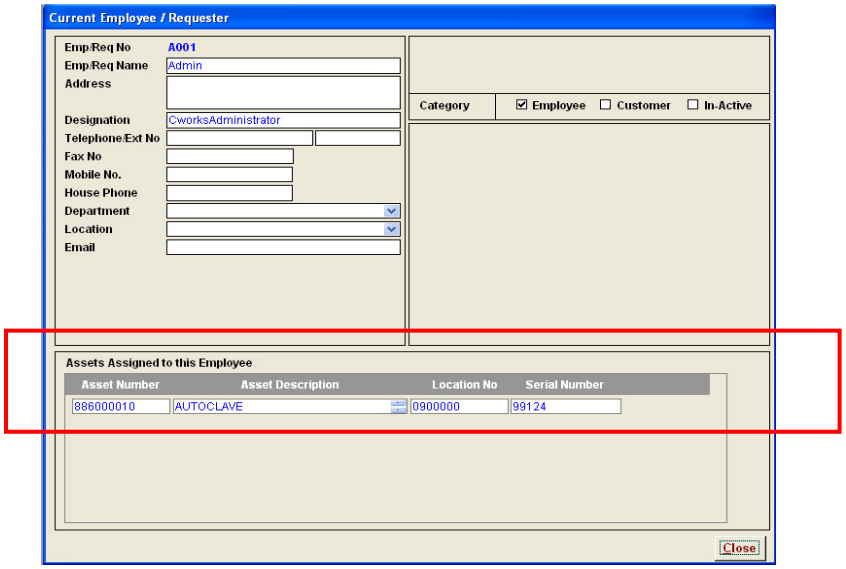


Figure 105: Current Employee/Requester Records

6.3 How To Filter Out Employee Information?

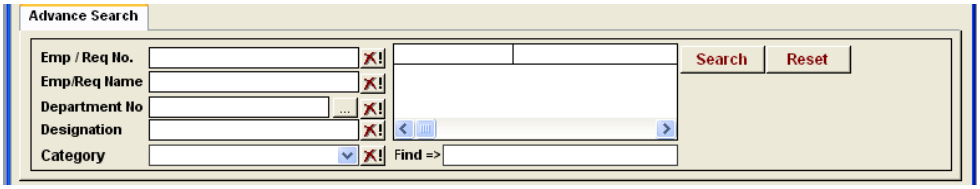


Figure 106: Search Options

To select a parameter in a field, click ... . The available options for the parameter will be displayed on the far right hand side of the screen (beside the search button). Select the parameter by clicking once on the text. More than one parameter can be selected by just clicking on another parameter text. The find column below the list allows user to find for the closest match in the list to ease browsing, for example Department No that contains the letter E the list will list all Department No that contains the letter E.

Click to clear all the selected parameter in the field. To clear all the filter options, click the "Reset" button.

To do a search, click on the field of choice, enter the field contents and click on the Search button.

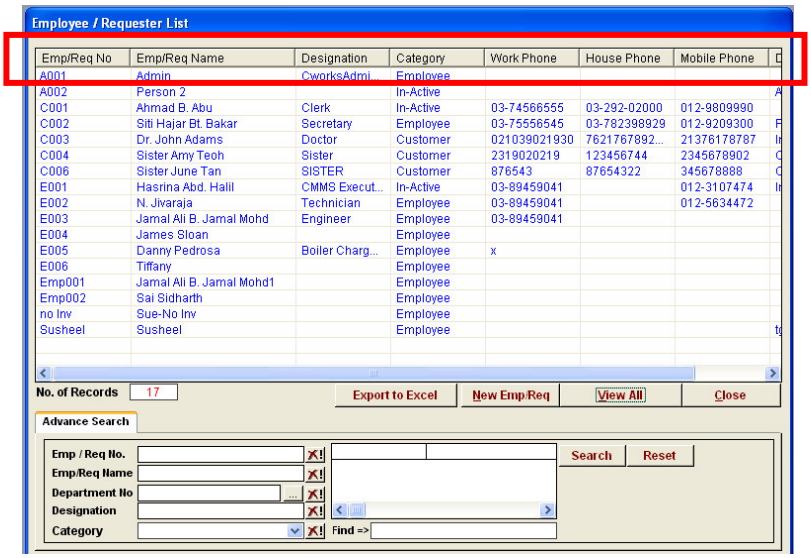


Figure 107

Users can also sort a search results, ascending or descending order, by clicking on the column header description.

MATERIAL MODULE

7. Material

7.1 What is the purpose of a Material module?

The primary purpose is to track parts as they move in and out of the warehouse and to improve material accuracy, manage costs and reduce "out of stock" delays. Tracking of parts and equipment issues, transfers and returns are critical to a productive maintenance organization. Two major aspects of Material management are :-

- Physical Management which involves controlling and administering the movement of stock during receiving, issuing, transfer & returns.
- Material Valuation Management which involves managing of stock value changes during stock movement through the operational processes.

7.2 How To Search For Parts And View The Details?

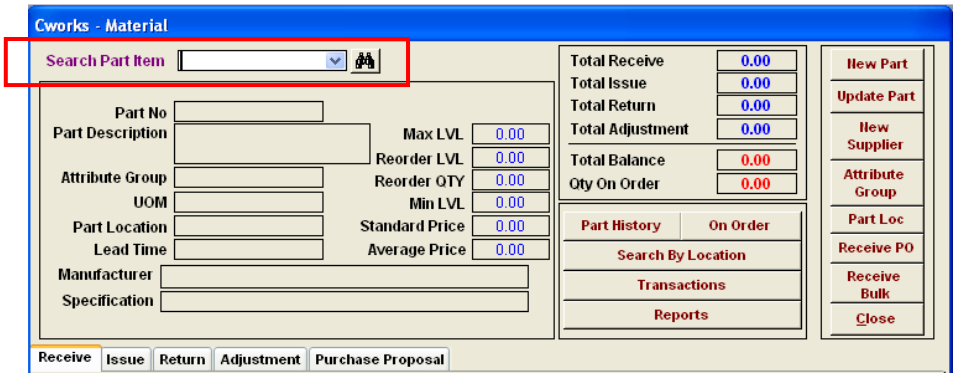


Figure 108: Material Main Menu

Click on  to activate the Search by Part form. Double click on the part to carry out the transaction.

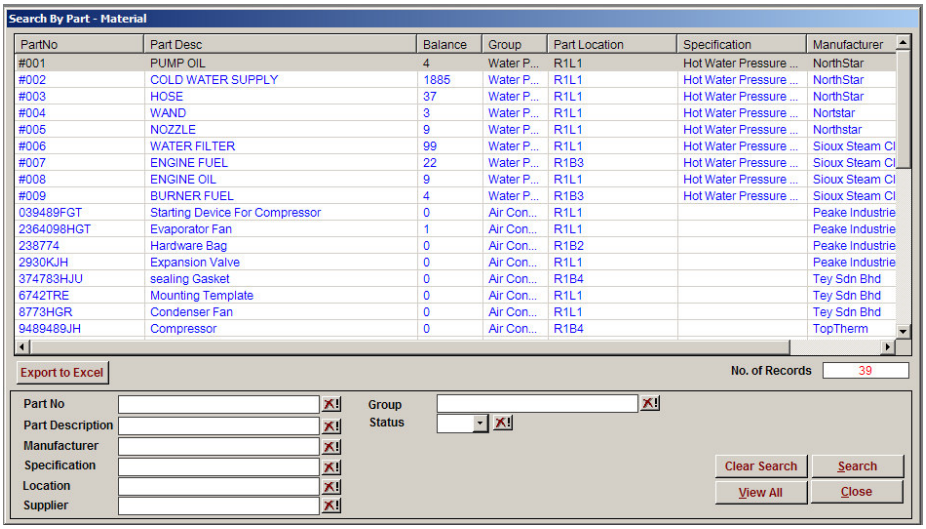
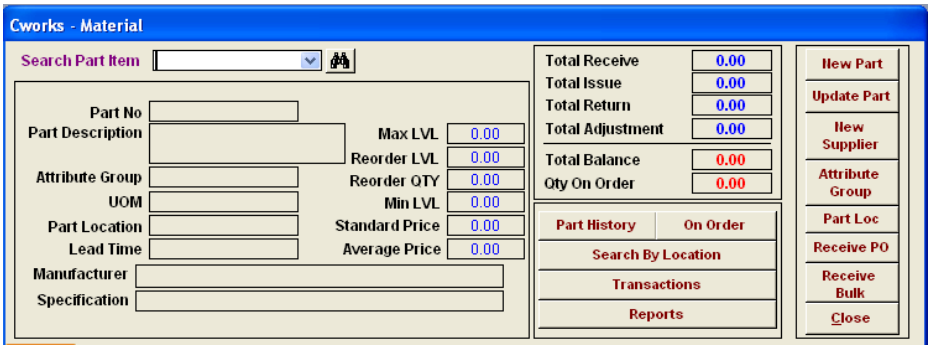


Figure 109 : Searching For Parts.

The selected part would populate all information associated to the part. Search for a part can be done using the search function on the bottom.



Fields	Description
Part No.	Part no. is a unique code assigned to a part. This filed will display the part no after the user chooses from the top bar. This data is set in the masters for parts.
Part Description	Default based on data set in part master. This field describes the part description.
Status	Displays the status of the part whether Active or Inactive. No transaction would be allowed if status of the part is "Inactive"
Attribute Group	Default based on data set in part master. This field describes the part group.
UoM	Default base on data set in part masters. This field describes the unit of measurement.
Part Location	Default base on data set in part masters. This field describes the location of the part in the warehouse.
Lead Time	Default base on data set in part masters. This field describes the time frame for the new stock to be supplied.
Manufacturer	Default base on data set in part masters. This field describes the manufacturer of the part.
Specification	Default base on data set in part masters. This field describes the specification of the part.
Max Level	Default base on data set in part masters. This field describes the maximum stock level in the store/warehouse.
Reorder Level	Default base on data set in part masters. This field describes the stock level when the user should reorder.
Reorder Quantity	Default based on data set in part masters. This field describes the stock quantity the user preferred quantity of order.
Min Level	Default base on data set in part masters. This field describes the minimum stock level in the store/warehouse.
Standard Price	This is the initial price set in the parts master.

Fields	Description
Average Price	Automatically calculated based on; $\frac{(\text{Avg Price}*\text{Total Balance}) + (\text{Total Tran.})}{(\text{Total Balance}) + (\text{Quantity})}$
Total Received, Total Issue, Total Return, Total Adjustment, Total Balance, Qty On Order	Automatically updated by the system after a transaction

7.3 How To Register A New Part?

When a part or item is received into the store for the first time, it has to be registered into the system by assigning a unique code to it.

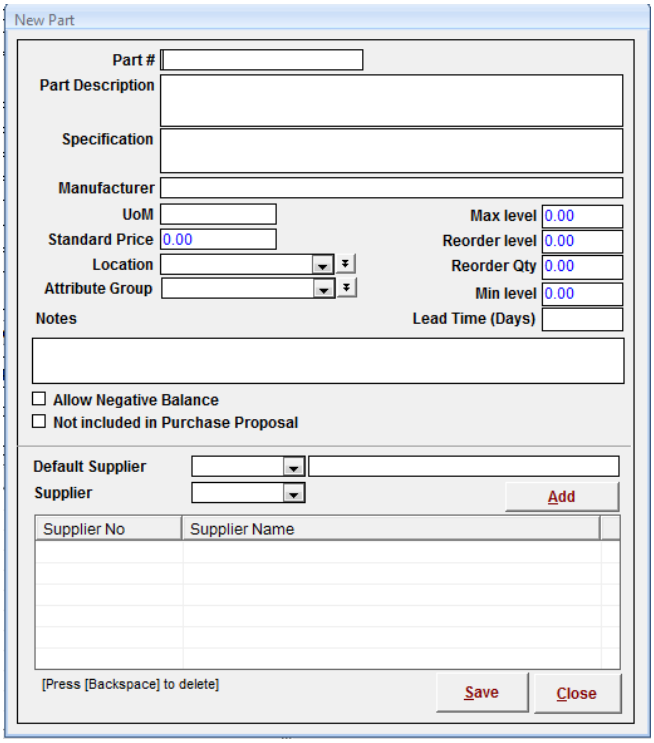


Figure 110: New Part

Click on 

button, the above screen would pop-up.

Fields	Description
Part No.	A unique number assigned to a part.
Part Description	A name for the parts
Specification	Part specification.
Manufacturer	The part manufacturer.
UoM	Unit of measurement
Attribute Group	A category assigned to a part. Click on this button to see a list of attribute groups or to add new group.
Standard Price	Initial price set for this part.
Notes	Any extra remarks.
Location	Location where the part were kept in the warehouse. Click on button to view list of part Location or register new ones.
Max Level	Maximum level to keep in the store / warehouse.
Reorder Level	Stock level when the user should reorder.
Reorder QTY	Quantity the user prefers to reorder
Min Level	Minimum level to have in the store / warehouse.
Lead time (Days)	Time frame for the new stock to be supplied.
Allow Negative Balance	Tick on, means user allows negative balance in the store for this stock item. Un-tick means user do not allow negative balance in the store.
Not Included in Purchase Proposal	Tick the check box if user prefer not to list the part in the Purchase Proposal List.
Default Supplier	Create a Default Supplier primarily supplying the part. This default supplier will shown in the Purchase Proposal list. User can filter supplier names when doing "Receive".
Supplier	Assigned multiple suppliers who can supply these parts. User can filter supplier names when doing "Receive".
Add	Click on the button to save the supplier
Save	Click on button to save the record.
Close	Click on button exit without saving.

Once a part has been registered, the system would not allow removal of the part number. However, details on the part can be modified.

7.4 How To Modify Parts Information?

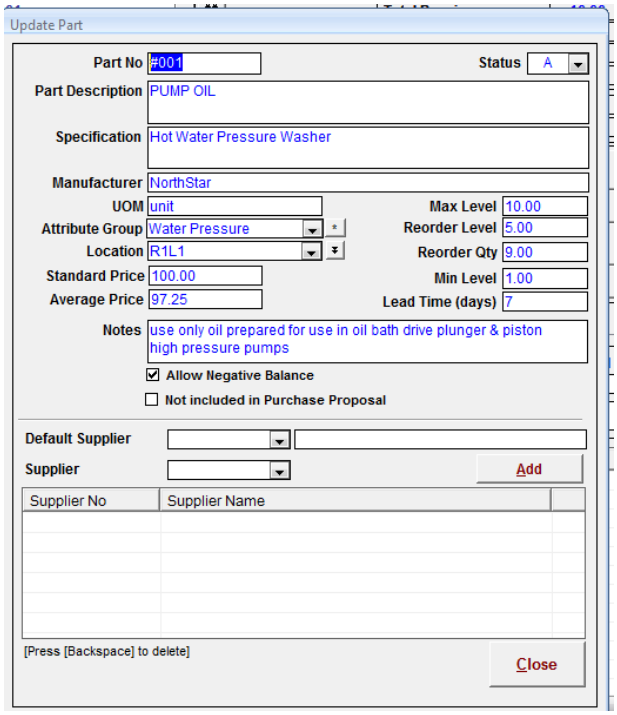


Figure 111: Update Part

Click on **Update Part** this button and the above screen would pop-up. Modify the fields in the Update Part form and click Close. You will be prompted whether you wish to save the changes.

Click "**Yes**" to save the changes and exit or "**No**" to exit the screen without saving the changes.

Status of part in the warehouse.

A = Active

N = Not Active

7.5 How To Receive Parts In Material Module?

Upon purchase of goods, these items are received into the warehouse. During this time, this transaction is performed to record incoming goods and quantity. Click on  icon, the screen below would pop-up.

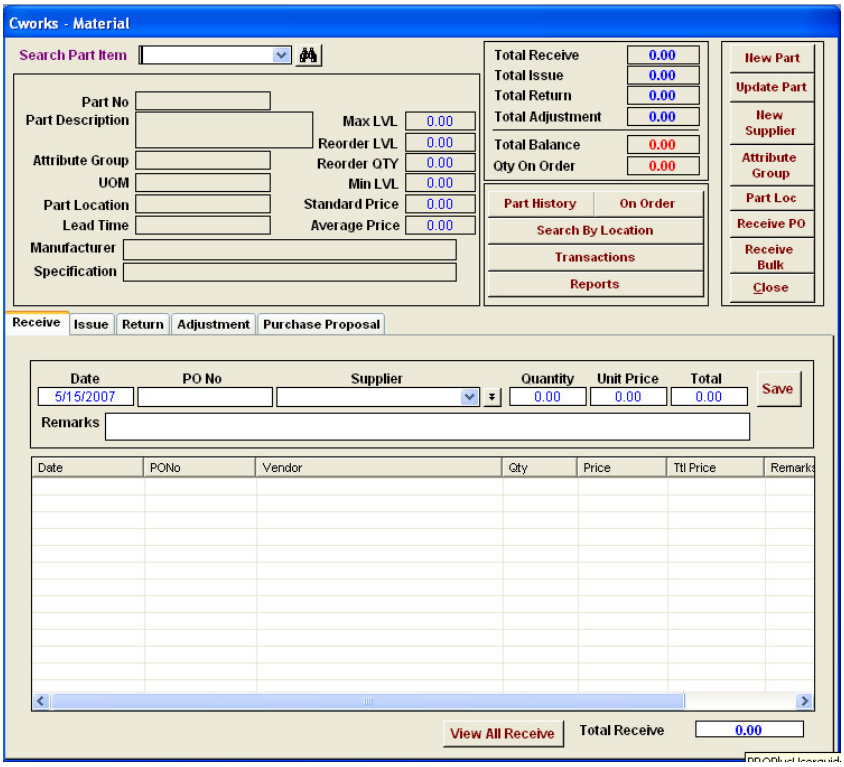


Figure 112: Receive Parts

Select the part no from the "Search Part" bar.

Fields	Description
Date	Date parts were received.
PO No.	Purchase order no.
Supplier	Supplier for the part. To search click on the button. The default list view is assigned supplier(s). To view all, click on VIEW ALL button.
Quantity	Amount received by the store
Unit Price	Current price the parts were bought at
Total	Automatically calculated. Formula Qty * Unit Price
Remarks	Any remark on part received.
Total Price	Automatically calculated. The grand total (Currency) for all the received done.
Save	To save the transaction record.

7.6 How To Receive Parts In Bulk?

Click on Receive Bulk to receive parts in bulk.

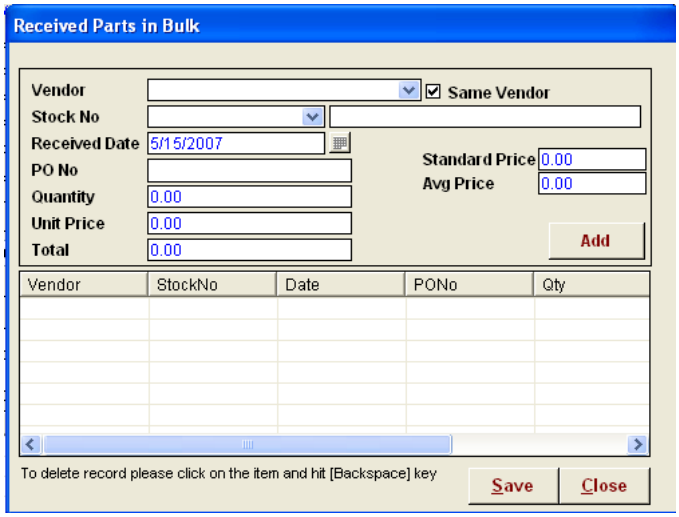


Figure 113: Received Parts In Bulk

Fields	Description
Vendor	Vendors name. List of Vendors preregistered.
☑ Same Vendor	Leave it ticked to receive multiple items from the same vendor
Stock No	Stock code and Description.
Received Date	Date received parts into the store
PO No.	Purchase Order number.
Quantity	Quantity received.
Unit Price	Price per unit received.
Total	Calculated automatically.
Standard & Avg Price	Default from masters. For display only.
Add	Click add to add items received to the list
Save	Click save to receive all item in the list
Close	Click to close the form without saving record

7.7 How To Issue Parts In Material?

Whenever an item is needed for work, it is issued from the store through this module. Part number and quantity issued is recorded. Issuing part could be done for a work order or Department.

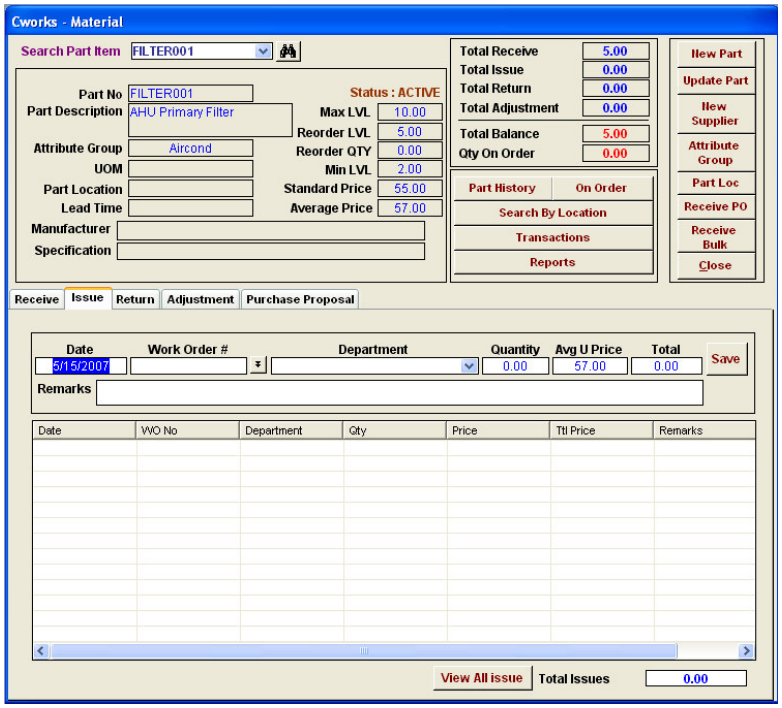


Figure 114: Issuing Parts

Select the part no from the "Search Part" bar.

Fields	Description
Date	Date issued parts
Work Order	Work order no. related to this issue. Click on this button to get a listing of all the work orders
Department	Department name where the parts are issued to
Quantity	Amount issued
Avg U Price	Automatically calculate.
Total	Automatically calculate base on Qty * Avg Price
Total Price	Automatically calculated. The grand total (Currency) for all the issued done.
Save	To save the transaction record.

7.8 How To Return Parts In Material?

Unused issued parts, which are returned to the store, can be captured through this module. The stock return can be done based on a work order or Department

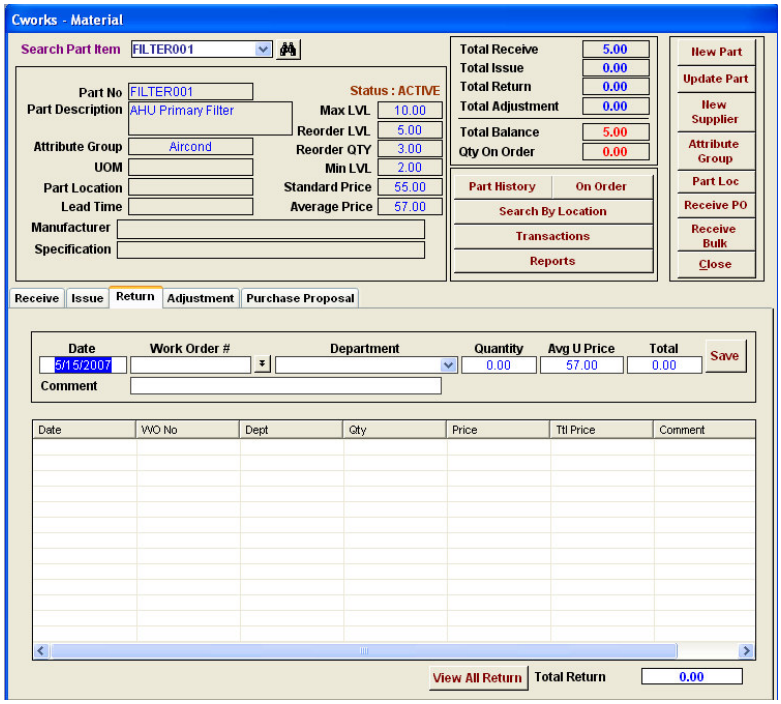


Figure 115: Return Parts

Select the part no from the "Search Part" bar.

Fields	Description
Date	Date parts were returned
Work Order	Work order no. related to this transaction. Click on this Button to get a listing of all the work orders.
Department	Name of the department which returned the part
Quantity	Amount return
Avg U Price	Automatically calculated
Total	Automatically calculated based on Qty * Avg Price
Comments	Any remarks need to be mention for this transaction.
Total Price	Automatically calculated. The grand total (Currency) for all the issued done.
Save	To save the transaction record.

7.9 How To Do Adjustments In Material?

Whenever there is a mistake in any of the above transactions, data entry errors, or losses in the store, an Adjustment can be done to correct the balance quantity. Adjustment can only be done by an authorize person. To set the authorization, go to Administration module, select the employee and tick on "Allow Adjustment".

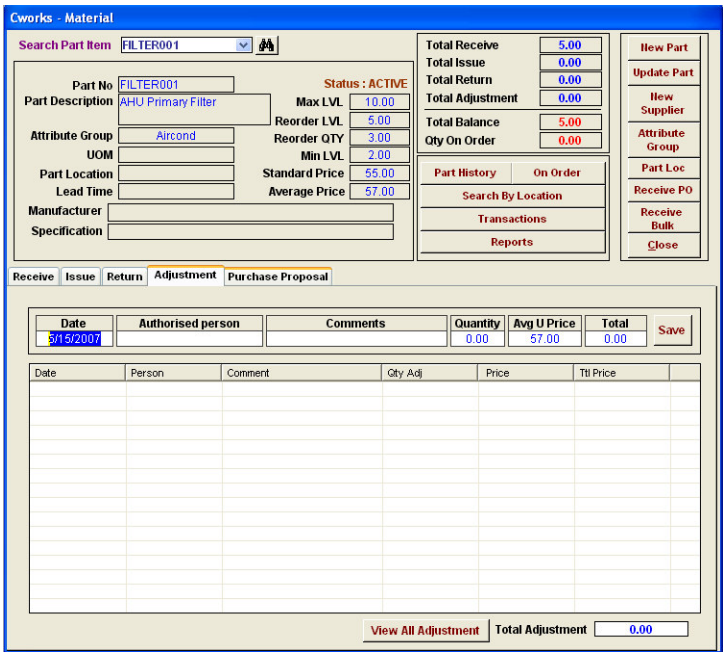
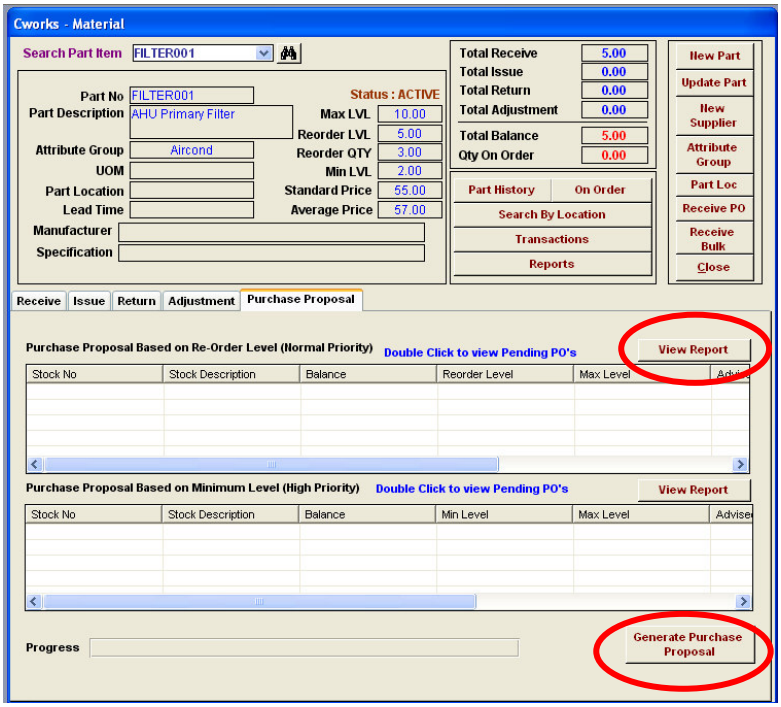


Figure 116: Making Adjustments

Select the part no from the "Search Part" bar.

Fields	Description
Date	Date when the adjustment was done
Authorised person	Name of a person who did or authorised the adjustment
Comments	Any remarks related to the transaction
Quantity	Amount can be adjusted. Use negative (-) to minus the value and vice versa.
Avg U Price	Amount can be adjusted. Use negative (-) to minus the value and vice versa.
Total	Automatically calculated base on Qty * Avg U Price
Total Price	Automatically calculated. The grand total (Currency) for all the adjustment done.

7.10 How To Generate A Purchase Proposal Report?



1) Click on "Generate Purchase Proposal"

2) Click the "View Report" button to Print a Purchase Proposal

Figure 117: Generating Reports

The minimum, reorder and maximum stock level has been added into the Material screens. By setting the minimum, maximum and reorder levels, purchase proposals can be generated from reports.

A Purchase Proposal report is generated when the balance stock level is at or below the reorder level or reach minimum level. The recommended reorder level is calculated as [Maximum Level – Current Balance].

7.11 How To View A List Of Transactions In Material Module?

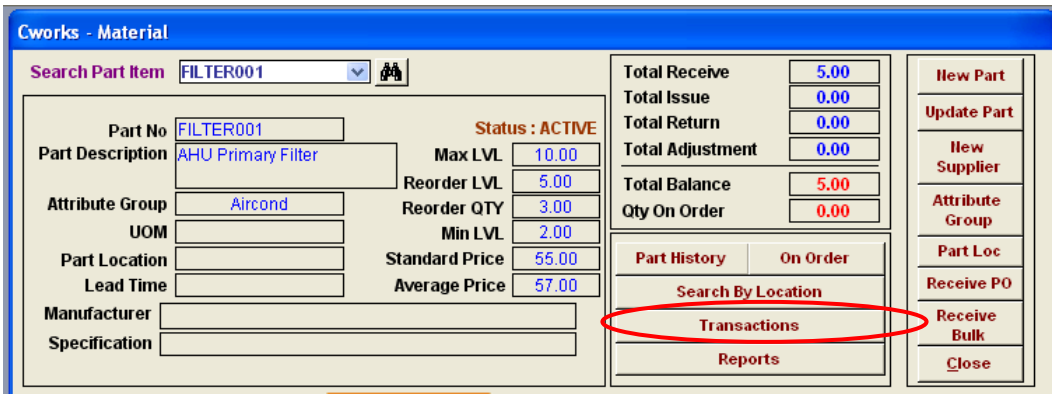
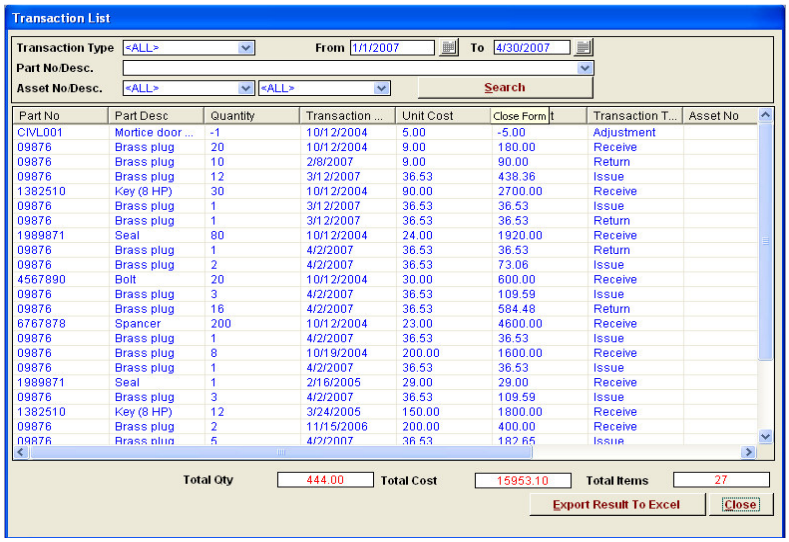


Figure 118: View List Of Transactions

Clicking Transaction button will give you the list of transactions as shown in Figure 118.



Choose the filters and click on "SEARCH".

To Export to Excel click on EXPORT RESULT TO EXCEL

Figure 119: Transaction List

7.12 How To View Parts History?

Choose the part no from the "Search Part" bar, then click on **Part History** button, to view part history. All the transaction history for the selected part can be view.

7.13 How To Update or view receive Goods?

Click on Receive PO button, to update or view receive goods. This links to the Purchasing Module (Good Reciept) database.

7.14 How To Add And View New Supplier/Vendor List In The Material?

Click on New Supplier button, to add or view new supplier. This links to the supplier master database

7.15 How To Add And View Attribute Group?

Click on Attribute Group button, see to add or view new attribute group.

7.16 How To Search Parts By Location Or By Part Number?

Click on Search By Location button or use the part list to do a fast search on part location or part no..

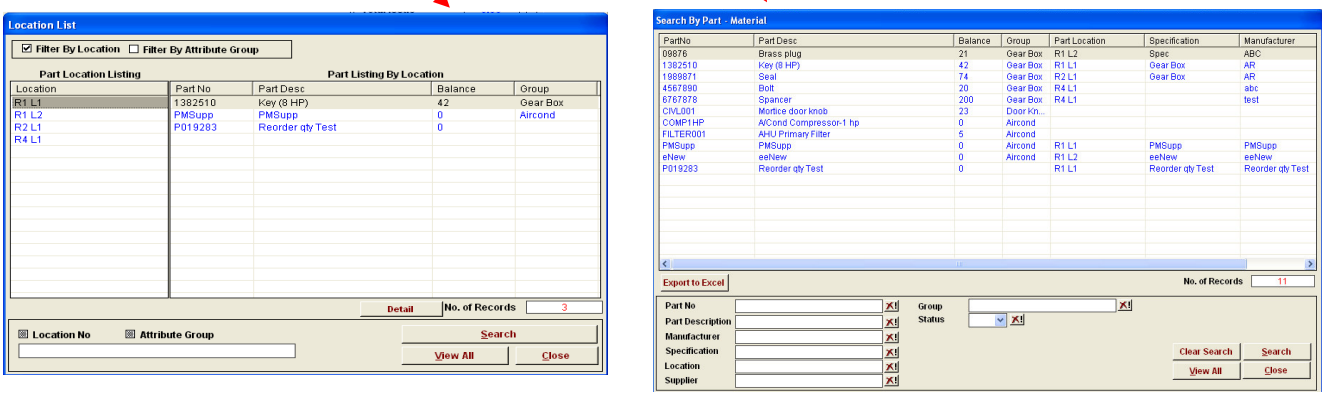


Figure 120: Searching by Location or Part No.

7.17 How To Generate Material Reports?

Click on Report and the screen below would pop-up. Click on any reports that you required and click on "Preview" to view. Certain reports will require user to give parameters.

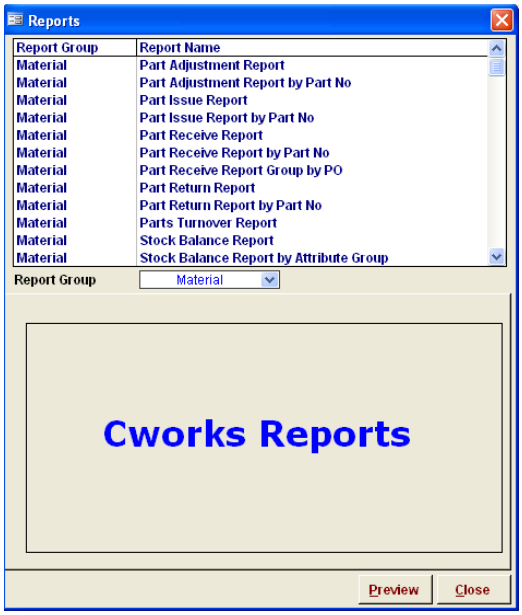


Figure 121: Generate Material Reports

WORK REQUEST MODULE

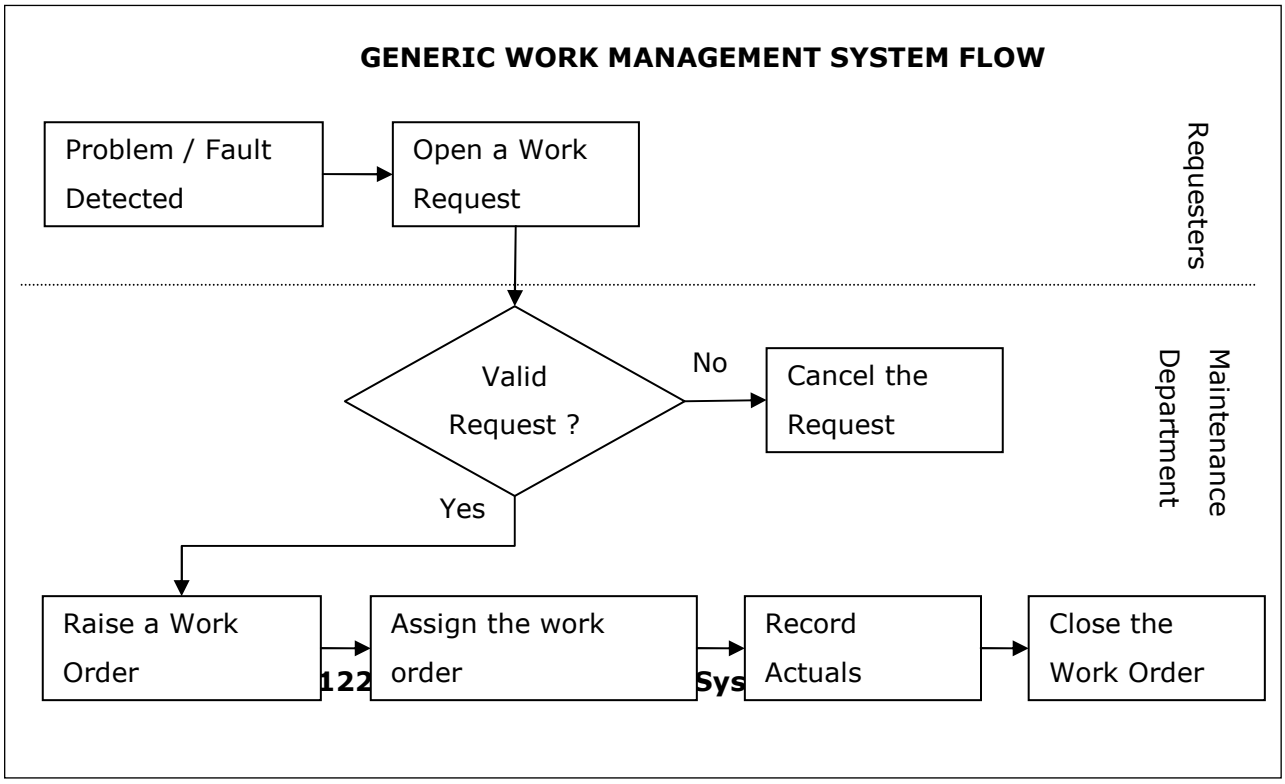
8. Work Request

8.1 What Is A Work Request?

Work Request is a way for non-maintenance personnel to raise or highlight problems to the maintenance department. It is a simplified Work Order screen for use by personnel who are not day to day users of the system. For any work to be carried out, a work order is generated from the request module.

Note: A dedicated Remote Work Request application installer file (RemoteWorkRequest.exe) is included in the Pro Plus package. This installer file can be deployed to requester desktop computers and data linked via a LAN to the CWorks database. In this way, Work Requests can be raised remotely.

A generic work request and subsequent work order generation process is illustrated below;



8.2 How To Open A New Work Request?

There are two ways of opening an internal work request.

8.2.1 Option 1: Remote Work Requests

Remote work requests is an application which can be made accessible on Requester desktop computers to enable them to raise work requests. It is a separate application from the CWorks main system.

Note: To run the remote Work Request system, the Remote Work Request application must be preinstalled using the RemoteWorkRequest.exe file. The application must then be connected via your netework to the CWorks database.

Click on the "CWPLUSWR" icon on your desktop and a listing would pop-up.

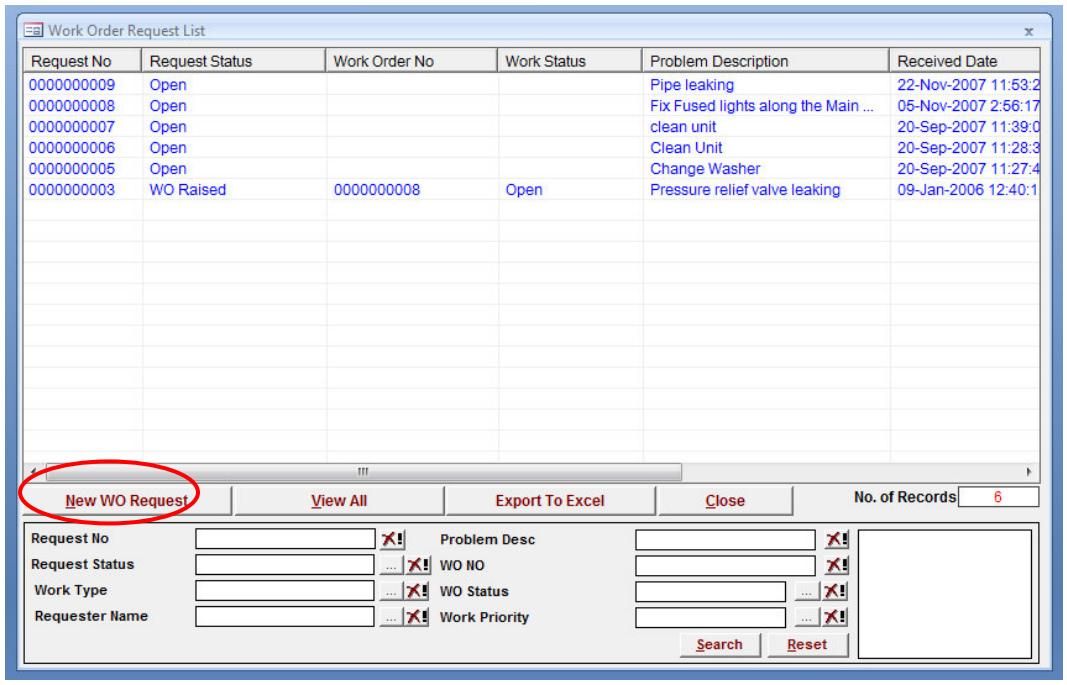


Figure 123: Work Order Request List

The list for displays all work requests in the system. By default, all closed work requests are not displayed in the list form. To also view closed work requests, click the "View All" button.

To open a new Work Request click the "New WO Request" button. This will activate the New WO Request Screen. The Request No # will display 0000000000. Only upon saving the request, the system will generate a request number.

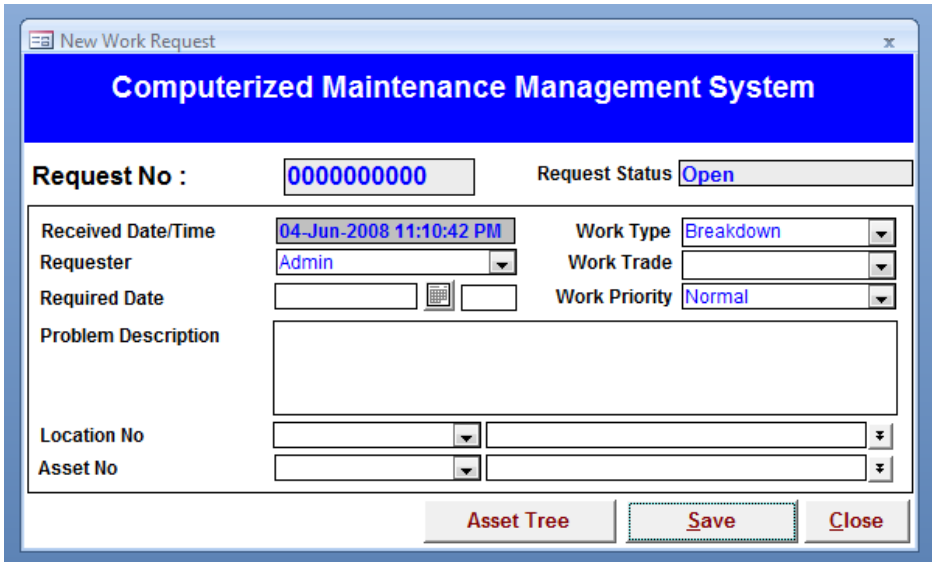


Figure 124: New Work Request

Fields	Description
Request No #	Automatically generated by the system upon saving the record.
Request Status	System defaults status to "OPEN". A work reques goes through different stages. The stages are; Open – The work request is open WO Raised – A work order has been raised for the work request. Cancelled – The work request has been cancelled Closed – The work order raised for the work request has been closed.
Requester	Choose from the list. Name of the person who requested for a service. The person could also be an employee of the organization or a customer to the organization.
Received Date/Time	Set default to system date and time.
Work Type	Defines the type of work which is requested. Default = Breakdown.
Work Trade	Trade or section that is primarily responsible for the work.
Problem Description	Describe the details of the problem for this particular work order.
Required Date	The date and time when the work order should be responded to.

Fields	Description
Work Priority	Level of urgency assigned to the request. This data is set in the MISC. – Master, The system-default data are as follows. They can be added but cannot be removed. Normal, Urgent, Emergency, Routine and Safety
Asset & Location Information	
Location No	Select a location from the list to specify where the problem is arising from. This field will automatically populate if an asset is selected (based on the asset location as defined in the asset register). A location list can be called from the work request screen b clicking . A Location list form would pop-up. To select a location from the list form, just double click on the required record.
Asset No	Select the asset which the work request is generated for. An asset list can be called from the work request screen by clicking . An asset list form would pop-up. To select an asset from the list form, just double click on the required record. An asset can also be selected using the asset tree. Open the asset tree by clicking Asset Tree. Browse the asset tree and click on the required asset. Click the "Add to WO/WR" button to select the asset for the work request.
Save	To save a work request
Close	To exit from a work request without saving

8.2.1.1 How To View WO Status From Remote Work Request?

Work requested for the maintenance department can only be generated into work orders from CWorks main application. Work orders cannot be generated from the remote work request application.

Once a work order has been raised for a work request, the work request status changes to "WO Raised". When the current work request form is viewed, the work order number will be displayed.

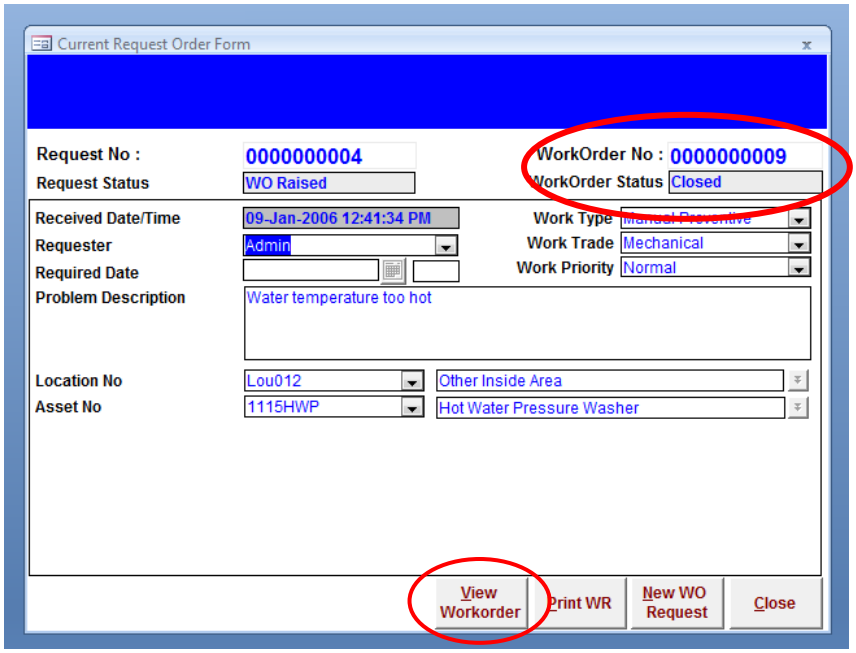


Figure 125: View Work Order

Click the "View Workorder" button to view details of the work order.

8.2.1.2 How To Cancel A Remote Work Request?

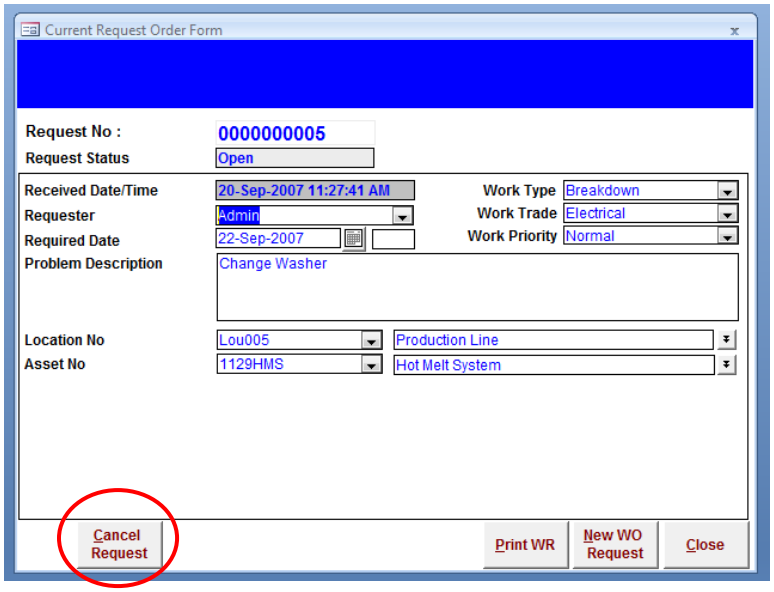


Figure 126: Cancel WO Request

To cancel this request click CANCEL button. You will see Figure 127 pop-up.

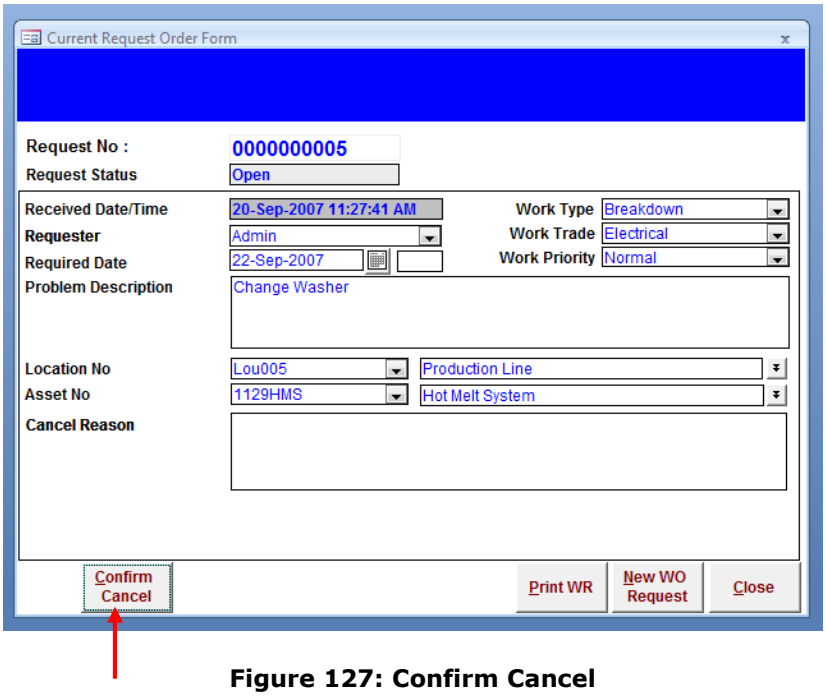


Figure 127: Confirm Cancel

Fill up the cancel reason field and then click on Confirm Cancel to Cancel the work request. Only Work Request with the status as open can be cancelled.

8.2.1.3 How To Filter Out Remote Work Requests?

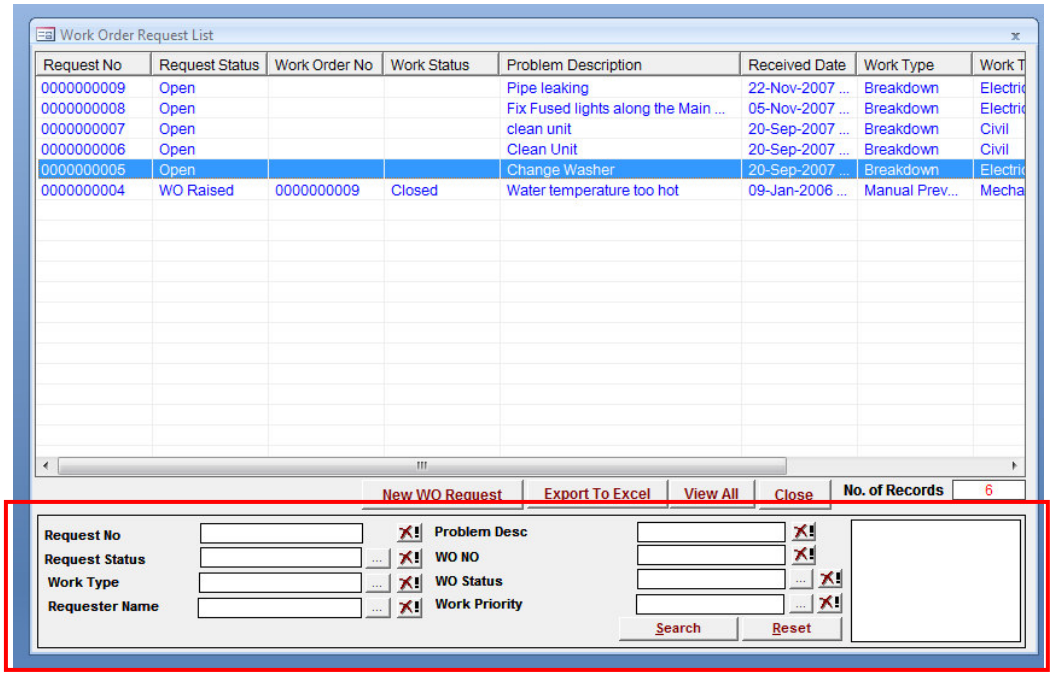


Figure 128: Filters

Work Requests can be filtered and searched in the work request list form. To select a parameter in a field, click .... The available options for the parameter will be displayed on the far right hand side of the screen (above the search button). Select the parameter by clicking once on the text. More than one parameter can be selected (example: Open & Closed) by just clicking on another parameter text. Click "Search" to carry out the search.

8.2.2 Option 2: Work Request From CWorks Main Menu

At the CWorks Main Menu, click on , see Figure 1.

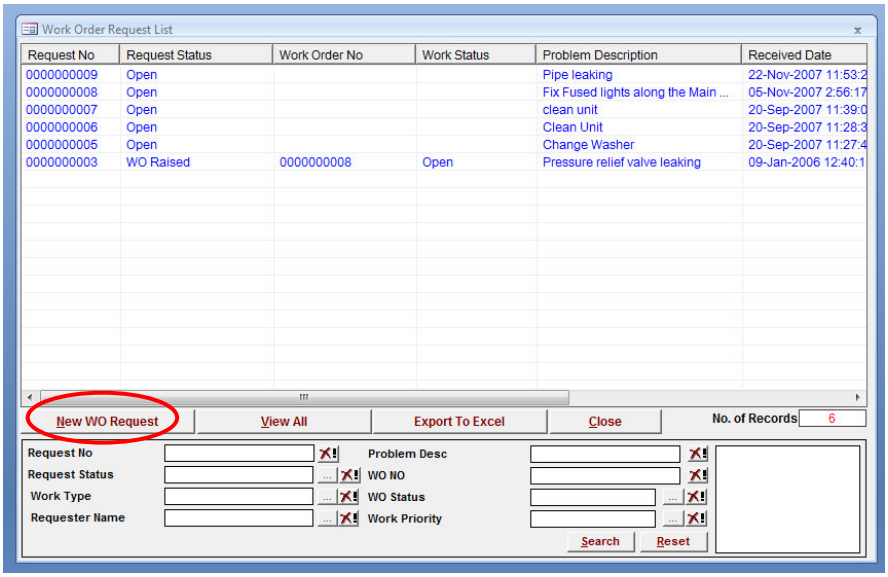


Figure 129: Work Order Request List

Click New WO Request button to open a new WO Request. Upon activation of the New WO Request screen (Figure 130), the Request Number will display 0000000000. Only upon saving the request, the system will generate a request number.

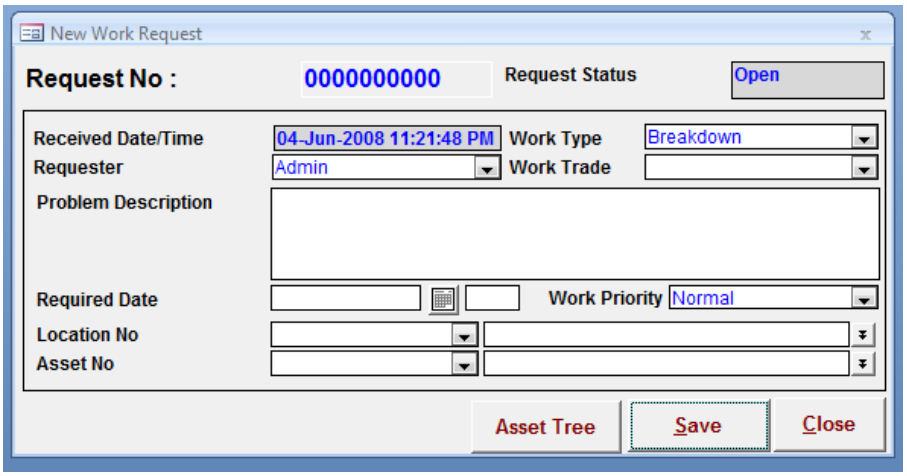


Figure 130: New Work Request

The above fields are the same as the normal remote request module. Upon saving the work request, a unique work request number will be given.

8.3 How To Generate A Work Order From Work Request Module?

From the Work Request list form, double click the required work request record. The Current Work Request form would pop-up (refer below).

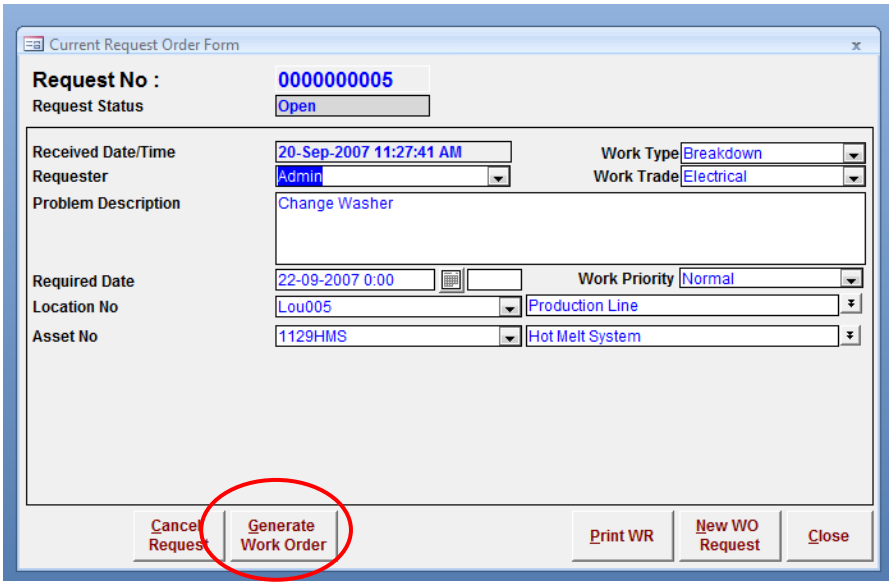


Figure 131: Generating Work Order

To generate a work order from the Current Work Request form, click the Generate Work Request button, see Figure 131. Details of Work Request will be automatically transferred into Work Order and system will assign a WO Number.

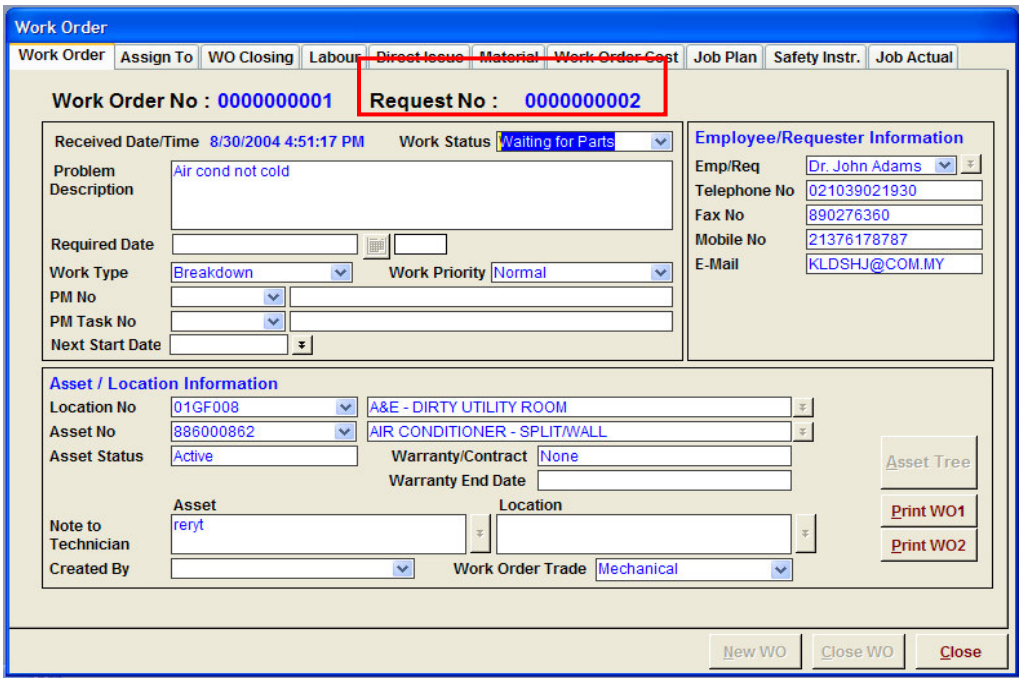


Figure 132: Work Order Generated From WO Request

The Work Order will display the Work Request No from which it was generated. To update the work order, go to work order module and double click on it.

Upon generation of a work order, the current work request form will display the work order number. *Note that once a work order is raised from a work request, all fields in the work request form will be locked. This is to ensure data consistency.*

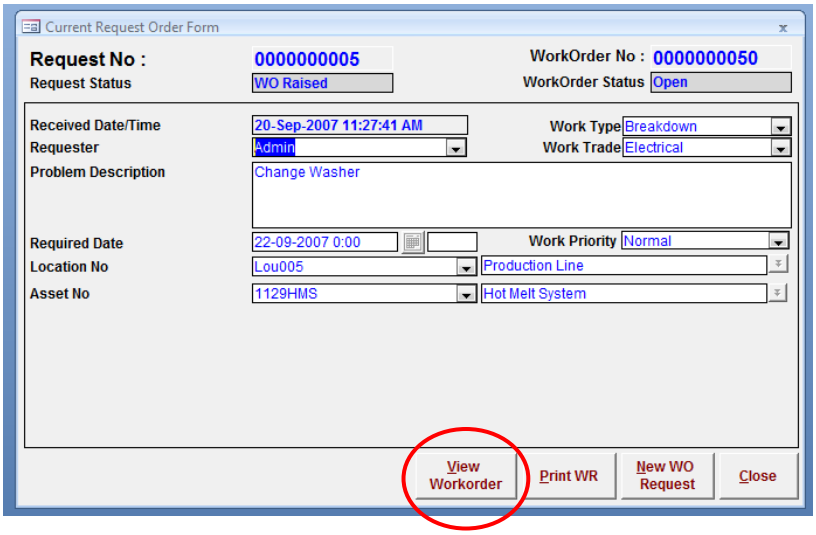
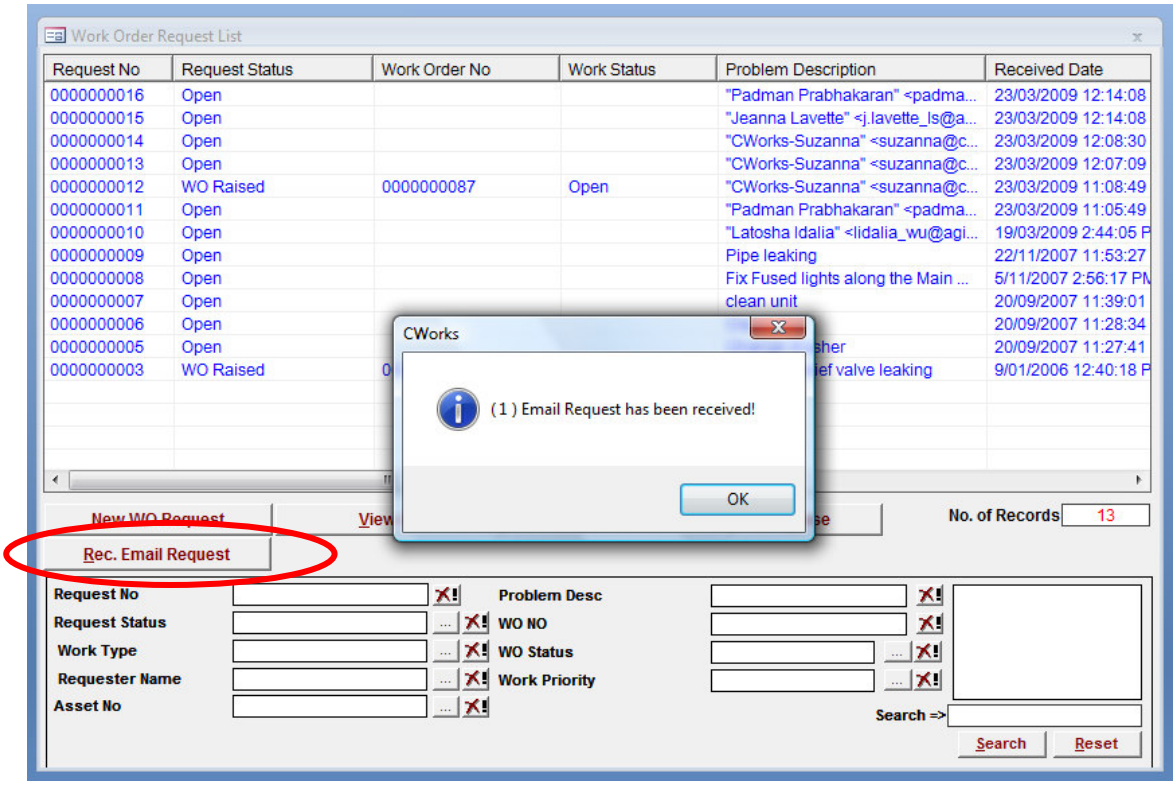


Figure 133: Current Request Order Form

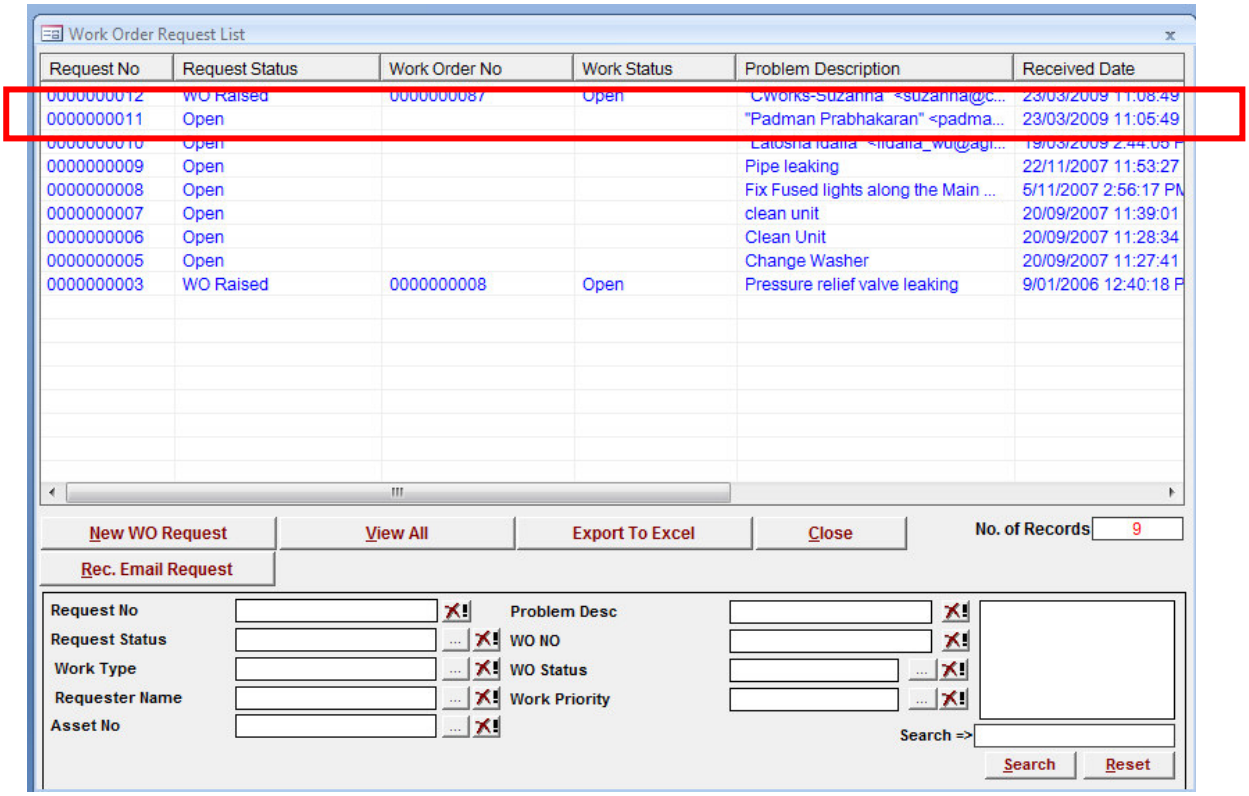
Users can view the work order from the form by clicking the "View Workorder" button. The current work order form would pop-up, see Figure 132. No amendments/modifications can be carried out when the work order is accessed from here.

8.4 How To Receive Work Request via Email?

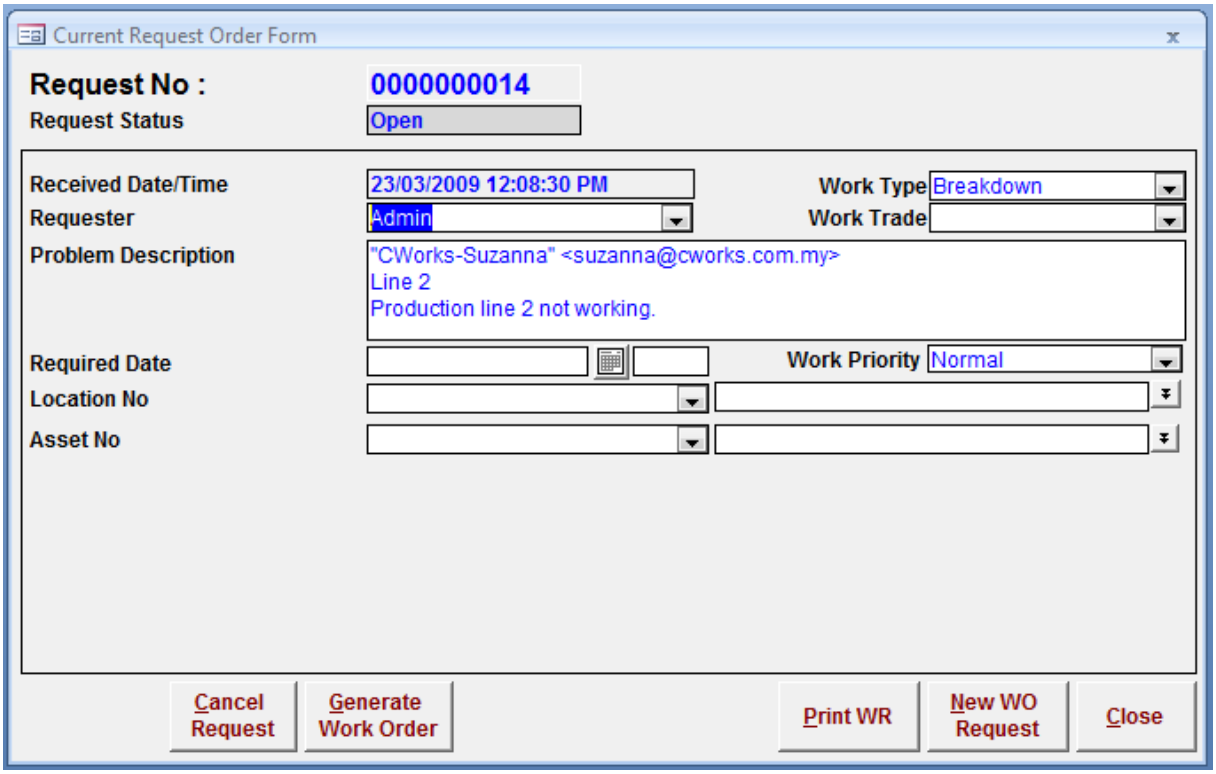
To check incoming work request via email, click on "Rec. Email Request" button. The system will prompt user for any incoming request.



The below list shows new incoming Work Request via email.



Current work request.



ADMINISTRATION MODULE

9. Administrative

9.1 How To Add User Information in Administration Module?

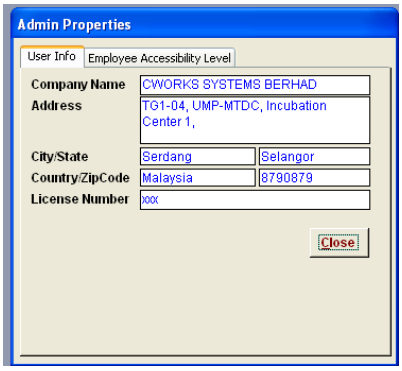


Figure 134: Admin Properties

Click on  Administration on the main menu, see Figure 1. Enter your company information in the User Info tab.

9.2 How To Change Passwords and Set Accessibility?

Passwords and level of access to CWorks modules can be set in the Administration module by clicking the "Employee Accessibility Level" tab.

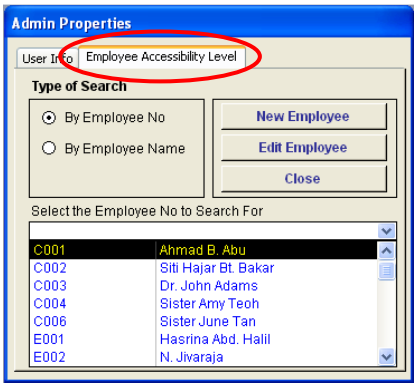


Figure 135: Employee Access Level

From this screen, the Administrator can register a new employee or set / modify the level of access to CWorks modules for a registered employee. To register a new employee, click the "New Employee" button. To amend the details on an employee, click the "Edit Employee" button

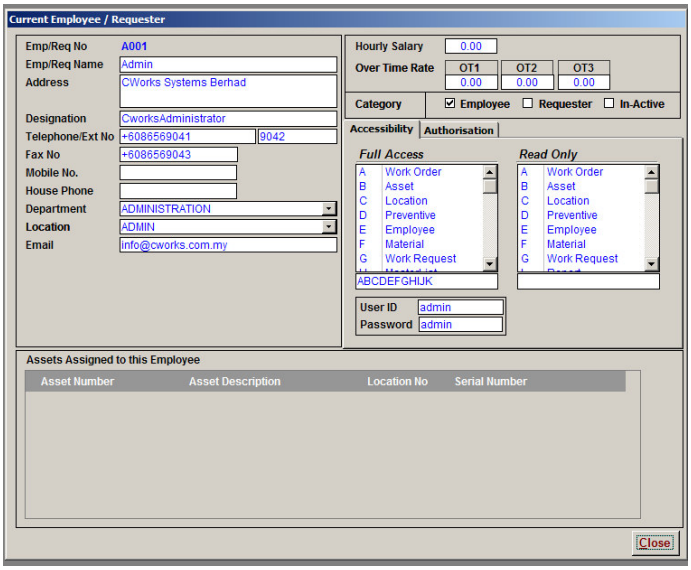


Figure 136 : Current employee

Refer to the Employee module of this user guide for details of the employee fields; see How To Add A New Employee/Requester.

There are two tabs in current employee. Accessibility and Authorization tab. Refer to screenshot below:

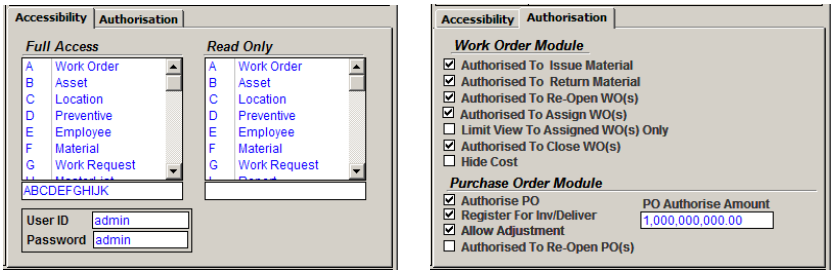


Figure 137: Setting Access Level

The fields are as follows:

Fields	Description
Accessibility Tab	
UserID	Defines the User ID for an employee when logging into CWorks
Password	Defines the Password for an Employee when logging into CWorks
Full Access Box	This list displays all the available modules within CWorks. Select the modules which you wish to provide user with full read-write access to by clicking on it.
Read Only Box	This list displays all the available modules within CWorks. Select the modules which you wish to provide user read-only access to by clicking on it.
Fields	**Description**
Authorization Tab	
Authorised To Issue Material	Setting permission for a user to Issue part in the WO- Material tab
Authorised To Return Material	Allow user to return unused Issued part in WO – Material tab
Authorised To Re-Open WO(s)	Allow user to re-open closed work order.
Authorised To Assign WO(s)	Allow user to assign Work Orders to employees.
Limit View To Assigned WO(s) Only	Allow an employee to view only Work Order(s) assigned to them.
Authorised To Close WO(s)	Allow an employee to Close work order(s).
Hide Cost	Hide Cost incurred in a Work Order
Authorise PO	Tick checkbox to authorize PO.
PO Authorize Amount	Setting the limit the user can authorize for a PO.
Register for Inv/Del	Tick to allow employee to be invoiced and accept delivery
Allow Adjustment	In the inventory module the material adjustment can only be done by an authorize person. To allow the authorization just tick on "Allow Adjustment".
Authorized To Re-Open PO(s)	Allow user to re-open authorized purchase order.
Save	Click the "Save" button to save the record.
Close	Click the "Close" to exit without saving the record.

MASTER MODULE

10. Masters

Frequently used codes and descriptions are recorded here for quick lookup by users. Masters are updated during first-time usage and later, on an as and when basis. This module captures all your basic maintenance data, which is required to start your CWorks. CWorks require some basic data before it could fully function. Refer "**Hints for New Setup of CWorks**" for guides to setup CWorks.

10.1 How to create master data?

Click on this  icon and the screen below would pop-up.

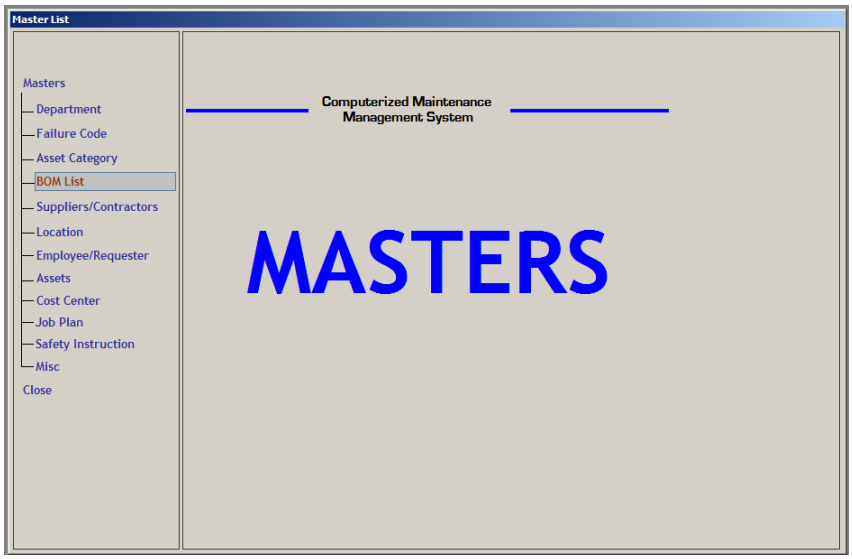
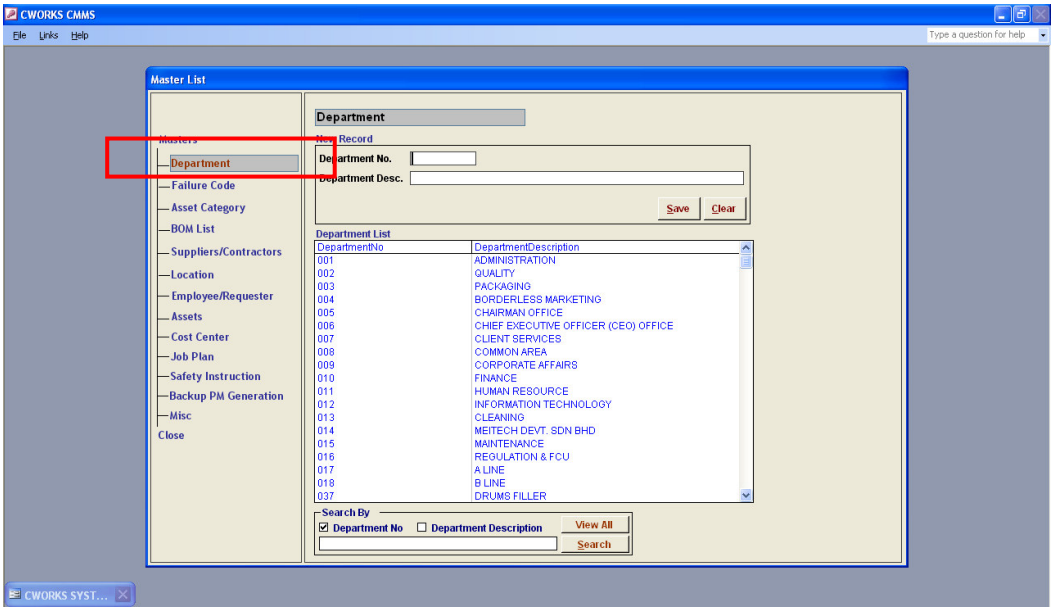


Figure 138: Department Master List

10.1.1 Master - Department

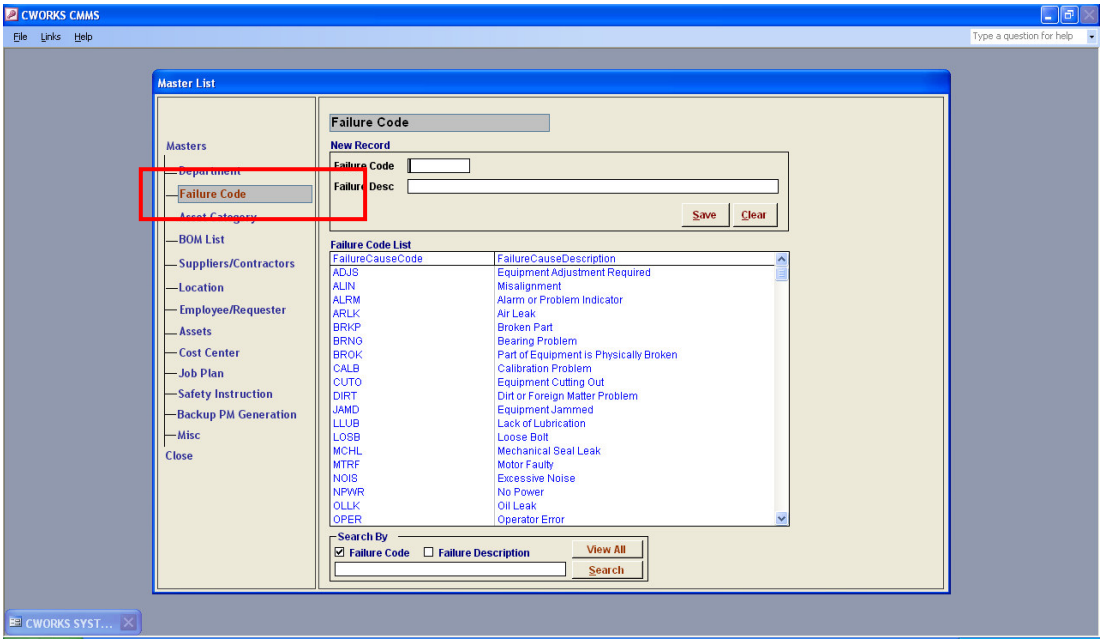


Click on "Master – **Department**" tab. This is the masters for "Department."

Figure 139: Department Master List

Fields	Description
Department No.	A unique number assigned to a department
Department Desc.	A name assigned to a department. To Edit description double click on the record to be edited from the list. The record will be populated into the field, make the necessary changes and click on "Update" button to update the record.
Department List	All the departments in your database
Search By	The Search By options will allow you to filter or narrow down your search result. The options are: • Dept No • Dept Description To do a search, click on the field of choice, enter the field contents.
Save	Click on Save button to save the record.

10.1.2 Master – Failure Code



Click on "Master – **Failure Code**" tab. This is the masters for "Failure Code."

Figure 140: Failure Code Master List

Fields	Description
Failure Code	A unique number assigned to a failure
Failure Desc.	A description of the failure. To Edit description double click on the record to be edited from the list. The record will be populated into the field, make the necessary changes and click on "Update" button to update the record.
Failure Code List	All the failure code registered in your database.
Search By	The Search By options will allow you to filter or narrow down your search result. The options are: • Failure Code • Failure Description To do a search, click on the field of choice, enter the field contents.
	Click on Save button to save the record.

10.1.3 Master – Asset Category

Click on "Master – **Asset Category**" tab. This is the masters for "Assets Category."

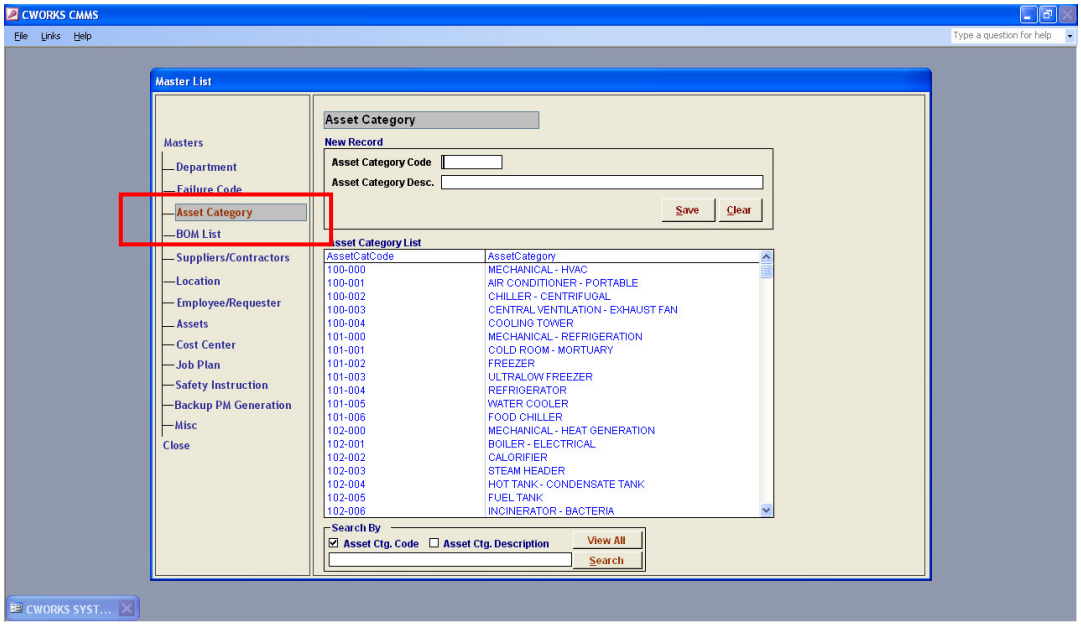


Figure 141: Asset Category Master List

Fields	Description
Assets Category Code	A unique number assigned to a category code
Asset Category Desc.	A name assigned to a category. To Edit description double click on the record to be edited from the list. The record will be populated into the field, make the necessary changes and click on "Update" button to update the record.
Asset Category List	All the category code in your database
Search By	The Search By options will allow you to filter or narrow down your search result. The options are: • Code • Category Desc. To do a search, click on the field of choice, enter the field contents.
	Click on Save button to save the record.

10.1.4 Master – Bill of Material List

Click on "Master **– BoM List**" tab. This is the masters for "BoM List"

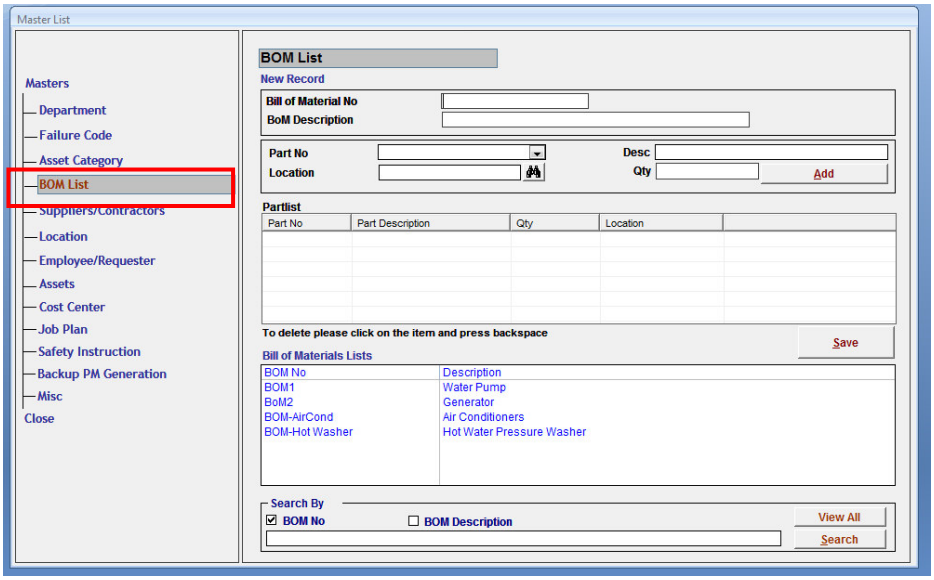


Figure 142: BOM Master List

Fields	Description
Bill Of Material No.	A unique number assigned to a BoM
BoM Desc.	A name assigned to a BoM.
Bill Of Material Lists	All the BoM in your database
Save	Click on Save button to save the record.

Double-click on any of the BoM number in the list and the screen below will pop up, where it allows the user to view and modify details on the particular Bill Material List.

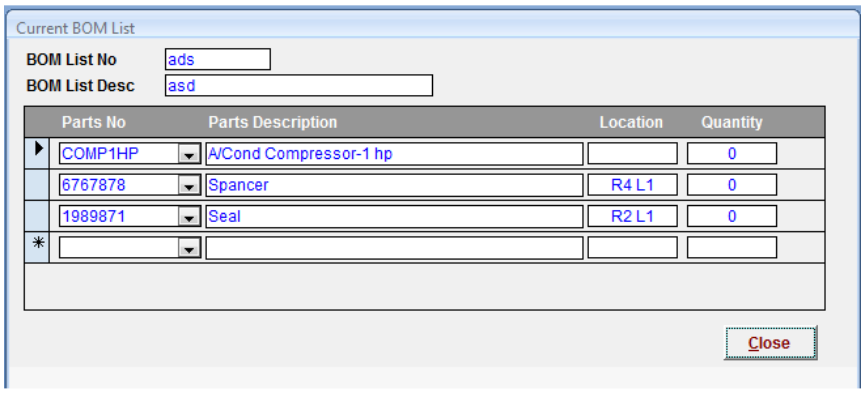


Figure 143: Current BoM List

10.1.5 Master – Suppliers/Contractors

Click on "Master **– Suppliers/Contractors**" tab. This is the masters for "Contractor"

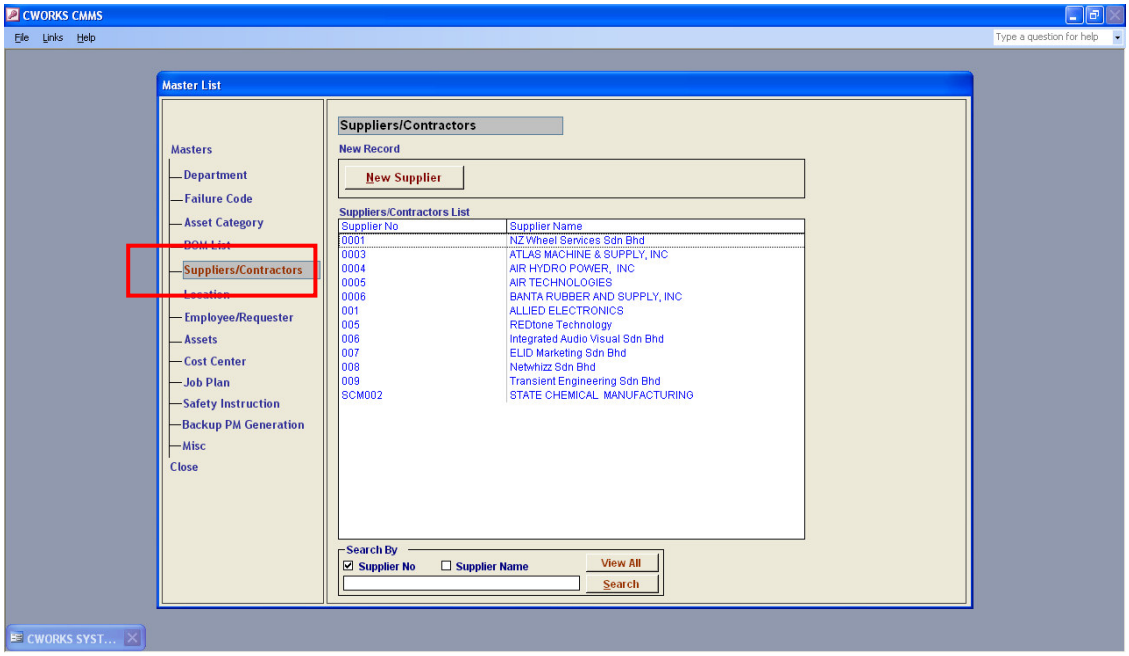


Figure 144: Suppliers/Contractors Master List

Double-click on any of the record in the list and user can view and modify details on the particular record. To add new Suppliers/Contractors, click the "New Supplier" Button and screen below will pop up.

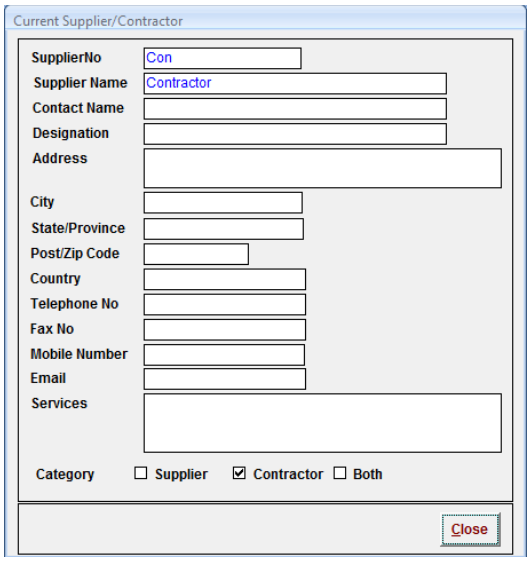


Figure 145: New Supplier/Contractor

Fields	Description
Supplier No.	A unique number assigned to a supplier
Supplier Name	The Supplier's name
Contact Person	Name of a person
Designation	Designation of the above persons
Address	Contractor's postal or company office address
City	City name
State/Province	State name
Post/Zip code	Postcode
Country	Country name
Telephone No.	Contractor's telephone number
Fax No.	Contractor's fax number
Email	Contractor's e-mail address
Services	Type of services given by this contractor
Category ☐ Supplier ☐ Contractor ☐ Both ☑ In-Active	Tick on "Supplier" if you're registering a supplier of Parts or Consumables. Tick "Contractor" if you're registering a contractor. Tick "Both" if they supply and provide contract services Tick on "In-Active" if no services is being provided by the current Supplier/Contractor
Save	Click on Save button to save the record.

10.1.6 Master - Location

Click on "Master – **Location**" tab. This is the masters for "Location"

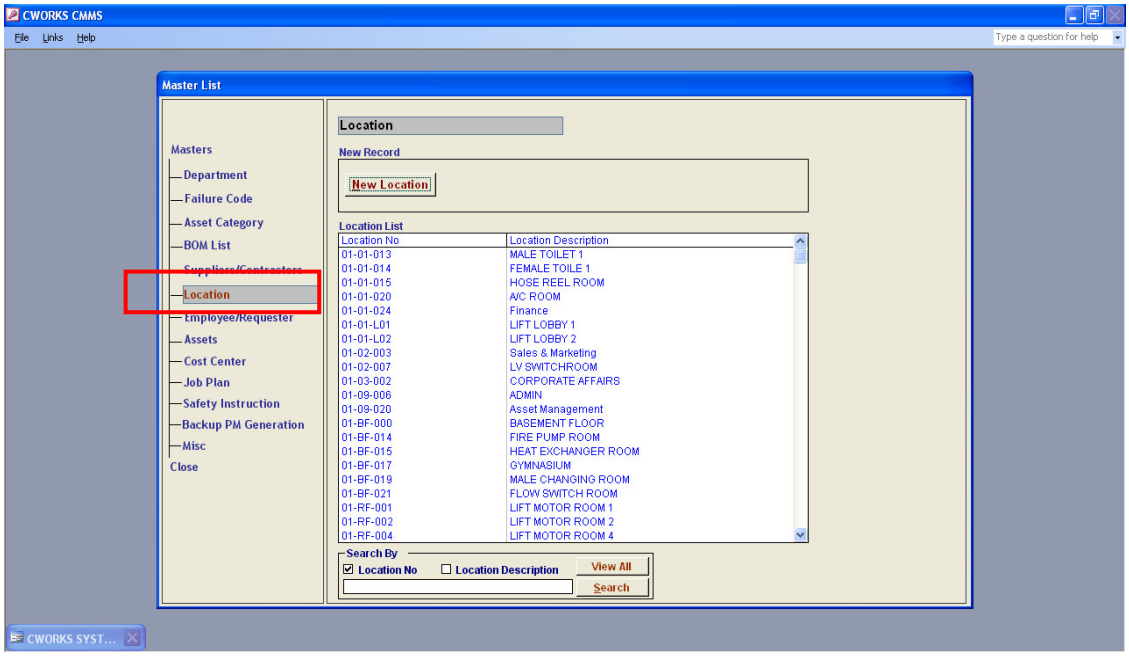
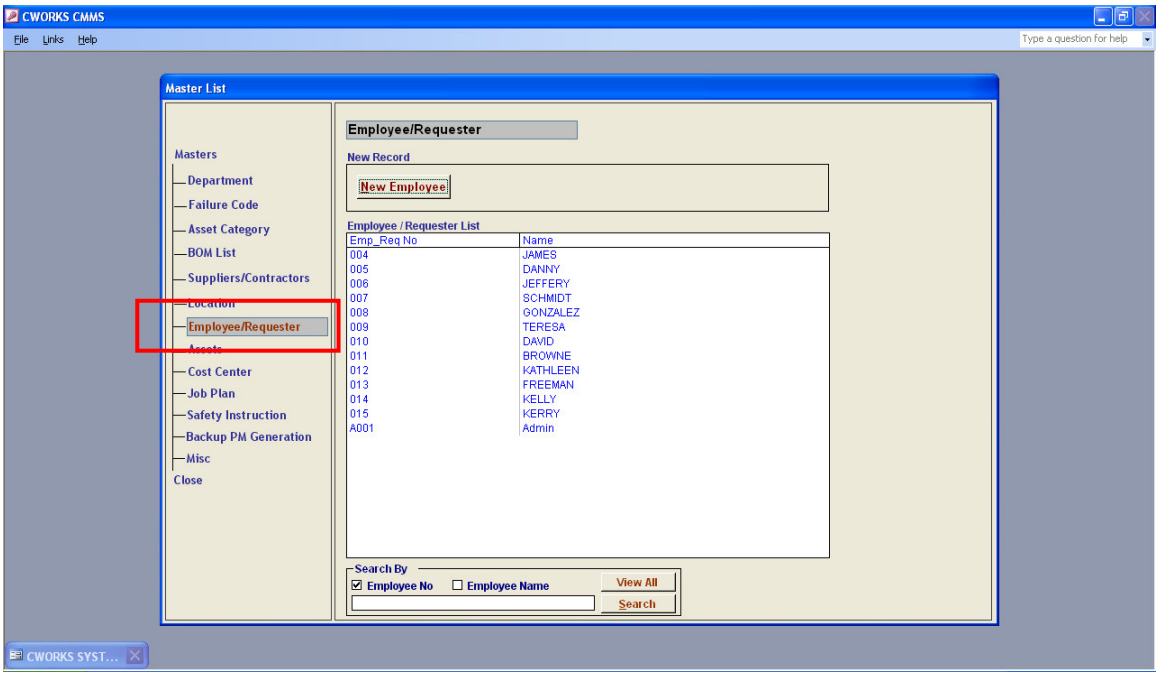


Figure 146: Location Master List

Click on "New Location" to add new records. Double click on the location on the right and you will be able to modify the data. For field explanation please refer to How To Add A New Location.

10.1.7 Master – Employee/Requester



Click on "Master – **Employee/Requester**" tab This is the masters for "Employee/ Requester"

Figure 147: Employee Master List

Click on "New employee" to add new records. Double click on the employee on the right and you will be able to modify the data. For field explanation please refer to *How To Add A New Employee/Requester?*

10.1.8 Master - Assets

Click on "Master – **Assets**" tab This is the masters for "Assets"

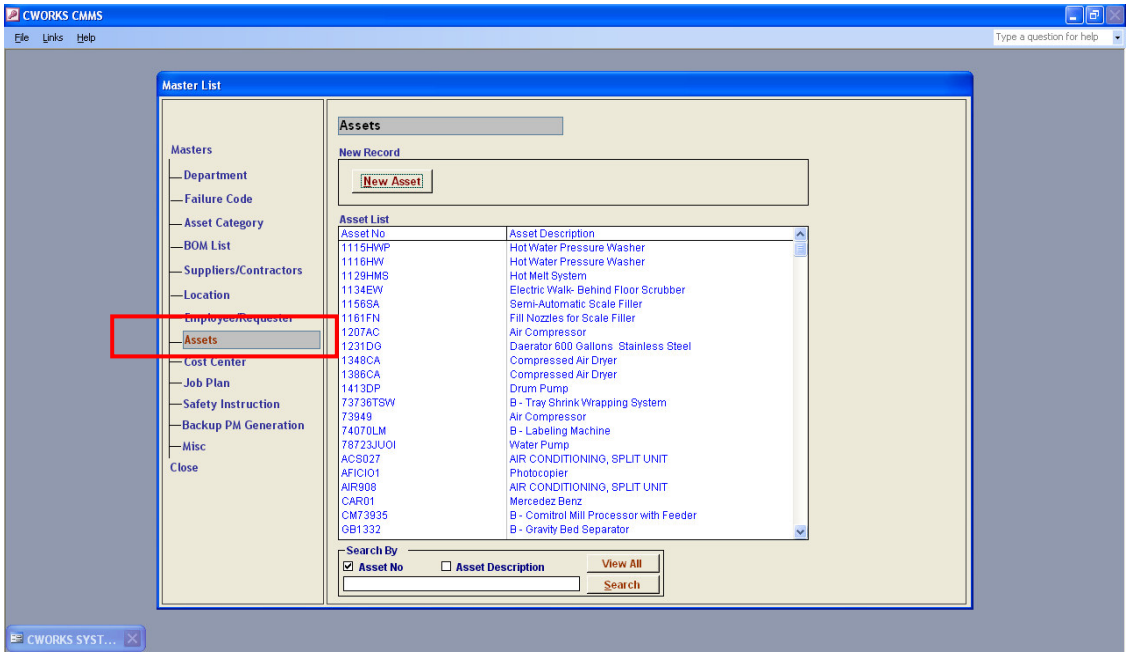


Figure 148: Assets Master List

Click on "New Assets" to add new records. Double click on the assets on the right and you will be able to modify the data. For field explanation please refer to How To Add A New Asset.

10.1.9 Master – Cost Center

Click on "Master **– Cost Center**" tab. This is the masters for "Cost Center."

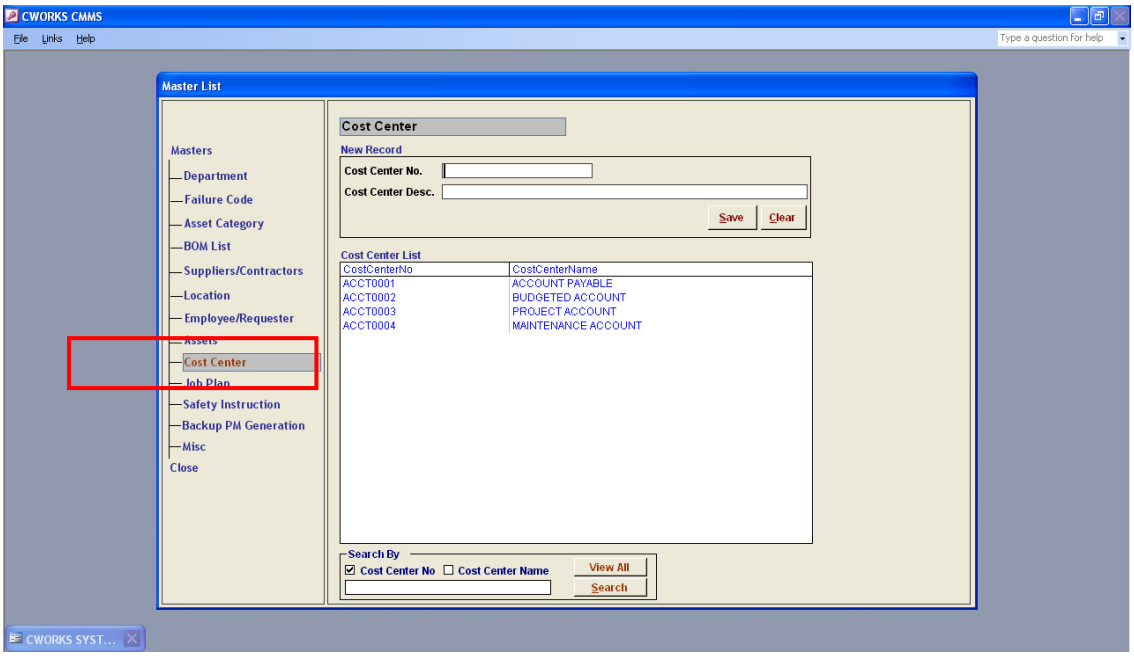


Figure 149: Cost Center Master List

Fields	Description
Cost Center No	A unique number assigned to a Cost Center
Cost Center Desc.	A name assigned to a Cost Center.
Search By	The Search By options will allow you to filter or narrow down your search result. The options are: • Cost No • Cost Center Desc. To do a search, click on the field of choice, enter the field contents.
Save	Click on Save button to save the record.

10.1.10 Master – Job Plan

Click on "Master –**Job Plan**" tab This is the masters for "Job Plan"

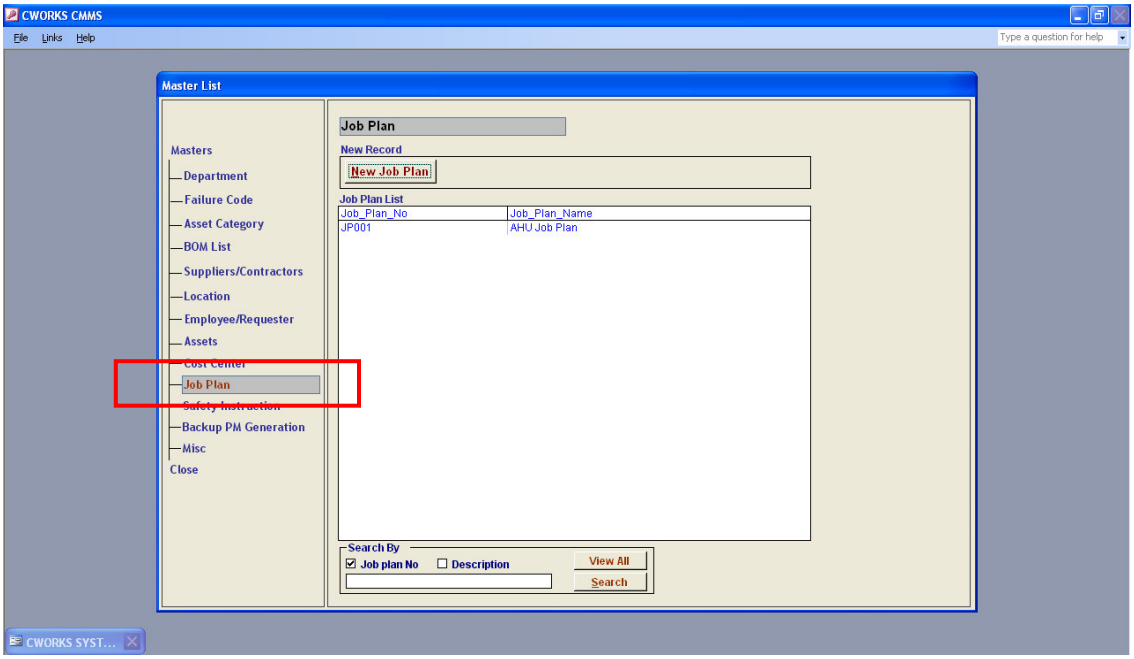


Figure 150: Job Plan Master List

A job plan is created to specify a set of steps or work instructions for a technician to carry out when executing a work. Double click on the Job Plan List on the right and you will be able to modify the data. To add new Job plan, click the "New Job Plan" Button and screen below will pop up.

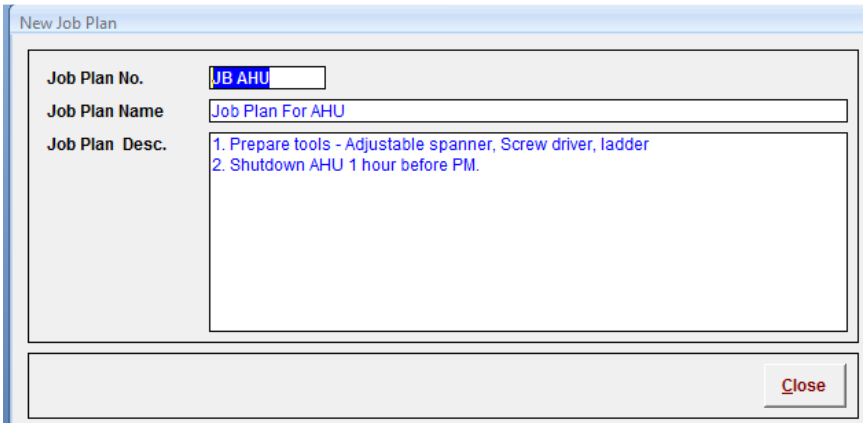


Figure 151: New Job Plan

Fields	Description
Job Plan No	A unique number assigned to a Job Plan No
Job Plan Name	A name assigned to a Job Plan Name.
Job Plan Desc.	Specify a set of step or work instructions.
Search By	The Search By options will allow you to filter or narrow down your search result. The options are: • Job Plan No. • Description To do a search, click on the field of choice, enter the field contents and click "Search" button.
Save	Click on Save button to save the record.
Close	Click on close button to close the screen without saving the record

10.1.11 Master – Safety Instruction

Click on "Master –**Safety Instruction**" tab This is the masters for "Safety Instruction"

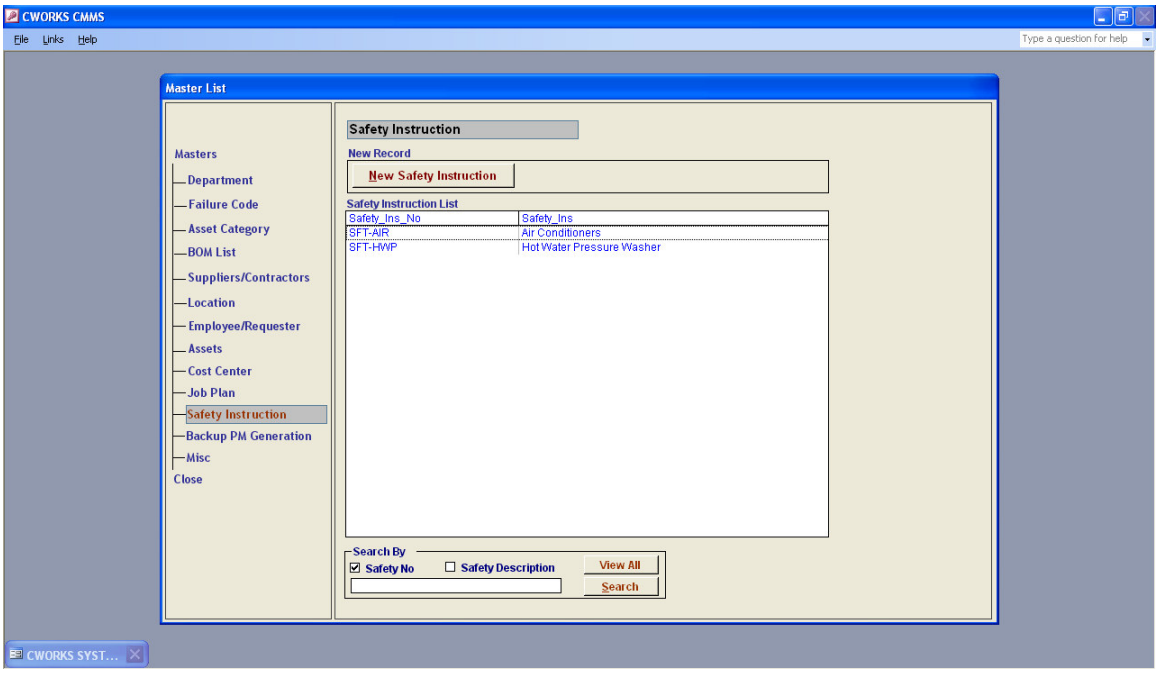


Figure 152: Safety Instruction Master List

A Safety Instruction is created to specify a set of safety steps or Safety instructions for a technician to carry out when executing a work. Double click on the Safety Instruction List on the right and you will be able to modify the data. To add new Safety Instruction, click the "New Safety Instruction" Button and the screen below will pop up.

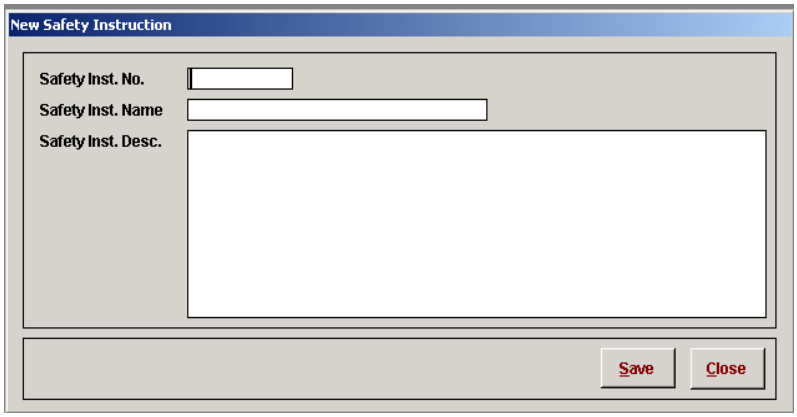


Figure 153: New Safety Instruction

Fields	Description
Safety Inst No	A unique number assigned to a Safety Instruction No
Safety Inst Name	A name assigned to a Safety Instruction Name.
Safety Inst Desc.	Specify a set of safety step or safety instructions.
Search By	The Search By options will allow you to filter or narrow down your search result. The options are: • Safety Inst No. • Safety Instruction Description To do a search, click on the field of choice, enter the field contents and click "Search" button.
Save	Click on Save button to save the record.
Close	Click on close button to close the screen without saving the record

10.1.12 Master – Backup PM Generation

To specify a path to backup database before generating PM Work Orders, this allows user to revert back to the previous state. To provide a path place a check on the "Backup PM Generation", then type in the path the backup should be copied. Click "Save" toe save the lnk. A fresh db with all the previous data will be created in the specified path named as PLUSDB_(gen date)_(time of generation). During PM generation a fatal error happens or the dates of the next PM Schedule dates are wrong and user would like to roll back the generation, replace the current db with backup db after renaming it to the live db.

Note: Please ensure to delete the backup file if the generation goes smoothly and the backup is not intended to be used.

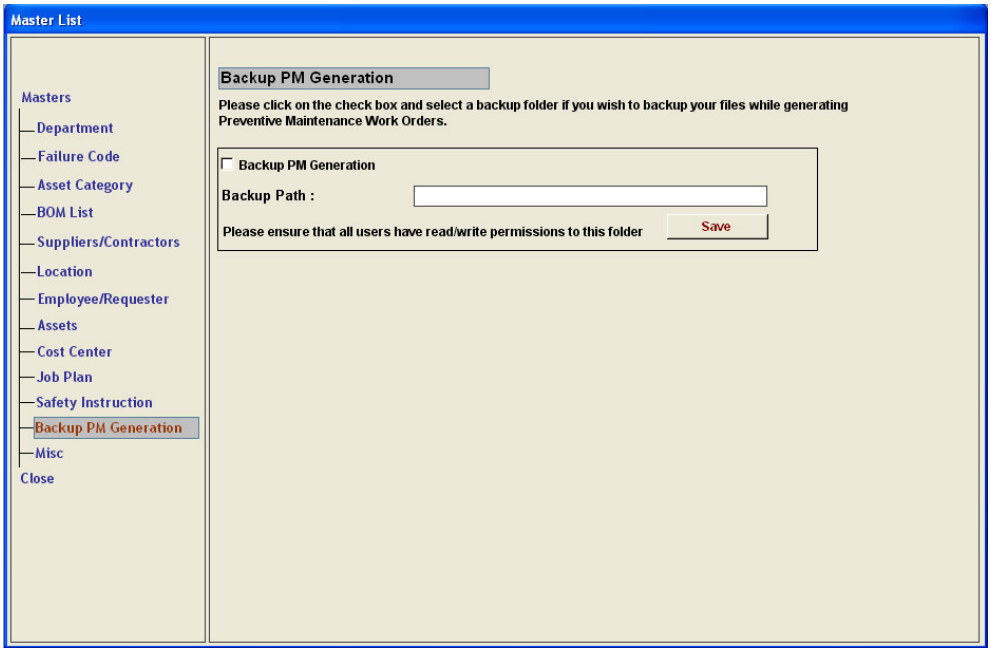


Figure 154PM Generation Backup

10.1.13 Master - Misc

Click on "Master – **Misc**" tab This is the masters for "Work Status, Work Priority, Part Location, Work Type, Work Trade, Part Location, Payment Location, warranty/Contract, Asset Criticality and Asset Status. "

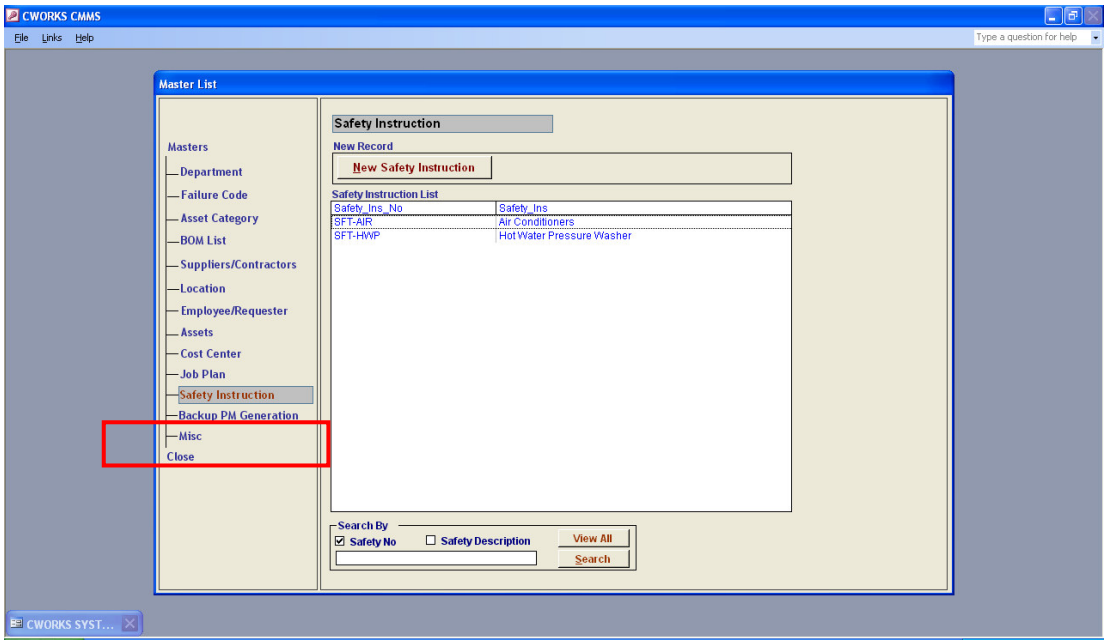


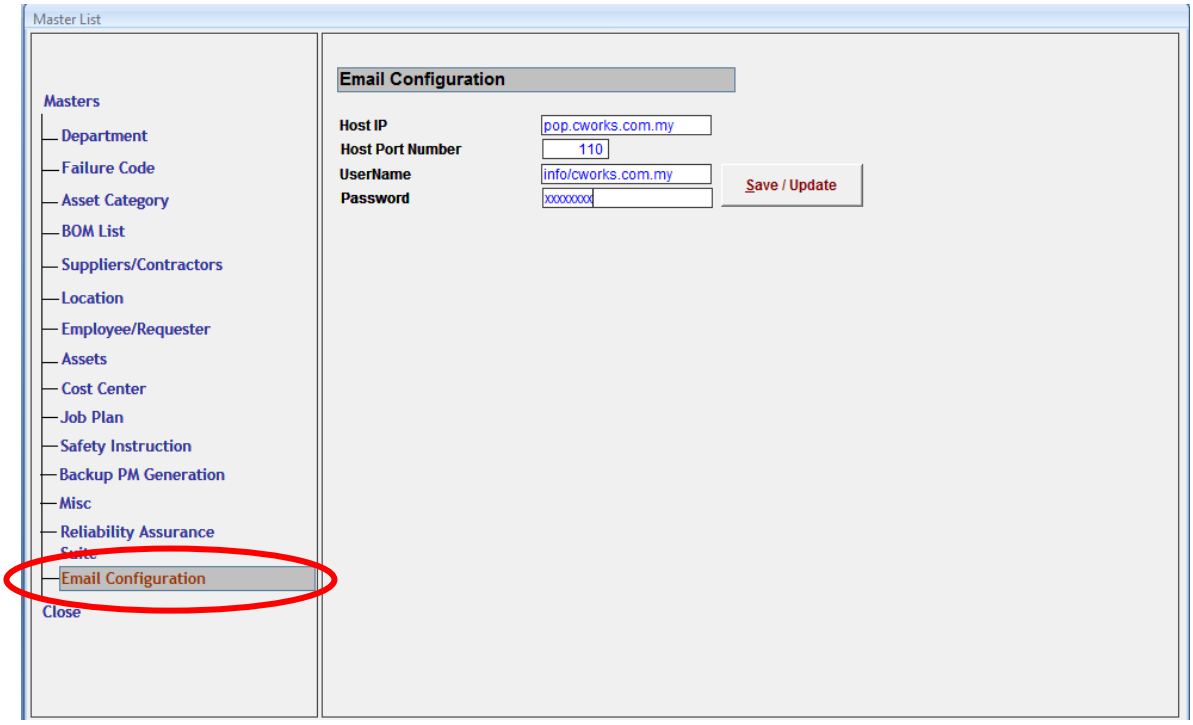
Figure 155: Miscellaneous Master List

This master contains default data for CWorks to function. User cannot delete the existing data but you could add more to it. Data entered into this master will be saved upon exiting.

IMPORTANT NOTE: Changing the Misc-Masters directly from the database table may have an impact on the smooth operation of CWorks CMMS. Please contact us at info@cworks.com.my for further details or clarification.

10.1.14 Master - Configuring To Receive Work Request via Email

User can receive work request via an email. To use this feature, you need to configure the system to accept work request via email.
Go to MASTERS module and click on EMAIL CONFIGURATION. The below configuration follows your email setup.



IMPOTANT Note: Once you download the email into CWORKS work request module, you would not be able to download again into OUTLOOK or other email provider.

PURCHASING MODULE

11. Purchase Order

11.1 How To Raise a Purchase Order?

Click on  icon on the main menu and a sub menu would pop-up.

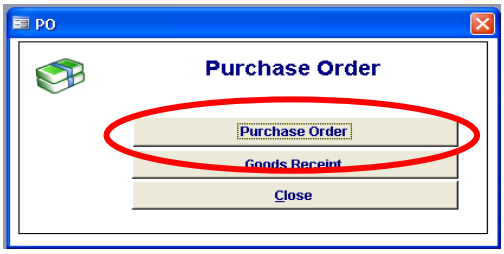


Figure 156: Purchase Order Menu

Click on "Purchase Order" button and the PO list below will appear.

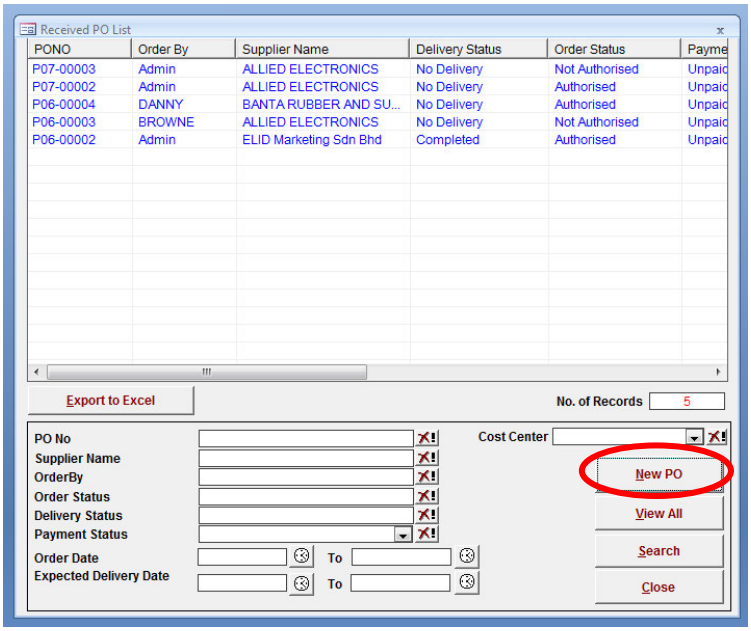


Figure 157: Purchase Order List

To open a new Purchase order, click on "NEW PO" button in Figure 157. A New PO screen will be displayed.

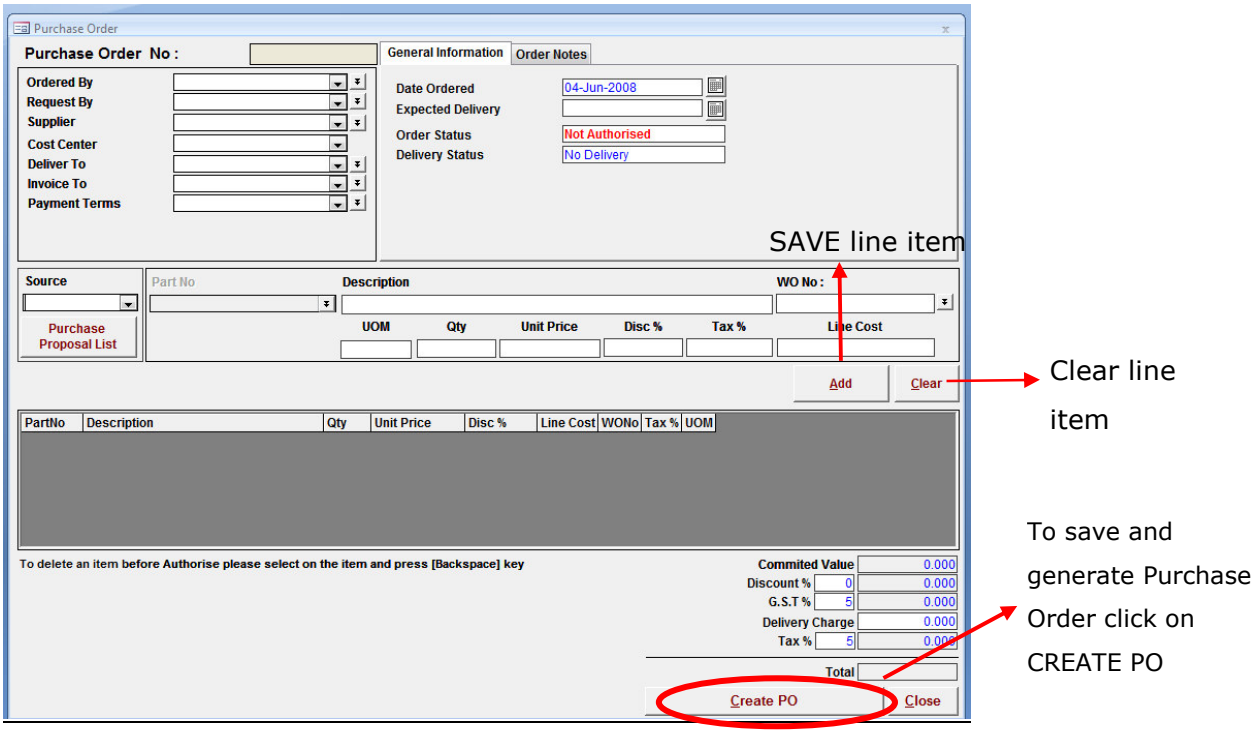


Figure 158: New Purchase Order

Fields	Description
Purchase Order No.	Automatically generated by the system upon saving the record
Ordered by	Select from the list the person who ordered the item or services
Requested by	Select from the list the person who request to purchase item or service.
Supplier	Select from the list a supplier name
Cost Center	Select from the list cost center from where the purchase request was raised.
Deliver To	Select from the list the person to deliver the materials to. Authorization is set in Administration Module.
Invoice To	Select from the list the person to invoice to. Authorization is set in Administration Module.
Payment terms	To identify the payment term of vendor. The payment term can be defined in Masters.
Delivery charge	Delivery charges in currency (If any)

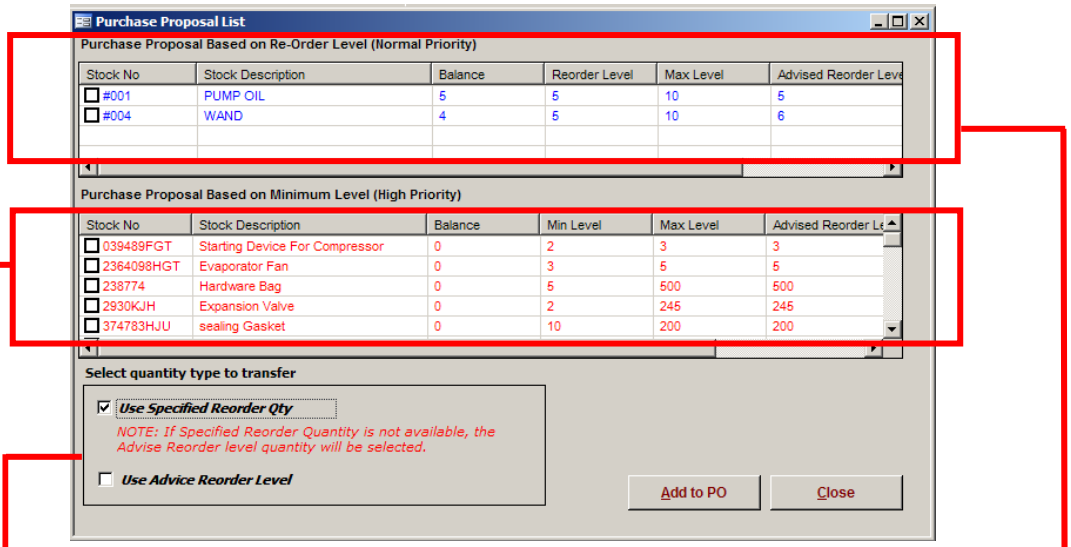
General Information Tab

Date Ordered	The date on which the goods are ordered
Expected Delivery	The date on which the goods are expected to be delivered

Fields	Description
Order Status	System defaults status to "Not Authorised". The current order status describes which stage the PO is in.
Delivery Status	System defaults status to "No Delivery". The current delivery status describes which stage the delivery is in.
Order Notes	User can note any remarks for this PO
Source	Select from the list the source of the item, Material or Direct Issue
Part No	If source is “Material”, user can select the part number from the material module.
Description	The description of the part selected which is descried in material module. If source is Direct Issue key-in in the description.
UOM	The measurement of the item to be purchased.
QTY	The quantity of the item required to buy
Unit Price	Pricing of the item supply by the vendor
Disc %	Discount given by the vendor (If any)
Line Cost	The total amount for the item (Currency)
Workorder No	Work order no. related to this Purchase Order. Click on the double arrow button to get a listing of all the work orders.
Committed Value	Total Value for all line item
Discount %	Discount for the overall Committed Value (if any)
G.S.T %	Gross Sales Tax percentage A preset value can be set in the “Masters - Misc”, also accepts user defined value.
Delivery Charges	Read only value, populated from the field above
Tax %	Overall tax for the PO. Value can be preset or a custom value can be entered. To preset the value go to “Master – Misc”.
Total	Automatically calculated; Total = (Committed Value – Discount) + GST + Delivery Charges + Tax

11.1.1 How To Select Items From Purchase Proposal?

When viewing an existing PO (see Figure 160) or raising a new PO (see Figure 158), click on Purchase Proposal List button to select items from purchase proposal.



Items in this list are at or below minimal level. To add the item to PO, tick on the item and click on ADD to PO.

Figure 159: Purchase Proposal List

User can select which QTY to add into PO either Specified Reorder Qty or Advice Reorder Level.

Items in this list are at or below re-order level. To add the item to PO, tick on the item and click on ADD to PO.

11.1.2 How To Update A Purchase Order

Modify details of the PO in the form and click on the Update PO button to save changes. To modify items in the list double click on the item that is to be edited and change the details then click on the Update button.

A PO's details can only be changed as long as the Order Status is "Not Authorised", the fields is locked for editing once it has been "Authorised".

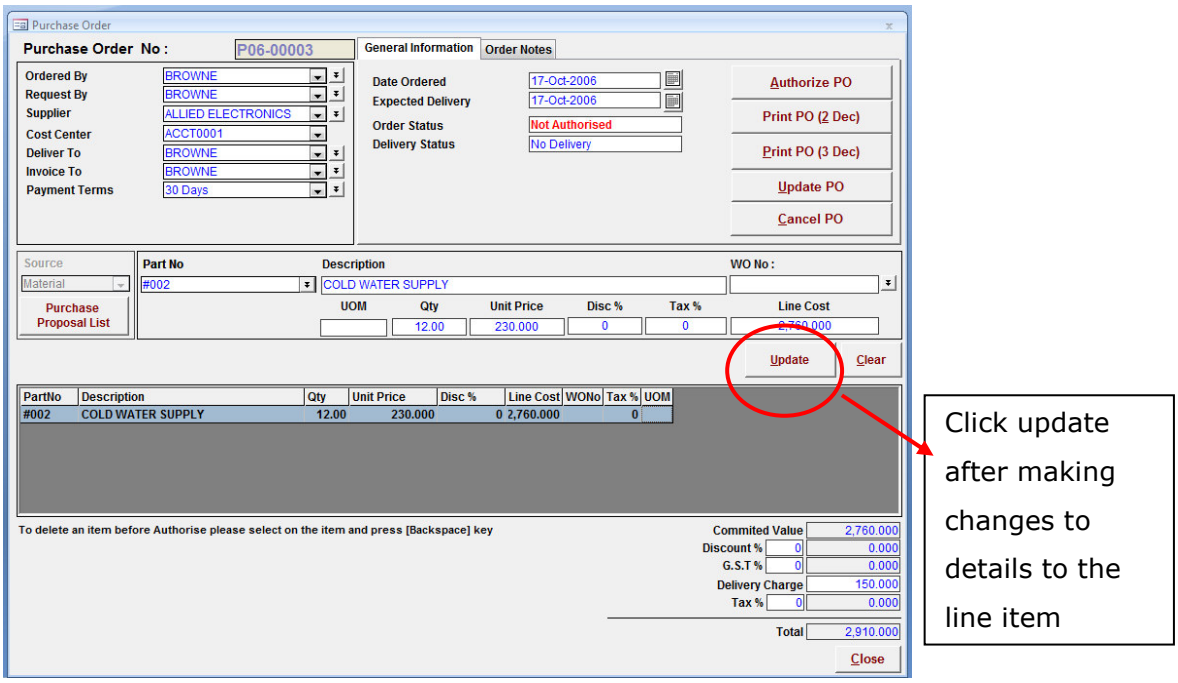


Figure 160: Updating A PO

11.1.3 How To Authorized A Purchase Order?

First set the authorization by user in the Administration Module.

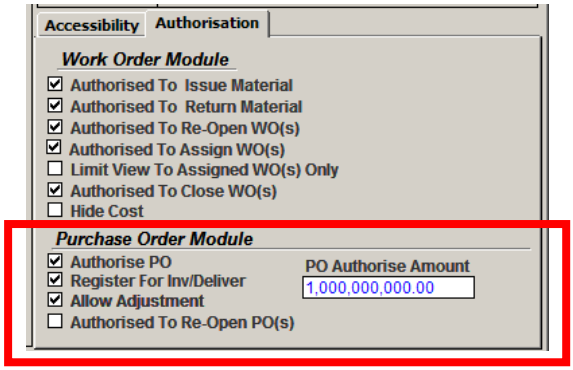


Figure 161: Authorizing Purchase Order

Once authorization is set, the user can now authorized Purchase Order by clicking on "Authorize This PO."

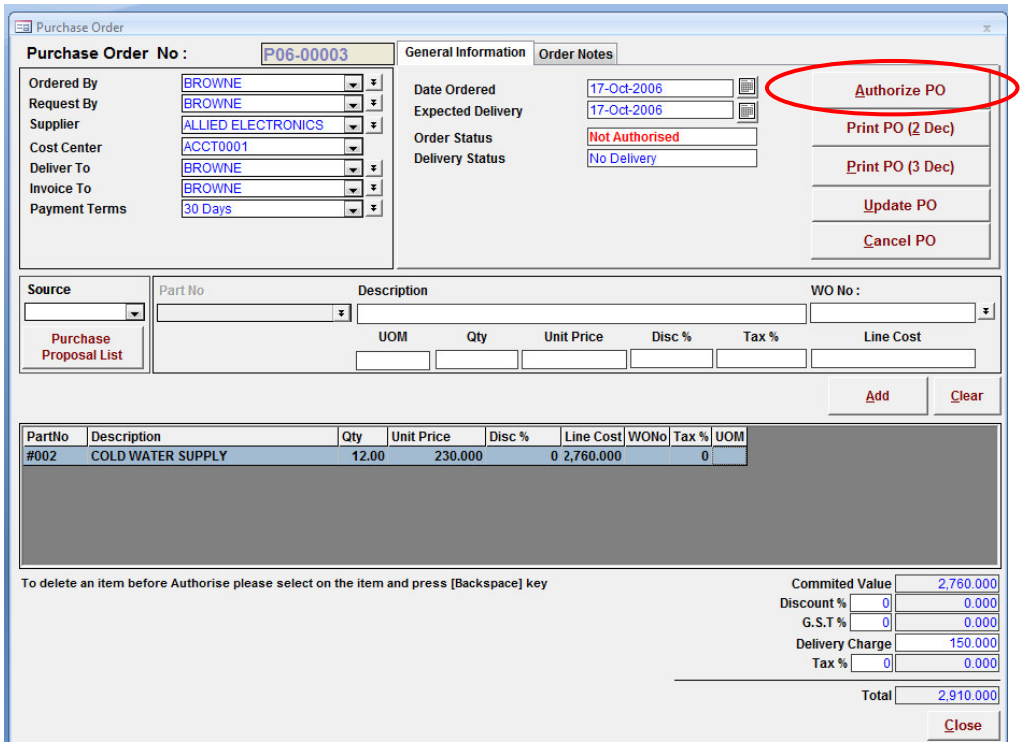


Figure 162: Authorize This PO

The authorized user needs to enter Name & password to authorize a Purchase Order.

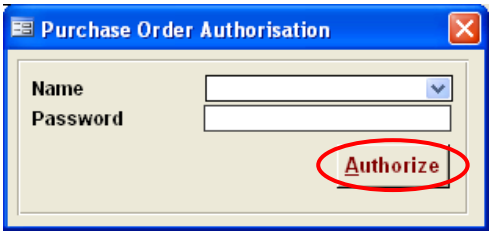


Figure 163: PO Authorization

This is how an authorized PO will look like.

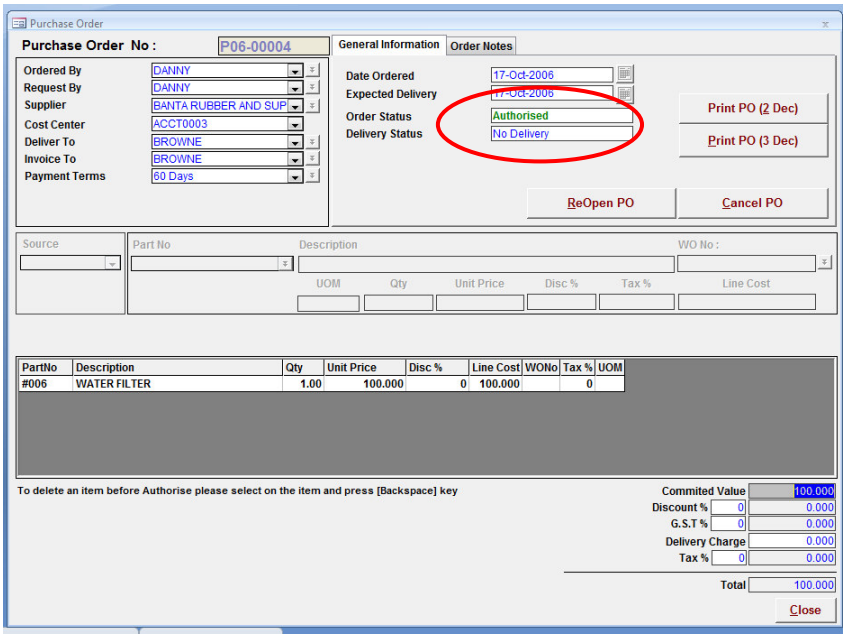


Figure 164: Authorized PO

11.1.4 How To Cancel A Purchase Order?

A purchase order can only be cancelled by the person who authorized the PO. Click on Cancel This PO to cancel the purchase order. The system will prompt for username & password for authorization (see Figure 163.)

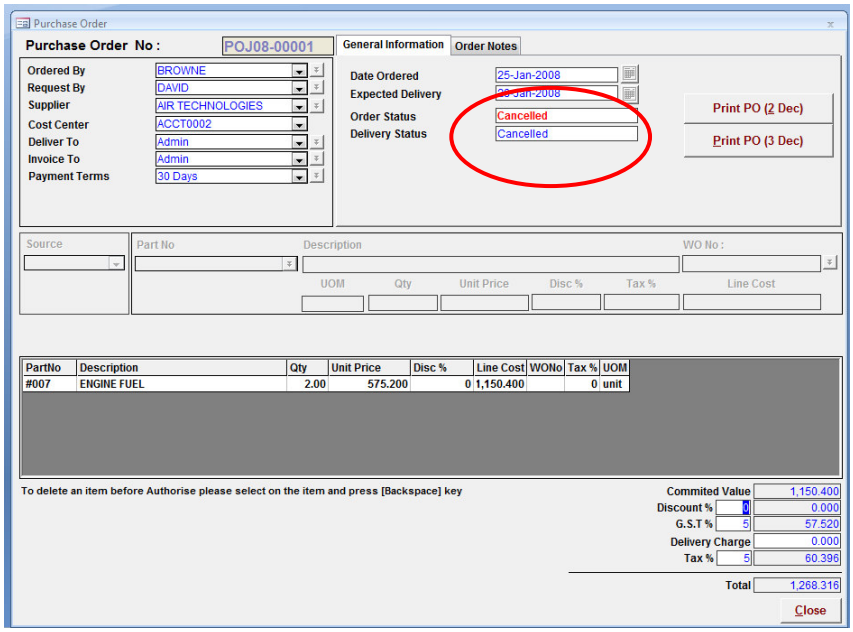
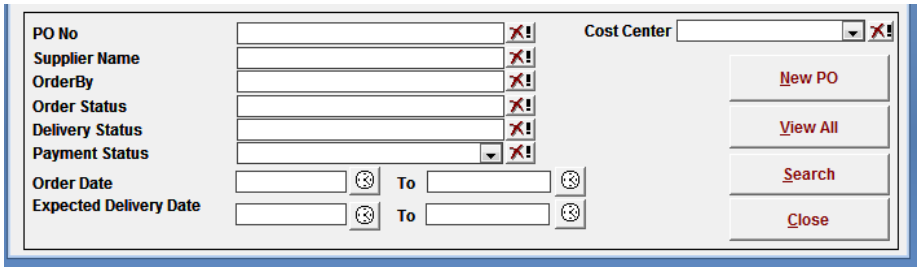


Figure 165: PO Cancelled

11.1.5 How To Make A Search In Purchase Order



Search Purchase Order

To do a search in PO, enter the parameter of the search and click "Search".

A search could be done with multiple parameters for a search.

The search can be sorted by clicking the column header in the list form.

To remove data in a field click on to clear the field.

11.2 Goods Receipt

The "Goods Receipt" screen allows you to record the goods received details.

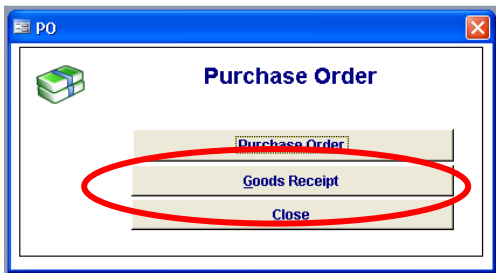


Figure 166: PO Menu

11.2.1 How To Sort The GRN List?

Data in the GRN list form can be sorted in ascending or descending order by clicking the relevant column header.

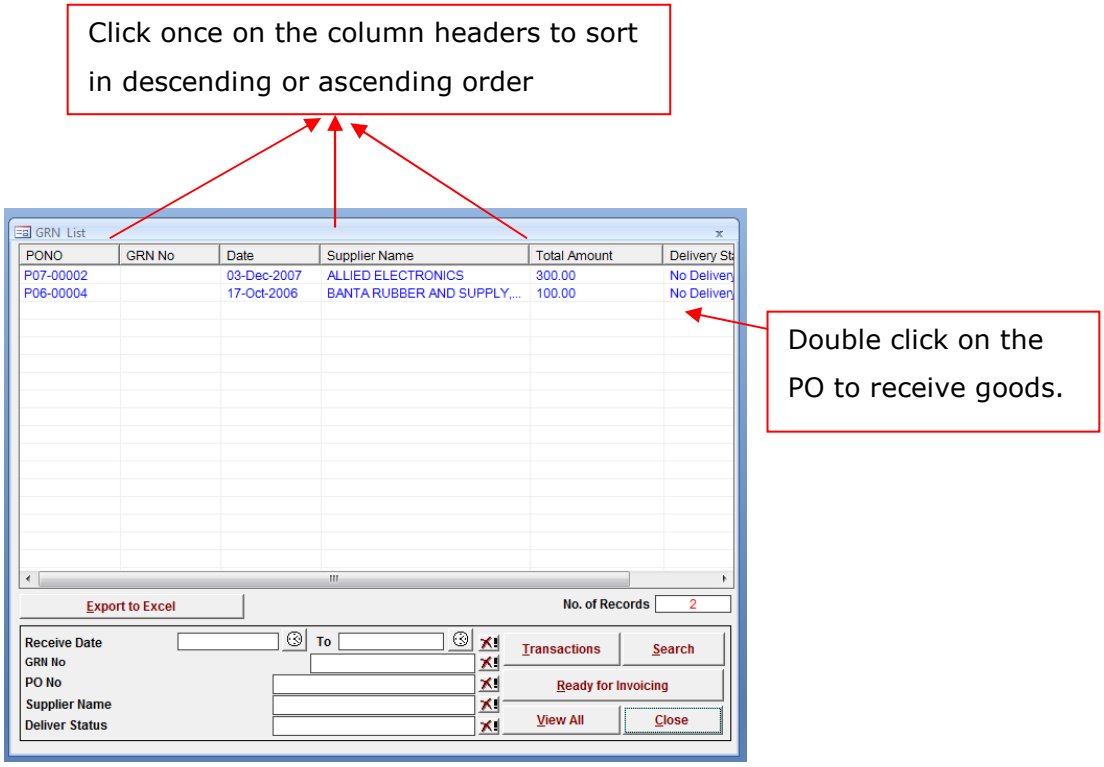


Figure 167: GRN List

11.2.2 How To Do Goods Receipt By Item?

This transaction is to receive item by item on this PO. The delivery status will show the current stage of the PO.

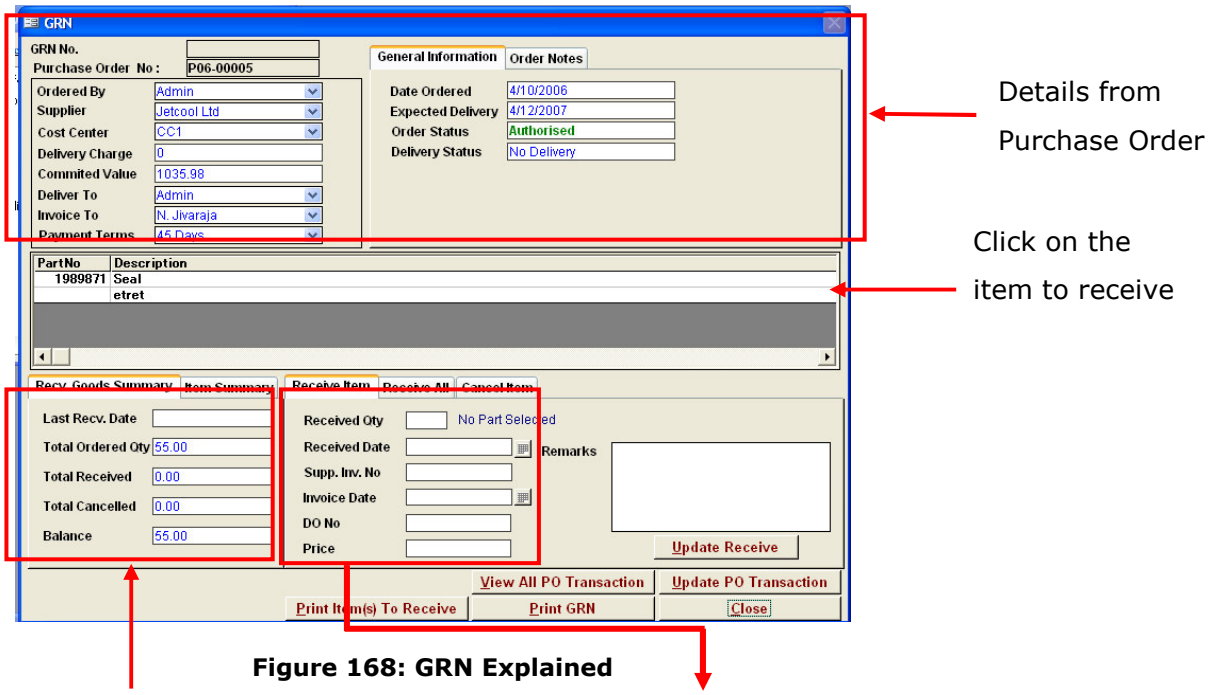


Figure 168: GRN Explained

This shows the summary for the item selected

Select on the item to receive then click on the Receive Item tab

Fields	Description
GRN No.	The number generated by system to identify the goods receipt documents.
Received QTY	The quantity of the item received from supplier.
Received Date	The date when the item received from supplier.
Supp. Inv. No.	The number stated on the invoice
Invoice Date	Date stated on the invoice
DO No.	The supplier delivery order number
Price	Default price from Purchase Order
Remarks	Notes
Update Receive	To save the transaction.
Print Item(s) To Receive	Print Good Receipt Note prior to any transaction
View All PO Transaction	Viewing Transaction of a GRN
Print GRN	Print Good Receipt Note after completion of transaction
Update PO Transaction	Update information on the Invoice details and DO No for every transaction.

This shows the entire status for this PO.

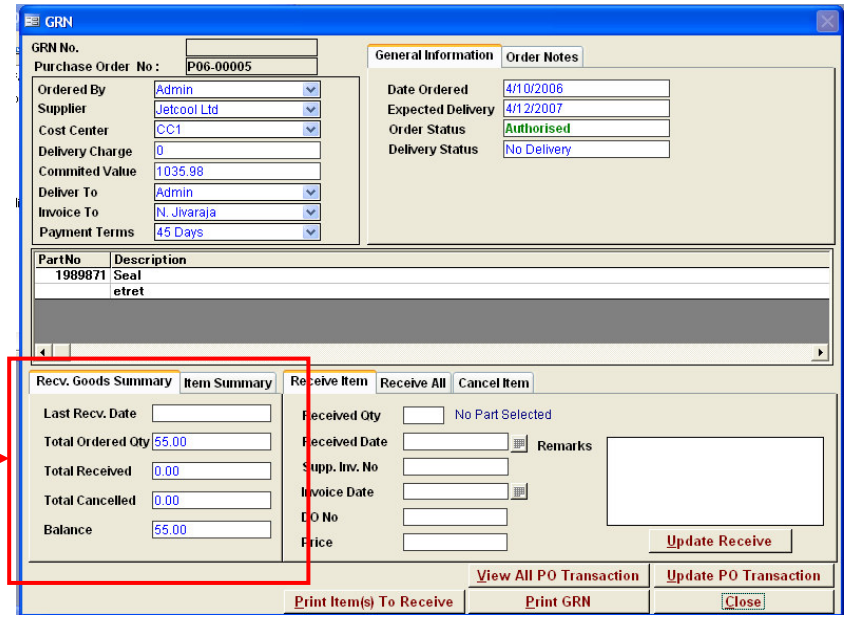
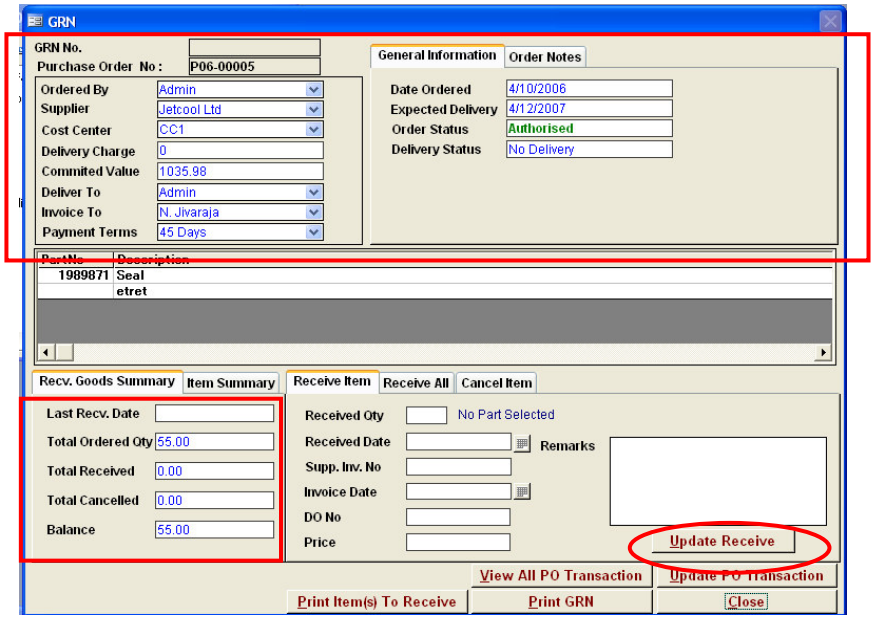


Figure 169: Goods Receipt Note

11.2.3 How To Record Received All Goods?

This transaction is to receive all the items on this PO. Click on the "Receive All" button to save the transaction and Delivery Status will change to "Complete", see Figure 171.



Details from Purchase order

Figure 170: GRN – Receive All

Fields	Description
GRN No.	The number generated by system to identify the goods receipt documents.
Received Date	The date when the item received from supplier.
Supp. Inv. No.	The number stated on the invoice.
Invoice Date	Date stated on the invoice
DO No	Delivery No for goods sent

This is how a completed delivery will look like.

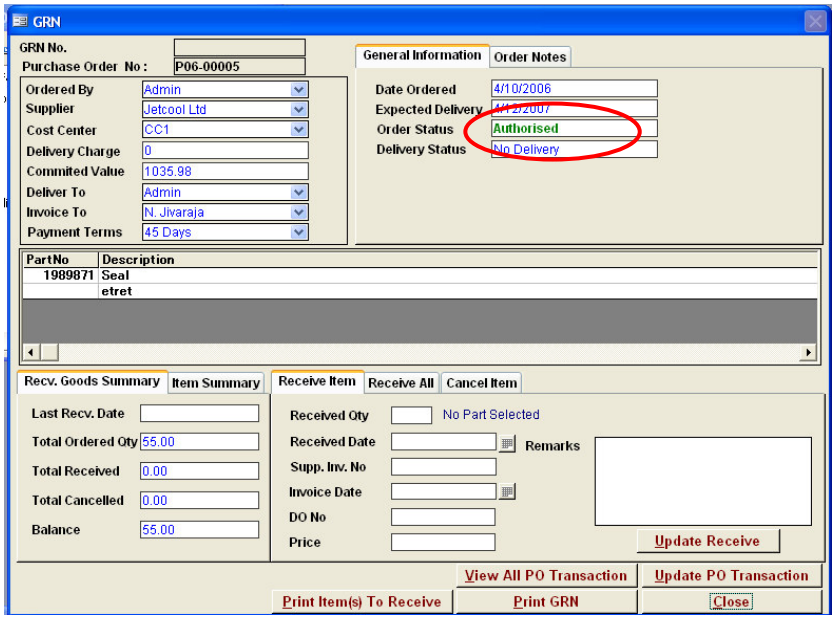


Figure 171: Completed PO

11.2.4 How To Cancel Goods?

Select the item to be cancelled, then click on the cancel item tab.

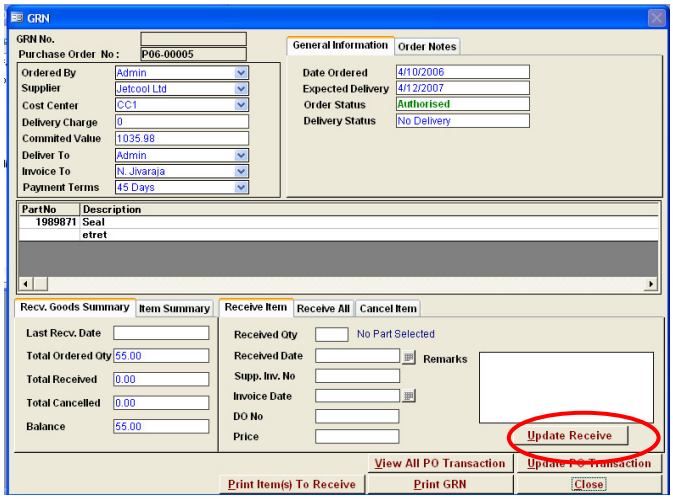


Figure 172: Cancel Goods

Fields	Description
Cancel QTY	The quantity cancelled.
Cancel Date	The date the item was cancelled
Reason	Reasons to cancel the order
CANCEL Item	Click on “CANCEL Item” to save the transaction

11.2.5 How to Update PO Transaction?

In the current Good Receipt Note click on "Update PO Transaction, a PO Transaction form would pop-up, see figure below. This form allows user to update information for invoice details. Double click on the transaction user would like to update, the information of the particular record would be populated into the respective column. Enter the information regarding the transaction and click on Update button to update record.

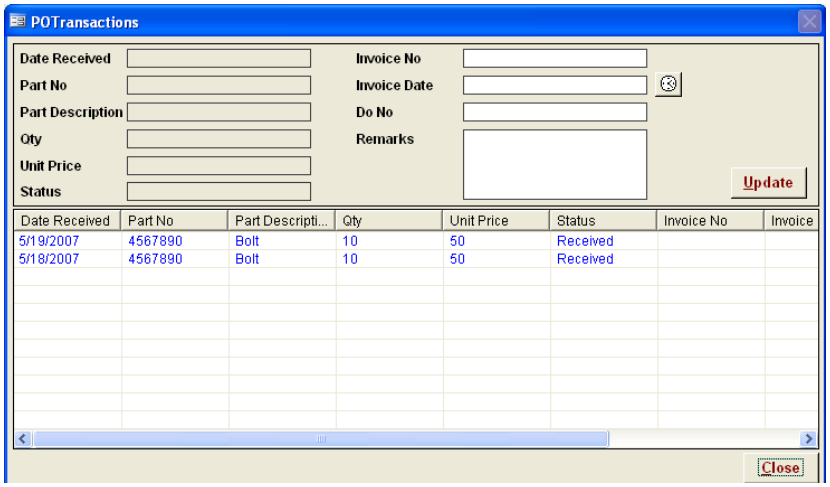


Figure 173: PO Transaction Record

11.2.6 How To View Transactions In Each PO And All PO?

To view all the transactions for a single PO, click on "View All PO Transaction" the below list would pop-up.

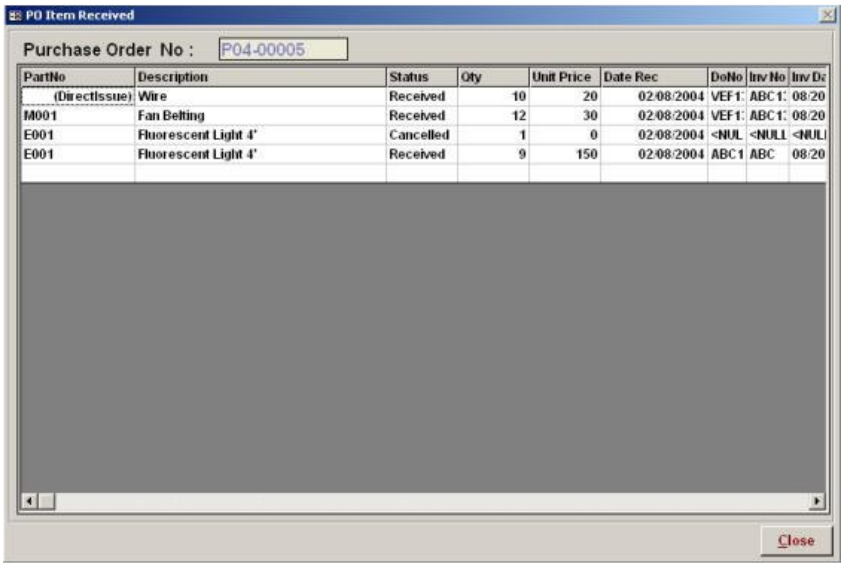
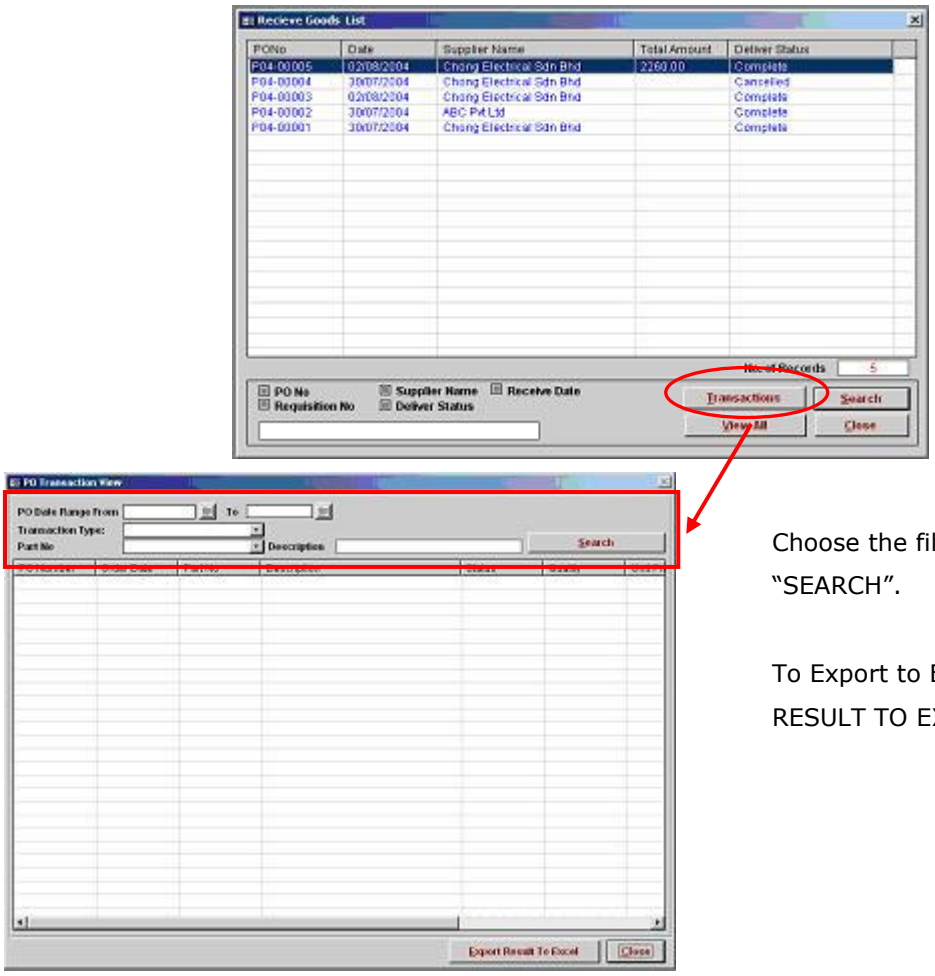


Figure 174: PO Item Received

To view all the transactions in PO module, click on “TRANSACTIONS” and the list below would pop-up.



Choose the filters and click on “SEARCH”.

To Export to Excel click on EXPORT RESULT TO EXCEL

Figure 175: Viewing Transactions

REPORT MODULE

12. Reports

12.1 Reports Main Menu

Data entered into the system are retrievable in report format, depending on the type of reports the user needs. Click on the Reports button in the CWorks Main Menu. The screen below would pop-up and consists of all CWorks reports. Some reports will ask user to key-in parameters. Click on "Preview" to view and print the report.

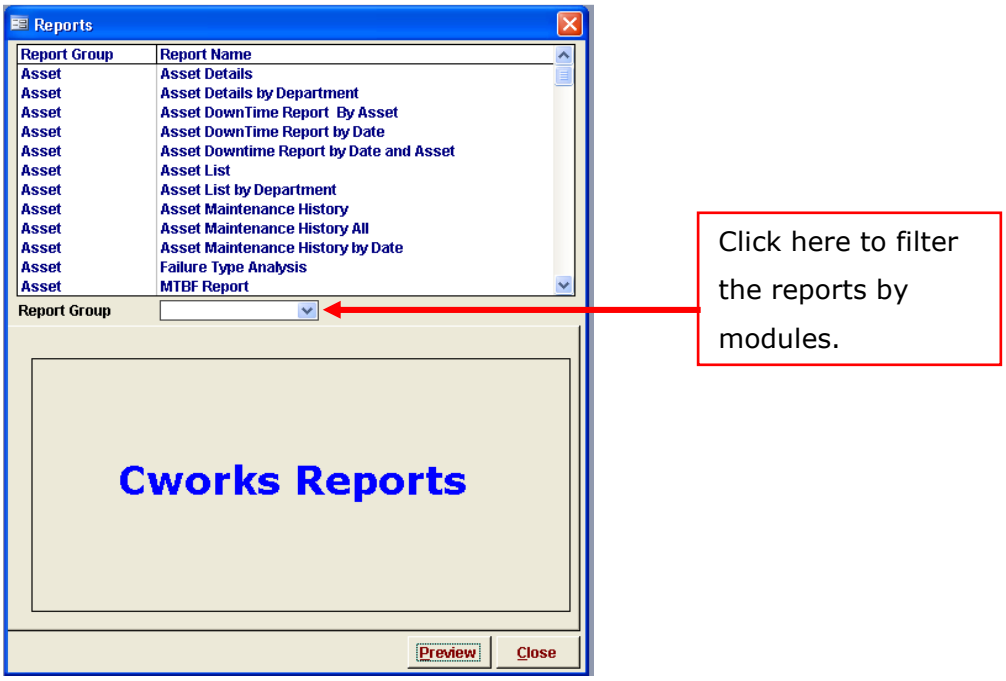


Figure 176: Reports Main Menu

OTHERS

13. Frequently Asked Questions

13.1 How To Back Up Your Data?

There is one file that stores the "CWORKS PRO PLUS" data, which is " CWorksPlus_db". It is important to backup this file in the event that the system gets corrupted and to access the data.

Steps for back up:

1) Click on the CWorks Pro Plus Tool Bar "Links", then select Utilities.

2) Click on 

button, and screen (refer below) would pop-up.

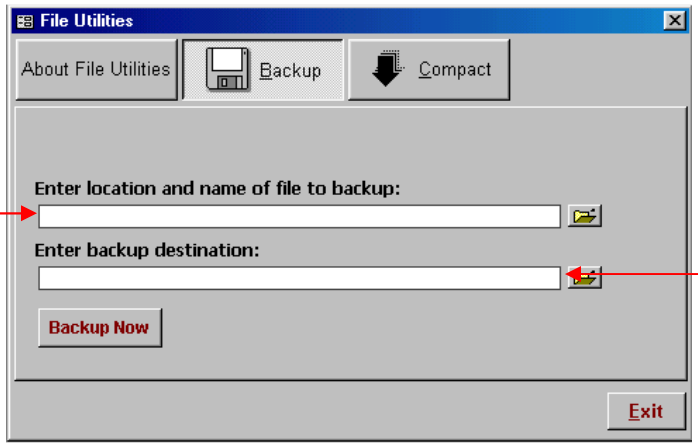


Figure 177: File Utilities - Backup

3) "Enter location and name of file to backup" is the CWORKS database to be backed up. User can browse "c:\" by clicking on  button.

4) "Enter backup destination" is where you want to store the backup data.

5) Click on 

13.2 How to Change List View Font?

CWorks allows users to set their default font style for all list view. To change the default font to user defined, go to "Links" on the application menu bar and click "Font" a form to choose the default font will appear choose the font and click "save" to save the font selection as shown in Figure 178. Click "close" to close all form to return to the application.

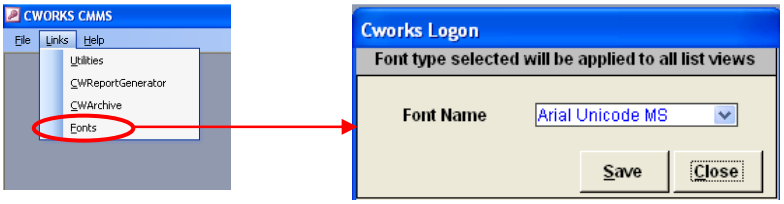


Figure 178 : Selecting default font

13.3 How To Improve CWorks Performance?

Users should repair and compact your file periodically to ensure data integrity and improve performance. If CWorks is networked and running on multiple users, before using these system utilities, make sure that the other applications are closed and no one has the CWorksPlus.mdb file open for edit.

NOTE: Because this utility cannot fix all possible forms of database corruption, user should backup your CWorksPlus.mdb & CWorksPlus_db.mdb files regularly to avoid unrecoverable data loss. This kind of corruption can occur when the system shuts down abnormally (such as during a power failure).

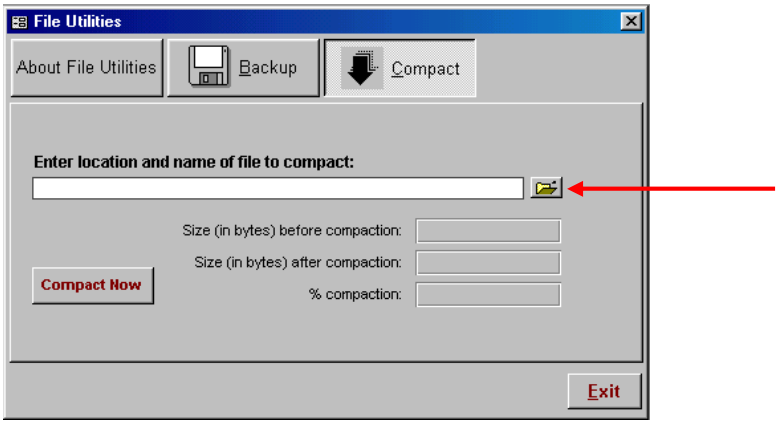


Figure 179: Compact Utility

Steps to repair and compact:

1) Click on the CWorks Pro Plus Tool Bar "Links", then select Utilities.

2) Click on  button, and the screen (refer above) would pop-up

3) To repair and compact CWorks main program & Database, "Enter location and name of file to compact"

Product	For Main Program	For Database
CWorks PLUS (with source codes)	C:\ CWPlus\ CWorksPlus.mdb	C:\ CWPlus\ CWorksPlus_db.mdb
CWorks PLUS (without source codes)	C:\ CWPLSD\ CWorksPlus.mdb	C:\ CWPLSD\ CWorksPlus_db.mdb

4) Click on  and percentage of compaction should reach 100% or full capacity.

13.4 How To Compact & Repair CWORKS application?

1. Depress the "Shift" key and launch CWorksPlus. Do not release the "Shift" key until CWorks is launched. This will allow you to access the source codes.
2. At the menu bar click**, Tools – Database Utilities – Compact and Repair database.**

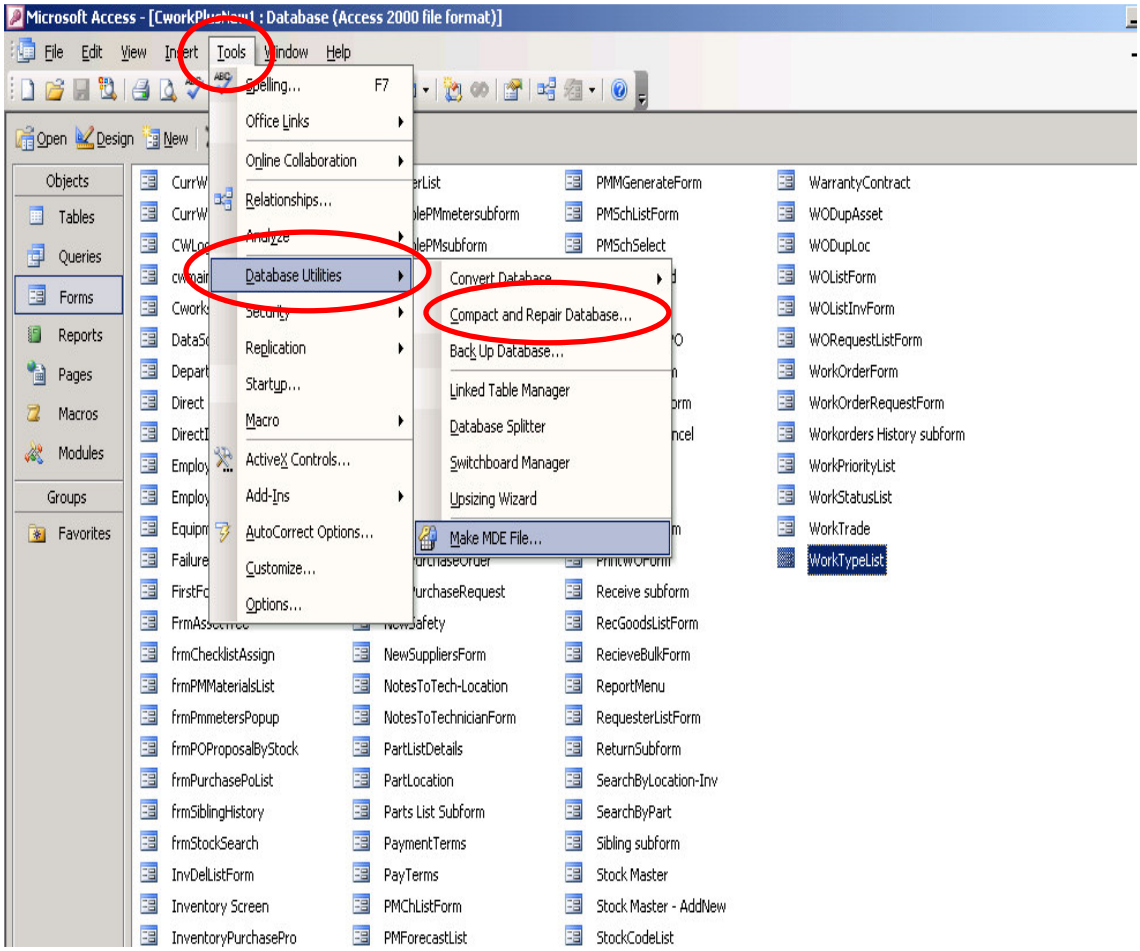


Figure 180: Compact

13.5 How To Lock And Unlock Access To Source Codes And Database?

A Lock /Unlock Database utility is provided in the system for security purposes. Using this utility will lock the CWorks application and database files by disallowing the Microsoft Access bypass key.

13.5.1 CWorks Application File (CWorksPlus.mdb)

To access the utility in the CWorks application file, go to **File** on the menu bar and select **Lock/Unlock Db**. Refer to **Figure 181:** Locking/Unlocking application.

Figure 181: Locking/Unlocking application

The User ID field will default to "admin". Enter the administrator password as set in the Employee Module.

Important Note: The administrator User ID "admin" must never be deleted from the employee record / table. Deleting this will not allow users to use this utility.

The "Lock" or "Unlock" button will activate according to the current status of the system. Click the relevant button to change the status of the file.

13.5.2 CWorks Database File (CWorksPlus_db.mdb & CWorksPlus_Sample_db.mdb)

By default the database is at **Unlock** status. If user double click on the database file, the below screen will launch automatically. Current Status = Unlocked. To view the database, exit from the program and launch the database file with the "Shift" key depressed. Do not let go the SHIFT key until you see Figure 183

To LOCK / UNLOCK the database, key-in the password then press ENTER. Press LOCK / UNLOCK button.

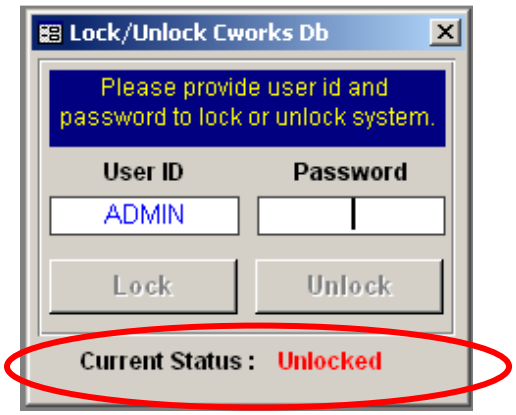


Figure 182: Locking/Unlocking database

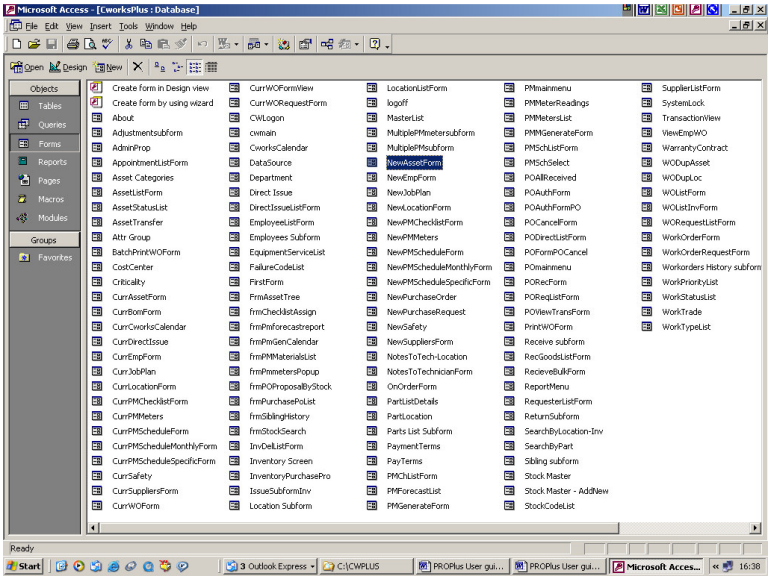


Figure 183: CWorks Tables

13.6 How to open CWorks Source Codes?

- Click on Start < Programs < Windows Explorer
- Double click on C:\CWPlus

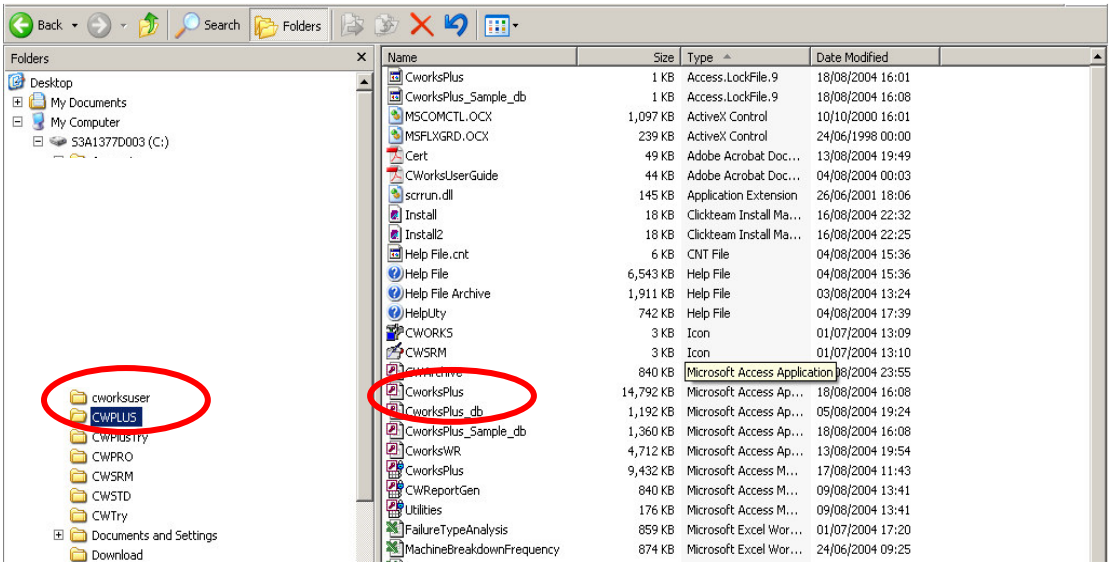


Figure 184: CWorks Source Code

- Find for a file called "CWorksPlus.mdb"
- Click once on "CWorksPlus.mdb"
- Press SHIFT and do not let go then press ENTER once, Figure 185 would pop-up then let go the SHIFT key.

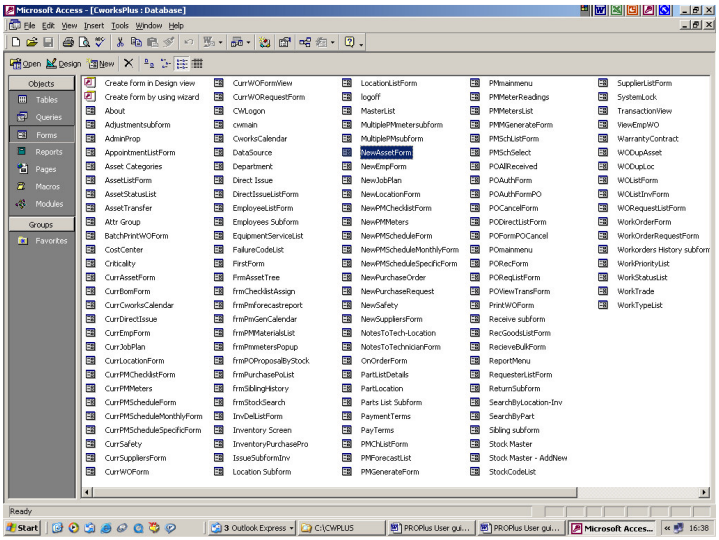


Figure 185: Database Tables

To change form design or label(s)

- Click on forms. For example NewAssetForm.
- Click on NewAssetForm
- Click on DESIGN icon

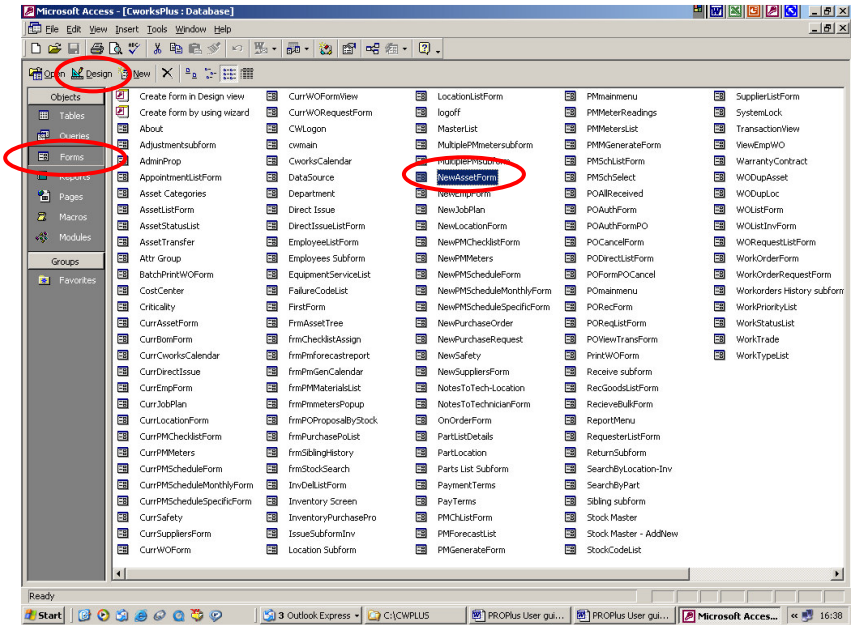


Figure 186: Changing Form Design /Label

- The form will change into a design mode (refer below)
- Once editing is done click on SAVE button.

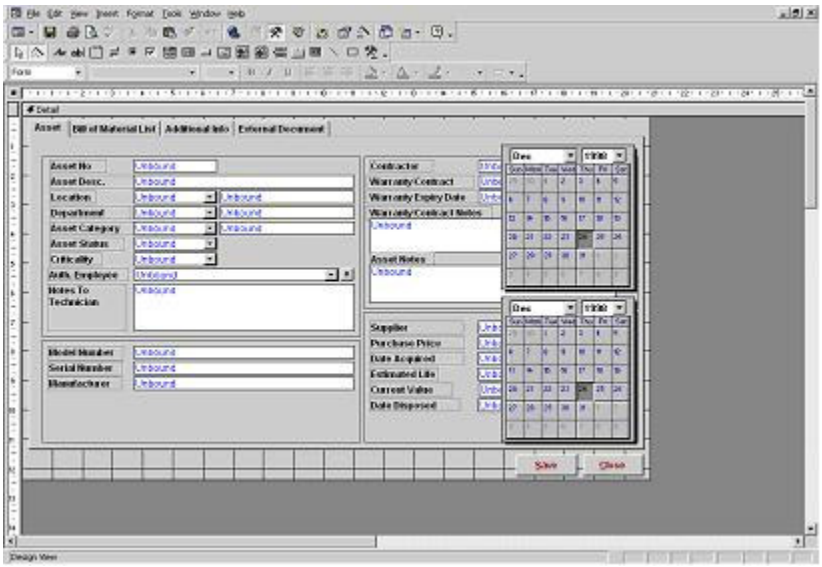


Figure 187: Design Mode Of Forms

13.7 How To Change The Database Source File?

A default Access 2000 database file is installed in the CWorks directory with each installation of CWorks CMMS. CWorks CMMS can also be configured to a different CWorks data source file in another directory. Upon login into CWorks, the system will automatically connect to the database in the same folder. If the system cannot find the database a message would pop-up requesting for user to connect to the correct database. Empty database :- CWorksPlus_db.mdb or sample database :- CWorksPlusSample_db.mdb.

User can also change the data link manually from the main program by, selecting File in the program menu bar and click on DataLink.

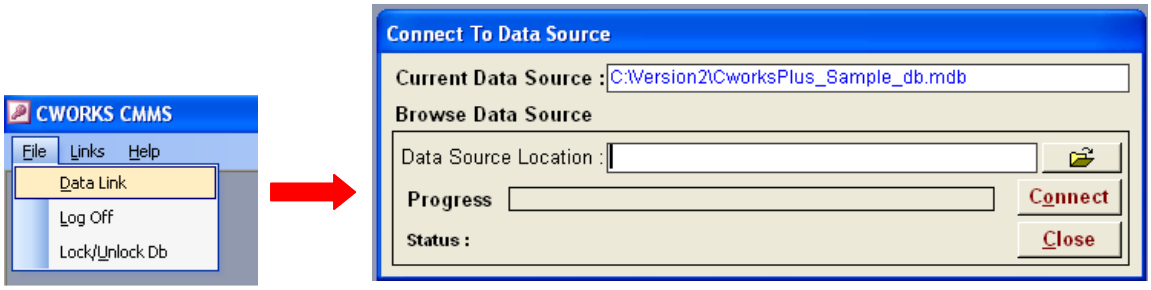


Figure 188: Connect To Data Source

The Connect To Data Source utility screen would pop-up. The current database source is displayed at the top of the screen. To connect to a database stored in a different directory or different computer within a network, define the location of the file in "Data Source Location:" field. You can browse for the file by clicking . Select or specify the database file path and click on Connect. A message will appear to confirm that the connection is successful. To view a sample database, connect to CWorks Sample Database c:\CWPlus\CWorksPlusSample_db.mdb

13.8 Hints for New Setup of CWorks

Data Entry

The CWorks database consists of a number of linked tables. All of these tables have a Key field. The Key fields typically will be Work Order Number, Asset Number, Task Number, Part No, Failure Code Number, and Location Number.

All of these fields have associated description fields, but it is the Key field that is used by the system to link tables together. In order to make the system as efficient as possible the following is recommended for all Key fields

1. Avoid spaces, avoid leading zeroes, use only alphanumeric characters and , do not use :/!\<>.,;'"@#^*(), some of these will stop the system working, it is OK to use _ and –
2. Try and keep the data in any key field the same number of characters. When you make a report columns have to be as wide as the longest Key field for that table.
3. If you are entering consecutive numbers, it is better to start with 100, 1000 or 10,000 rather than 1,2,3 etc. This will keep the Key field length consistent and make it easier to spot invalid numbers.
4. Unless you already have a familiar and logical numbering system, do not try and build a lot of logic into the number. The searches provided will normally allow you to find the number for any item.
5. Be consistent in the use of Capitals, leading caps and lower case. Recommend Caps in Key fields and Leading Caps in Descriptions. Long descriptions in lower case. If you are trying to sell to higher management, presentation is important
6. There is no restriction on what you put into description fields

Master Tables Set Up

7. Set up standards for most master tables:

    a) Failure Codes. These should be set up with a view to using them to extract the most useful data from the Work Order records
    b) Asset Categories. These should reflect such things as pumps, compressors, HVAC etc. it will then be possible to search records for typical repairs to ,say, pumps. It would also allow the use of unassigned Asset fields per Category.
    c) BOM List. This a free standing list of Spare Parts that can be associated with any selected Asset(s)
    d) Suppliers/Contractors, only the format needs to be common
    e) Location is a grouping(system) of several Assets, not always geographical. It will allow cost gathering and can also be used in the PM system for general inspections
    f) Assets. Normally belong to a Location. Assets can be set up hierarchically. Ensure there is logic and consistency in the Asset numbering system
    g) Employee/Requestor. Recommend a marked-up rate be applied so that labor costs will be available as time is entered
    h) Cost Center is only used on Purchase Orders. Worth considering using the department field for this as it is linked to every Asset and could be used to track costs/commitments per Account Code/Cost Center
    i) Job Plan can be used to describe a particular maintenance procedure and then called up on a Work Order.
    j) Safety Instruction, much as a Job Plan but related to lock-outs/vessel entry etc
    k) Misc. These should be under corporate control in terms of any changes or variations

Reporting Options

SQL Reporter. This can used to establish particular reports per site. It is important to ensure that it is linked to the correct database.

KPI Excel Macro. This reads selected fields from the database by date range and then uses incorporated pivot tables to sort that data. This could become a standard monthly Excel report that is submitted by all sites.

WorkLog. Enables easy entry of data on existing WOs and creation and closing of Breakdown WOs

13.9 How to use the Mouse & Keyboard Functions?

In CWorks user guide the following terms are used to describe mouse actions and keyboard functions:

13.9.1 Mouse Actions

Action	Result
Click	Press and release the left mouse button.
Double-click	Click the left mouse button twice.
Right-click	Press and release the right mouse button.
Put a Check in the Box	Move the mouse pointer over a check box and click it to activate or deactivate it. Turn on a box by putting a check in it.

13.9.2 Keyboard Functions

Action	Result
<Tab>	Move the focus of the cursor to the next available control.
<Enter>	Either moves the focus of the cursor to the next available control or commits a transaction.
<Delete>	Remove selected data from fields and some

Action	Result
	datasheets.
<ESC>	Stops a function.
Save	Click on this button to save any changes
Close	Click on this button to exit from the screen. In a "New" screen (for registering a new record), clicking this button will close the screen without saving the record. In a "Current" screen (for viewing and modifying existing records), clicking this button will prompt the user for confirmation to save or discard the changes (refer "Confirm Save" screen below).
Confirm Save Do you wish to save the record ? Yes No	Click Yes to save the changes and exit the screen or No to exit the screen without saving the changes.

13.10 How to use The Calendar In CWorks?

Entering date fields in CWorks can be done via a calendar.

For each date field, click and a calendar as displayed would pop-up.

Figure 189: Calendar Function

Select the month and year from the combo boxes and click on the required date. The selected date will be carried over to the date field.

To exit the calendar box without selecting a date, just move the mouse pointer out of the calendar screen boundary and the calendar will exit automatically. The original date in the field will remain.

For date fields where time is available for entry, select a date first from the calendar. The system will default the time to 00:00 hrs. To enter a time, key in a time in the "Time" field and press "Tab". The time value will automatically be joined to the date field. The time can also be amended from the "Time" field.

Figure 190: Setting Estimated and Actual Date/Time

Note: The date & time can also be entered manually by keying in the value directly into the field. Formats (dd/mm/yyyy as opposed to mm/dd/yyyy) will depend on your Windows Regional Settings.

13.11 How To Create A New CWorks Application?

- Open MSAccess2000 or higher program.

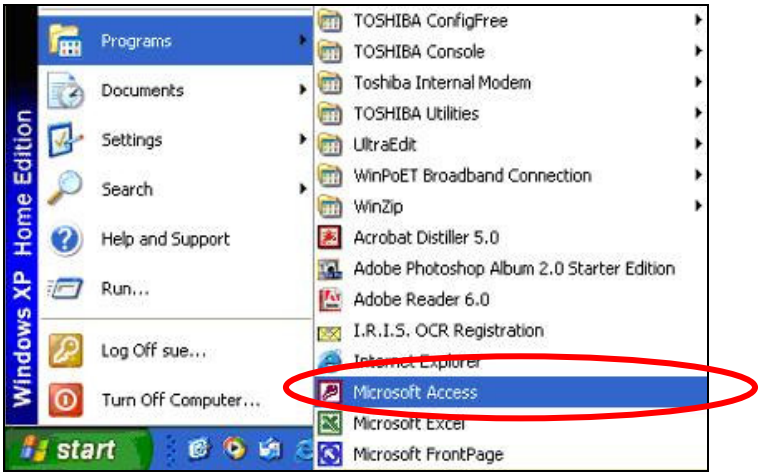


Figure 191: Windows Menu

- Create a blank database file in MSAccess.

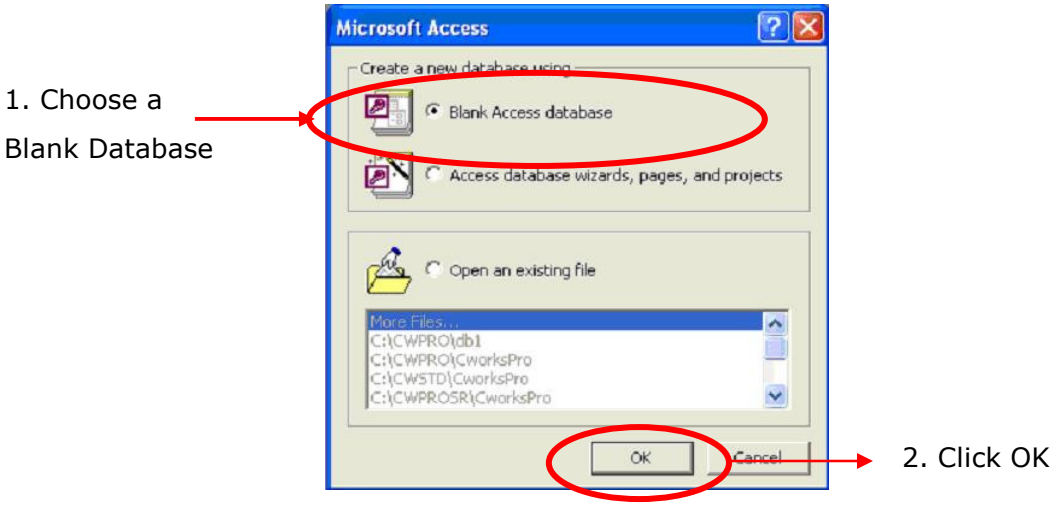


Figure 192: Blank MSAccess Database

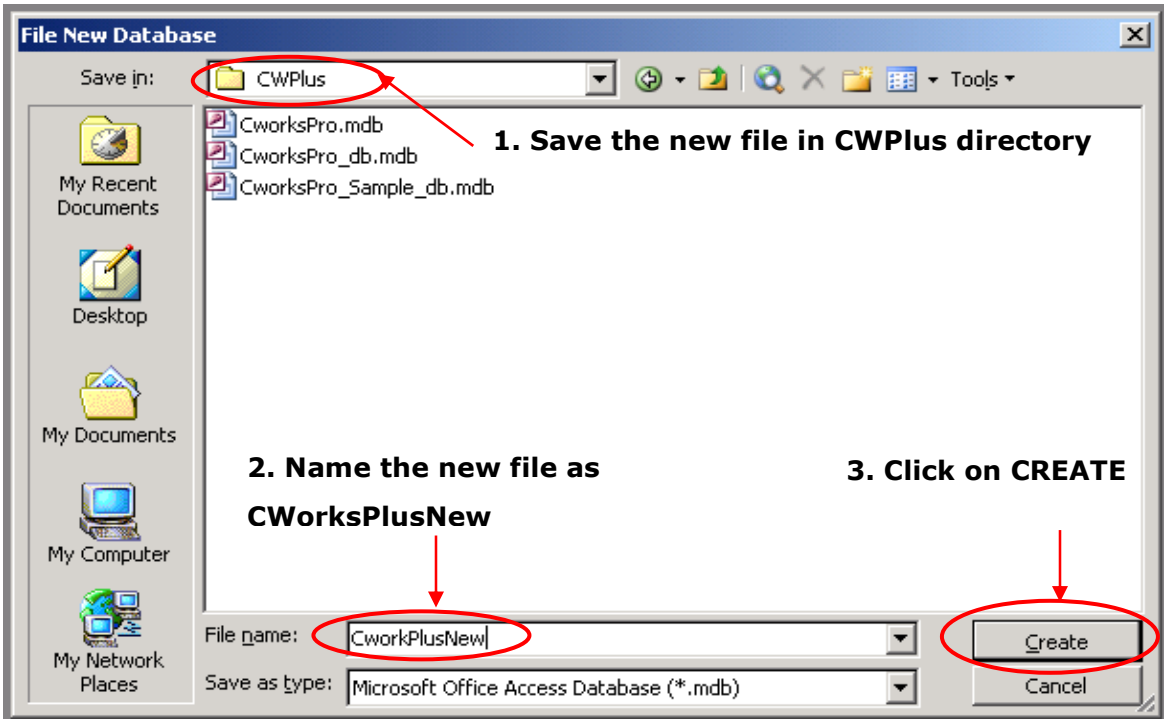


Figure 193: Creating New Database File

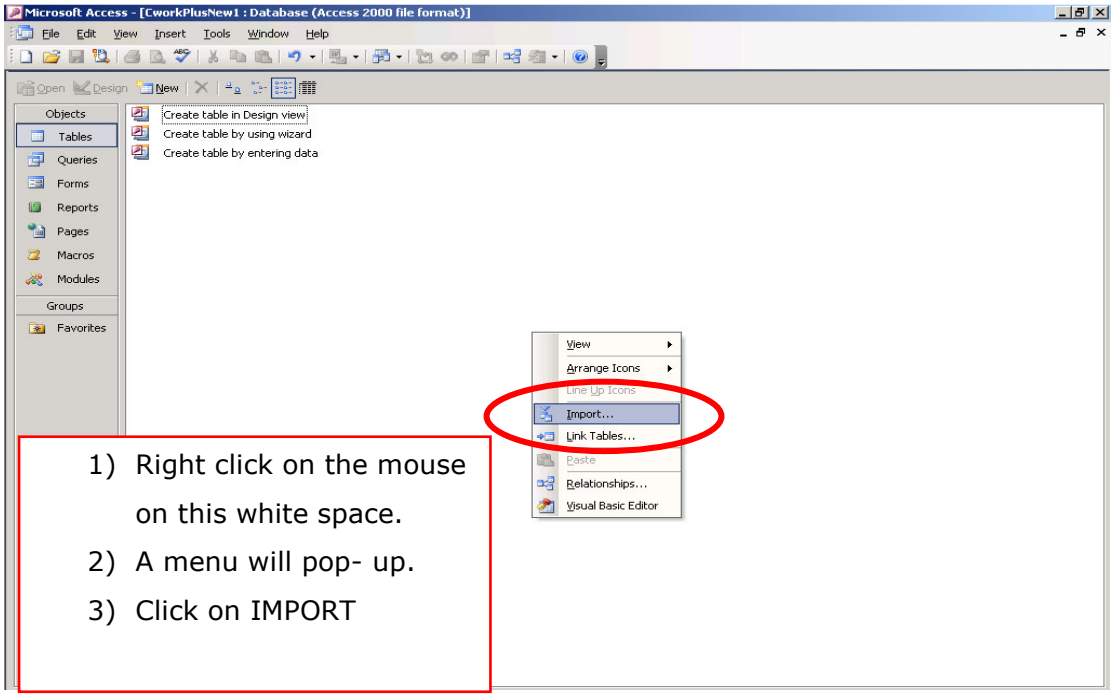
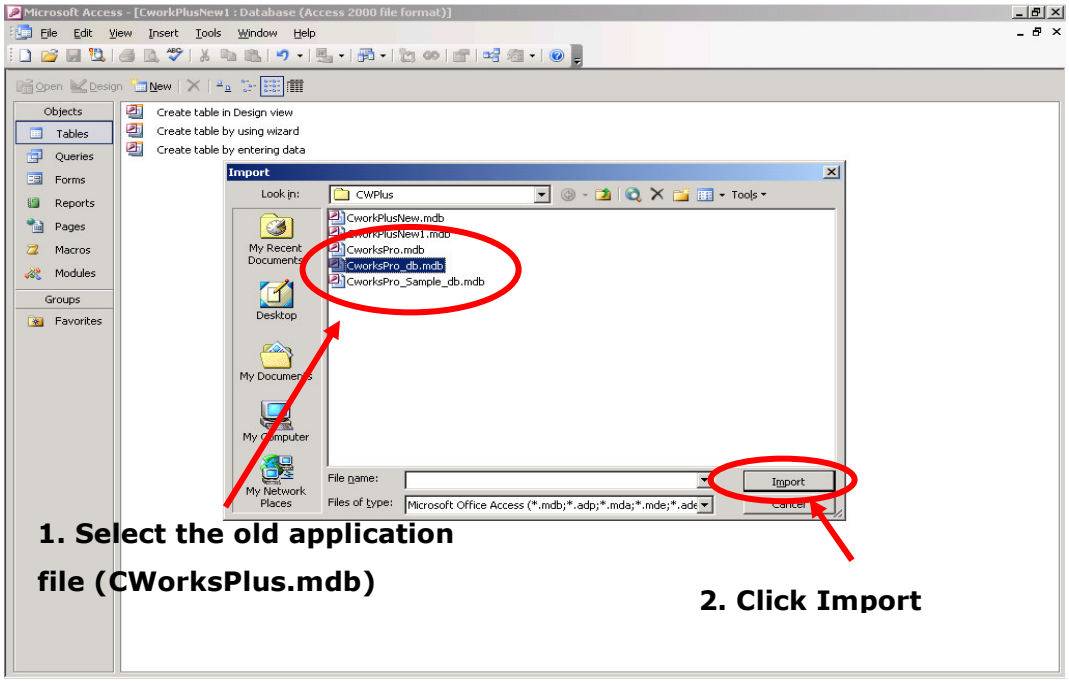


Figure 194: Importing Tables



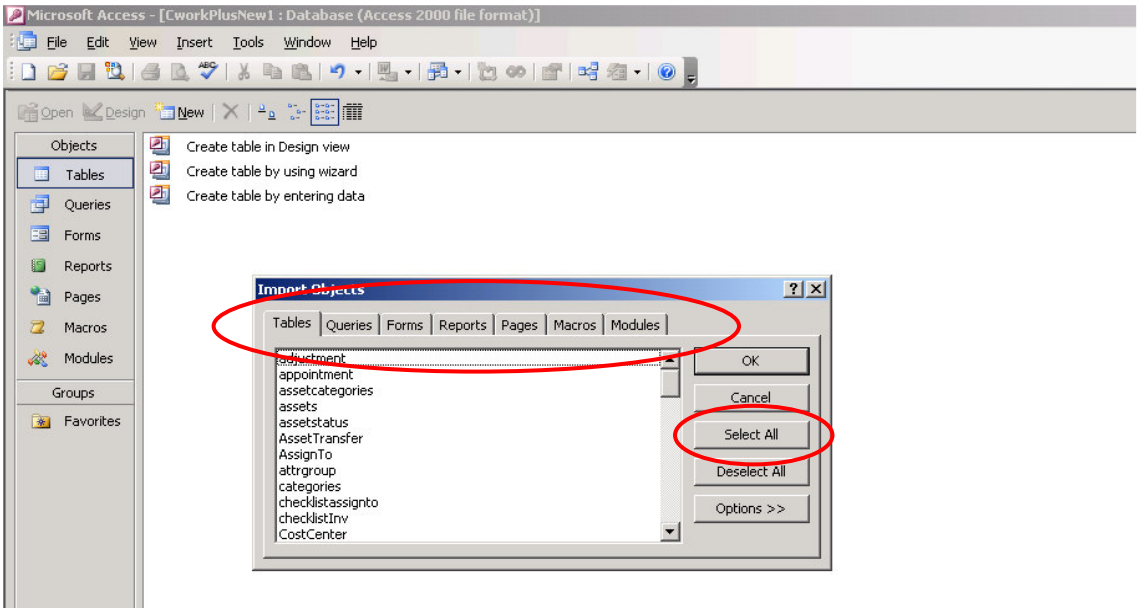


Figure 195: Importing All Objects

- Click on TABLES tab and click SELECT ALL. Repeat this for all the tabs "QUERIES, FORMS, REPORTS, PAGES, MACROS & MODULES. At the end click OK.

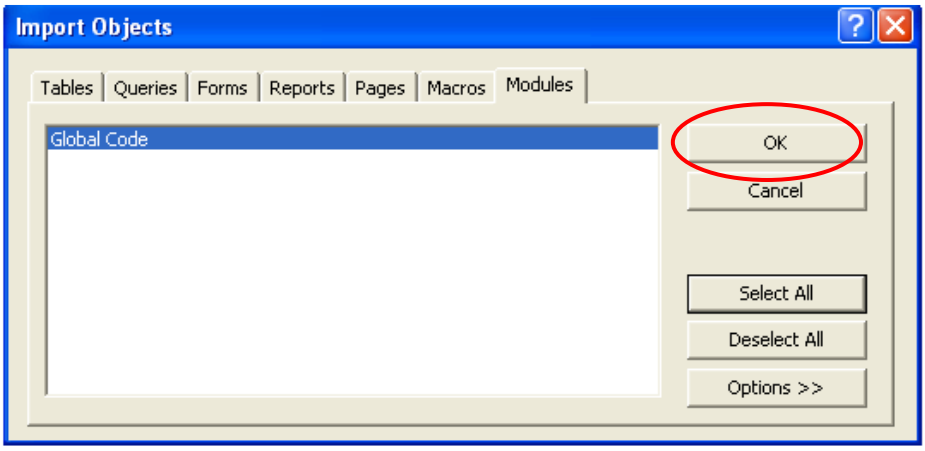


Figure 196: Import Objects Dialog

- After the above process completed click on MSAccess menu bar, select Tools –> Startup.

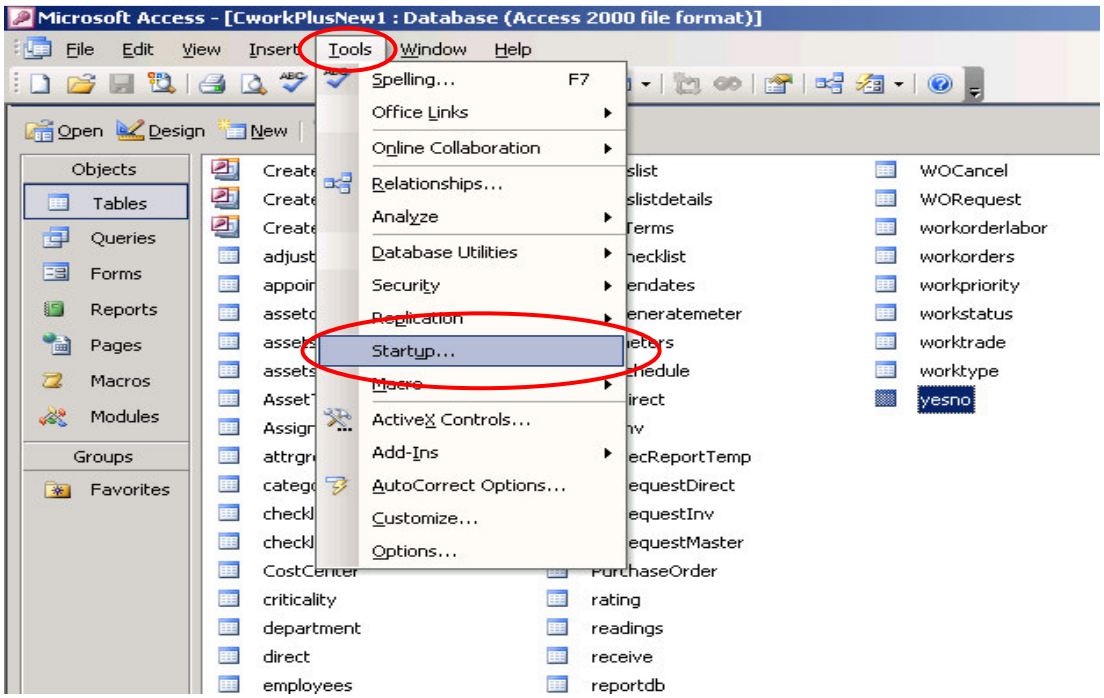


Figure 197: Tools -> Startup

- Fill up the STARTUP as per the screenshot below and un-tick all options and click OK

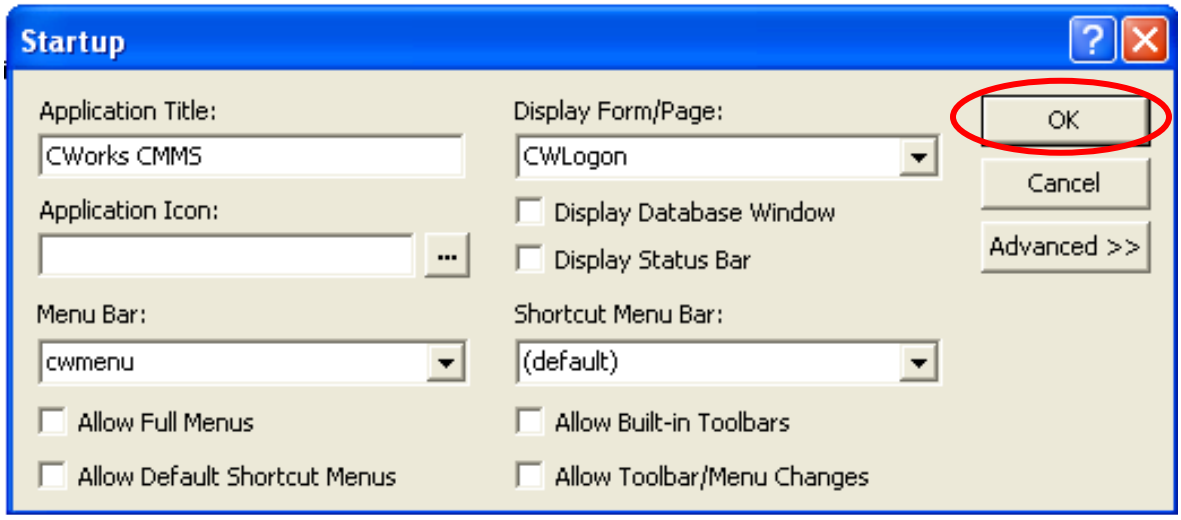


Figure 198: Startup Dialog

- Create a new Toolbar called "pagesetup". Click on MSAccess menu bar, Select View -> Toolbars -> Customize.

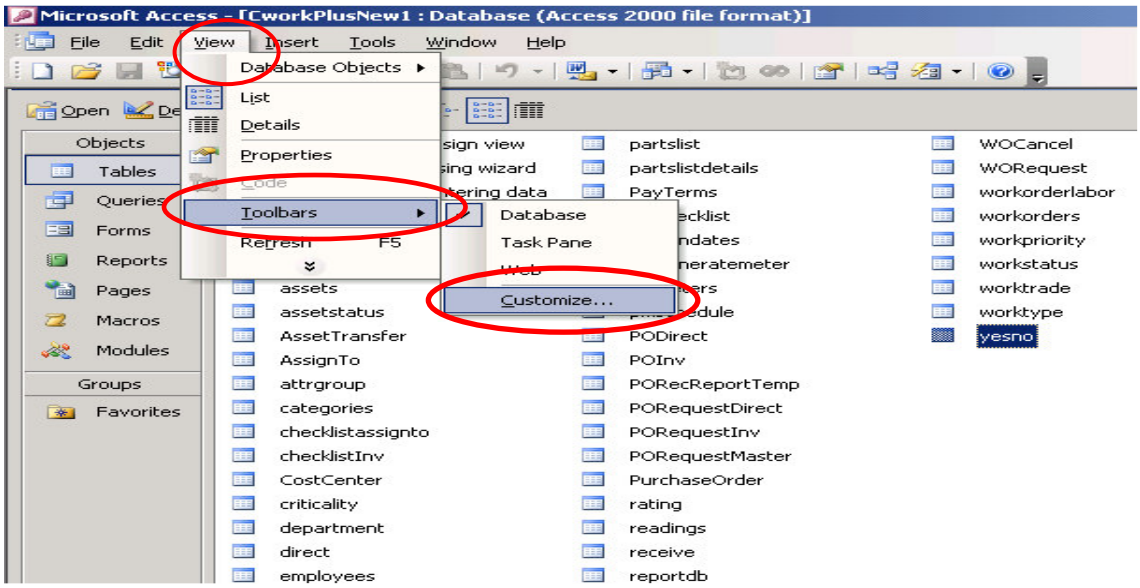
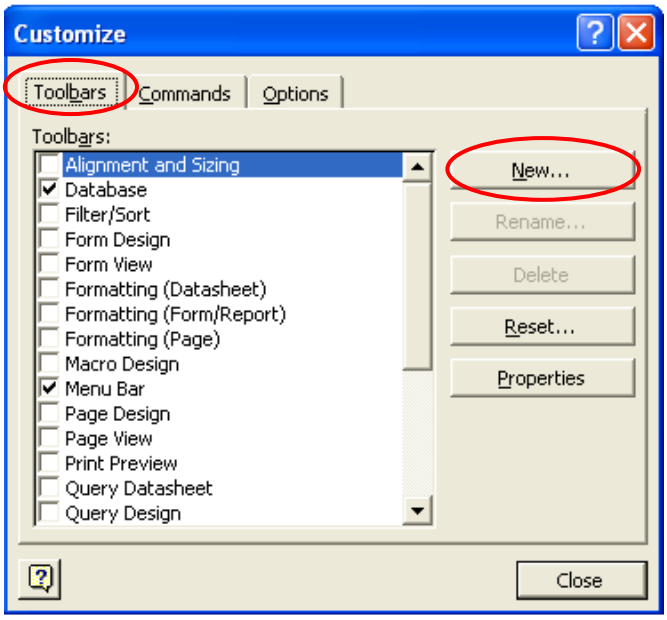
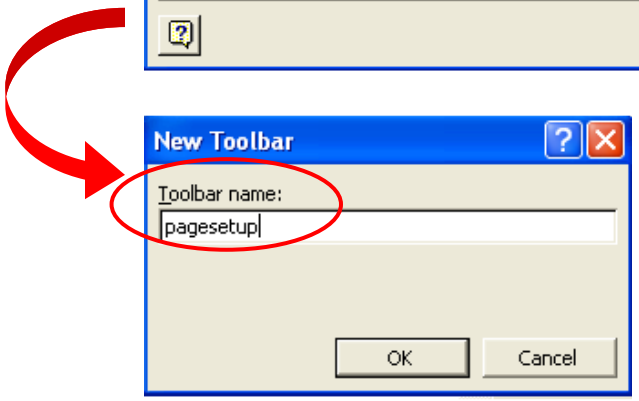


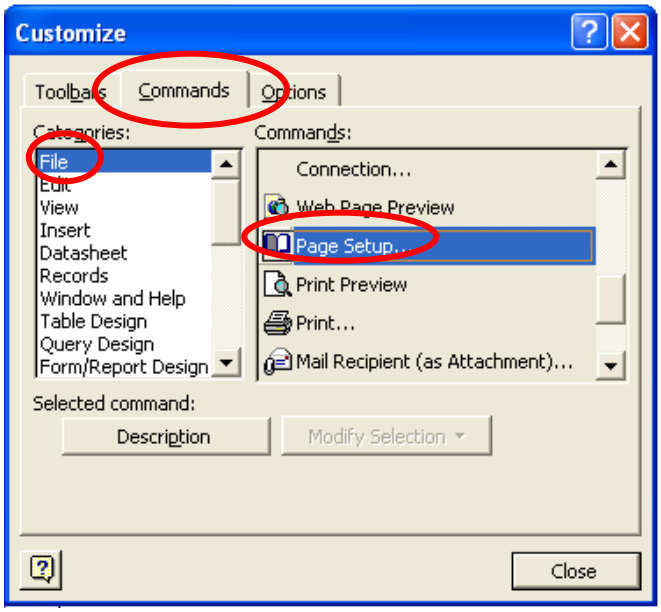
Figure 199: Creating New Toolbar

Select the “Toolbars tab” and click the “NEW” button.





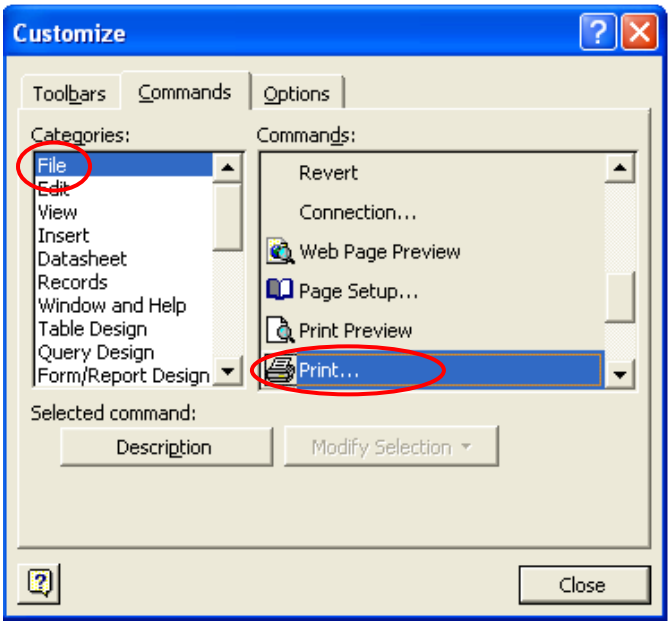
Toolbar name : pagesetup



Click on COMMANDS tab

Click FILE and find for an icon Page Setup. Drag and drop the icon onto the panel.

Repeat this for the PRINTER icon and CLOSE icon.



- Icon for Email

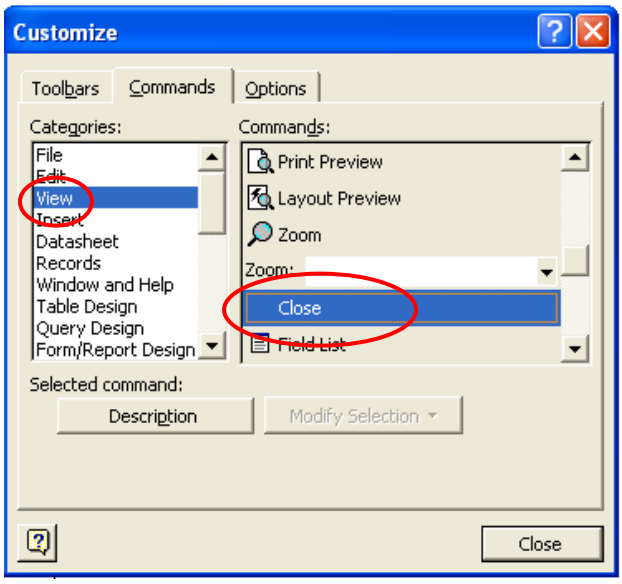
  File -> mail recipient (as attachment)

- Icon for Excel

  Tools -> Analyze it with Microsoft Excel

- Icon for Word

  Tools -> Publish it with Microsoft Word



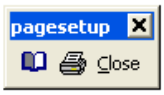
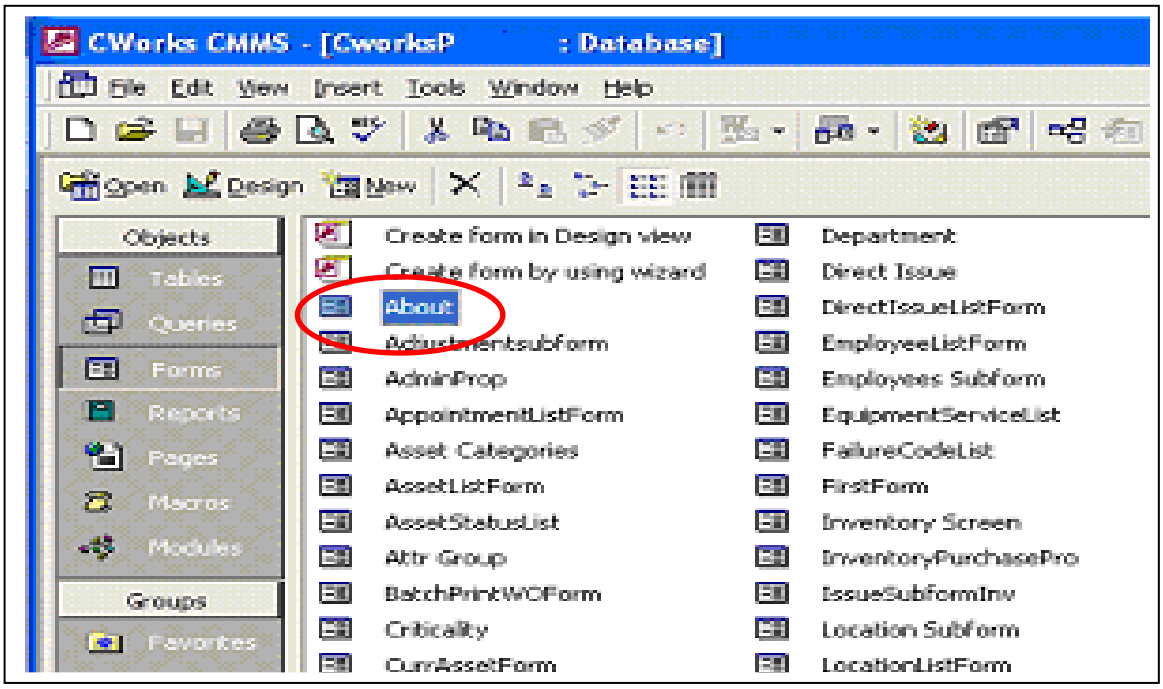
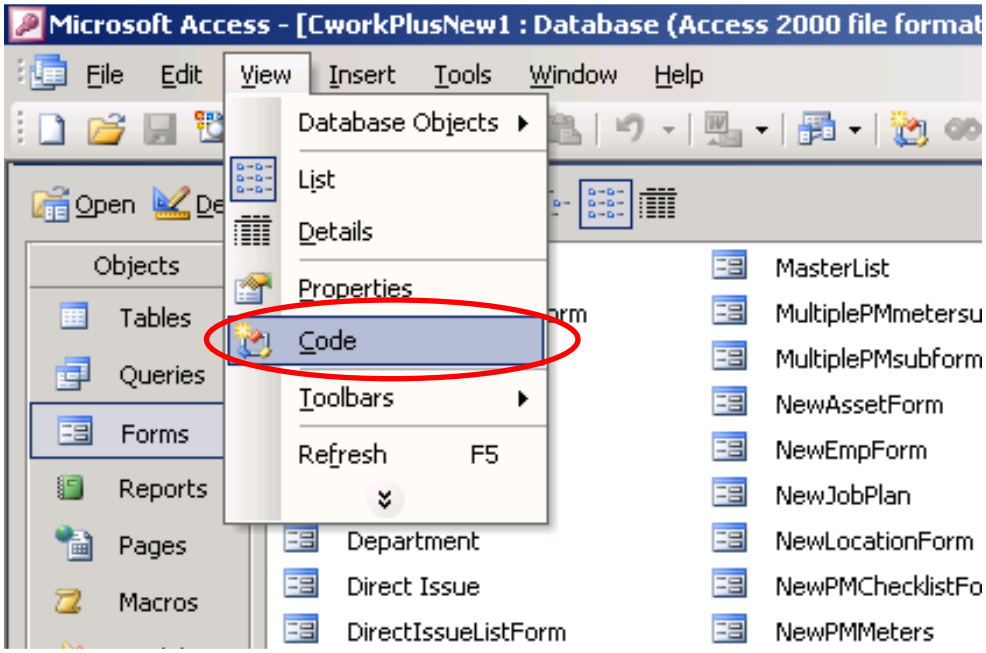


Figure 200: Adding Commands To "PageSetup" Toolbar

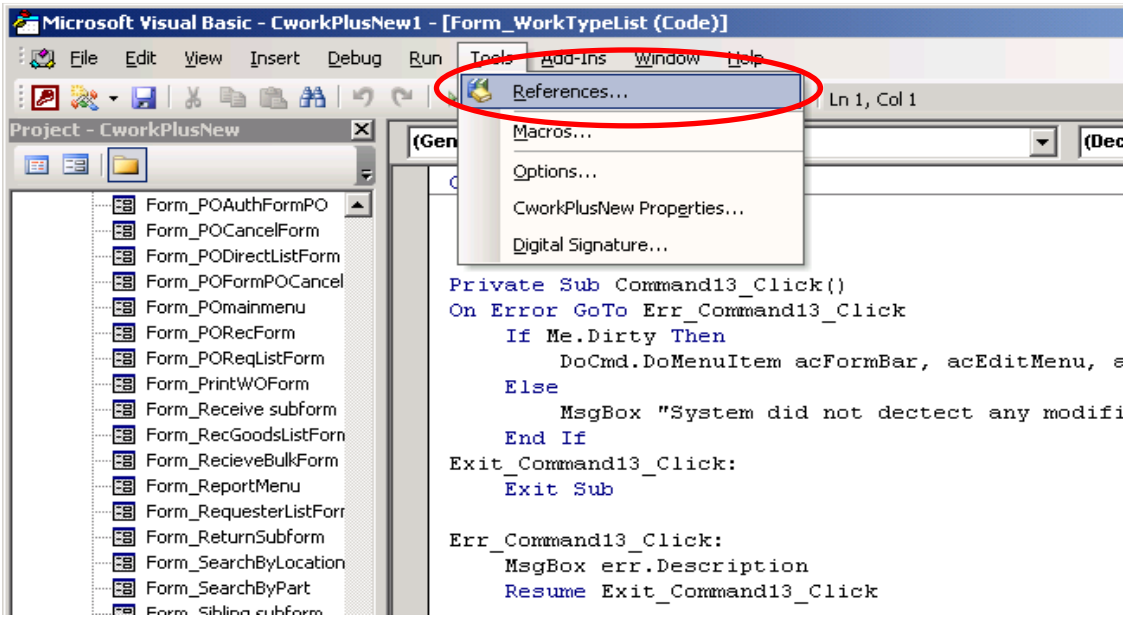
- Go to OBJECT –> Forms. Click on the first Form ABOUT



- Click the Code icon on the menu bar (refer screenshot below)



- The VBA code editor will be launched. On the menu bar click Tools –>



- The References Table would pop-up. Ensure that the below references are ticked and click OK

For Microsoft Access 2000

- Visual Basic For Applications
- Microsoft Access 9.0 Object Library
- OLE Automation
- Microsoft ActiveX Data Objects 2.1 Library
- Microsoft DAO 3.6 Object Library
- Microsoft Excel 9.0 Object Library
- Microsoft Scripting Runtime

For Microsoft Access 2002 / XP/2003

- Visual Basic For Applications
- Microsoft Access (10.0/11.0) Object Library
- OLE Automation
- Microsoft ActiveX Data Objects 2.1 Library
- Microsoft DAO 3.6 Object Library
- Microsoft Excel (10.0/11.0) Object Library
- Microsoft Scripting Runtime

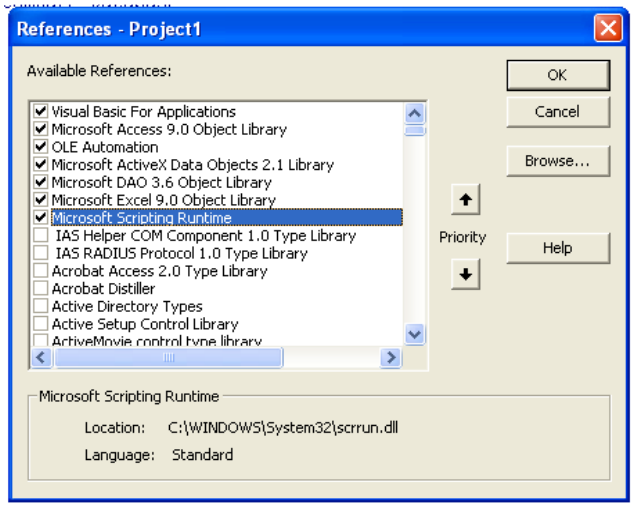


Figure 201: References

- On the menu bar, click Debug –> Compile CWorksPlusNew.mdb (refer screenshot below)

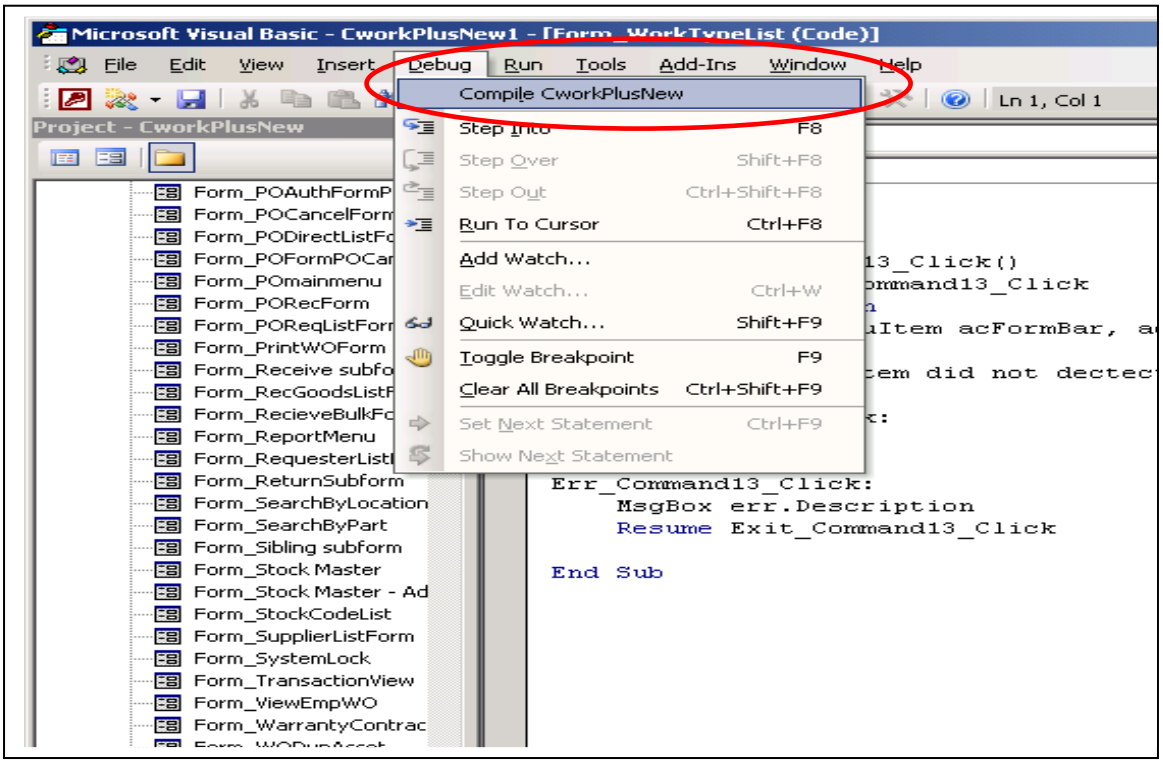


Figure 202: Compiling Database

- After the system finished compiling the program exit from MSAccess.
- Backup the old CWorks application file "CWorksPlus.mdb" to another location and rename "CWorksPlusNew.mdb" to "CWorksPlus.mdb".

13.12 How To Create An MDE File In Ms Access 2002?

- Go to Windows Explore. Find for CWPLUS directory / Folder.
- Click once on CWorksPlus.mdb
- Depress the "Shift" key and launch CWorksPlus. Do not release the "Shift" key until CWorks is launched. This will allow you to access the source codes.
- At the menu bar click, **Tools – Database Utilities – Make MDE File…**
- You will be prompted to save the MDE file as a separate file.
- There is no need to do the same for the database file (CWorksplus_db.mdb) as it contains no source codes.

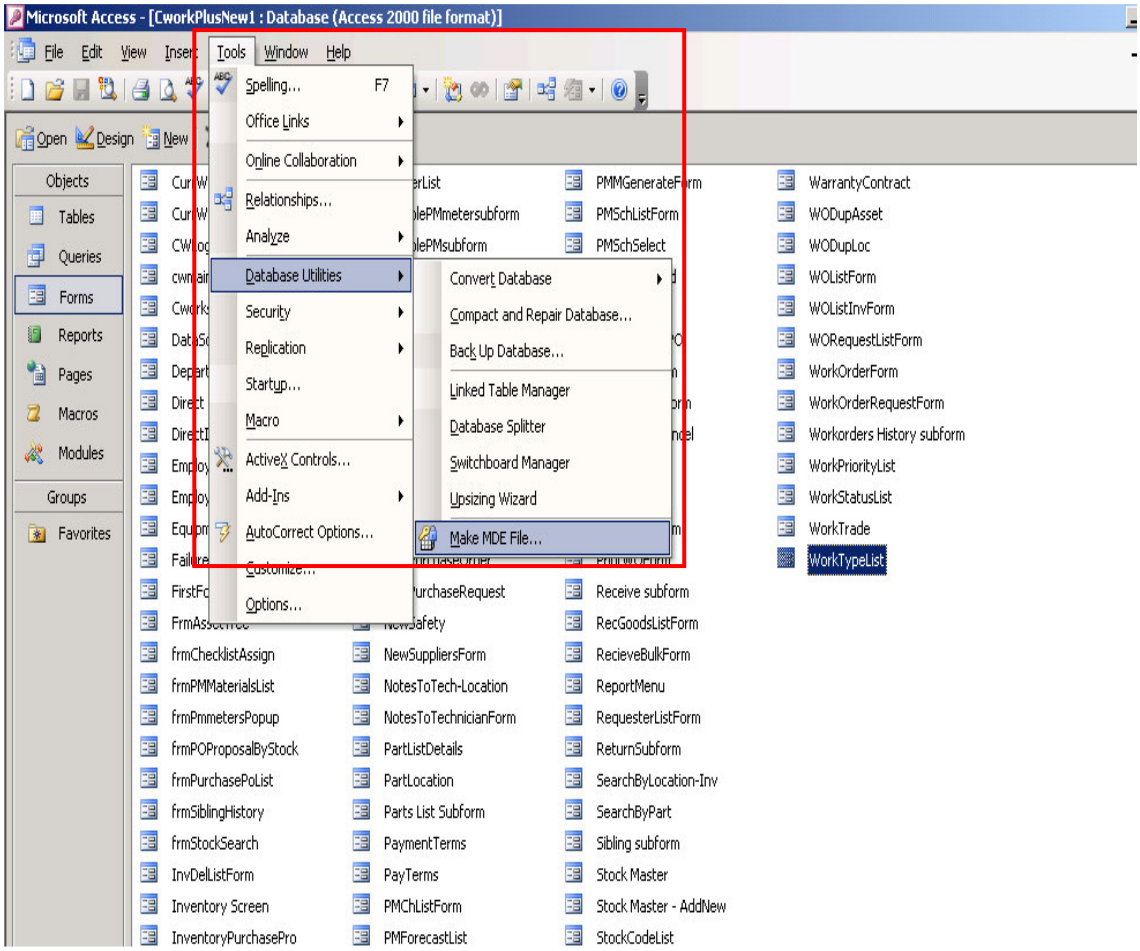


Figure 203: Making MDE File

13.13 How To Delete Data From The Database?

WARNNING: The system would not be able to retrieve back deleted information therefore we would advice user to backup the database before deleting any information. Also, do not delete any standard default data as it is connected to the standard reports in CWORKS.

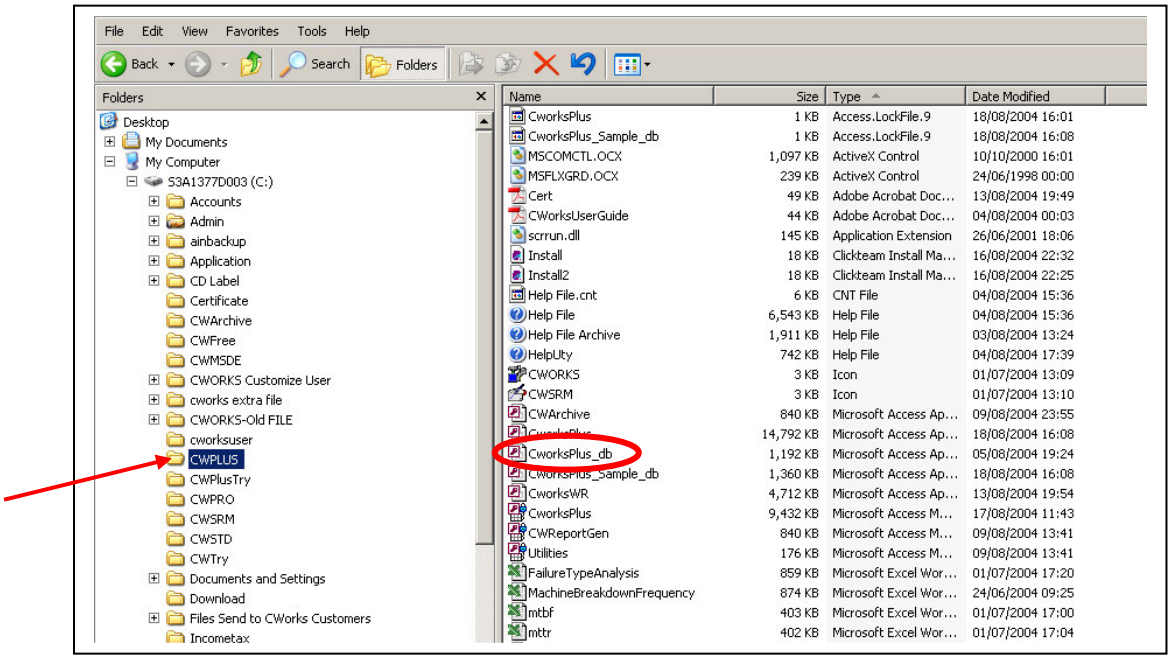


Figure 204: Opening The Database

1. Go to Windows Explore
2. Click on CWPlus directory
3. Click once on CWorksPlus_db
4. Press "SHIFT" and do not let go then press "ENTER" once .
5. The below screen would pop-up.

13.13.1 How To Delete Data?

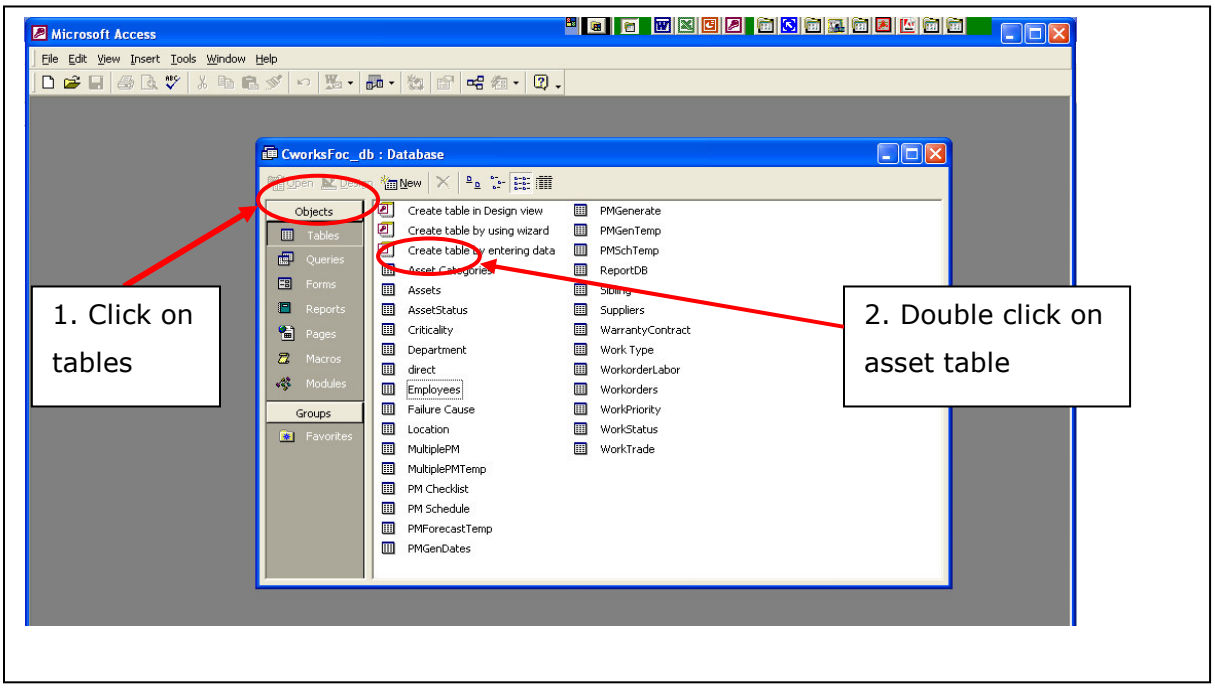
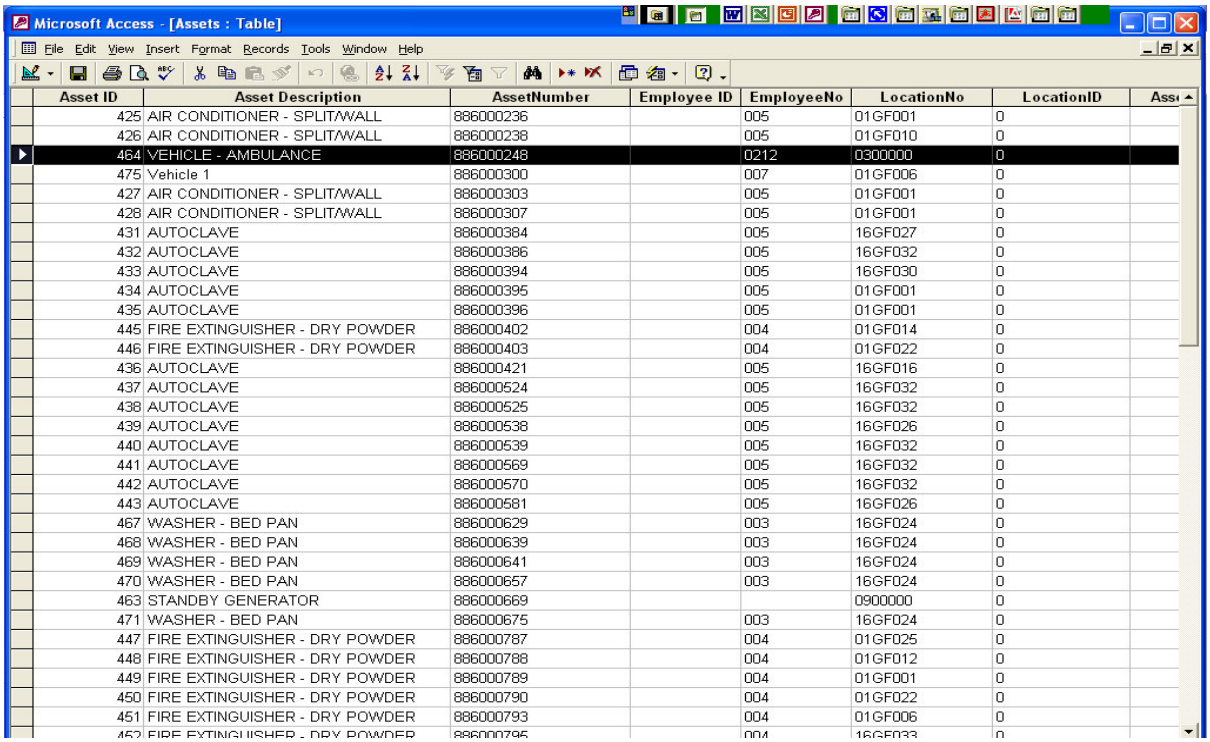


Figure 205: Opening Assets Table



Asset ID	Asset Description	AssetNumber	Employee ID	EmployeeNo	LocationNo	LocationID	Ass
425	AIR CONDITIONER - SPLIT/WALL	886000236		005	01GF001	0	
426	AIR CONDITIONER - SPLIT/WALL	886000238		005	01GF010	0	
464	VEHICLE - AMBULANCE	886000248		0212	0300000	0	
475	Vehicle 1	886000300		007	01GF006	0	
427	AIR CONDITIONER - SPLIT/WALL	886000303		005	01GF001	0	
428	AIR CONDITIONER - SPLIT/WALL	886000307		005	01GF001	0	
431	AUTOCLAVE	886000384		005	16GF027	0	
432	AUTOCLAVE	886000386		005	16GF032	0	
433	AUTOCLAVE	886000394		005	16GF030	0	
434	AUTOCLAVE	886000395		005	01GF001	0	
435	AUTOCLAVE	886000396		005	01GF001	0	
445	FIRE EXTINGUISHER - DRY POWDER	886000402		004	01GF014	0	
446	FIRE EXTINGUISHER - DRY POWDER	886000403		004	01GF022	0	
436	AUTOCLAVE	886000421		005	16GF016	0	
437	AUTOCLAVE	886000524		005	16GF032	0	
438	AUTOCLAVE	886000525		005	16GF032	0	
439	AUTOCLAVE	886000538		005	16GF026	0	
440	AUTOCLAVE	886000539		005	16GF032	0	
441	AUTOCLAVE	886000569		005	16GF032	0	
442	AUTOCLAVE	886000570		005	16GF032	0	
443	AUTOCLAVE	886000581		005	16GF026	0	
467	WASHER - BED PAN	886000629		003	16GF024	0	
468	WASHER - BED PAN	886000639		003	16GF024	0	
469	WASHER - BED PAN	886000641		003	16GF024	0	
470	WASHER - BED PAN	886000657		003	16GF024	0	
463	STANDBY GENERATOR	886000669			0900000	0	
471	WASHER - BED PAN	886000675		003	16GF024	0	
447	FIRE EXTINGUISHER - DRY POWDER	886000787		004	01GF025	0	
448	FIRE EXTINGUISHER - DRY POWDER	886000788		004	01GF012	0	
449	FIRE EXTINGUISHER - DRY POWDER	886000789		004	01GF001	0	
450	FIRE EXTINGUISHER - DRY POWDER	886000790		004	01GF022	0	
451	FIRE EXTINGUISHER - DRY POWDER	886000793		004	01GF006	0	
452	FIRE EXTINGUISHER - DRY POWDER	886000795		004	16GF033	0	

Figure 206: Deleting Data

13.14 How To Setup CWorks In A Network Environment?

Installing the Main CWorks Application

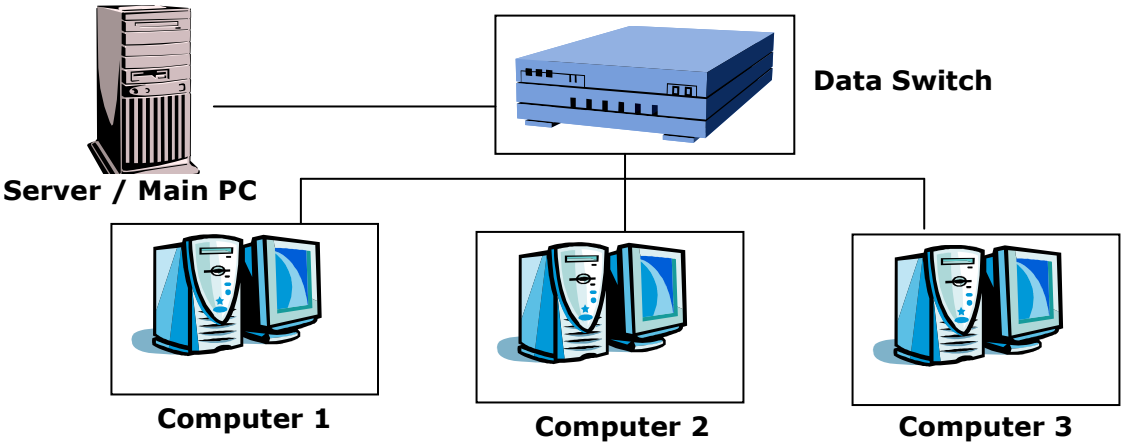


Figure 207: Network Environment

- Step 1
  - Install CWPLSxxx (main program) into the server/main computer.
- Step 2
  - Share CWPLUS directory in the server/main computer. The database will reside here and all other CWorks program will need to be connected to this database.
- Step 3
  - If required, install CWPLSxxx other computers but after installation delete the database file (file name:- CWorksPlus_db.mdb) and then do a data link to the server / main computer database file via your local area network.

- Step 4
  - Click on CWorks icon on the desktop. Before key-in the user name & password click on **FILE –> Data Link** at the menu bar. In data source location, find for cworkPlus_db.mdb in the server / main computer via the network and click connect. Repeat this for all the PC which has CWorks. With this setup, the system will save all the data into a central database.

Installing the Request Module on Requester Desktops / Workstations

- Step 1
  - Install "RemoteWorkRequest.exe" into all Requester computers.
- Step 2
  - Double-Click on the icon labeled "CWSRM" on the desktop. Before key-in the user name & password click on FILE **–> Data Link** at the menu bar. In data source location, find for cworkPlus_db.mdb in the server/ main computer via the network and click connect.
  - **Do not install this file into the computers which has the main program.**

13.15 How To View VB Codes?

To view VB codes, click on CODE

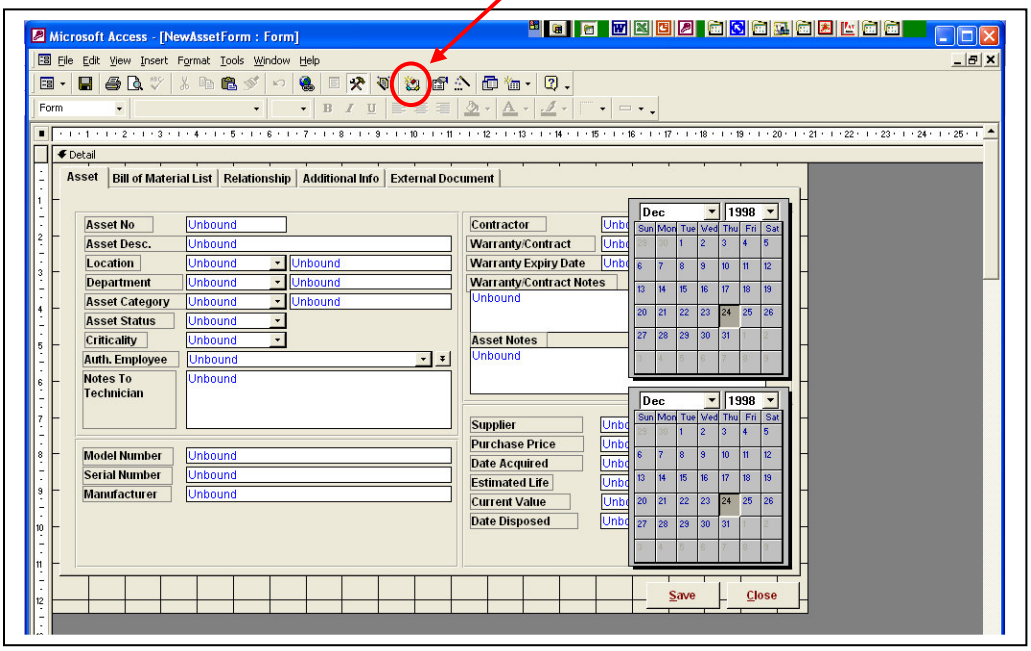


Figure 208: MSAccess Design Form

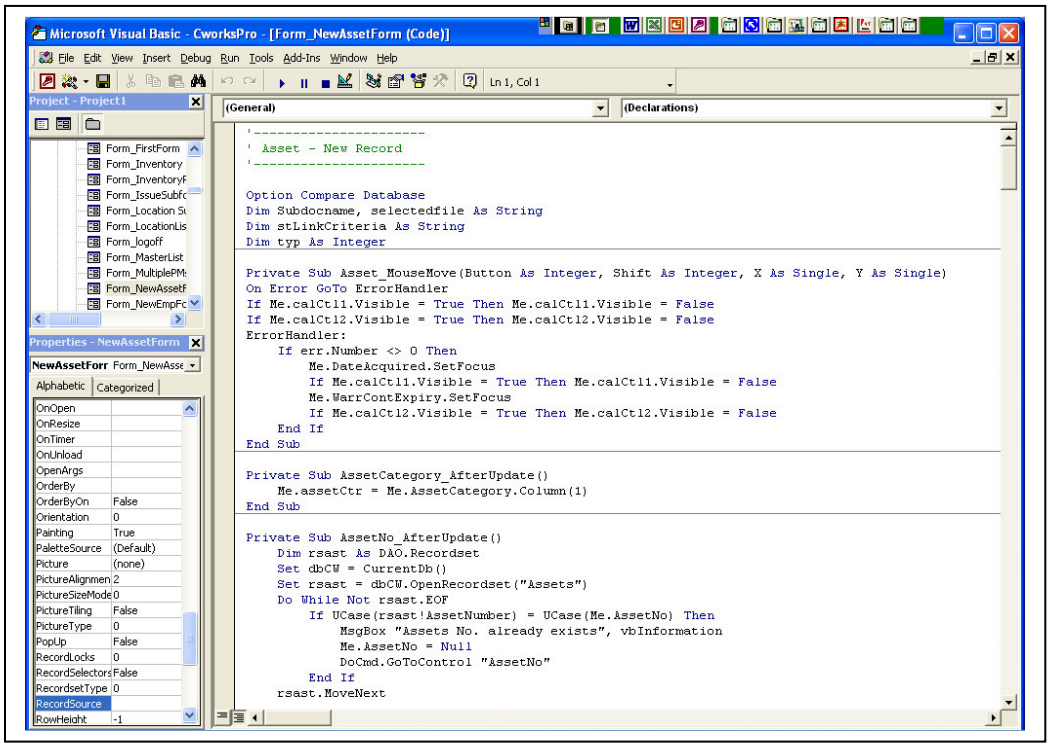


Figure 209: VB Codes

13.16 How To Export Data From CWorks And Import Data Into CWorks?

1) Go to Windows Explorer

2) Find for CWORKS directory called

   CWPlus = For CworkPlus Version

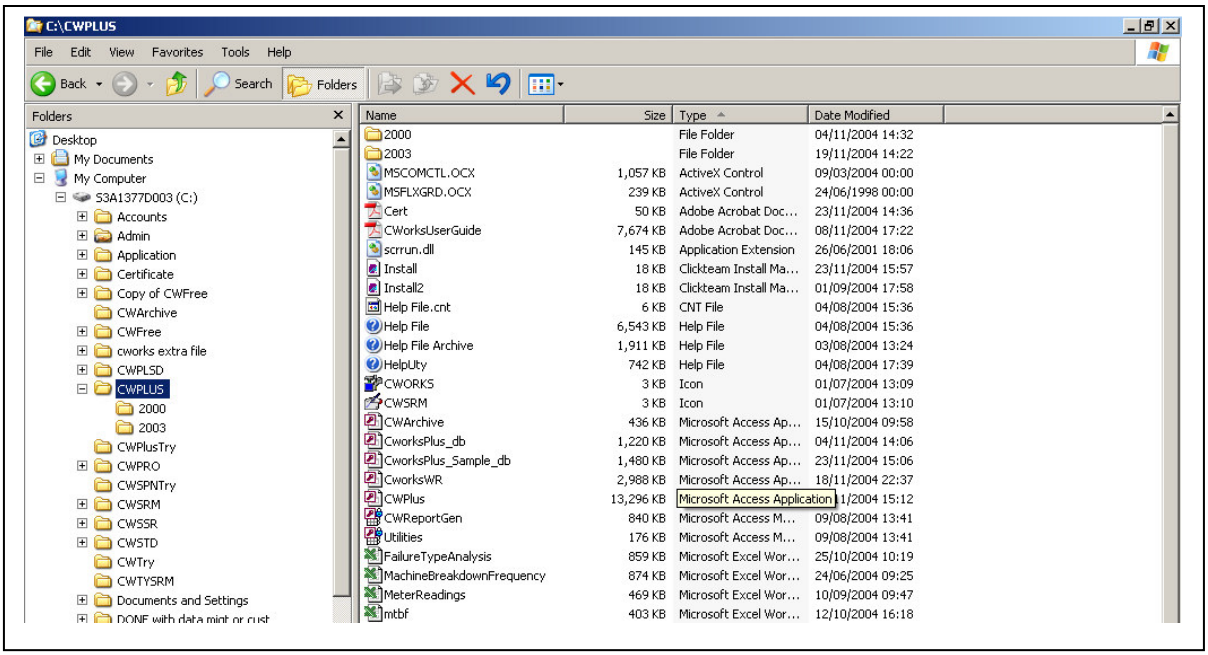


Figure 210: Searching For File

3) Find for a file called

   CWorksPlus_db.mdb = for CWorksPlus Version

4) Click once on the above file

5) SHIFT + ENTER on the file

6) The screen (refer below) would pop-up.

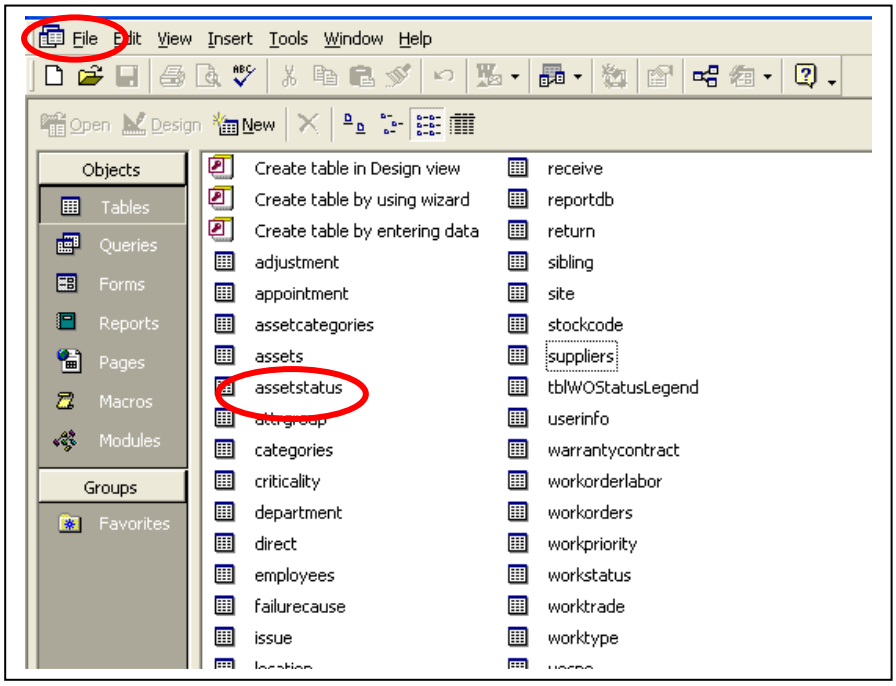


Figure 211: Opening Database

7) For example you want to Export Asset data. Click on "assets"
8) Click on File-> Export

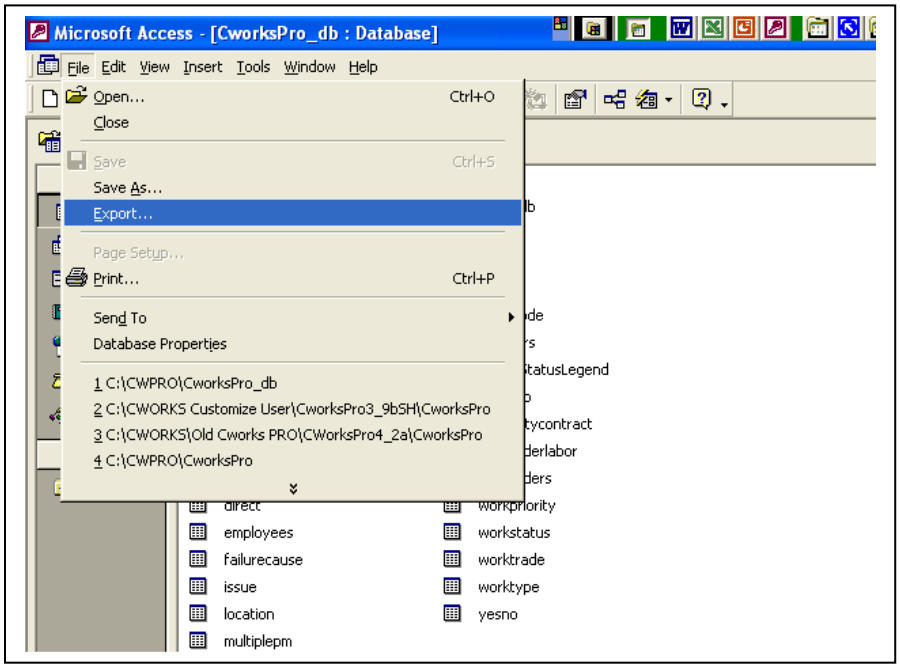


Figure 212: Export Function

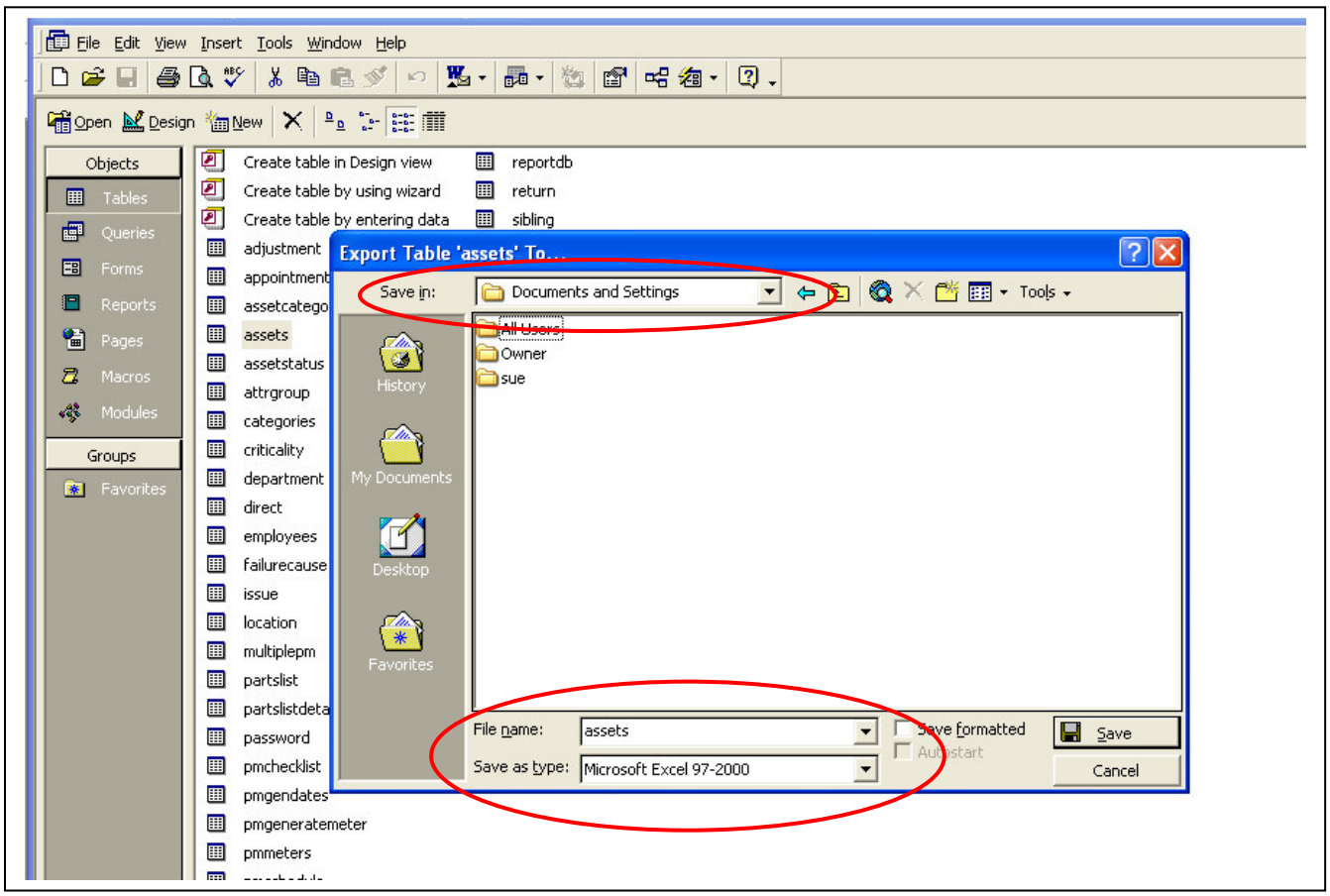


Figure 213: Saving File

9) Save in: "Where you want the file to be Saved in"

File name : "File name"

Save as type : Microsoft Excel Click on SAVE

13.17 Import Data

1) For example you want to Import asset data. (Note : Before importing any data into CWORKS, ensure that the excel format fields are the same as the CWORKS table fields)
2) Right click on the WHITE space and choose IMPORT

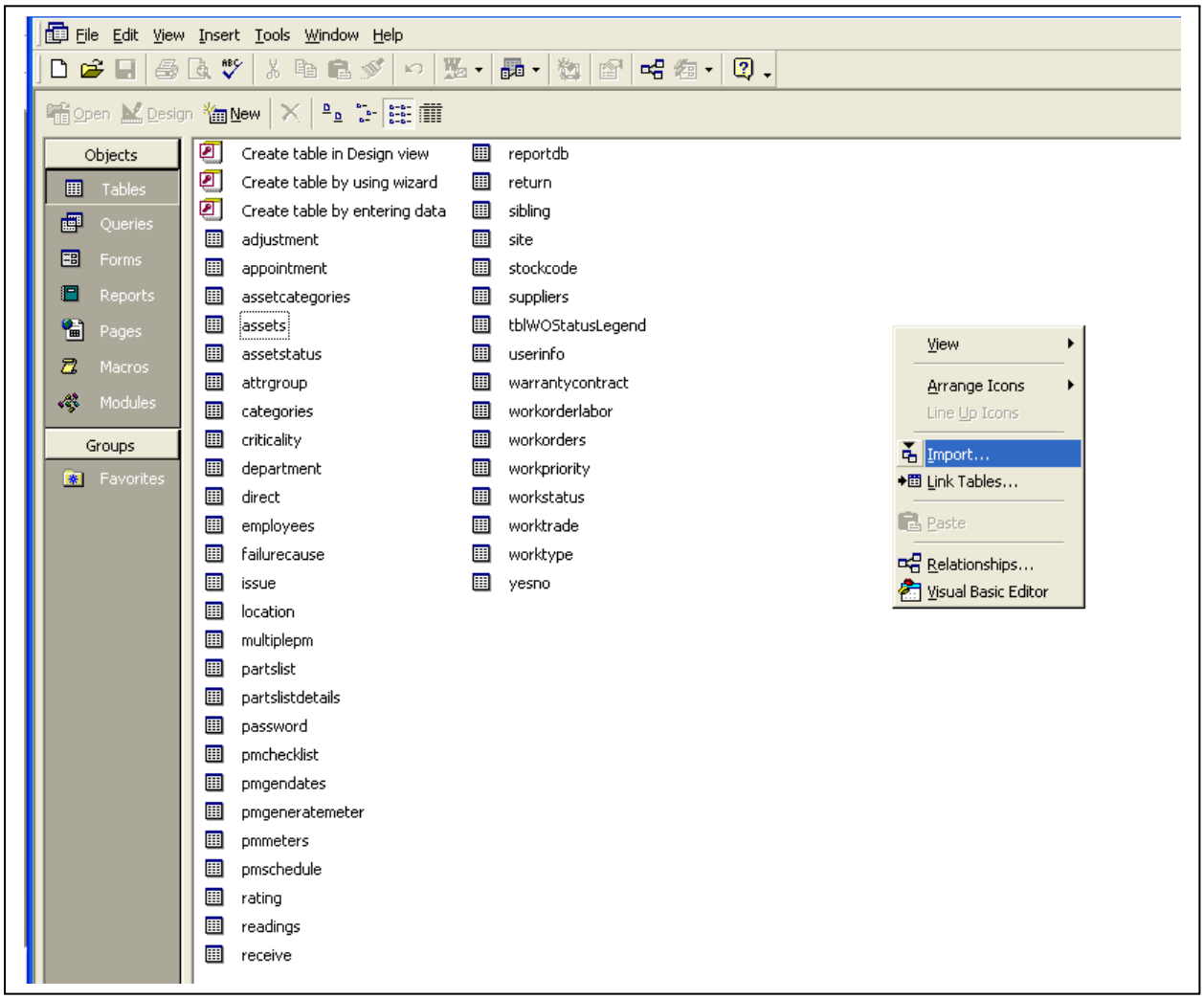


Figure 214: Import Link

3) Select : Look in : "Where is the Excel format SAVED"

   File name : "File name"

   Files of type : Microsoft Excel

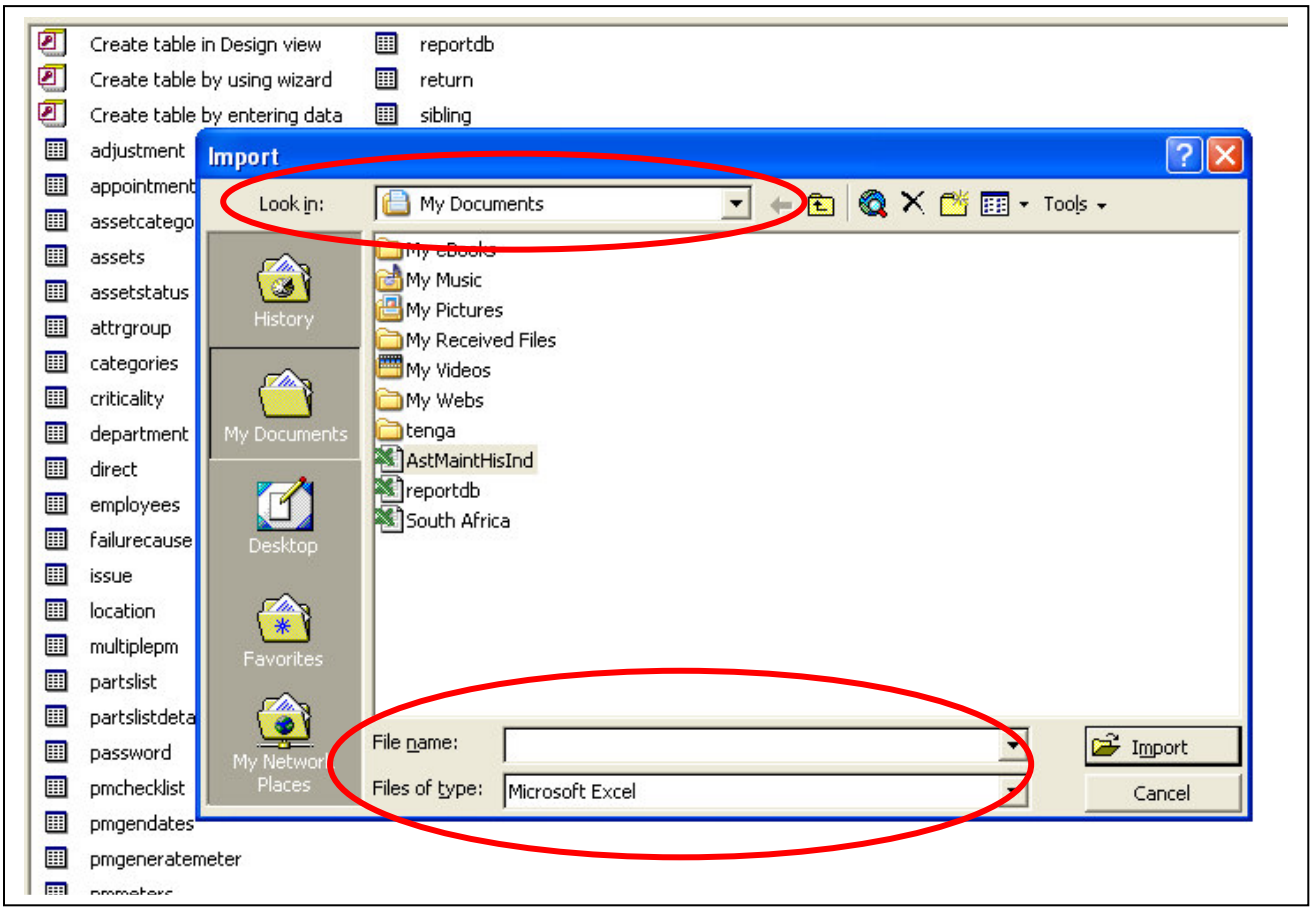
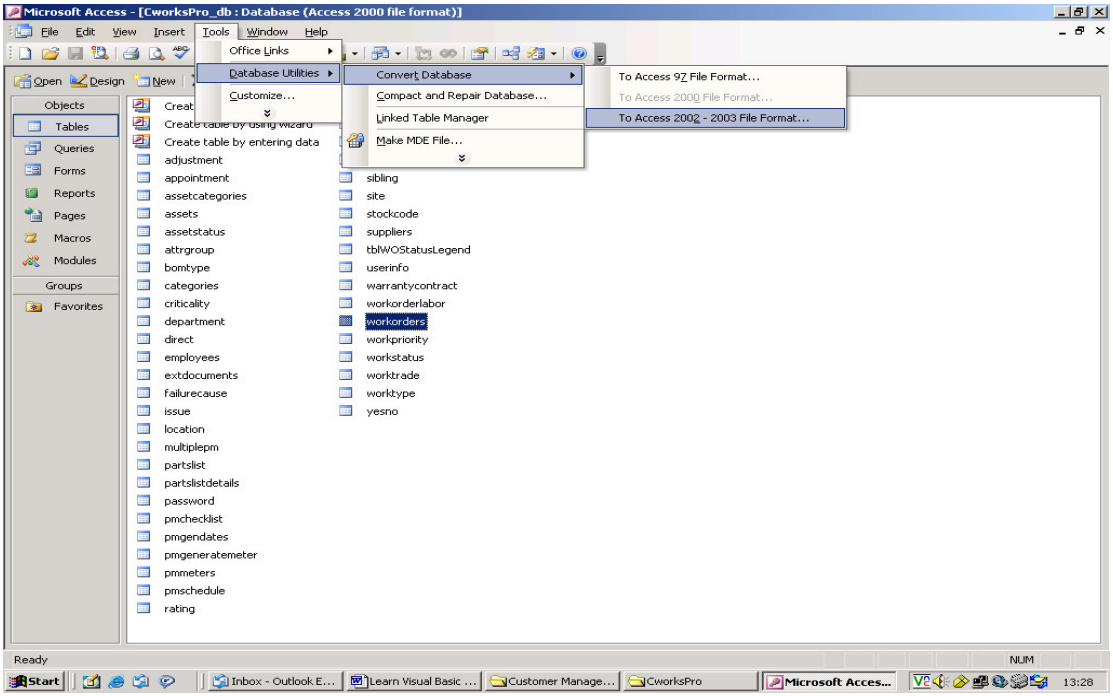


Figure 215: Saving File

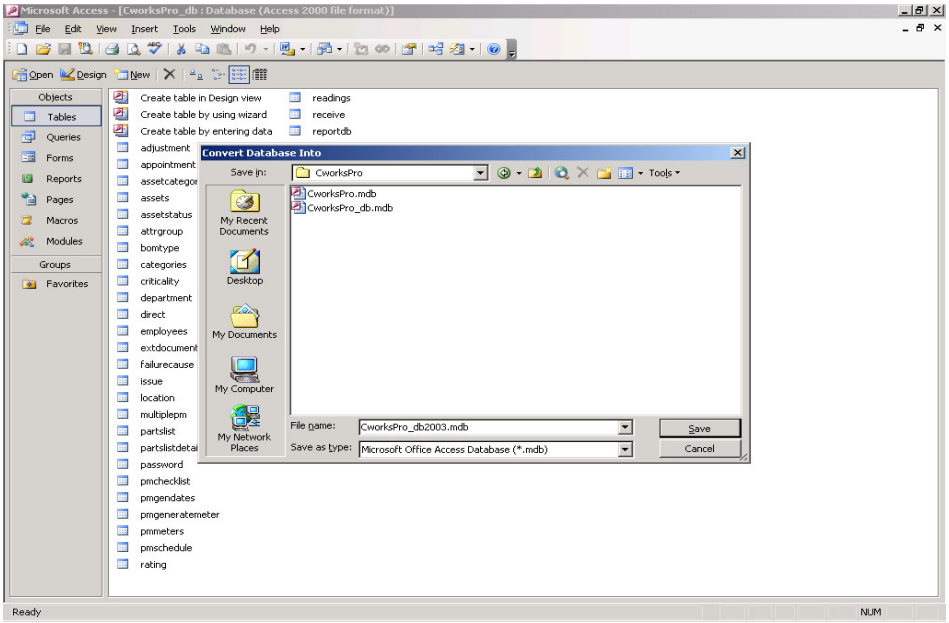
4) Click on IMPORT then follow the systems instruction until the end.

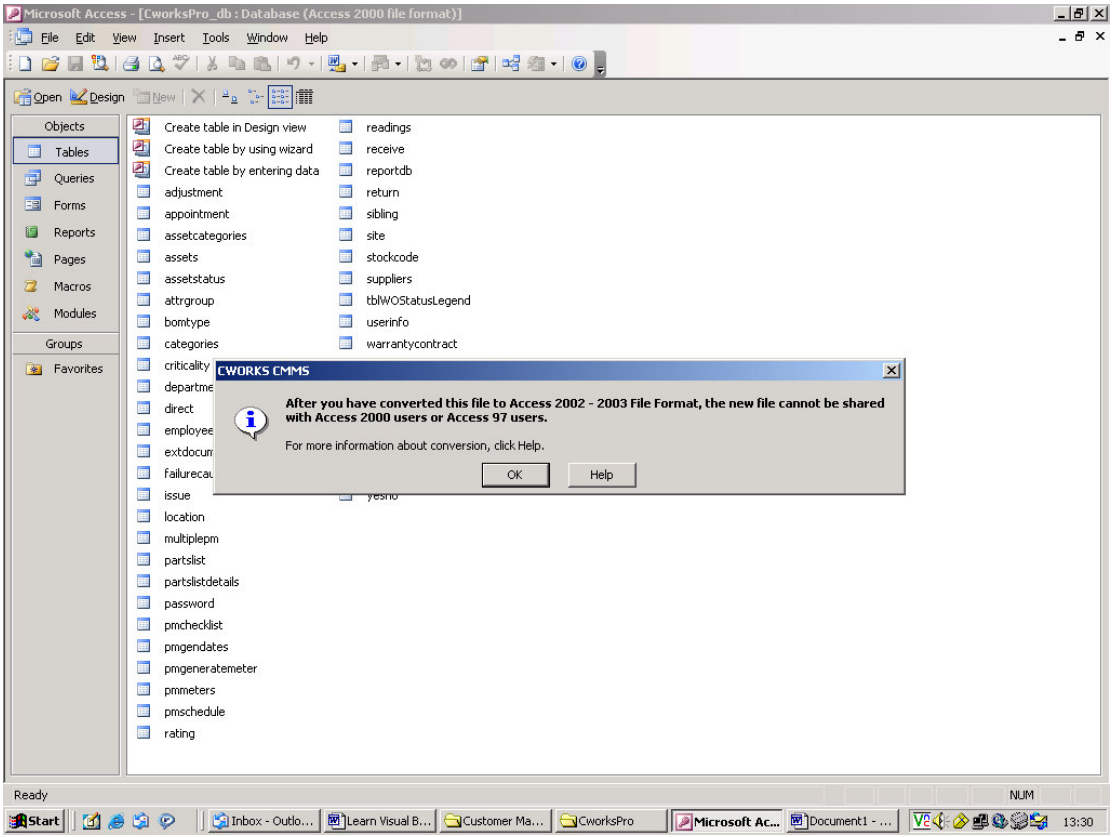
13.18 How to convert CWORKS from MSAccess 2000 to 2002-2003?

1. Open the Application or database by “Shift + Enter”
2. Then go to “Tools”, “Convert Database” and click on “To Access 2002-2003 file format.



3. Select the directory and the new filename.




Microsoft Access - [CworksPro_db : Database (Access 2000 file format)]
File Edit View Insert Tools Window Help
Open Design New
Objects
Tables
Queries
Forms
Reports
Pages
Macros
Modules
Groups
Favorites
Create table in Design view
Create table by using wizard
Create table by entering data
adjustment
appointment
assetcategories
assets
assetstatus
attrgroup
bomtype
categories
criticality
departme
direct
employee
extdocum
failurecau
issue
location
multiplepm
partslist
partslistdetails
password
pmchecklist
pmgendates
pmgeneratemeter
pmmeters
pmschedule
rating
readings
receive
reportdb
return
sibling
site
stockcode
suppliers
tblWOStatusLegend
userinfo
warrantycontract
CWORKS CMMS
After you have converted this file to Access 2002 - 2003 File Format, the new file cannot be shared with Access 2000 users or Access 97 users.
For more information about conversion, click Help.
OK
Help
Ready
NUM
Start
Inbox - Outlo...
Learn Visual B...
Customer Ma...
CworksPro
Microsoft Ac...
Document1 - ...
13:30

REPORT WRITER

14. Report Writer

14.1 Introduction

The CWorks report writer enables exporting of data from the CWorks CMMS tables to Microsoft Excel. Filters and criteria's can be specified within the report generator. A basic knowledge of SQL statements is required to operate the report writer.

14.2 How To Launch The Report Generator?

Go to CWorks Plus tool bar "Links" and then click on CWReportGenerator. Refer to screen below:-

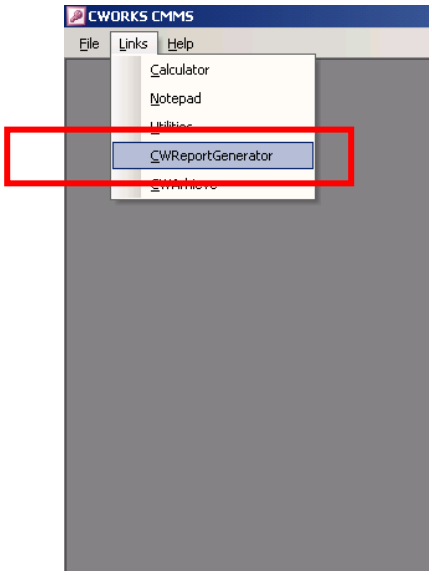


Figure 216: CWorks Logon

14.3 Criteria no.1

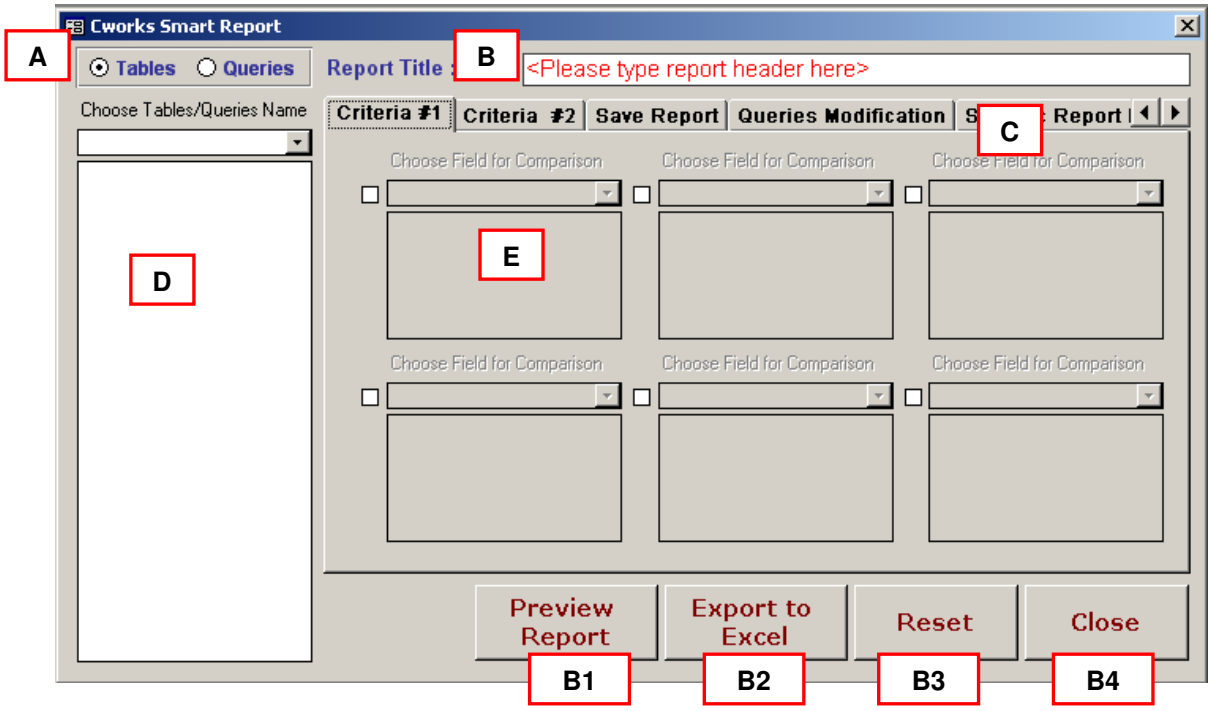


Figure 217: CWorks Smart Report Generator Screen Layout

14.3.1 Screen Details

A <u>Tables/Queries Radio Button</u>

Choose tables/queries to generate information for that particular object.

B <u>Report Title</u>

This area of the screen allows users to insert a custom report header so that the report is generated with a customized report title.

C <u>Tab Names</u>

Tabs that is available to display the table/queries. All queries would be displayed under these tabs. The left and right arrows allow the user to scroll through the tabs available.

D <u>Choose Tables/Queries Name</u>

This drop-down menu box provides the list of available tables/queries that are in the database.

E Criteria No. 1

This tab displays all the tables/queries that need to be generated in the report.

B1 Preview Report Button

Previews the report.

B2 Export to Excel Button

Exports the report into excel format in windows. This button will be explained later on it functions.

B3 Reset Button

Resets all the fields to restart everything again.

B4 Close Button

Closes the application immediately.

14.3.2 Specifying Report Parameters

In the "Choose Tables/Queries" tab, select the type of object which is to be generated (Refer to (A)). In the same screenshot (Refer to (C)), available tabs are Criteria #1, Criteria #2, Save Report, Queries Modification and Save Report by Work Type.

Example for Work Order Reports via Criteria #1 tab:

1. The Report Title is named to: "Basic Asset Details"
2. Check the "Tables" radio button shown in (A).
3. In the "Choose Tables/Queries Name" drop down menu box choose the name of the report you want to generate, the list will automatically appear. In this list, only the names that are selected will be displayed in the report. In the screenshot example below, the WorkOrderNo, AssetNo, Warranty_Contract, Warranty_ContExpiry and LocationNo fields are selected.

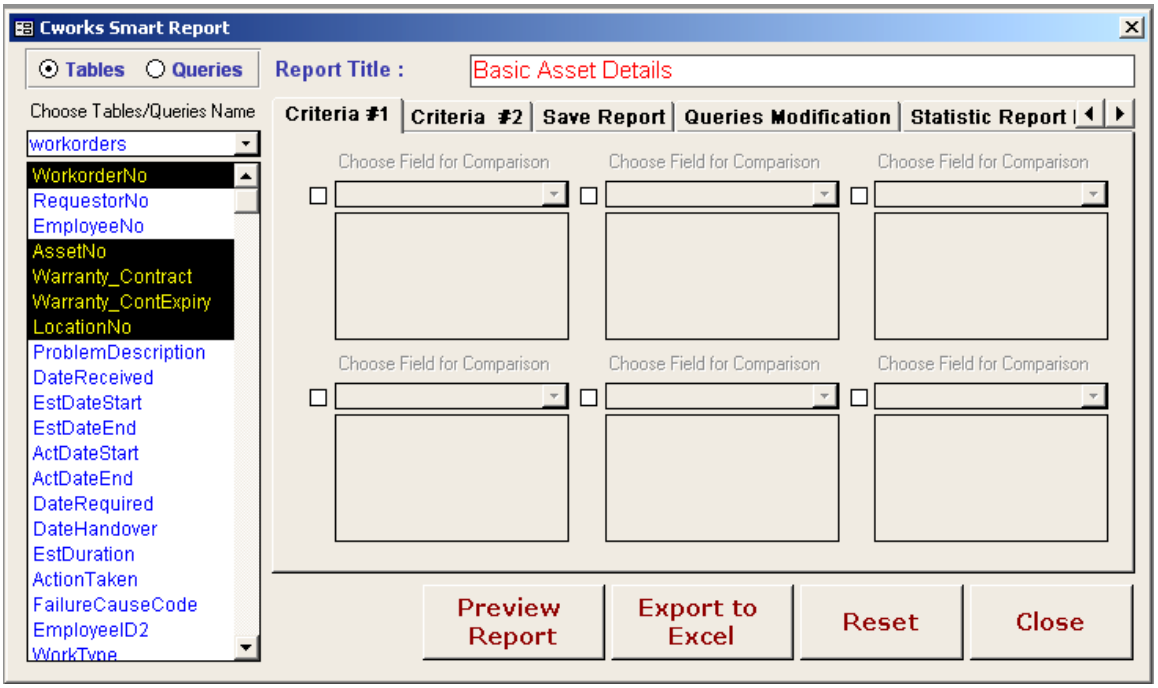


Figure 218: Specifying Report Parameters

3. Just below the "Criteria #1" tab, there are the check boxes with "Choose Field for Comparison" above each box. Click the required amount of check boxes to activate them. In each drop down menu, select the required field names. Un-check each check box to delete the display starting from the last check box. Clicking on the "Reset" button will reset everything on this page.
4. To see the preview of the report to generate, click on the "Preview Report" button.

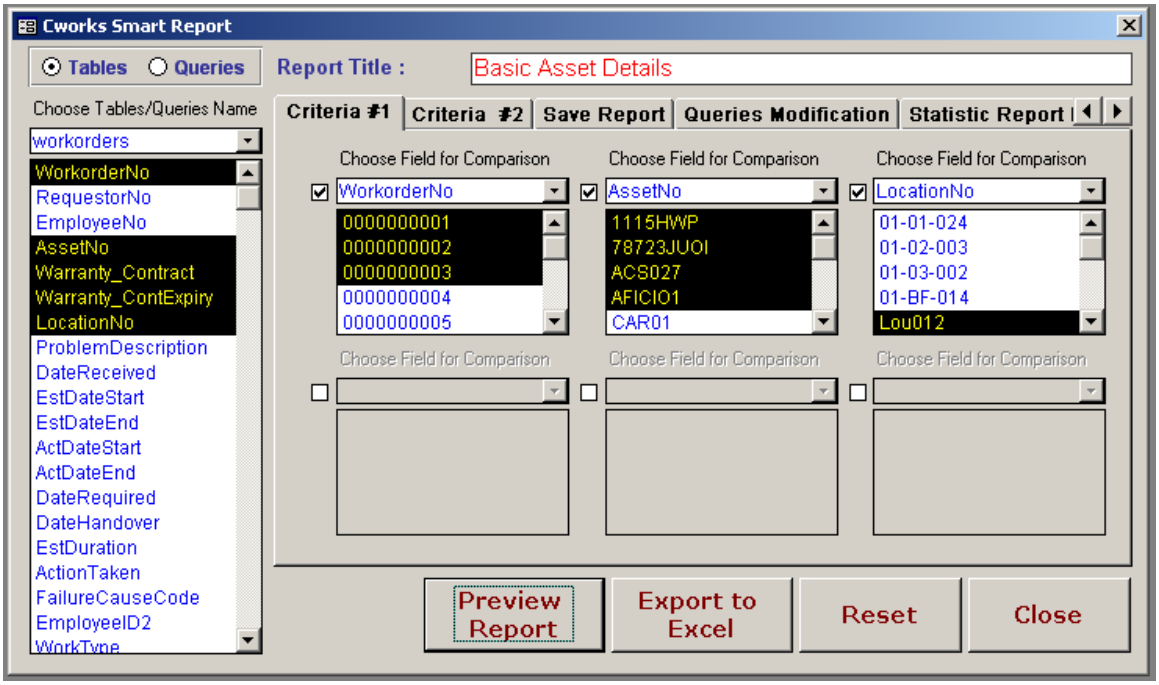


Figure 219: Selecting fields for comparison

5. After clicking the "Preview Report" button, the "CWorks Smart Report" generator will minimize and the report preview will pop up.

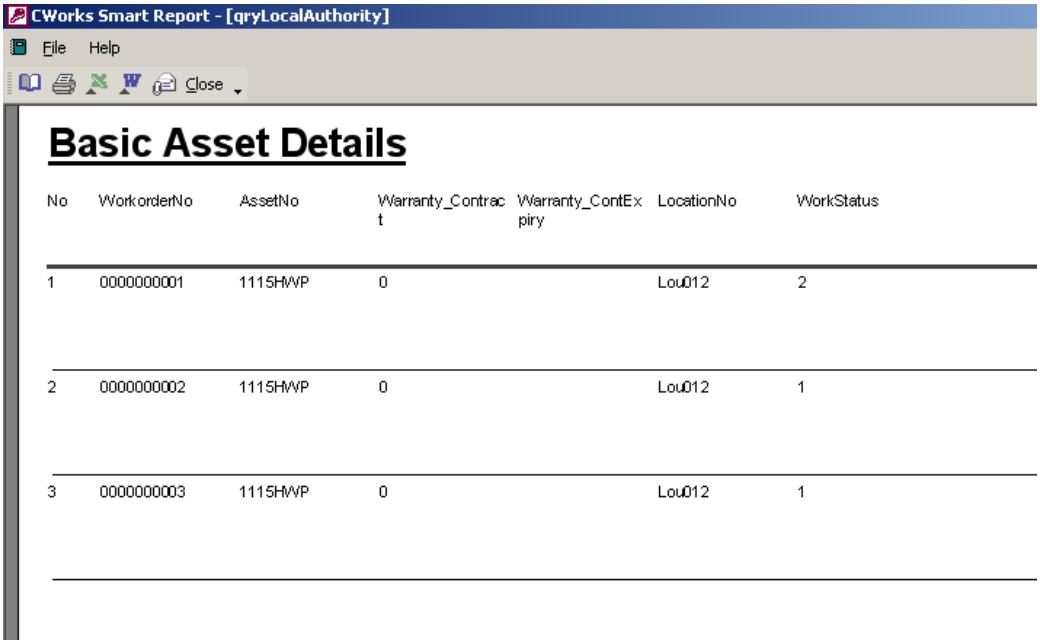


Figure 220: Criteria #1 Report Preview

14.4 Criteria No.2

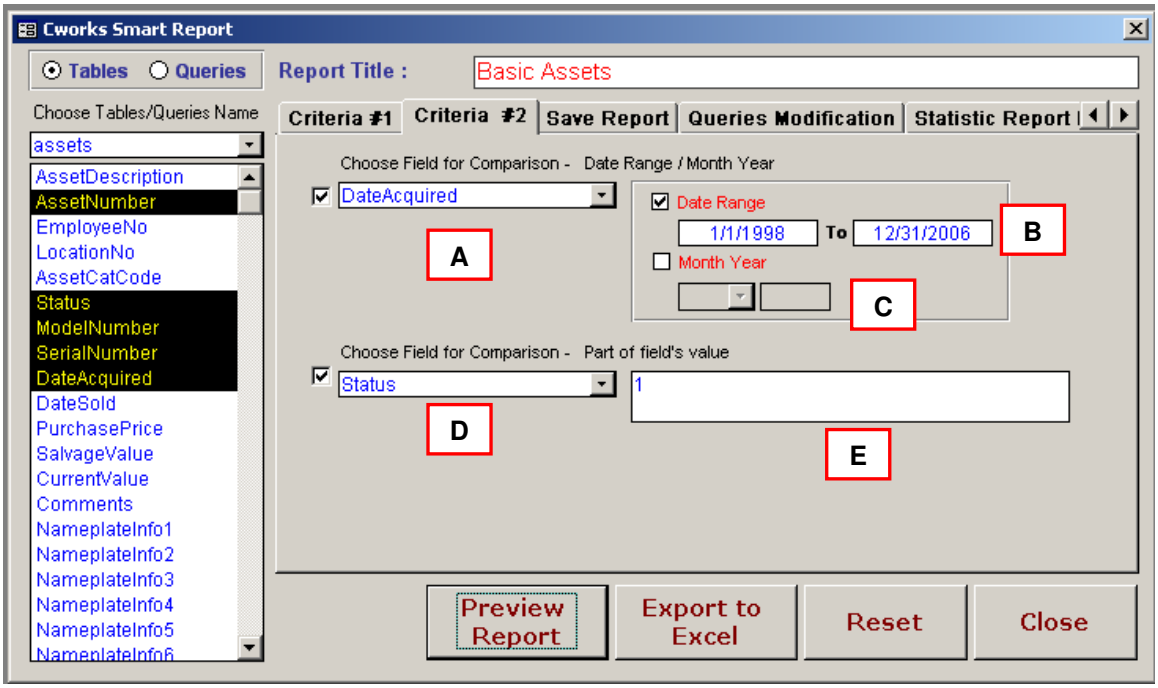


Figure 221: Report Generator

14.4.1 Screen Details

A <u>Choose Field for Comparison – Date Range/Month Year</u>

Choose fields that have date range related data from the drop down menu.

B <u>Date Range</u>

Choose the date range of the field selected. Example is as shown on the screen details. The date format here is MM/DD/YYYY.

C <u>Month Year</u>

Choose the month and year to acquire the report from that particular month.

D <u>Choose Field for Comparison</u>

This drop-down menu box provides the list of available fields that are in the database for comparison in the report.

E <u>Part of Field's Value</u>

To compare the data from that field only.

14.5 Generating report with Date range

1. Tick the first check box (as shown in A), and select the field required. E.g. "DateAcquired". Note: You can choose only one of the check boxes to tick, either "Date Range" or "Month Year".
2. Tick the Date Range check box; fill in the dates to generate result for the report.
3. Tick the check box in D for comparison of the date range with another field. In this example, the field "Status" is chosen. And in E, the "Status" is either 1 or 2 depending on what is in the database. This field box acts as a filter to separate the results in the report.
4. Click on the "Preview Report" button, and the result comes out as follows:

Criteria #2

No	AssetNumber	Status	ModelNumber	SerialNumber	DateAcquired
1	1115HWP	1	E53053	X194399	4/1/1998
2	1156SA	1	0113	1391-98-017	6/1/1998
3	AFICIO1	1	Aficio270	SNH2400601005	1/1/2006
4	CAR01	1	E180	450000BZ	1/1/2006
5	1161FN	1			8/1/1998
6	1207AC	1	GA110	AIF060761	1/5/2000

Figure 222: Criteria #2 Report Preview

14.6 Saving the Reports

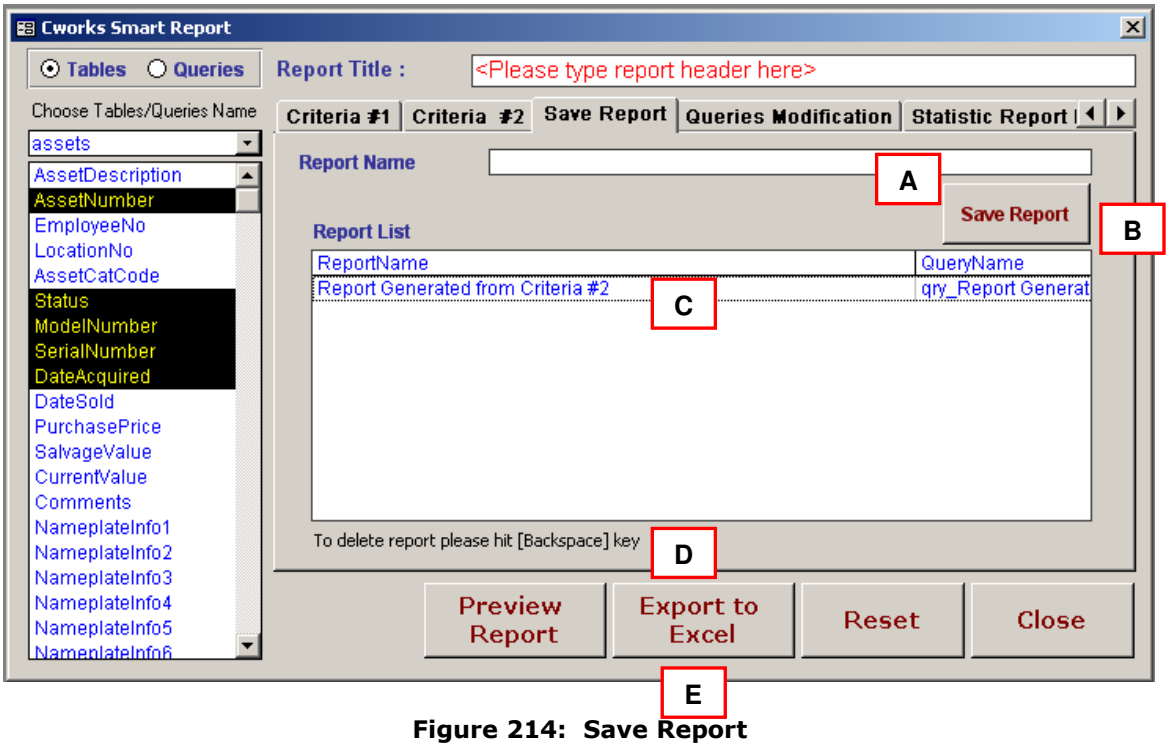


Figure 214: Save Report

14.6.1 Screen Details

A Report Name

Fill in this area with a suitable name.

B Save Report

This button saves the report in the generator itself.

C Report List

List of saved reports, and the query named after the name saved.

D Delete the Report

Press the [Backspace] key on your keyboard to permanently delete the report saved. Deleted reports can never be recovered again.

E Export to Excel Button

Clicking on the "Export to Excel" button; saves the current report saved and displayed in the "Report List". The Excel file will be named as "qry_ReportNameSaved" and it will be in the same folder where the "Data Source Location" is. To find out where is the folder lookup in:

"File > Data Link > Current Data Source"

14.7 Queries Modification

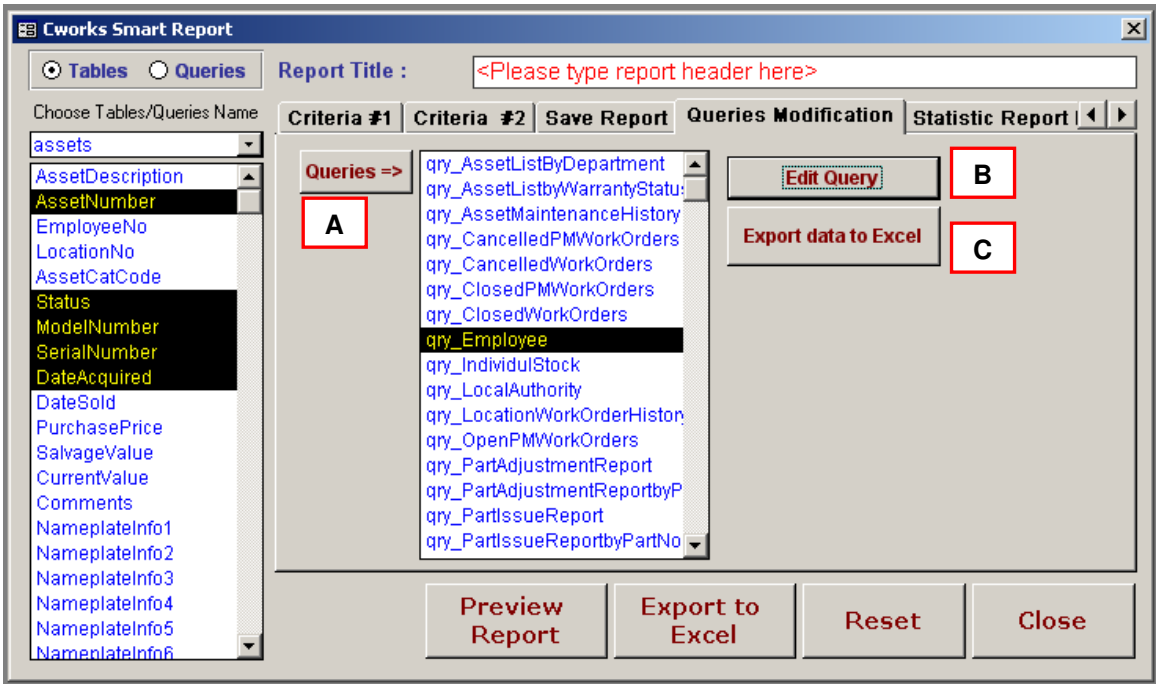


Figure 215: Queries Modification

14.7.1 Screen Details

A Queries => Button

Upon clicking on this button, it generates a list of queries available linked to the "Tables/Queries Names" box.

B Edit Query

Minimizes the current report generator window and a relationship window will pop up.

C Export Data to Excel

This button exports the query that is selected into an Excel file.

14.7.2 Modifying the Query

1. Select the required fields in the “Tables/Queries Name” box.
2. Select a query from the list generated.
3. Click on “Edit Queries” button, a relationship window will now pop up; listing the relationship of the query selected. Make any changes to the relationship table if needed.
4. Click on “Export Data to Excel”, save the excel file in the same folder as the data source.

14.8 Statistic Report by Work Type

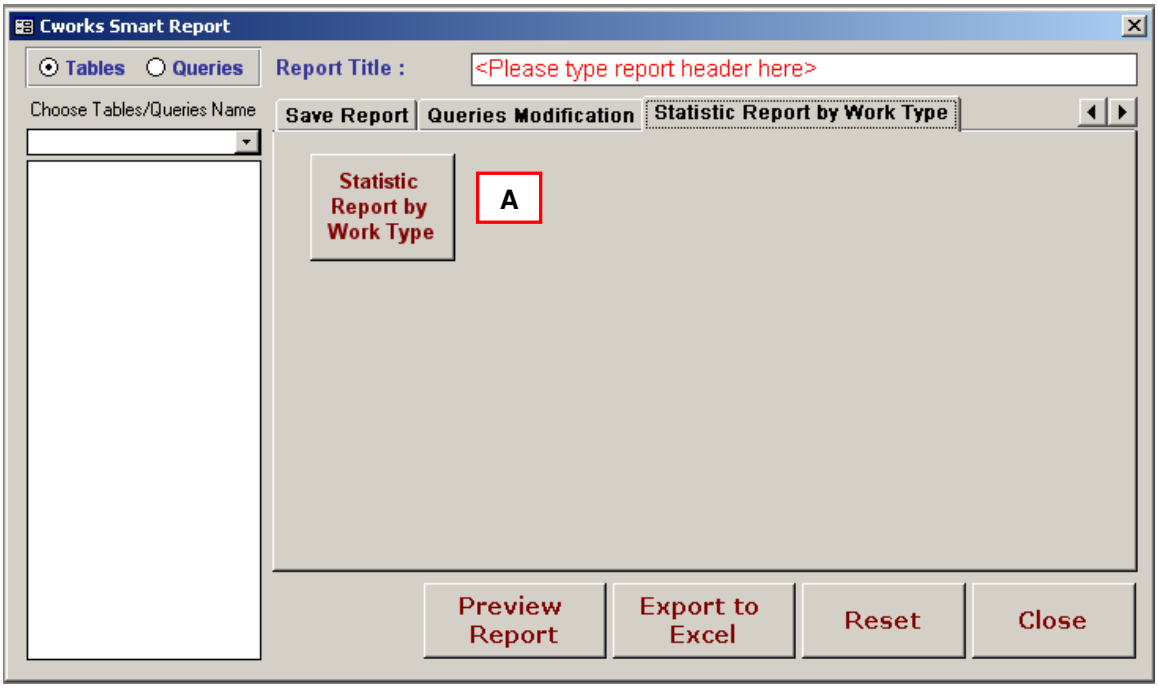


Figure 216: Statistics Report by Work Type

A Statistic Report by Work Type

Converts saved excel files into statistic type. Graphs are made through this process.

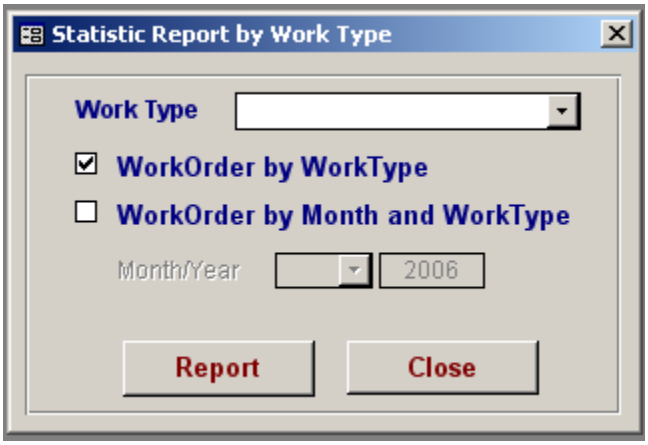


Figure 217: Statistics Report by Work Type Pop Up

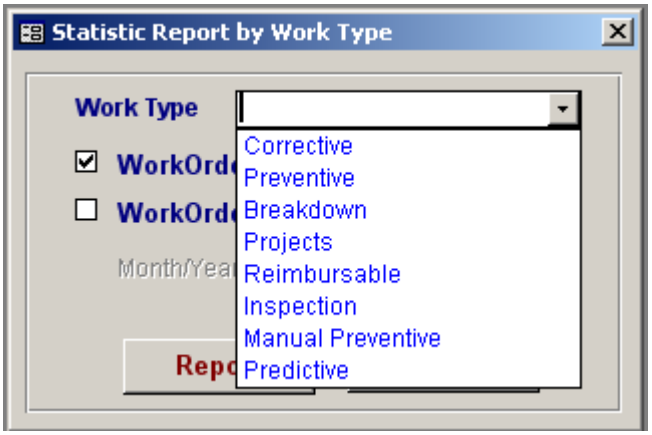


Figure 218: Work Type Details

14.8.1 Creating Statistics Charts/Graph

1. Click on the drop down menu of "Work Type". A list of work type will drop down (as shown in Fig 208). List of work type such as Corrective, Preventive, Breakdown, Projects, Reimbursable, Inspection, Manual Preventive and Predictive is available. Only one can be selected at a time.
2. At the bottom of the drop down menu there are two check boxes:
   - Work Order by Work Type
   - Work Order by Month and Work Type

   The first option will only filter in the order of the work type while the other option will list out both the work type and the month. In this example, the first option which is "Work Order by Work Type" is selected.

3. Click on report, and this action will export the options selected into an Excel formatted file. This new Excel file is called “WorkType_Report.xls” located in the data source folder.
4. If at the beginning the “Work Order by Month and Work Type” is selected, it will export the data into another file called “Monthly_Report.xls”.

CWArchive

15. Work Order Archiving

15.1 Introduction

The work order archiving program allows administrators of CWorks to archive closed and cancelled work orders for a specified work order received date range. It also allows restoring of archived work orders so that maintenance history of assets can be analysed even after the work orders have been archived.

Archiving of work orders is recommended when the work order records exceeds a number which slows downs the system.

Due to the inherent relationships in the system, only the workorders & workorderlabor tables are archived.

15.2 Creating an Archive Database File

The first step in the archiving process is to create a new archive database file from the "live" database. This file must be created using the CWorks Archiving program. This process creates empty workorders and workorderlabour tables with all the fields (including customized fields) in the new archive database file.

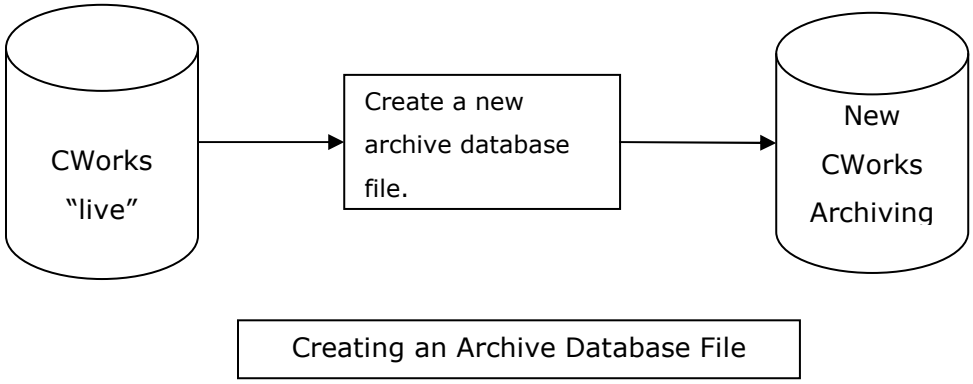
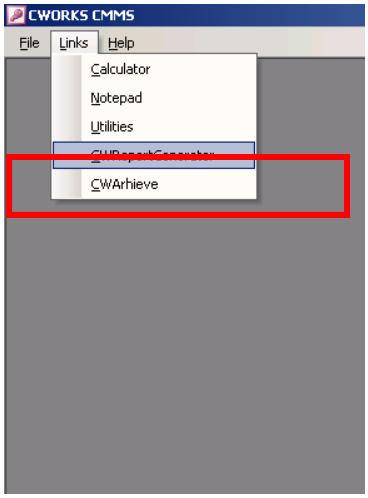


Figure 223: Archiving Process Flow



15.3 Creating the Archive File

Launch the CWorks Archiving program.

Firstly, ensure that the program is connected to the live CWorks database (default name = CWorksPlus_db.mdb). The file link can be viewed via File – Data Link on the menu bar.

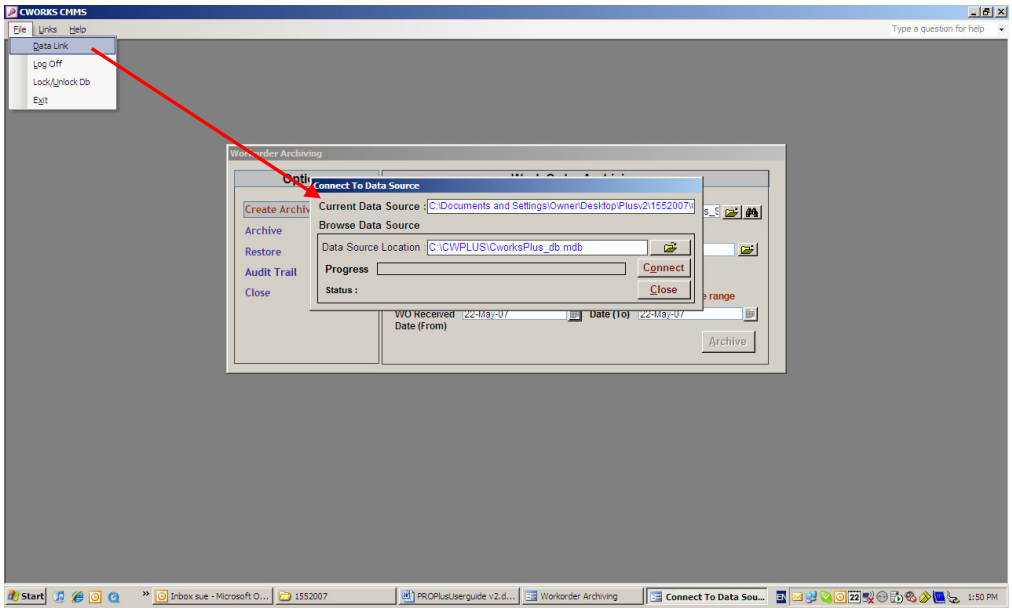


Figure 224: Connection To Data Source

Connect to the live CWorks database by clicking the browse button next to Data Source Location and selecting the appropriate file. Click "Connect" to connect to the selected file. This database file will now be the source for creating the archive file.

To create the archive file, click on “Create Archive Database” in the main screen Options.

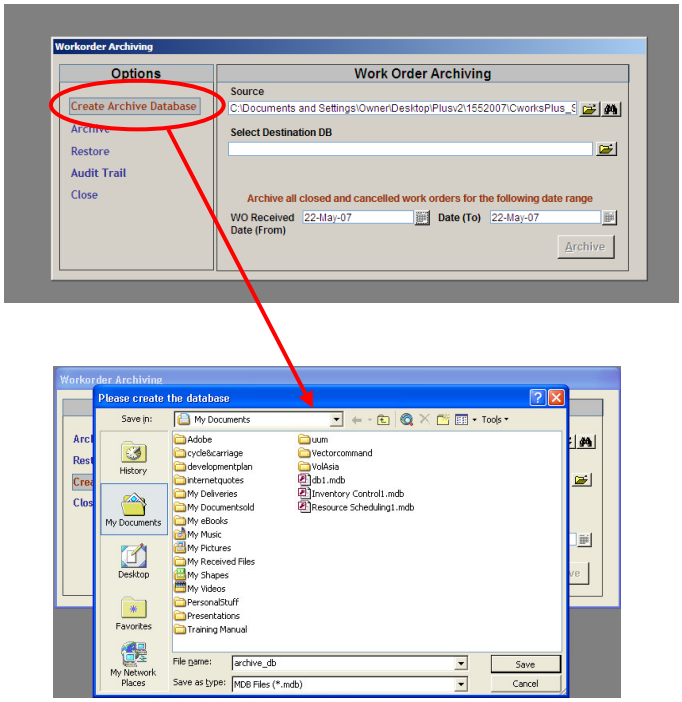
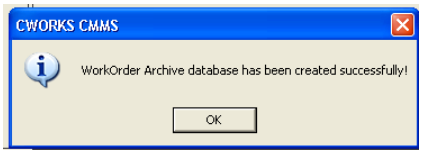


Figure 225: Archiving Database

Specify the filename (example: archive_db.mdb) and location to create/save the new database file using the screen above.

Click “Save” to create the new file. The message below would pop-upon successful archive file creation.



Note: This operation may take a few minutes depending on the size of the live CWorks database.

15.4 Archiving Work Orders

Launch the CWorks Archiving program. At Options, click Archive.

Ensure that the program is connected to the live CWorks database (default name = CWorksPro_db.mdb). This acts as the source database for archiving. The source database is displayed in the Work Order Archiving screen.

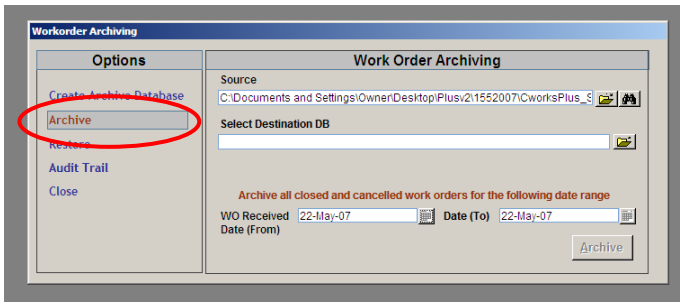


Figure 226: WO Archiving

To change the source, click . The Connect to Data Source form would pop-up. Browse for the live CWorks database and connect to it. The contents of the work order table can be viewed by clicking .

Select the destination database file by clicking at the "Select Destination DB" field. For example: archive_db.mdb which was created in "Create Archive Database".

Note:

1. *The properties of the workorders and workorderlabour table in the destination file must be identical to the source file. If the destination file does not contain the file will be rejected and you will not be able to proceed any further. Refer to "Creating an Archive Database File" in this document for details.*
2. *Ensure that the source and destination databases are consistent. If duplicate work order numbers are found when the system compares both databases, the process will be terminated.*

Specify the work order records received date ranges to be archived. All work orders where the received data falls within the selected range will be archived. Click the "Archive" button to archive these work orders.

A progress bar would pop-up indicating that the archiving process is in progress. Upon completing of the archiving process, a message box would pop-up indicating successful completion and the number of work orders archived will be displayed.

15.4.1 Restoring Archived Work Orders

Archived work order can be restored to the source database by using the Restore feature. At Options click "Restore". The Work Order Restoring form will activate.

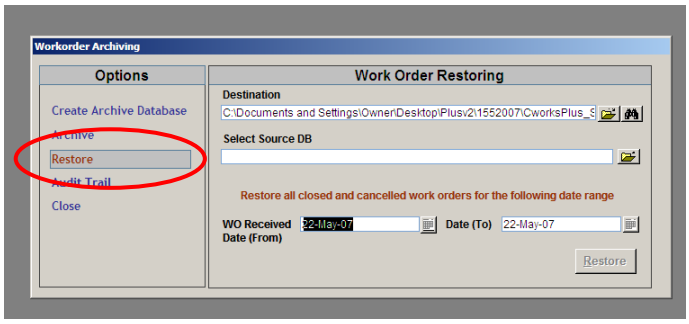


Figure 227: WO Restoration

The destination database (live CWorks database) is displayed in the Destination field. To change the destination, click . The Connect to Data Source form would pop-up. Browse for the live CWorks database and connect to it. The contents of the destination work order table can be viewed by clicking .

Define the source database file (archive database) by clicking at the "Select Source DB" field.

Specify the work order records received date ranges to be restored. All work orders from the source database where the received data falls within the

selected range will be restored to the destination database. Click the "Restore" button to restore these work orders.

A progress bar would pop-up indicating that the archiving process is in progress. Upon completing of the process, a message box would pop-up indicating successful completion and the number of work orders restored will be displayed.

Note:

1. *The properties of the workorders and workorderlabour table in the destination file must be identical to the source file. If the destination file does not contain the file will be rejected and you will not be able to proceed any further. Refer to "Creating an Archive Database File" in this document for details.*
2. *Ensure that the source and destination databases are consistent. If duplicate work order numbers are found when the system compares both databases, the process will be terminated.*

15.5 Viewing The Audit Trail

To view Work Order Archiving and Restoring history, click Audit Trail at Options.

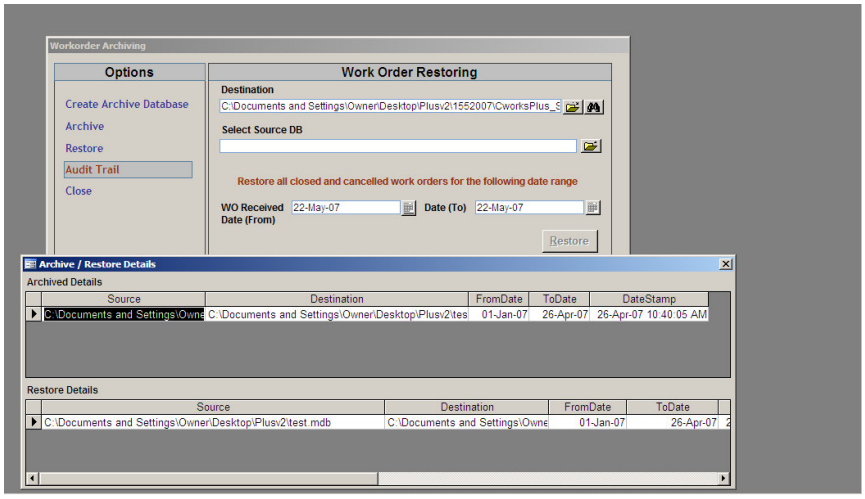


Figure 228: Audit Trails