



ERP Consulting  
Web Development  
Custom Programming Solutions  
Desktop & Web Applications for Manfact

# **NorthClark Computing, Inc.**

## **Bill of Material and Parts Master Maintenance User Guide**

Web and Desktop Applications  
for Manfact by Epicor

**December 11, 2009**

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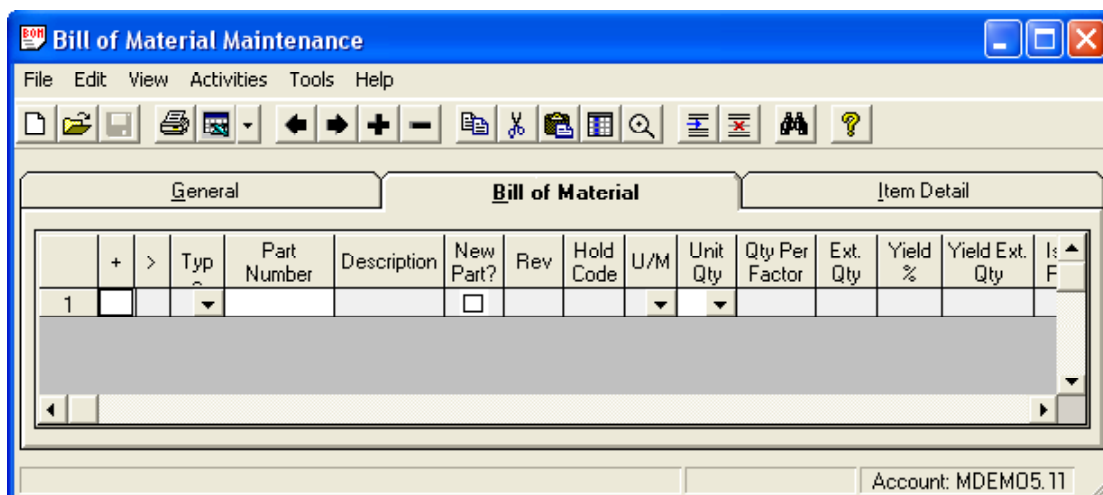
## Introduction

NorthClark's *Bill of Material and Parts Master Maintenance* module is a Windows based desktop application used to view, create, and modify Bills of Material and Part Master records in your Manfact system. Features include:

- ❑ Use a flexible spreadsheet format to easily add and delete items, or change the structure of a multi-level Bill of Material.
- ❑ Import Bill of Material structures and Part Master details from an Excel spreadsheet or a tab-delimited text file providing integration with virtually any CAD application.
- ❑ Update the Manfact Bill of Material (BOM), Engineering Bill of Material (ENGBOM), and Work Order Bill of Material (WOBOM) files.
- ❑ Create and update Item Master (PARTS) records.
- ❑ Summarize the Bill of Material and customize output with flexible reporting options.
- ❑ Export Bill of Material and Part data to *Microsoft Excel*.
- ❑ Save partially updated or incomplete Bills of Material in a local *Microsoft Access* database, where they may be retrieved and posted to Manfact at a later time.

## Bill of Material Maintenance

This window is used to view and/or update Bill of Material records in your Manfact system.

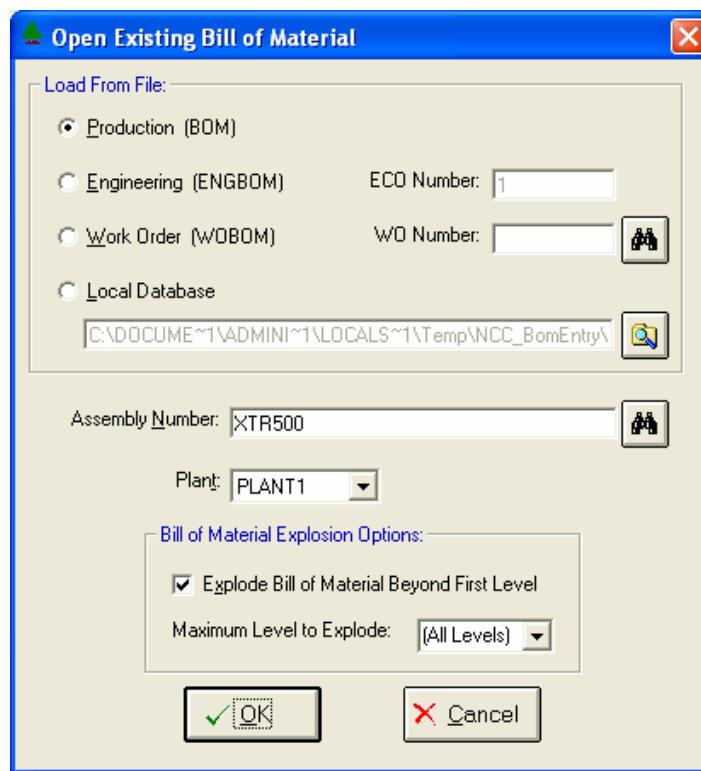


The Main screen is composed of three tabs:

- **General Display** shows descriptive information about the selected Bill of Material.
- **Bill of Material Display** is a spreadsheet environment used to create or edit a Bill of Material.
- **Item Detail Display** contains information for a selected line item on the Bill of Material

## Open an Existing Bill of Material

To retrieve an existing Bill of Material, select the **Open** command from the **File** Menu, or click the open button on the Toolbar: 



Select the desired Bill of Material Type: Production, Engineering, or Work Order. Enter the appropriate Engineering Change Order (ECO) or Work Order (WO) number if required. Use the search buttons to look-up the Work Order Number and Assembly Number if desired.

If your company uses Manfact's multi-plant feature, and you want to create or update a plant-specific Bill of Material, select the Plant Code from the drop-down list. If all plants share the same bill of material, this field should be left blank.

You may view/update the Bill of Material using either a single-level or multi-level format. Click the *Explode Bill of Material Beyond First Level* option if a multi-level view is desired, then use the drop-down list to select the maximum number of levels to explode.

## General Display

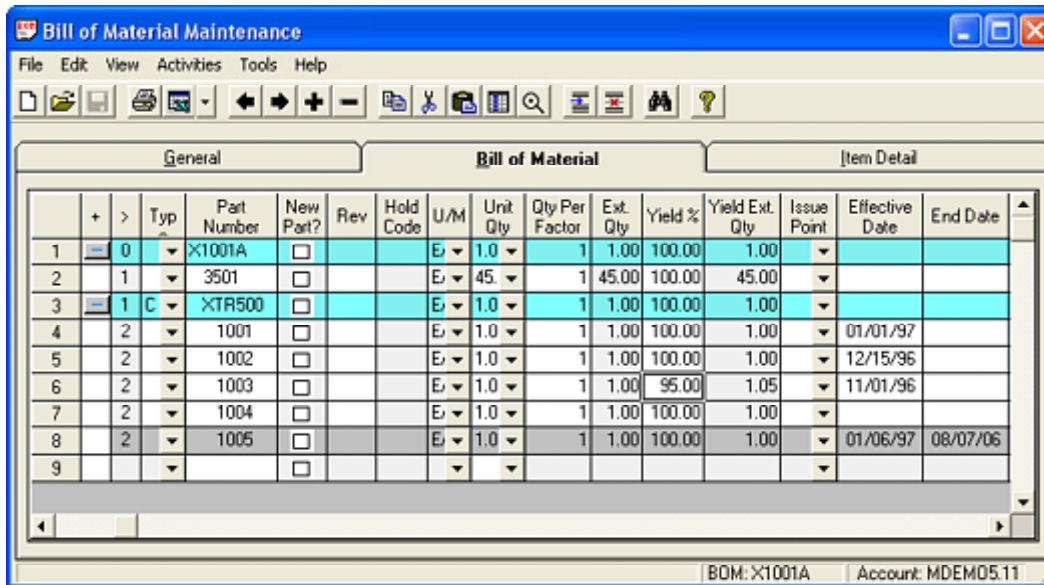
The *General* tab displays information about the bill of material you are currently updating. Data may not be changed using this view.

### *General Display Field Descriptions:*

Field Name	Description
Assembly Number	The top-level part number.
Description	The name or a brief description of the item.
Configuration Plant	If Manfact's multi-plant feature is enabled, you may optionally configure a unique bill for each plant. If this field is blank, then the BOM is generic for all plants.
Owner Plant	The plant that has ownership or primary control of the part.
BOM File	The name of the BOM file currently in use.
WO or ECO Number	The Work Order (WO) or Engineering Change Order (ECO) Bill of Material number.
Revision Level	Revision Level of the Assembly.

## Bill of Material Display

The *Bill of Material* Display is used to update or create Bill of Material records. This view allows you to see and update all line items in the structure at the same time. During data entry, the spreadsheet may be scrolled to the right to view additional columns.



### Bill of Material Display Field Descriptions

Column	Description
[+] or [-]	The Bill of Material is a hierarchical structure displayed in outline form. Click [+] to expand an item and component parts, or [-] to collapse and hide component parts.
Level [>]	The roll up level of the item. 0 = Top assembly, 1 = 1 <sup>st</sup> level sub-assembly, and so on.  During entry or update of a BOM, use the <b>Move Left</b> (Outdent) or <b>Move Right</b> (Indent) option from the <b>Edit</b> Menu or the Outdent or Indent options found on the Right Click menu.
Type	Use the drop-down list to select the Type of line item. <ul style="list-style-type: none"> <li>• <b>Part:</b> An individual part or assembly.</li> <li>• <b>Note:</b> Leave the part number blank and enter notes only.</li> <li>• <b>Called Item:</b> The part entered at this line item must be an assembly with an XPL code of X or XP. The assembly specified by this line item will be inserted at this line item, and considered part of this assembly.</li> </ul>

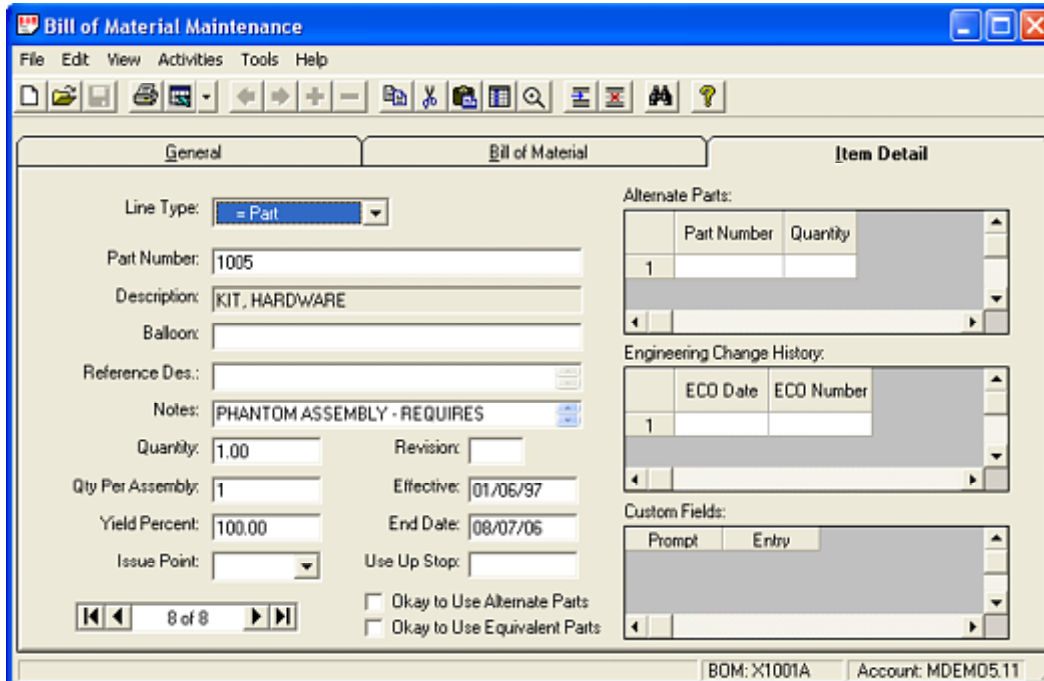


Column	Description
Part Number	The Part Number for assemblies and parts.
Description	A brief description of the item. For existing parts, the Description will default from the <i>Part Master</i> record and may not be updated except through <i>Parts Master Entry</i> .
New	The system will place a checkmark in this box any time a part is added that is not currently in your <i>Manufact</i> database. This is a reminder that you will need to use the <i>Part Master Update</i> screen to complete the part record before the Bill of Material can be filed to the BOM, WOBOM, or ENGBOM files. It may, however, be filed to the local database.
Rev	Revision Level of the part. For existing parts, the Rev Level will default from the <i>Part Master</i> record. For existing parts, updating the Rev Level must be done through <i>Parts Master Update</i> .
Hold Code	For existing parts, the Hold Code will default from the <i>Parts Master</i> record. Changes to this field must be done through <i>Parts Master Update</i> . The following codes are available: <ul style="list-style-type: none"> <li>• <b>D</b> = Discontinued, no orders recommended.</li> <li>• <b>U</b> = Use up remaining stock.</li> <li>• <b>O</b> = Obsolete, do not issue to work order.</li> </ul>
U/M	The Unit of Measure by which each Part is inventoried. For existing parts, the U/M will default from the <i>Parts Master</i> record. Changes to this field must be done through <i>Parts Master Update</i> .
Unit Qty	The quantity of this item required to produce the number of units defined in the Qty Per Factor field. If the Qty Per Factor is 1, enter the quantity of this part required to build one assembly. If the Qty Per Factor is 1000, enter the quantity required to build 1000 assemblies. You may enter a numeric value, or select one of the following from the drop-down list: <ul style="list-style-type: none"> <li>• <b>AR</b> = As Required</li> <li>• <b>DWG</b> = Drawing</li> <li>• <b>REF</b> = Reference</li> </ul>
Qty Per Factor	The Unit Quantity will be divided by the factor entered in this field.

Column	Description
Ext Qty	The Quantity of each item required for the top-level assembly: $\text{Ext Qty} = \text{Next Level Qty} * \text{Unit Qty} / \text{Qty Per Factor}$ Where Next Level Qty is the extended quantity of the next higher (parent) assembly.
Yield %	The Yield Factor is used to plan for component shrinkage. This value is expressed as the percentage of good units. So, a factor of 95 means that 95% of the parts issued to a Work Order will be usable, and an estimated 5% will be scrapped.
Yield Ext. Qty	The total extended quantity required, taking the Yield Factor into account: $\text{Yield Ext Qty} = \text{Ext Qty} / \text{Yield\%} / 100$
Issue Point	Issue Points may be used to link required materials to a specific step on the Work Order routing. This allows lead times to be adjusted so parts arrive just in time. Please refer to the Manfact documentation for more information on setting up and using Issue Points.
Effective Date	The date the part becomes effective for use on this BOM.
End Date	The last date this part may be used on this BOM. Leave this field blank if the part will be effective indefinitely.
Use-up Stop	This is a system maintained field posted by the <i>Manfact Engineering Change</i> system when a part has been flagged for Use Until Exhaust effectivity. The system will stop searching for the use-up part as of this date.
Balloon	User defined drawing reference.
Reference Designator	User defined drawing reference.
Notes	Any notes to be included in the BOM.
Alt. OK	Check this box to approve the use of an alternate part.
Eqv. OK	Check this box to approve the use of an equivalent part.
Alternate Parts	List any alternates for this part.
ECO History	The system displays a list of Engineering Change Orders that have affected this line item.
Used on Assembly	The next level (parent) assembly on which this Part is used.

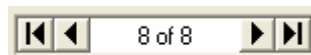
## Item Detail Display

The Item Detail Display is used to view or edit details for specific line items on the Bill of Material. This may be used as an alternative to the multi-line view presented in the *Bill of Material* Display. Any changes made on this screen will automatically update the *Bill of Material* Display.



Select **Insert Row** from the **Edit** Menu or click the **Insert Row** icon on the top tool bar to insert new items using this view. The item will be inserted immediately above the item where the Insert a Row feature was used.

Use the Record Navigator (located in the lower left part of the screen) to scroll to the desired BOM line item:



*The leftmost button will move to the first line item, and the rightmost button will move to the last line item on the Bill of Material. Use the two inside buttons to move to the previous or next line item. If you hold down your left mouse-button, the previous/next commands will scroll continuously until the mouse-button is released.*

## Creating a New Bill of Material

Selecting New from the File Menu will clear the screen allowing you to enter or import a new Bill of Material. There are several ways to populate the new Bill of Material with data:

- Enter information manually by selecting a cell and typing the appropriate data. Certain cells use drop-down lists to allow you to select the information from a list. The system will automatically load applicable Manfact Data when you enter a Part Number.
- Rows, Cells, or Columns may be Copied and Pasted into your new BOM.
- Import a Bill of Material from an existing spreadsheet.

## Saving a Bill of Material

To save changes to the record you are creating, simply click the **Save** icon on the top toolbar, or select **Save** from the **File** Menu. The screen illustrated below is displayed when you save a bill of material for the first time, or when you select **Save As** from the File Menu.

Save Bill of Material As...

Save to File:

Production (BOM)

Engineering (ENGBOM) ECO Number:

Work Order (WOBOM) WO Number:

Local Database

C:\DOCUMENTS\ADMINISTRATOR\LOCALS\Temp\NCC\_BomEntry\

Assembly Number: XTR500

Configuration for Plant:

Owner Plant:

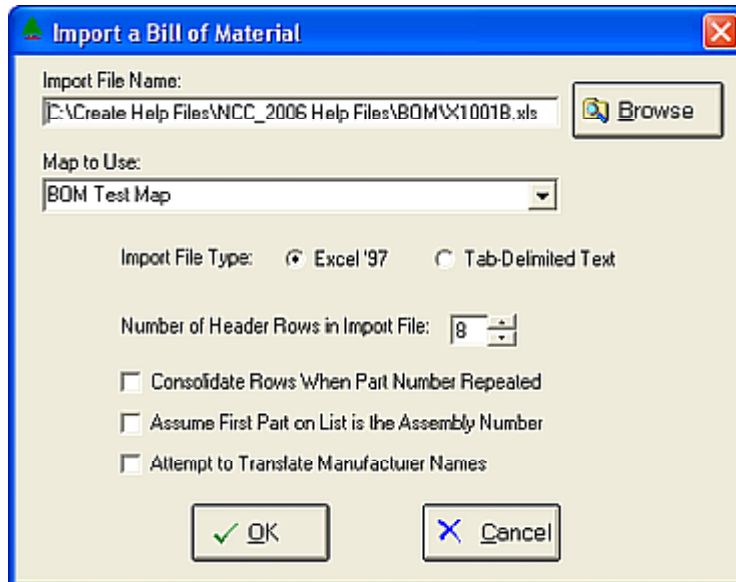
OK Cancel

When saving locally, you may choose any name you like for the file. The **.mdb** file extension is customary for *Microsoft Access* databases.

When Applicable, select the Configuration Plant and/or Owner Plant from the drop-down list. Click the **OK** button to complete the save.

## Importing a Bill of Material

Any Bill of Material currently saved in spreadsheet format may be imported into the Bill of Material Maintenance Module. Select **Import a Bill of Material** from the **Activities** Menu.

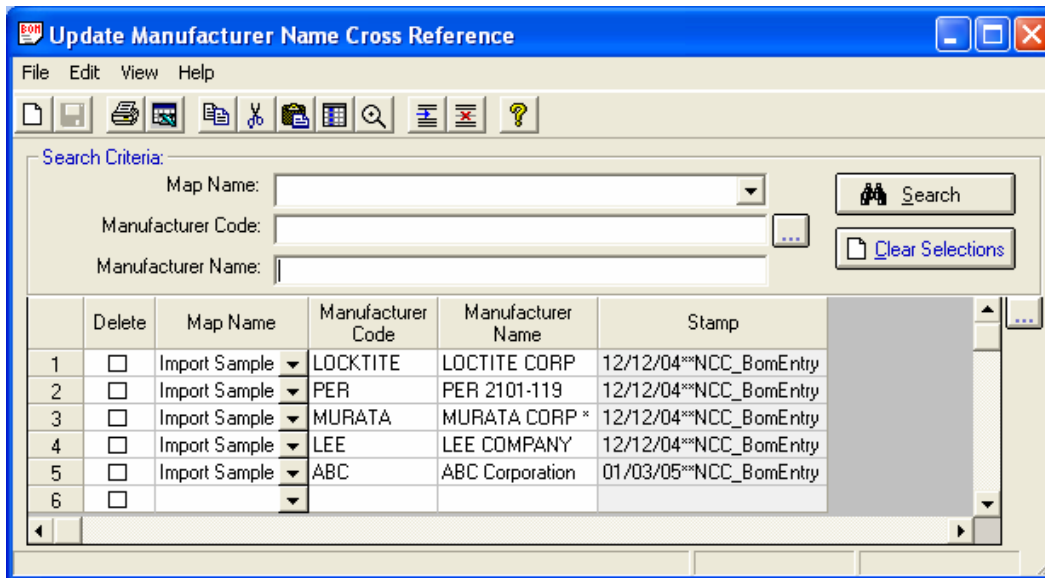


- ❑ Select the **Browse** button to navigate to the desired spreadsheet file.
- ❑ Use the drop-down list to select the appropriate mapping information. *Note: Your System Administrator must enter import and export mapping instructions for various spreadsheet formats using the Ncc\_BomSetup application.*
- ❑ The remaining selections are set automatically with your map selection, but may be temporarily changed with this dialog. If you receive an error message after clicking the **OK** button, the spread you are attempting to import may be in a slightly modified format, or incompatible with the selected map.
- ❑ You may use this command to append to or combine existing BOMs. If you currently have an open Bill of Material, a dialog appears asking if you wish to append to the existing spreadsheet.

*Note: The Excel spreadsheet you are trying to import must be closed, otherwise you will receive a message indicating that 0 Parts have been loaded.*

## Translating Manufacturer Names During BOM Import

If your company receives Bill of Material data from customers or other outside sources, it may be necessary to translate manufacturer names supplied on the spreadsheet to match the Manufacturer Codes defined in your Manfact system. To accomplish this, choose the Update Manufacturer Name Cross Reference option from the Tools menu to create the cross-reference file, and when the Bill of Material is imported check the option: *Attempt to Translate Manufacturer Names*.



On the cross-reference table illustrated above, each row will translate a Manufacturer's Name as shown on a spreadsheet, to a valid Manufacturer Code defined in the Manfact system. Enter as many rows as needed to translate all of the names included in the spreadsheets your customer provides.

Note that each translate instruction is associated to a specific Import Map, allowing you to define different mapping parameters for each customer who supplies Bill of Material data.

The Search Criteria at the top of the screen are used to locate existing Manufacturer Cross-Reference entries. Use the Map Name, Manufacturer Code, and Manufacturer Name prompts to narrow your search as desired, or leave all fields blank to retrieve all existing records.

To permanently remove an entry, click the Delete checkbox on the offending row, then click the Save button.

## Main Menu Options

Following is a brief description of the options available from the Main Menu of the Bill of Material application.

Menu	Option	Description
File	Log In/Log Out	LOG IN OR LOG OUT OF YOUR CURRENT SESSION
	New	Clear all current data on all displays in preparation to enter a new Bill of Material.
	Open	Open a specific BOM to view or update.
	Save	Save the BOM to a specified database.
	Save As	Save your changes to a database with a new file name.
	Revert to Last Save	Restores your Bill of Material or PARTS List to its condition as of the last time you saved it to disk.
	Print	Print the current active spreadsheet. See <i>Printing a Spreadsheet</i> in the General information section for more information.
	Export	Export data from the active spreadsheet. See <i>Exporting a Bill of Material Spreadsheet to Excel</i> in the General information section for more information.
Exit	Close the application	
Edit	Move Right	Allows the user to provide structure to the Bill of Material. By moving Right you are indicating that this item is a sub-assembly to the assembly immediately preceding it.
	Move Left	Allows the user to provide structure to the Bill of Material. By moving Left you are indicating that this item is a higher level assembly than the assembly immediately preceding it.
	Expand All	Expand and show all levels of the Bill of Material.
	Collapse All	Collapse all of the lower level items and show only the top-level assembly.
	Copy	Copy data to the Windows clipboard.
	Cut	Cut data from the field and copy it to the Windows clipboard.

	Paste	Paste data from the Windows clipboard.
	Fill	Update all of the selected cells from the Windows clipboard.
	Zoom	Expand the contents of a field to view, print and/or edit.
	Insert Row	Insert a row. The row will insert immediately above the row where you have specified the command.
	Delete Row(s)	Remove the selected row(s) from the Bill of Material.
View	Unhide All Columns	Expose all columns previously hidden. (Columns are hidden via the Display Options.) This allows you to view the hidden columns without changing the defined Display Options.
	Auto Fit Columns	Automatically adjust the width of each column to accommodate your data.
	Hide/Show Cancelled Rows	Hide or Show rows where the end date is less than or equal to today's date.
	Display Options	Set user preferences affecting the appearance of the screen.
Activities	Import a Bill of Material	Import a Bill of Material currently saved in a spreadsheet format.
	Parts Master Update	Load Parts Master data for the selected part.
Tools	Part Number Search	Locate a Manfact Part number using a variety of search criteria.
	Find a Bill of Material Item	Find a specific item in the current Bill of Material.
	Display Drawing	Display a drawing for a specific part number.
	Update Manufacturer Name Cross Reference	Search for a Manufacturer Name and/or Code.



## **Right Click Menu**

The following options are available from the Right-Click Menu of the Bill of Material application.

<b>Item</b>	<b>Description</b>
Copy	Copy data to the Windows clipboard.
Cut	Cut data from the field and copy it to the Windows clipboard.
Paste	Paste data from the Windows clipboard.
Fill	Update all of the selected cells from the Windows clipboard.
Zoom	Expand the contents of a field to view, print and/or edit.
Insert Row	Insert a row immediately above the row where you have specified the command.
Delete Row(s)	Remove the selected row(s) from the Bill of Material.
Indent Row	Allows the user to provide structure to the Bill of Material. By moving Left you are indicating that this item is a higher level assembly than the assembly immediately preceding it
Outdent Row	Allows the user to provide structure to the Bill of Material. By moving Right you are indicating that this item is a sub-assembly to the assembly immediately preceding it.
Parts Master Update	Load Parts Master data for the selected part.
Part Notes Entry	Enter public or private notes associated with the current part number.

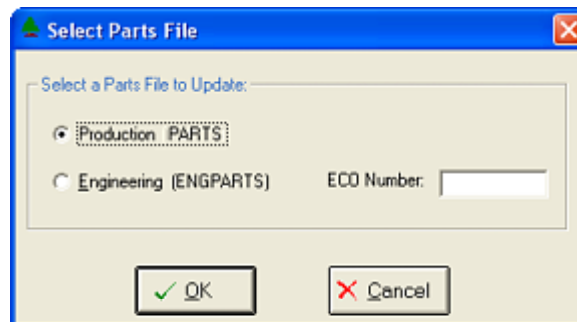
## Parts Master Update

The Parts Master Update screen is used to enter information stored in either the Manfact PARTS or ENGPARTS file. Use the General tab to view or update a list of Part Numbers in spreadsheet form. The remaining tabs present information for a single Part Number, organized by the major disciplines responsible for maintaining Part data: Engineering, Planning, Inventory, Purchasing, and Marketing.

	Part Number	Copy From Part	Description	Sum Bom Qty	XPL Code	Issue U/M	Hold Code	Rev Level	Rev Date	Alt Revs	Owner Plant	Part Type
1	XTR500		POWER DRIVE ASSY.	1.00	X	EA		F	09/29/03			OL
2	1001		MOTOR, 2HP	1.00	X	EA		12	09/20/96	X		OL
3	2001		HOUSING, MOTOR MACHINED	1.00	X	EA		C	02/26/03			OL
4	3501		CASTING, MOTOR HOUSING	3.00		EA		A				OL
5	4503		BOLT FOR ROTOR ASSEMBLY	12.00		EA						OL
6	110-0001-		INDUCTOR,SMD,20UH,2.1A,DU	1.00		EA		B				
7	2002		ROTOR ASSEMBLY	1.00	X	EA		C				OL
8	3004		ROTOR SHAFT MACHINED	1.00	X	EA		A	04/22/05			XTR 50

There are two ways to access the Parts Master Update screen:

1. Right Click on any line item on the Bill of Material Maintenance window and select **Parts Master Update** from the drop-down list, and the system will display the available data for the selected Part Number.
2. Select **Parts Master Update** from the *Bill of Material Maintenance Activities* Menu. If you are currently editing a Bill of Material, the system will automatically select the correct file for the BOM you are editing. If you have loaded an Engineering Bill, the ENGPARTS file will be used, otherwise the PARTS file is assumed. If you have not opened a Bill of Material record, you will be prompted for the file to update:



To change the file to be updated, choose the **Open** option from the **File** Menu of the *Parts Update* screen.

## Load a List of Part Numbers / Summarized BOM

This screen may be accessed by selecting the **Summarize BOM** option from the **Activities** menu on the Bill of Material Maintenance screen, or from the **Tools** menu on the Parts Master Update window.

### Summarized Bill of Material

This option will display one row on the General spreadsheet for each unique Part Number used on the Bill of Material, including the total quantity required for each item. The Summarized Bill of Material Quantity is calculated for the BOM currently open on the Main screen, based on the following options:

Quantity to Build	The extended required quantity of each part is multiplied by the Build Quantity you specify.
Effective Date	The date used to determine which parts are currently effective defaults to today's date.
Exclude "As Required" Parts	Check this box to exclude Bill of Material line items with a non-numeric quantity (AR or DWG).
Exclude Phantom Parts	Check this box to exclude Part Numbers with an XPL Code of "XP", also known as "Blow Through" items.
Make / Buy	Include manufactured items, purchased parts, or all items.
Effective	Limit the selection to effective or non-effective items based on the Effective Date.

New Parts Only for the Current Bill of Material

This option displays each unique part number shown on the Bill of Material Display that does not already exist in the Manfact system. This may be particularly useful when you have imported a bill of material with several new parts that need to be created before the bill can be filed.

Use the List From the Last Parts Query Selection

*Part Number Search query* is a separate program available from NorthClark Computing, Inc. Choosing this option will load the list of part numbers resulting from the last search you performed using *Part Number Search query*.

The Part Number Search query may be activated as any *Windows* application, by clicking the icon on your desktop or selecting it from your Start menu. It may also be launched directly from this application by clicking the **Parts Query** button at the lower right of this screen.

**General Display**

The following fields are included on spreadsheet displayed on the General tab:

<b>Field</b>	<b>Description</b>
Part Number	The assigned identifier for Assemblies and Parts.
Copy From Part	Enter the identifier of an existing Part Number to copy.
Description	The name or a brief description of the item.
Sum BOM Qty	This column is displayed when you choose the option to Summarize a Bill of Material, otherwise it is hidden from view.
XPL Code	Select the appropriate code from the drop-down list: <ul style="list-style-type: none"> <li><input type="checkbox"/> (Blank) = for a purchased part.</li> <li><input type="checkbox"/> <b>X</b> = Assembly (Explode)</li> <li><input type="checkbox"/> <b>XP</b> = Phantom Assembly (Blow Through)</li> <li><input type="checkbox"/> <b>L</b> = Line Stock</li> </ul>
Issue U/M	Select the Unit of Measure by which each Part is issued from the drop-down list.
Hold Code	Select the appropriate character to indicate a part is on hold from the drop-down list: <ul style="list-style-type: none"> <li>(Blank) = No Hold</li> <li><b>D</b> = Discontinued, no orders recommended.</li> <li><b>U</b> = Use up remaining stock.</li> <li><b>O</b> = Obsolete, do not issue to work order.</li> </ul>

<b>Field</b>	<b>Description</b>
Rev Level	Revision Level of the item.
Rev Date	Revision Date of the item.
Owner Plant	The Plant that has ownership or primary control of the part.
Part Type	User defined.
Category	User defined.
Notes	Any notes to be included with the Part may be entered into the pop-up window. Click the <b>OK</b> button to save the notes.
Exp. 1 Level	Check this box to Explode one level when creating a work order.
Purchase Assembly	Check this box if the assembly is to be configured as a Buy part for costing purposes.
Delete Flag	Check this box to flag this PARTS record for deletion. Note: A part will not be deleted if it is linked to any open transactions.
Made From	The part(s) used to make this item. This is used to support assemblies that are made by a supplier on a purchase order.
Equivalent	Approved equivalent Parts.
Make / Buy	Select Make or Buy from the drop-down list. The MRP process will not explode requirements for components of Buy items.
Planner Code	Code used to indicate the group or individual responsible for planning this part.
Plan Fence	Enter the Planning Time Fence in days.
Demand Fence	Enter the Demand Time Fence in days.
Routing	Routing Identifier (BOO File).
Fcst Type	Specify type for Sales Forecasting from the drop-down list. <b>S</b> = Spare <b>F</b> = Finished Goods

<b>Field</b>	<b>Description</b>
Order Policy	Select MPS/MRP Order Policy from the drop-down list. <b>D</b> = Discrete (actual need) <b>F</b> = Fixed (minimum quantity over need) <b>L</b> = Least Total Cost <b>P</b> = Part Period Balancing <b>T</b> = Time Phased (need + need for next 'x' days)
Days Supply	The number of days that the Order Qty must cover requirements.
Order Qty	The minimum Order Quantity of each item.
Order Multiple	Enter the Order Multiple Quantity.
Yield %	Standard yield or shrinkage factor.
MPS	Check this box if the item is used by MPS and to be included in all Master Scheduled Part processing.
MRP	Check this box if the item is used by MRP. If un-checked, the MRP process will not explode requirements for this item.
Detailed Pegging	Check this box if you want the MRP system to maintain Detailed Pegging for this part.
Auto Release	Check this box to enable Automatic Order Release, allowing the Planner System to automatically launch live orders.
Buy Guide	If checked, this part will be reported on the buying guide.
Plan Lead Time	The number of days required for planning this part.
Assy/Buy Lead Time	The number of days required to assemble or purchase this part.
Total Lead Time	Total lead-time for this part. Usually Plan Lead Time + Assy/Buy Lead Time.
Cum Lead Time	The Cumulative Lead Time is calculated by adding the longest Total Lead Time at each level of the structure.
PPB Cost Group	Select the Cost Group to be used to determine unit cost for Part Period Balancing from the drop-down list.

<b>Field</b>	<b>Description</b>
PPB 2 <sup>nd</sup> Policy	Select Secondary Part Period Balancing Policy from the drop-down list. <b>D</b> = Discrete (actual need) <b>F</b> = Fixed (minimum quantity over need) <b>P</b> = Part Period Balancing.
PPB Days Plan	The number of days after which to switch to PPB 2 <sup>nd</sup> Policy.
PPB Place \$	Enter the dollar amount of Order Placement Cost.
PPB Place %	The percentage of overall unit cost for Order Placement.
PPB Setup \$	Enter the dollar cost per order to set up for production.
PPB Setup %	The percentage of overall unit cost for Setup.
PPB Carry \$	Enter the cost per unit per day held in inventory.
PPB Carry %	The percentage of overall unit cost for holding the item in inventory.
QA Inspect	Check if this part is to be inspected by the QA system.
QA Report	Check this box if a QA Report is required for this part.
QA Spec Code	Enter the default QA Specification Code.
Inspection Level	Select the Inspection Level from the drop-down list.
Serial Control	If checked, Serial Numbers will be required for this item on each move.
QA Notes	Enter QA Notes into the pop-up window. Click the <b>OK</b> button to save the notes.
Lot Control	If checked, Lot Numbers will be required for this item on each move.
Fraction Qty	Check to allow fractional quantities of this part.
Stock Phantom	Check this box if the assembly is a stockable phantom.
Auto WO Close	If checked, Work Orders with this part number will automatically close at month end.
Freeze ABC	If checked, Stratification (PARTS05) will not change the ABC Code.
Safety Stock	The minimum quantity of the item to be in stock to assure continuous supply.

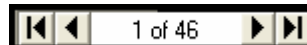
<b>Field</b>	<b>Description</b>
Max. Inv	Maximum Inventory Level. Not used for MRP items.
Shelf Life	The number of days the item may remain in inventory before expiration.
ABC Code	Select the alphabetic category for cycle counting frequency of this item from the drop-down list.
Cost Groups	Enter the Cost Group(s) to be used for this item.
Buyer Code	Enter Code for the individual normally responsible for buying this item.
Load Factor	Factor for distributing estimated freight costs.
Price Conv.	Conversion Factor used when Unit Price is not equal to Buy Unit Of Measure.
Pur. Tax Type	Select the default Purchase Tax Type code for this part from the drop-down list.
Fcst Part	Check this box if the part is forecasted. It will be included in the Vendor Forecast Report.
Fcst PO/SPO	Select Forecast Planned Order (to meet MPS requirements) or Start Planned Order (offset by lead times) from the drop-down list.
Prod Class	Select Product Classification Code from the drop-down list.
Sub Class	Select Product Sub-Classification Code from the drop-down list.
Mrk. Tax Type	Select Marketing Tax Type Code from the drop-down list.
Price Per	Enter Price Per Unit Factor.
Units / Package	The normally shipped number of Units Per Package.
Unit Weight	Weight per Part per Unit of Measure.
Clip Qty.	Used by the buying guide and sales forecasting to “clip” or control unusually high demand for a part.
Non Inv. Cost	Unit cost for this item on non-inventory shipments.
NSN Number	U.S. Defense Department National Stock Number.
NSN Desc.	U.S. Govt. assigned Description.
Ref Part Number	Enter any internal alternate part numbers.



Field	Description
Complimentary Parts	Enter any Complimentary Parts.
Comp. Parts List	Enter List(s) of Complimentary Parts.
Substitute Parts	Enter any Substitute Parts.
Sub. Parts List	Enter List(s) of Substitute Parts.
OK To Sell	If checked, this item is OK to sell.
Auto Create WO	If checked a WO will automatically be created for this assembly and all lower assemblies in the WO.B procedure.

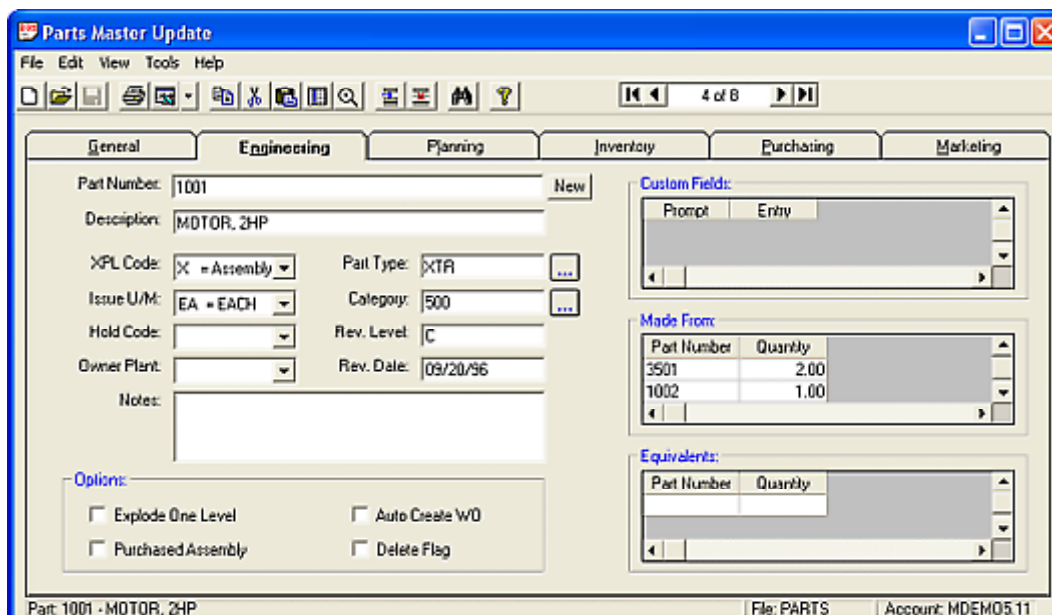
### Navigating the List of Part Numbers

While the General display allows you to edit multiple part numbers, the departmental views display data for only one part number at a time. To navigate from one part number record to another use the record navigator buttons at the top right of the departmental display screens.



### Engineering Display

The *Engineering Display* is used to make engineering related changes to PARTS or ENGPARTS records. Changes made here will automatically update the *General Display*. To add a new part or assembly, click the **New** Button next to the *Part Number* field.



## Planning Display

This tab includes parameters that affect Master Production Scheduling and Material Requirements Planning.

The screenshot shows the 'Parts Master Update' application window with the 'Planning' tab selected. The window title is 'Parts Master Update' and it has a menu bar with 'File', 'Edit', 'View', 'Tools', and 'Help'. The toolbar includes various icons for file operations and navigation. The 'Planning' tab is active, showing several input fields and checkboxes. The 'General' tab is also visible in the background.

Field	Value
Make/Buy	M = M
Plan Fence	0
Demand Fence	0
Planner Code	RR
Routing	
Forecast Type	S = Spare
Order Policy	P = Part Period Balance
Days Supply	0
Order Qty	0.00
Order Multiple	0
Yield%	93.10
MPS	<input type="checkbox"/>
MRP	<input checked="" type="checkbox"/>
Detailed Pegging	<input checked="" type="checkbox"/>
Auto Release	<input type="checkbox"/>
Buy Guide	<input checked="" type="checkbox"/>

Field	Value
Planning Lead Time	3
Assembly / Buy Lead Time	3
Total Lead Time	6
Cumulative Lead Time	50
Cost Group	SD = STANDARD
2nd Policy	D = Discrete
Days Plan	20
Place \$	0.00
Setup \$	0.00
Carrying \$	0.00
Place %	0.00
Setup %	0.00
Carrying %	10.00

Part: 1001 - MOTOR, 2HP | File: PARTS | Account: MDEM05.11

## Inventory Display

This tab includes fields of interest for Inventory Control personnel.

The screenshot shows the 'Parts Master Update' application window with the 'Inventory' tab selected. The window title is 'Parts Master Update' and it has a menu bar with 'File', 'Edit', 'View', 'Tools', and 'Help'. The toolbar includes various icons for file operations and navigation. The 'Inventory' tab is active, showing several input fields and checkboxes. The 'Planning' tab is also visible in the background.

Field	Value
QA Inspection Required	<input checked="" type="checkbox"/>
QA Report Required	<input checked="" type="checkbox"/>
Serial Controlled	<input type="checkbox"/>
Lot Controlled	<input type="checkbox"/>
Fractional Qty's OK	<input type="checkbox"/>
Stockable Phantom	<input type="checkbox"/>
Auto WO Close	<input type="checkbox"/>
Freeze ABC	<input type="checkbox"/>
QA Spec Code	
Inspection Level	N = Normal
Safety Stock	0.00
Max Inventory	0.00
Shelf Life	0
ABC Code	D
QA Notes	Be Sure to check packaging

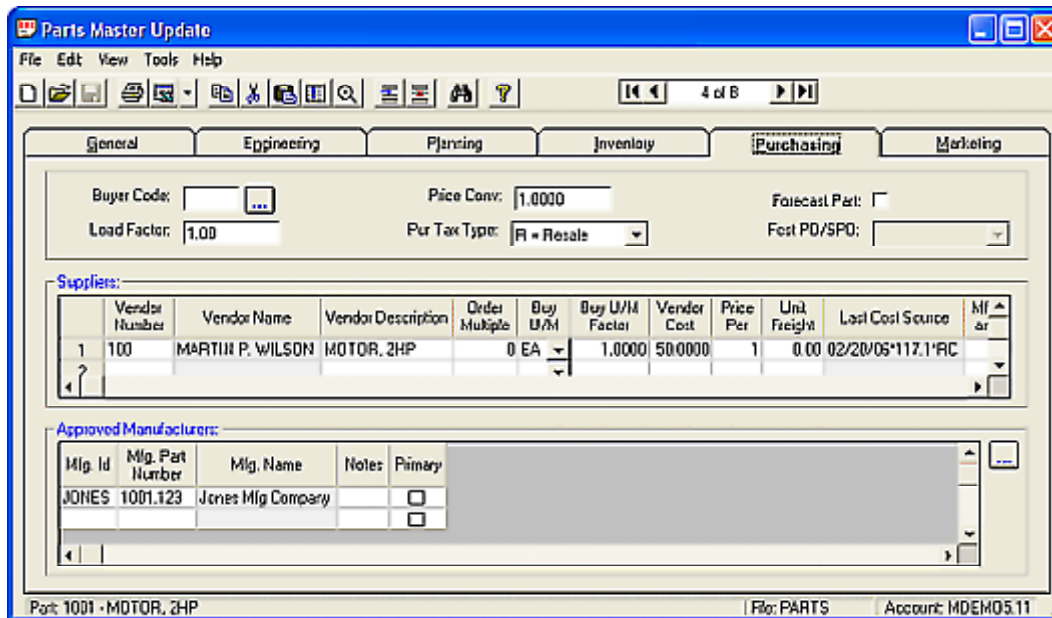
Create PARTSDTL for Cost Groups:

- AC = ACTUAL COST (LOT CONTROL)
- AVG = AVERAGE COSTING
- FIFO = FIFO
- SD = STANDARD COST

Part: 1001 - MOTOR, 2HP | File: PARTS | Account: MDEM05.11

## Purchasing Display

The information on this tab is used primarily for Procurement and Supply Chain Management purposes.



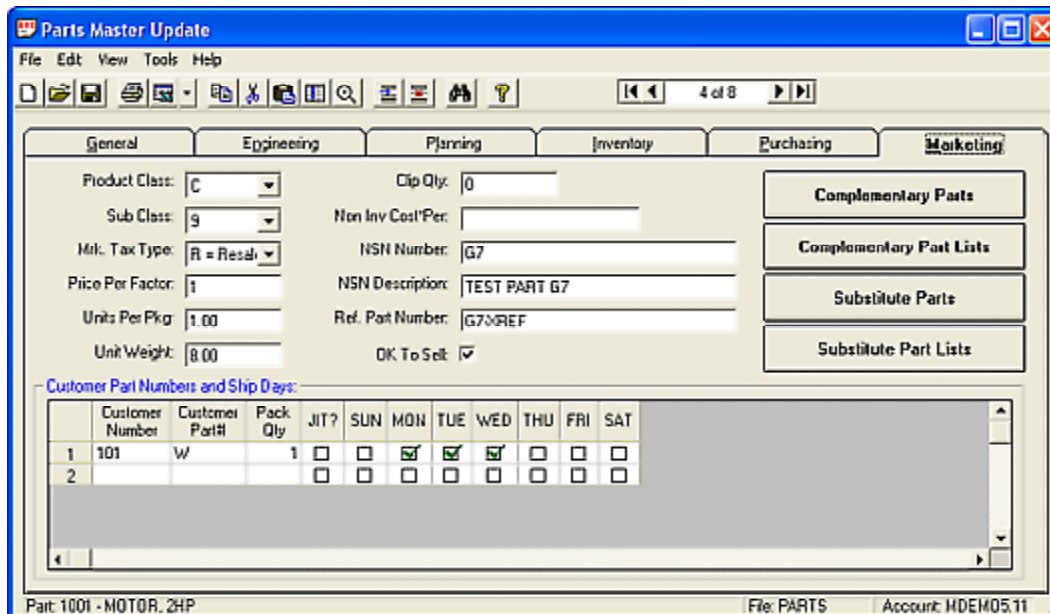
The following fields are included in this view. Note, these datasets are not available on the General tab.

Column	Description
Vendor Number	Vendor Number that this item has been purchased from.
Vendor Name	Name of the Vendor this item has been purchased from.
Vendor Description	Vendor's Description of the part.
Order Multiple	The number of units the vendor will package together.
Buy U/M	Select the Buy Unit of Measure from the drop-down list.
Buy U/M Factor	Enter the conversion factor that will convert the Buy Unit of Measure to the Stocking Unit of Measure.
Vendor Cost	Last Vendor Cost per Buy Unit of Measure.
Price Per	Enter the factor that the unit price * total quantity will be divided by.
Unit Freight	Enter estimated freight cost per vendor unit.
Last Cost Source	Last Date * Document Number * Transaction Type that updated cost.
Mfg Name and Part #	Enter Manufacturer Name and Part Number in the pop-up window. Click the <b>OK</b> button to save the changes.
Plant Code	The Plant Code associated with the part. If nothing is entered then the part is available to all Plants.

Column	Description
Composite Rating	<p>The Composite Rating is made up of the Supplier's Quality, Cost and Delivery (QCD) ratings, as modified by the Weighting Factors. These factors may be defined in the VENDOR file (updated via VEN.PC or NCC_BWBSupplier), and default values are entered using TABLE.VP. The three Weighting Factors are:</p> <p style="padding-left: 40px;">QW = Quality Performance Weight            CW = Price (Cost) Performance Weight            DW = Service (Delivery) Performance Weight</p> <p>The total of these percentages must equal 100%. Each performance rating is multiplied by its weight, then the three ratings are added together to get the Composite Rating:</p> <p style="padding-left: 40px;">QR = Quality Rating            CR = Cost Rating            DR = Delivery Rating            Composite Rating = (QR * QW) + (CR * CW) + (DR * DW)</p>
Mfg ID	The Manufacturer's Identifier.
Mfg Part Number	The Manufacturer's Part Number.
Mfg Name	The Name of the Manufacturer.
Notes	Enter notes in the pop-up window. Click the <b>OK</b> button to save notes.
Primary	Check the box if this is the primary manufacturer desired for the part.

## Marketing Display

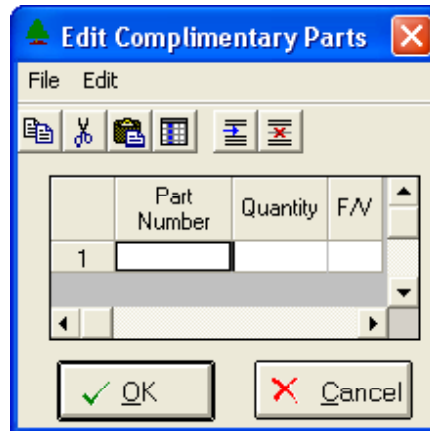
This tab includes parameters associated with Marketing and Sales Order Processing.



In addition to the fields in the *General Display Fields Description* Table, the following fields may also be updated on this view:

Column	Description
Customer Number	Enter the Customer's Number who purchases this item.
Customer Part #	Enter the Customer's Part Number.
Pack Qty	Enter the number of units of this part that will be shipped together when calculating delivery quantities for this customer.
JIT	Check if Customer wants delivery Just In Time.
SUN – SAT	Check the normal ship day for this item.

The Complimentary and Substitute Parts and Part Lists command buttons will activate Popup Spreads for each related list.



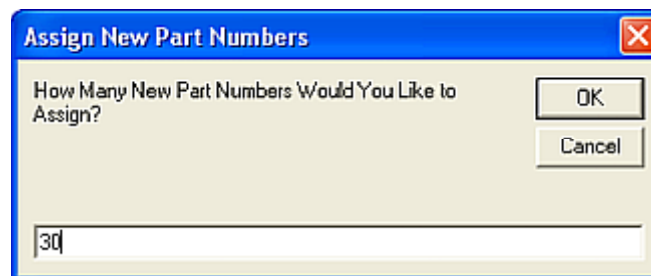
### Entering Part Numbers

To update a single record, simply type the identifier in an empty cell in the Part Number column of the spreadsheet on the General tab. The system will read and display the current information from Manfact for editing. If the Part Number entered is not found, you will be prompted to create a new record. As an alternative, you may enter a new or existing identifier in the Part Number box on the Engineering tab.

### Automatic Part Number Assignment

To assign a part number to a new part or parts select **Assign a Part Number** from the *Parts Master Tools* Menu.

*Note: Perform this step **before** entering part data for the items you wish to assign. If any data already exists in the spreadsheet the system will append rows and begin assigning numbers at the **end** of the current list.*

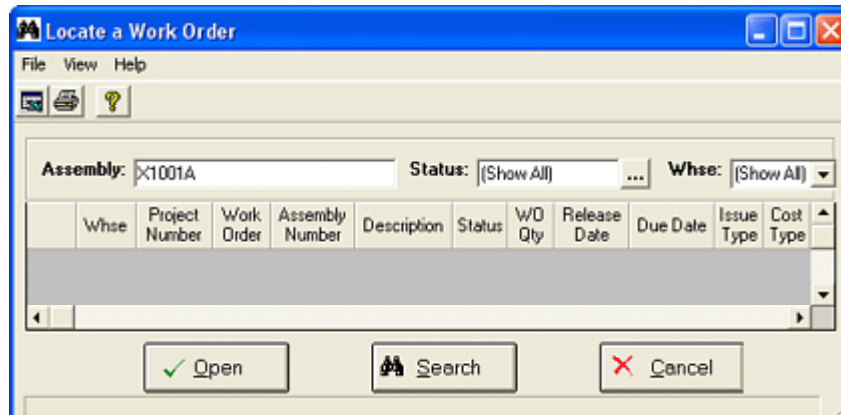


Enter the amount of Part ID Numbers you wish to assign and click the **OK** button. The system will add the desired number of rows and sequentially fill the Part ID Column, starting with the lowest currently unassigned number. Enter your new part data and save.

## Tools

### Locate a Work Order Number

The Work Order Search feature is available during the *Open* and *Save* dialogs:

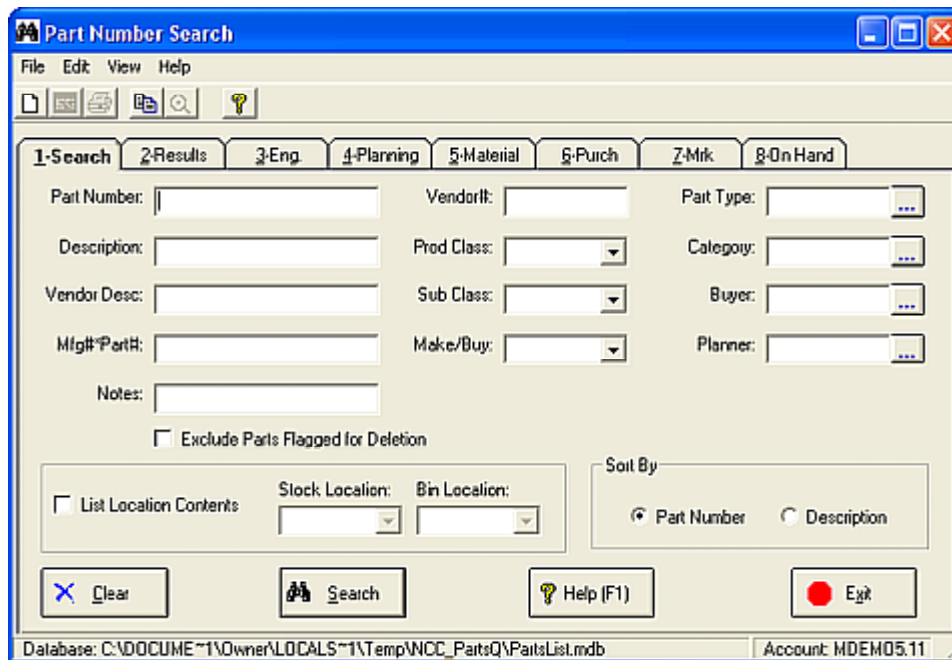


- If you are unsure of the part number, you may use wildcarding to search for a listing of Work Orders for parts that contain a portion of the Part Number.
- You may narrow your search by selecting the appropriate status. Click on the icon to the right of the *Status* field.
- You may also narrow your search to a specific warehouse by selecting one from the drop-down list.
- You may select a work order by double-clicking on the desired row, or by positioning the highlight-bar and clicking the **Open** button on the bottom of the screen.

## Part Number Search

The Part Number Search query helps you locate a Manfact Part Number using a variety of search criteria and provides you with an Inquiry Only process for users who do not have Parts Master Update authorization.

The main screen is composed of eight tabs. The Search and Results tabs are the two tabs that will be utilized in locating a part number. The remaining tabs display information that is contained in the Manfact PARTS and Inventory files, organized by departments: Engineering, Planning, Material, Purchasing, Marketing and On Hand.



### Locating a Part Number

Selecting **Part Number Search** from the **Tools** menu will display the search tab. If you know the part number that you want to inquire on, enter the part number and click on the **Enter** key. The engineering tab will be displayed. If you don't know the specific part number, but know some basic information about the item, several fields are available to use in narrowing your search.

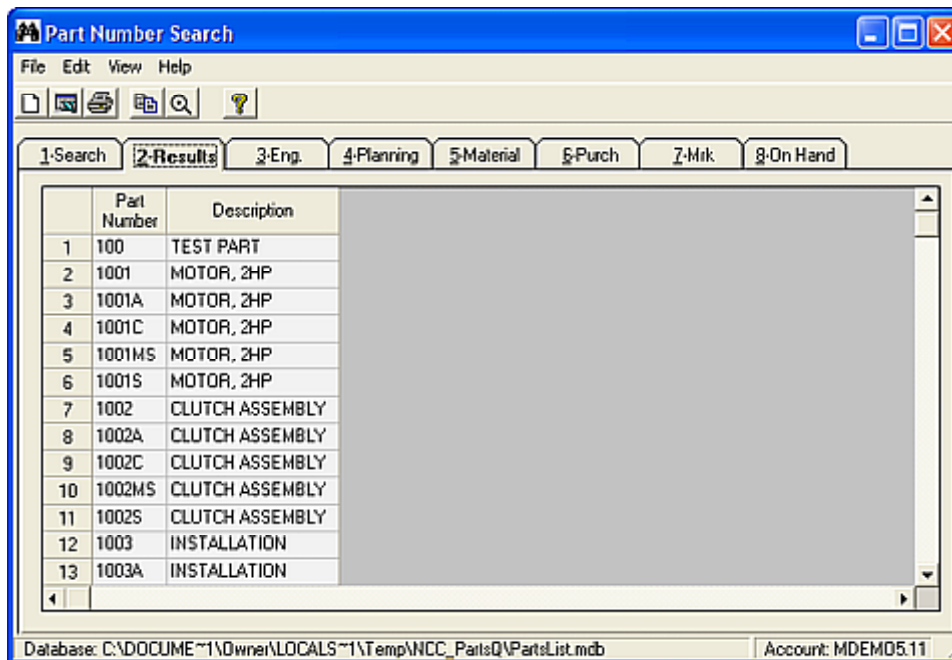
The fields you may use in your search include: Part Number, Description, Vendor Description, Mfg#\*Part#, Notes, Vendor #, Product Class, Sub-Class, Part Type, Category, Buyer, Planner, and Make/Buy Code. You may use as many of the search fields as necessary to narrow your search to the fewest number of records. If you don't know the specific details of a particular field, you might use *wildcarding* to enter only a portion of the item's part number, description, etc.

To further assist you in locating the desired part number, you may Sort the search results by either the Manfact Part Number or the Engineering Description. Select the **Search** button and the *Results* tab will be displayed.



### Search Results

One part number and its associated description are displayed on each row of the list. You can change the way the information is sorted by returning to the *Search* window and using the **Sort By** option.




Please refer to the Part Number Search Query User Guide for more information.

*Note: The NCC Part Number Search Query is sold separately. If this option is not currently available, please contact your System Administrator or NorthClark Computing, Inc. to obtain a copy of NCC\_PARTSQ.*

## Find a Bill of Material Item

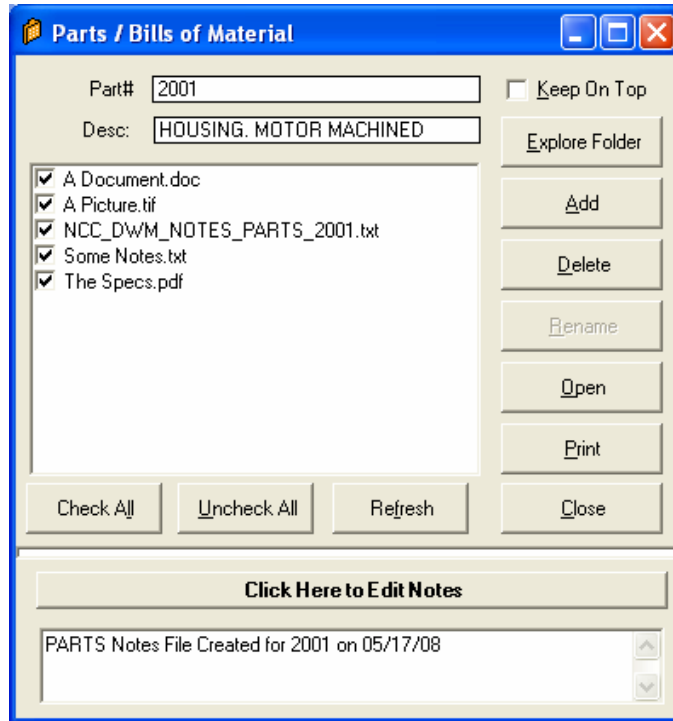
The Find a Bill of Material Item procedure allows you to quickly locate items that have been included on your open Bill of Material. Use the screen below to enter the criteria for the item you wish to find.



- ❑ Select the Search Field from the drop-down list
- ❑ Enter the Text you wish to match and select whether you wish to Match the Case (case sensitive) or Match the Whole Field Only (searching for an exact match).
- ❑ Click the **OK** button to begin the search.
- ❑ Once located you may proceed to perform the necessary review or update to the data.

## Data Warehouse Management

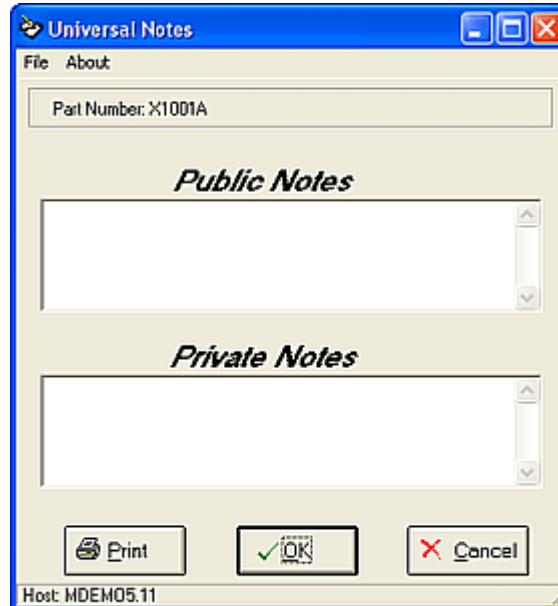
The NorthClark Data Warehouse Management module allows you to store drawings, specifications, and related documents in a centralized folder that can be easily access from various applications. Select **Display Drawing** from the **Tools** Menu to enter the Part Number for the drawing you wish to view.



Please refer to the *Data Warehouse Management User Guide* for more information.

### Part Notes Entry (from Right Click Menu)

From the Right Click Menu you may enter notes associated with the current part number. Enter the Notes, either Public or Private and click **OK** to save the notes.

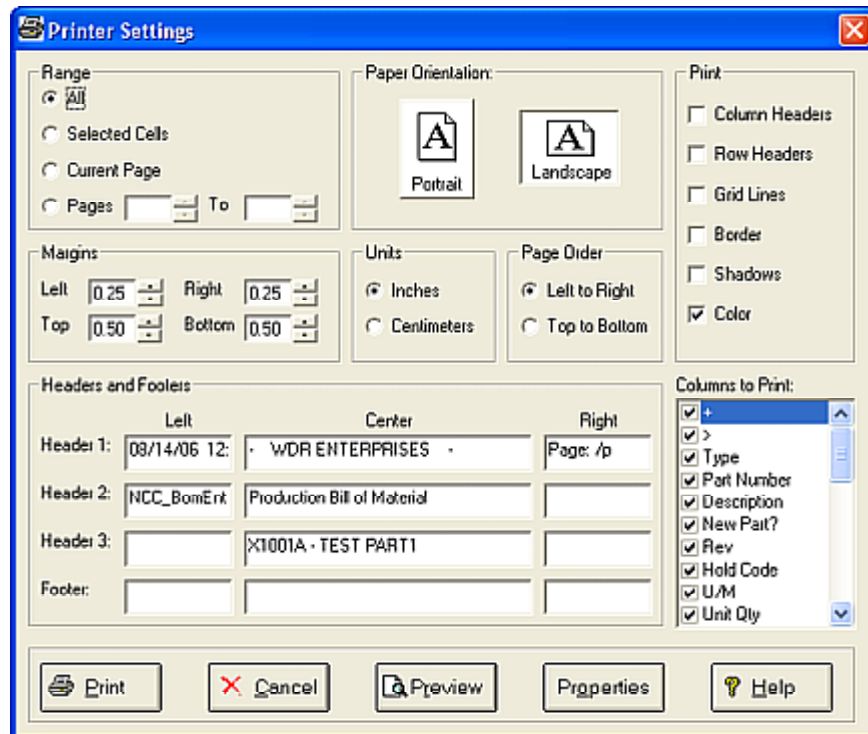


□

## General Information

### Printing a Spreadsheet

To print the current active spreadsheet, select the **Print** option from the **File** menu.



#### **Range**

You may choose to print **All** (the entire spreadsheet), **Selected Cells** (those that you have highlighted on the current screen), **Current Page** (only the rows that are currently visible on your screen), or **Pages** (any range of page numbers).

#### **Orientation**

You may print your report in portrait mode (normal) or landscape mode (sideways). Printing in landscape mode will allow you to fit more columns of information on your report.

#### **Margins**

You can make your report more attractive by setting the top, bottom, left, and right margins. Reduce the left and right margins to fit more columns on the report.

#### **Units**

Select inches or centimeters to designate the unit of measure for the entered margins.

### Page Order

If your report is too wide to fit on a single page, it may span multiple pages. When this occurs, select your preference to have the report printed from top to bottom or left to right.

### Print

You can customize the appearance of your report by printing (or not printing) column headers, row headers, grid lines, borders, shadow, and color.

### Headers and Footers

Your report may have up to three lines for the heading, and one line for the footer. The system initially displays a default heading, which you may modify if desired.

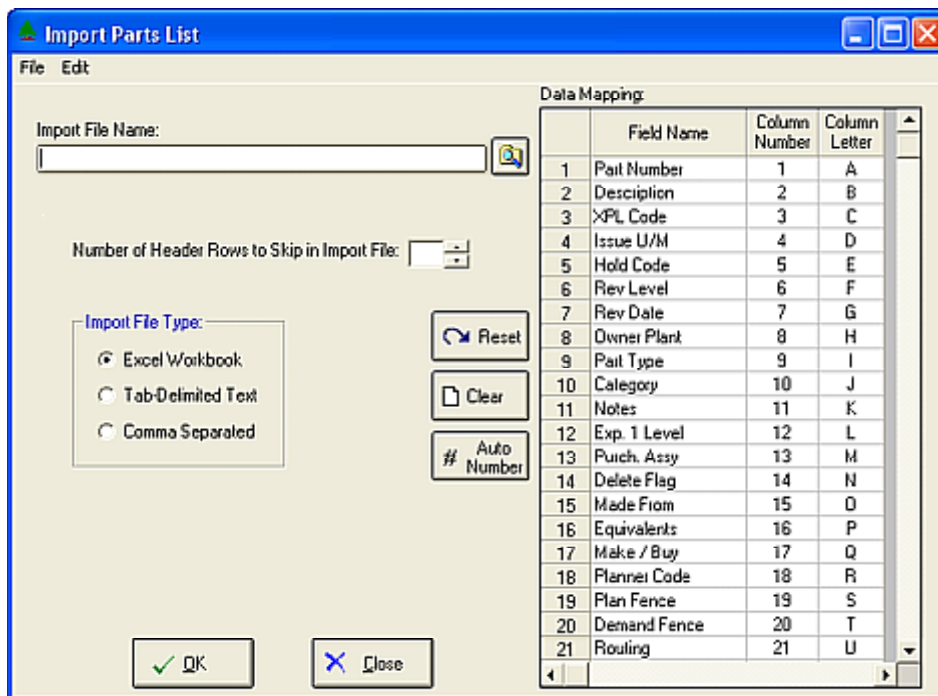
*Tip: Use /p to designate a page number.*

### Columns to Print

The columns that are available for printing are listed. Select the columns you wish to include on your report.

## Importing Data

To import a Bill of Material from Excel, see *Importing a Bill of Material*. Data other than a Bill of Material may be imported from a Microsoft Excel spreadsheet, a tab-delimited text file, or a comma-separated text file. Open the desired spreadsheet which is to receive the imported data via the File Search button.



***Import File Name***

Enter the path for the file that you wish to import. You may browse the files by clicking on the button next to the text box.

***Header Rows***

Enter the number of rows at the beginning of the file that are not to be imported.

***Import File Type***

Select the type of file that you are importing.

***Data Mapping***

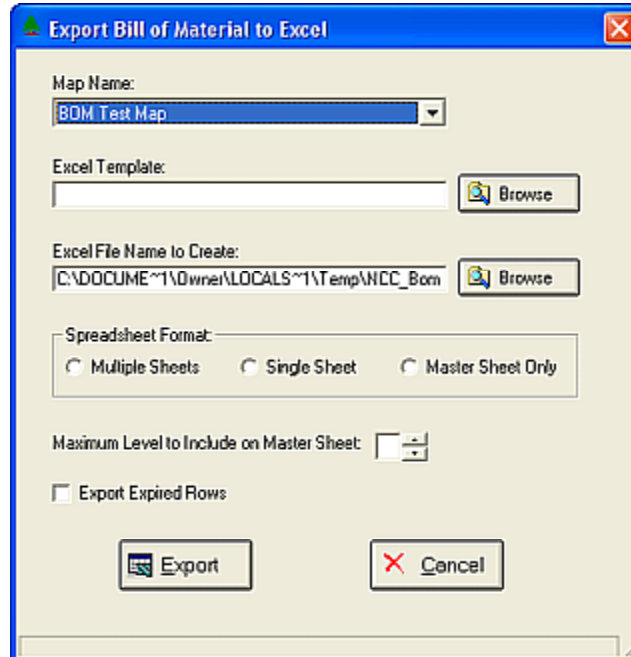
Enter the Column Number or Letter where data resides on the Excel file. Use the **Reset** button to restore the fields to their original state. Use the **Clear** button to clear all fields. Use the **Auto Number** button to automatically number the values sequentially.

***Import Data***

Click the **OK** button to begin the import procedure.

## Exporting a Bill of Material Spreadsheet

From the spreadsheet you wish to export select **Export** from the **File** menu in the Bill of Material Maintenance module.



### ***Map Name***

Select the name of the import/export map you wish to use from the drop-down list.

### ***Excel Template***

As an option an *Excel* template may be selected to add headings, borders and other graphics to your report.

### ***Excel File Name to Create***

Enter the Excel Sheet Name to create. This will automatically default to Sheet1.

### ***Spreadsheet Format***

Your Excel workbook may contain multiple sheets. The first (Master) sheet is usually a single-level bill for the top assembly. If you have a multi-level bill, a separate sheet will be generated for each sub-assembly contained herein. Select the sheet(s) you wish to produce using the radio buttons on this screen.

### ***Maximum Level to Include on Master Sheet***

Enter the number of levels to explode for the Master sheet. Enter '1' for a single-level bill.

### ***Export Expired Rows***



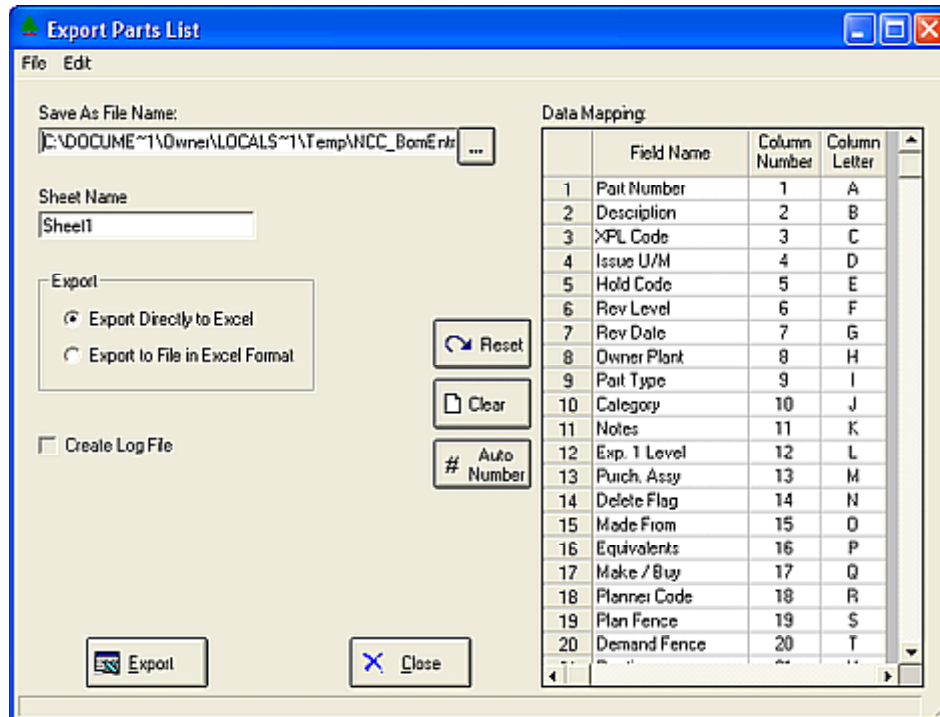
Check the **Export Expired Rows** button to export expired rows. Leave it blank to not export expired rows.

***Export Button***

After all required information has been entered, click the **Export** button to export your data to *Microsoft Excel*.

## Exporting All Other Spreadsheets

You may export the contents of displays, such as Parts Master Maintenance, directly to *Excel*, or you may choose to create a file in *Excel* format. The format of the *Excel* file will match the layout of the spreadsheet on your screen.



### ***Save As File Name***

Enter the pathname of the file you wish to create.

### ***Save As Sheet Name***

Enter the *Excel* Sheet Name to create. This field will automatically default to Sheet1.

### ***Export Directly to Excel***

This is the easiest way to export data. If *Excel* is not already running on your computer, the system will attempt to start it. The information from the display is then loaded directly into corresponding cells in the *Excel* spreadsheet. This option may be used with either *Microsoft Excel 95* or *Excel 97*.

### ***Export to File in Excel Format***

This option allows you to create a file in *Microsoft Excel 97* format (BIFF8). This option may be preferable when exporting large amounts of data.

### ***Create a Log File***

Select this option to create a log file. The log file contains error messages and other information about how your *Excel* file was created. The name of the log file will be "CreateExcelFile.log", and it will be

stored in the same folder as the spreadsheet.

***Data Mapping***

Data Mapping allows you to change the sequence in which the data will be stored. Use the **Reset** button to restore the fields to their original state. Use the **Clear** button to clear all fields. Use the **Auto Number** button to automatically number the values sequentially.

***Export Button***

After all required information has been entered click the **Export** button to export your data to *Microsoft Excel*.

## **Editing Features**

### ***Copy, Cut, Paste and Fill***

You may use the standard *Windows* Copy, Cut, and Paste features to copy or cut data to the *Windows* clipboard, or to paste data from the clipboard into a cell.

To copy data, hold down the left mouse button and highlight one or more cells. Choose one of the following methods to copy the highlighted cells to the clipboard:

1. From the **Edit** menu choose **Copy**.
2. Click the **Right Mouse** button, and choose **Copy** from the drop-down list.
3. Click the copy icon (two overlapping sheets of paper) on the toolbar.
4. Hold down the **Ctrl** key and type the letter **C** (**Ctrl-C**).

The above methods can be used to Cut (**Ctrl-X/Scissors** icon) and Paste (**Ctrl-V/Clipboard with paper** icon).

To copy and/or cut the contents of an entire row, click once on the row header (the number displayed on the left side of the first cell), then choose **Copy** and/or **Cut**. Click on the row header that you want to copy the data to and choose **Paste**.

To update several cells with the same value, highlight all of the cells you wish to update then select **Fill** from the **Edit** Menu or from the right click menu. This command will update each cell with the current information from the clipboard.

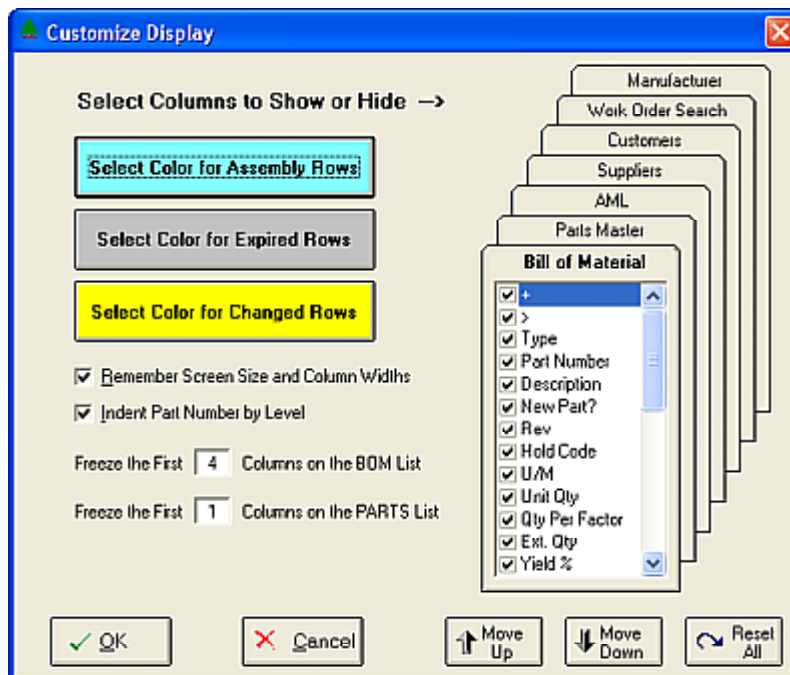
### ***Zoom***

This feature allows you to view, print and/or edit the expanded contents of a field. It is especially useful for multi-line information such as notes and long descriptions.

- Zoom in on any selected item by selecting **Zoom** from the **Edit** Menu, clicking the magnifying glass on the toolbar, or selecting **Zoom** from the right click menu.
- The Column Name will appear in the Title Bar with **Edit** (an editable field) or **View** (a view only field). Make any entries or changes desired and click the **OK** button when finished, or the **Cancel** button to revert to the original data.
- Locked fields may be viewed but not modified using the *Zoom Feature*. If the field is locked, **View** will appear in the Title Bar, and there will only be a single command button labeled **Done**.
- To print the selected item, click on the printer icon and the information will be sent to your local printer.

## Customizing Your Display / Arranging Columns

Select **Display Options** from the **View Menu** to customize the display.



- ❑ Each tab contains a list of fields that corresponds to a screen used in this application. Click the checkboxes to show (a checkmark in the box) or hide (a blank value in the box) each field
- ❑ Use the **Move Up** and **Move Down** Buttons to re-arrange the order in which the fields appear on the specific screen Display. Click **Reset All** to return to the system's default settings.
- ❑ To select the color for highlighting rows that have been modified, during data entry, but not saved, click the **Select Color for Changed Rows** button.
- ❑ You may opt for the system to **Remember Screen Size and Column** Widths. Any changes you make to the screen's appearance will be saved and applied the next time you launch this application.
- ❑ On the BOM Screen you may choose the option to Indent Part Number by Level.
- ❑ Choose the number of columns (from left to right) you wish to *freeze* on the spreadsheet. A frozen column will remain in place as you scroll to the right.
- ❑ Click the **OK** button to apply any changes you have made or the **Cancel** button to revert to the previous settings.

Note: These settings are stored in the Windows Registry for each user.

## Wildcarding

Wildcarding is a powerful feature that allows you to search using a portion of the field. You tell the system you want to use a wildcard by typing three periods “...” or an asterisk “\*” at the beginning or end of your search entry. See the table below for examples of wildcard commands and their expected results.

<b>Item</b>	<b>Sample</b>	<b>Description</b>
Part Number	XTR... or XTR*	Returns part numbers that begin with “XTR”
Description	...VALVE... or *VALVE*	Returns parts with the word “VALVE” anywhere in the description.
Category	...A or *A	Returns parts with a category ending with the letter “A”.



ERP Consulting, Web Development,  
Custom Programming Solutions,  
Web & Desktop Applications for Manufact

PO BOX 2096  
Oregon City, OR 97045

Phone: 503.632.5671  
Fax: 503.632.5688  
Email: [info@northclark.com](mailto:info@northclark.com)

[www.northclark.com](http://www.northclark.com)