

Text Summary And Introduction

This text will be covering many subjects related to Job Scheduling module within the Expandable ERP system (Expandable). The overall assumption in this class is that the user will want to have multiple operations on a Job, and have those operations integrated with the Bill of Material and Kit List. This process is completely optional, however it can be a great way to collect and manage data.

Below is an example of Multiple Operations that an Assembly may move through during production:

Operation	Work Center	Description
10	KITG	Kitting
20	ASSY	Assembly
25	QC	Quality Control
30	PKG	Packaging

With the example above, when the Kitting Department has finished pulling the components from Stock, they will update the inventory balances on the system. This will show the job as kitted and put the job quantity as the balance due in the first operation. When they move the Kit from the stockroom to manufacturing, they do a transaction on the system to show this movement. The system will now move the balance due to the 2nd operation, Assembly. As Assembly moves completed units to QC, another transaction is done on the system. When QC is complete the items are then moved to the packaging area and the job is then closed. At any time, a user can look on the system to see where the Job is in the process.

Throughout this class multiple operations will be discussed; how to set them up in the data dictionary, how to set multiple operations on Jobs, and how to tie them to the Bill of Material.

Section One

Setting Up to use Jobs

Chapter One

System Set-Up, Part & Stores Set-Up
How to tie multiple operations to the bill of material

Section Two

Job Scheduling

Chapter Two
Chapter Three
Chapter Four

Job Entry, Release, Copy, Availability & Report Print
Kit Issue, Edit & Reporting and Job Maintenance
Job Completion & Related Programs

Section Three

Job Costing & Month End

Chapter Five

Cost Analysis & Distribution, Job Budgeting, Month End Processing

Notes:

Chapter 1 - System Set-Up:

Setting up Work Order Operations

Table Values Editor

Shop Dates Generation Utility

Shop Dates List

Manufacturing Settings Editor

Systems Setting Editor

Parts Master Editor

Purchasing and Sales Tabs - Unit of Measure Conversion

Standard Cost Tab – Setting Standards

Parts Master List Using QBE

Stores Master Editor – Set GL Defaults

Bill of Material Editor

Setting up Work Order Operations

An available feature of Expandable is the ability to set up multiple operation codes that represent the different areas or steps of manufacturing. Each area is assigned an operation code, in the sequence in which it occurs. This information is planned and maintained outside of the system. The field Operation Code is four character numeric only. This is a process usually done while implementing Expandable.

The Bill of Materials for the products that are manufactured can be structured to reflect where in the process each component is used. This is then tied into the work orders opened for each assembly; the work order schedule entered will reflect the operations required for the assembly. In order to have consistent work order operation schedules, up to 9 standard schedules can be predefined using the Table Values Editor.

First the field SCHEDULE_CODE needs to be defined. The Values are from 1 to 9, with the Description field defaulting to the standard "Schedule Type N". This description can be changed, usually to reflect the Part ID or Product Line/Type being manufactured.

The screens shown on these pages are the Table Values Editor. The Table Values Editor is used to maintain the User Defined tables in Expandable. The System Administrator is usually the person who maintains the tables, but the User should ensure that the tables get updated as required.

Note: There are many fields in the tables that affect more than one department. For example, both Purchasing and Sales Order use the Ship Method field. Always check with all departments before changing a table.

“Standard Routings” Using the Tables Value Editor

This procedure allows the use of a “standard routing” (template) during Job Entry (**Manufacturing - Job Schedule/Costing – Job Editor**) without the Shop Routing module (SR) installed, eliminating the need to manually type in all the operations an assembly requires. Cycle times for each operation will need to be entered at Job Entry for proper scheduling.

STEPS:

1. Establish Schedule Codes (a code which identifies a particular sequence of manufacturing steps). These Schedule Codes are already setup on your system all you need to do is define their descriptions.

- Click **System**
- Click **Utilities**
- Click **Table Values Editor**
- Enter **Schedule Code** at the **Data Element Name**

- Entry Type = **T (Table)**
- Value Enter **1–9**
- **Description** = establish names for the up to nine Schedule Codes. For example, Schedule Code 1 could be Jack assembly while Schedule Code 4 could be Sprocket Assembly, both having very different operations used during their respective assemblies.

The system allows one Manual code and up to 9 defined Schedule Codes. See the Dictionary Browser below.

Data Element	Entry Type	Value	Description	Last Update
SCHEDULE_CODE	T	1	SCHEDULE TYPE 1	10/13/1997
SCHEDULE_CODE	T	2	SCHEDULE TYPE 2	10/13/1997
SCHEDULE_CODE	T	3	SCHEDULE TYPE 3	10/13/1997
SCHEDULE_CODE	T	4	Sprocket Assembly	12/12/2001
SCHEDULE_CODE	T	5	SCHEDULE TYPE 5	10/13/1997
SCHEDULE_CODE	T	6	SCHEDULE TYPE 6	10/13/1997
SCHEDULE_CODE	T	7	SCHEDULE TYPE 7	10/13/1997
SCHEDULE_CODE	T	8	SCHEDULE TYPE 8	10/13/1997
SCHEDULE_CODE	T	9	SCHEDULE TYPE 9	10/13/1997

“Standard Routings” Using the Table Values Editor continued

2. Next the user needs to set up the Schedule Type within each Schedule Code. Each Schedule Code may have many Schedule Types. (Schedule Types can be thought of as the Task or Operation required to complete a procedure).

a) Click Systems – Utilities – Table Values Editor.

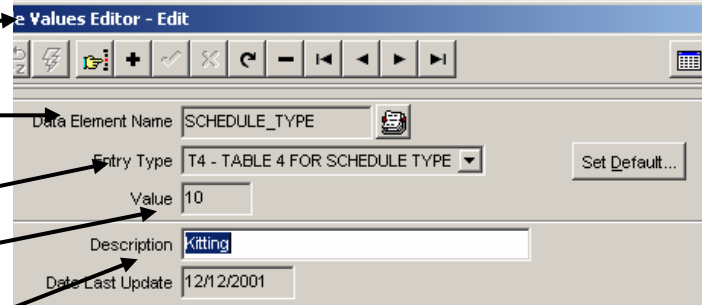
b) Enter Schedule_Type

c) Enter Entry Type (This is the Schedule Code being generated). Schedule Code 4 will be T4 etc.

d) Enter the Value (this is the operation number)

e) Enter the Description. This is the description of the operation.

f) Save the record by clicking the 3 on the Button Bar.



To add multiple operations Click Actions on the Menu Bar and Click Copy Record.

Click the **New Record** Button

Click **Actions** on the **Menu Bar** and then click **Paste Record**

Change the **Value** and the **Description**

Click the **Save** Button.

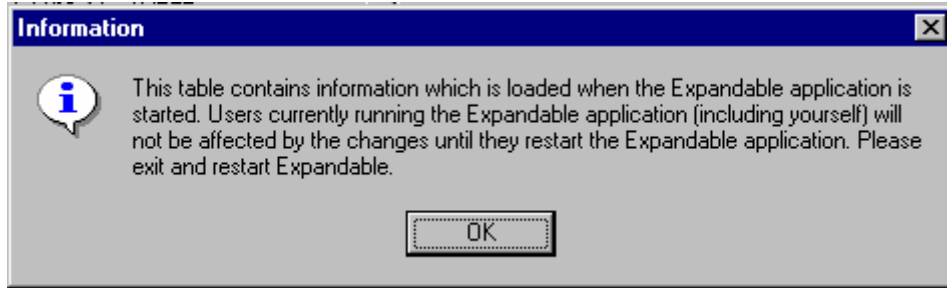
Add as many operations (Schedule Types) as needed

Below is a sample of the Browse screen after all the operations (Schedule Types) have been entered.

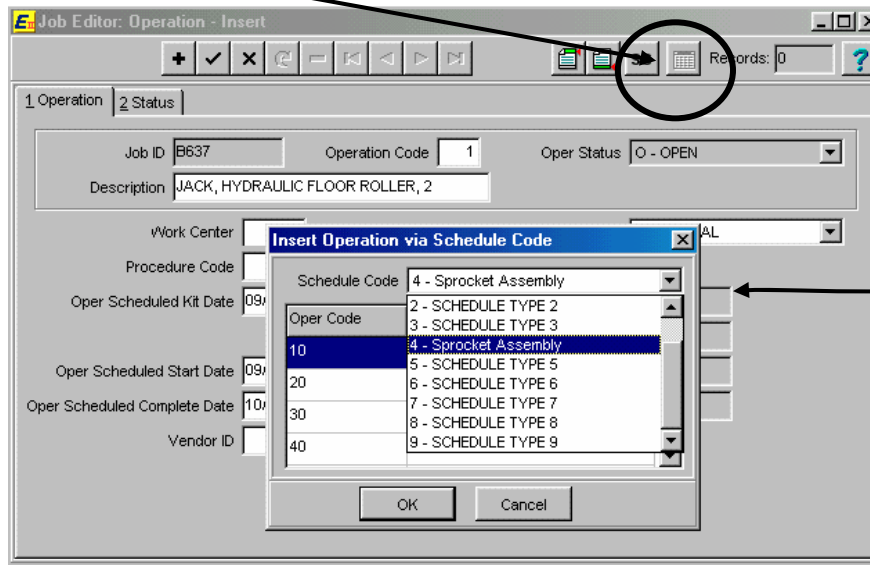
Data Element	Entry Type	Value	Description	Last Update
SCHEDULE_TYPE	T1	20	TEST	8/7/1985
SCHEDULE_TYPE	T1	30	INSPECTION	8/7/1985
SCHEDULE_TYPE	T2	10	KITTING	8/7/1985
SCHEDULE_TYPE	T2	20	VENDOR OPERATION	8/7/1985
SCHEDULE_TYPE	T2	30	INSPECTION	8/7/1985
SCHEDULE_TYPE	T4	10	Kitting	12/12/2001
SCHEDULE_TYPE	T4	20	First Assembly	12/12/2001
SCHEDULE_TYPE	T4	30	Second Assembly	12/12/2001
SCHEDULE_TYPE	T4	40	Test	12/12/2001
SCHEDULE_TYPE	T4	50	Packaging	12/12/2001
SCHEDULE_TYPE	T5	10	Kit	2/25/2002
SCHEDULE_TYPE	T5	15	Fitst QC	2/25/2002

“Standard Routings” Using the Table Values Editor continued

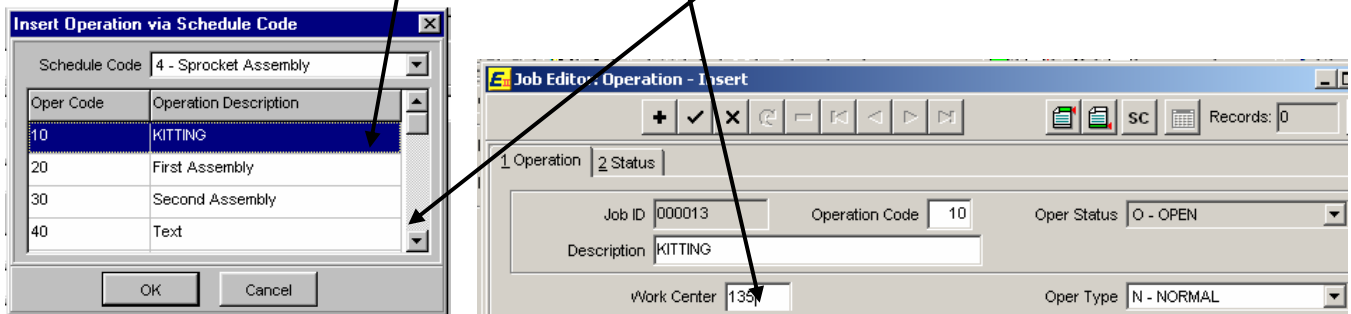
- When the addition/change is saved the system will display the message below. Follow the instructions on the message. When exiting Expandable and reentering Expandable the changes will be activated.



- During Job Entry, **Manufacturing – Job Scheduling/Costing – Job Editor – Operations Window**, click the Schedule Code Button and select the drop down menu at Schedule Code to display the table. (In the example below Schedule Type 4 was selected.)

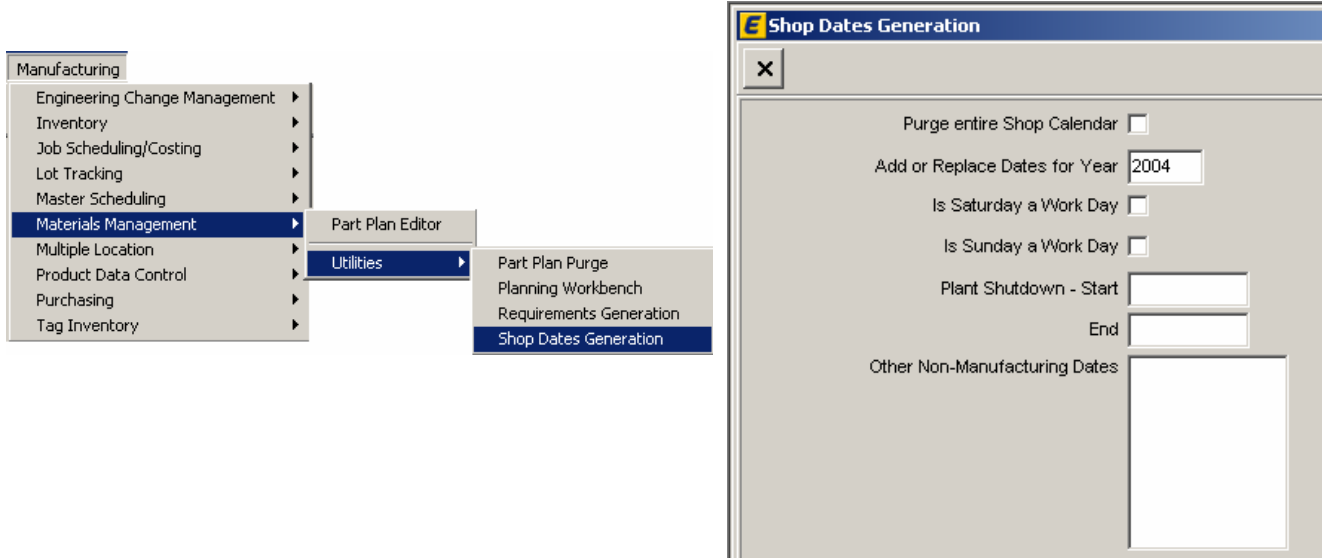


Click the desired Schedule Type and the Operation Codes. Operation Descriptions available for the Schedule Type will display. A work center must be entered.



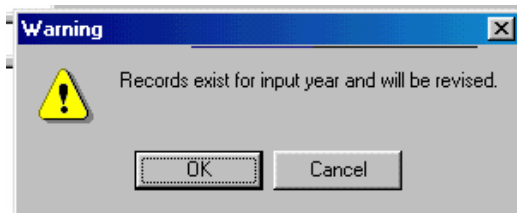
Shop Dates Generation Utility

The calendar of working days is set up using the Shop Dates Generation Utility. The system uses the shop calendar to give warnings, schedule MRP using lead times and schedule jobs based on lead times. This utility assigns a 0 (zero) to each day that is designated as a non-working day when the screen below is filled in. All other days are assigned a number, with the first working day of the first year being 1, the second working day of the first year is 2, etc. As many years as possible should be set up in advance. If the expected holidays are not known, the year can be set up again after they are known.



Purge existing Shop Calendar Leaving the box blank will continue to the next question, without changing the shop calendar. Putting a Check in the box will also continue to the next question, but it will delete all existing records before creating the year specified. All years on the calendar that are still needed would need to be recreated.

Year Enter the 4 digit year to be created. If the year entered already has a shop calendar, the system will display this warning message.



Clicking on **Cancel** will re-prompt the question. Clicking on **OK** will continue to the next prompt, and the year will be recreated. All future years that exist on the Shop Calendar will also be updated to reflect the changed shop dates.

Is Saturday a Work Day Leaving the box blank will assign a shop day of 0 to all Saturdays in the year.

Is Sunday a Work Day Leaving the box blank will assign a shop day of 0 to all Sundays in the year.

Plant Shutdown - Start & End The first & last dates of a planned shutdown. Remember: the dates have to be in the year being set up.

Other Non-Manufacturing Dates Enter all other non-manufacturing dates.

Click **Run** and the system will process the calendar.

Shop Dates Generation Utility continued

The Shop Calendar is currently only set up through 2004. Extend that through 2005 by using the Shop Dates Generation Utility.

Go to the **Manufacturing - Materials Management – Utilities - Shop Dates Generation**.

Use the screen below for data entry to add the year 2005.

Shop Dates Generation

Purge entire Shop Calendar

Add or Replace Dates for Year

Is Saturday a Work Day

Is Sunday a Work Day

Plant Shutdown - Start

End

Other Non-Manufacturing Dates

- 1-03-05
- 02-21-05
- 05-30-05
- 07-04-05
- 09-05-05
- 11-24-05
- 11-25-05

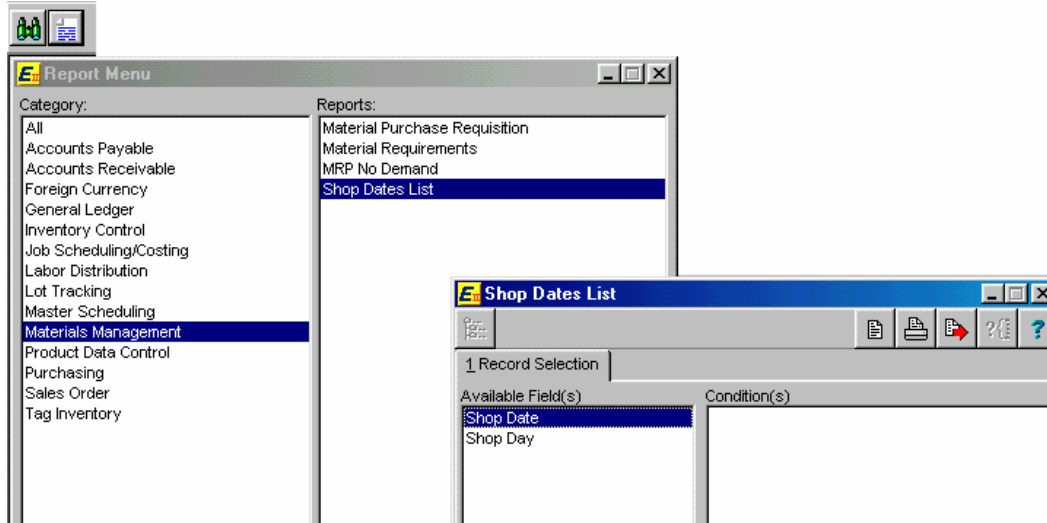
Run

Status:

When the last date is entered, click **Run** to begin processing.

Shop Dates List

If the shop calendar needs to be reviewed, the report Shop Dates List can be run. The selected screen is below. Use **Reports - Materials Management - Shop Dates List**.



A sample report is below. Notice in this example the 3 day weekend for the fourth of July holiday.

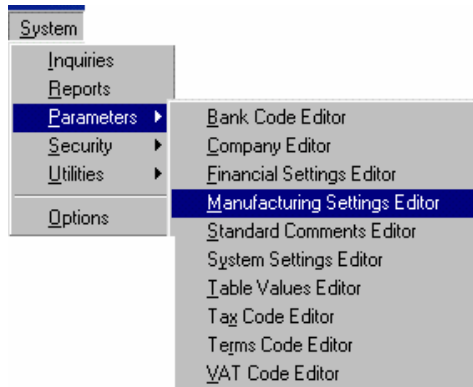
Job Scheduling/Costing Class		Shop Dates List	Page 21 of 25 10/21/2004 4:17 PM
Shop Day	Shop Date	Day	
0	6/19/2005	Sunday	
615	6/20/2005	Monday	
616	6/21/2005	Tuesday	
617	6/22/2005	Wednesday	
618	6/23/2005	Thursday	
619	6/24/2005	Friday	
0	6/25/2005	Saturday	
0	6/26/2005	Sunday	
620	6/27/2005	Monday	
621	6/28/2005	Tuesday	
622	6/29/2005	Wednesday	
623	6/30/2005	Thursday	
624	7/1/2005	Friday	
0	7/2/2005	Saturday	
0	7/3/2005	Sunday	
0	7/4/2005	Monday	
625	7/5/2005	Tuesday	
626	7/6/2005	Wednesday	
627	7/7/2005	Thursday	
628	7/8/2005	Friday	

Manufacturing Settings Editor

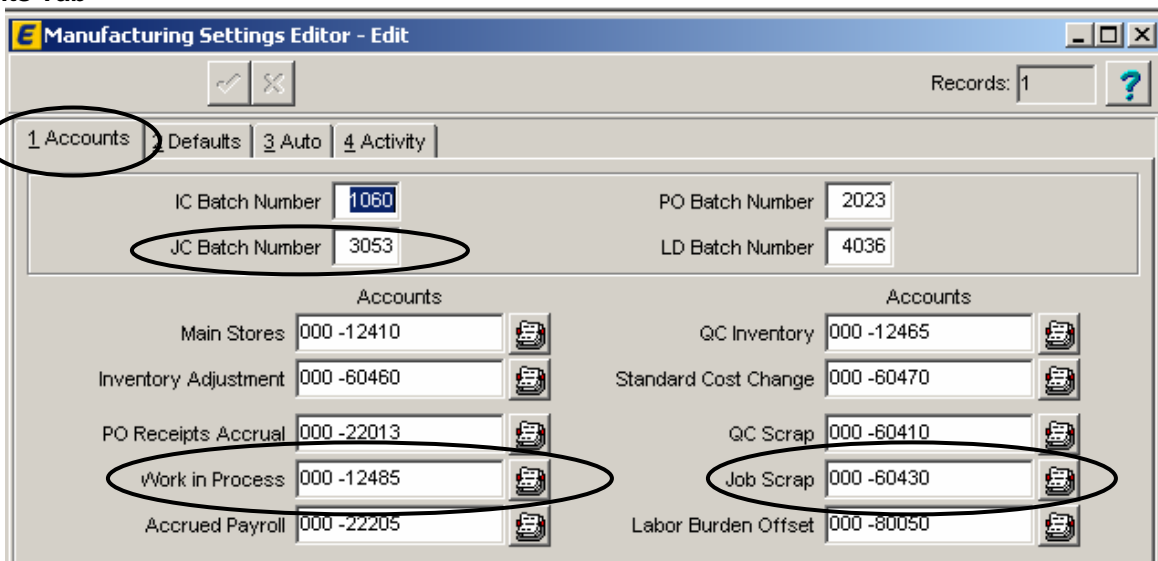
The Manufacturing Setting Editor is used to store system defaults and preferences related to the manufacturing side of the database.

For the default Departments and Accounts, this is the last place the system will look while processing a transaction. For most transactions, the Departments and Accounts come from other sources, specifically the Stores Master Table.

Below is the first (Accounts) tab of the Manufacturing Settings Editor. The fields related to Bill of Materials or Jobs are detailed below. Use **System – Parameters - Manufacturing Settings Editor**.



Accounts Tab



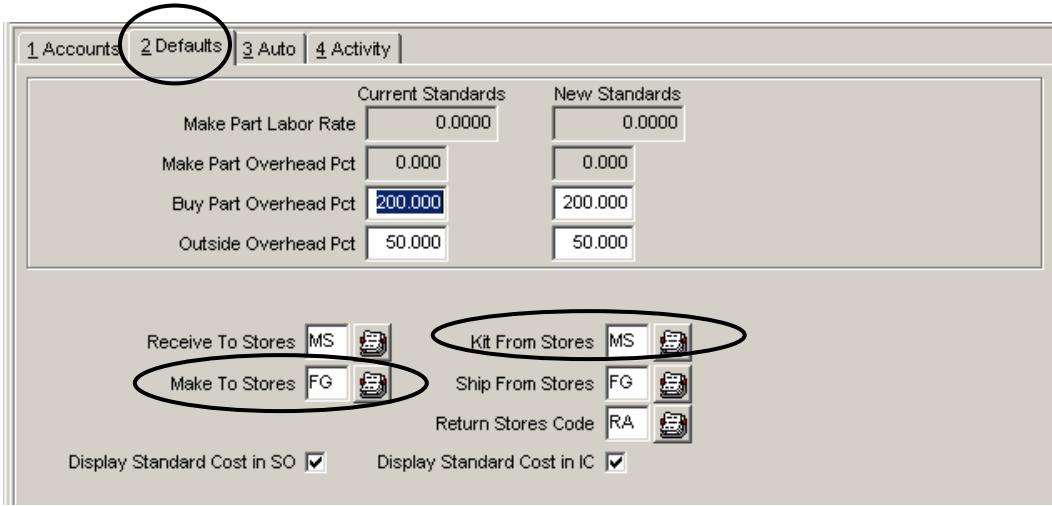
JC Batch Number The Batch Number assigned to a batch of transactions created by the Job Cost System.

Work In Process is the default account charged for all transactions related to orders or jobs processed through the manufacturing operations. An asset account.

Job Scrap is the default account charged for parts scrapped from WIP.

Manufacturing Settings Editor continued

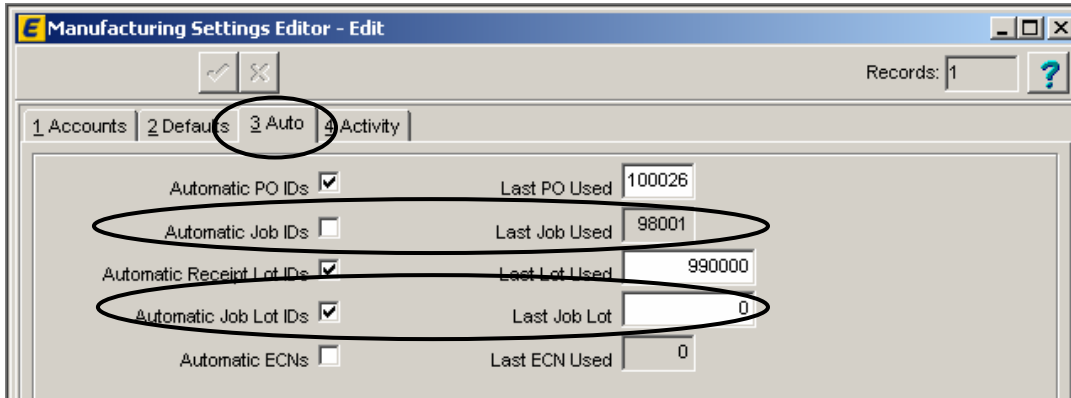
Defaults Tab



Kit From Stores The preferred Stores Code to kit material from. This stores code will be the default filled in during Job Entry.

Make To Stores The preferred Stores Code to make an assembly to. This Stores Code will be the default filled in during Job Entry.

Auto Tab



Automatic Job ID's An unchecked box will allow the user during Job Entry to manually assign a Job ID. With a checked box, the system will fill in the Job ID based on the field Last Job ID.

Last Job Used This field holds the last Job ID issued automatically by the system. When first setting up the system, it is filled in with the first number that should be assigned. When using Automatic Job ID, this field is six-character numeric only.

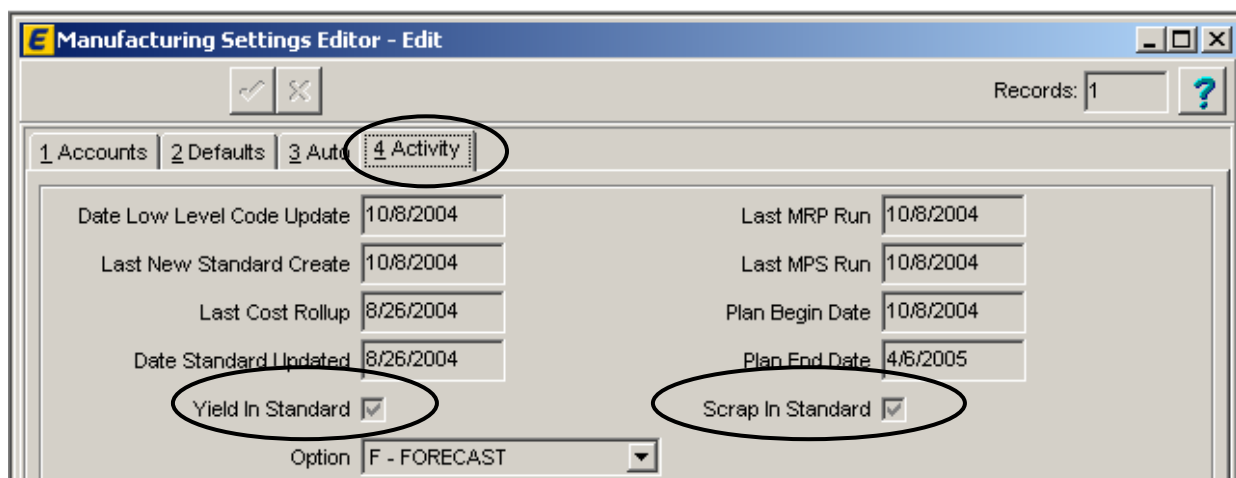
Automatic Job Lot IDs is only prompted if the optional module Lot Tracking is installed. A checked box will assign the Lot ID to all lots completed using WIP Completions.

Last Job Lot will only be prompted if the optional module Lot Tracking is installed, and the box was checked answered to Automatic Receipt Lot ID's or Automatic Job Lot ID's. A twelve character numeric value is entered.

Manufacturing Settings Editor continued

Activity Tab

Below is the third (Activities) tab that stores the dates the last time some of the major programs were run. For example, this screen shows the last time the Standard Cost was rolled up and the last time MRP was run.



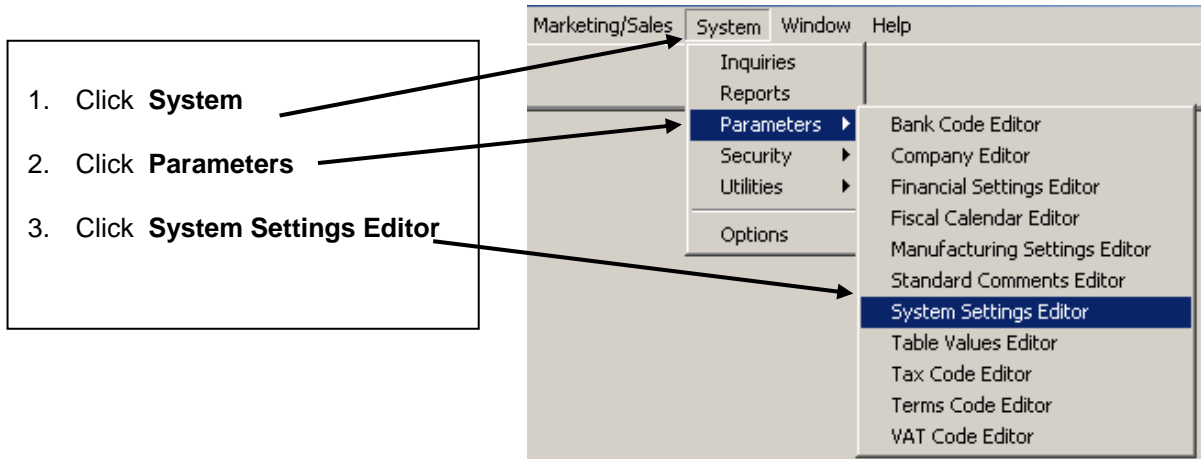
Yield in Standard Indicates whether a part's Yield Factor was considered when calculating its standard cost when the last full Standard Cost Rollup was run. Yield is a field in the Parts Master Table that applies only to Make parts (Part Type M). When analyzing Job Variance it is helpful to know how the Standard Costs were set in the system.

Scrap in Standard Indicates whether the Scrap Factor in a Bill of Materials was considered when calculating standard costs when the last full Standard Cost Rollup was run. Scrap Factor is a field in the Bill of Material Table that applies to usage of a component when making the assembly it reports to. When analyzing Job Variance it is helpful to know how the Standard Costs were set in the system.

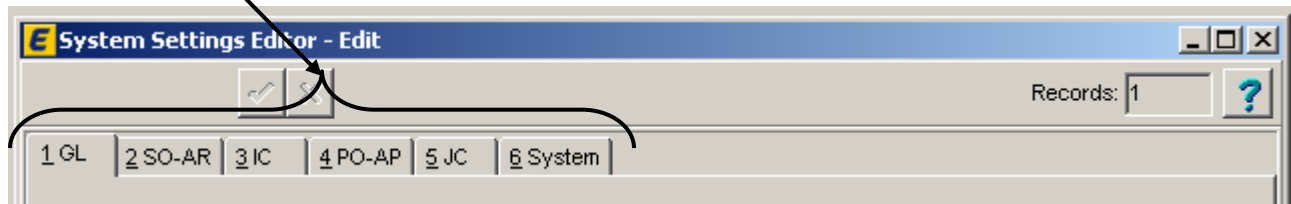
System – Parameters – System Settings Editor

The System Settings Editor allows the user to specify defaults to questions within many programs and allows switches to be set to use special options within your software. For example., is your company using Unit of Measure Conversion for Buy, Sale and Stock quantities.

Following is a sample of the screens/fields that may be set in your company. Most of the options will be set using the screens below. However there are a few exceptions that will be covered at the end of this section.

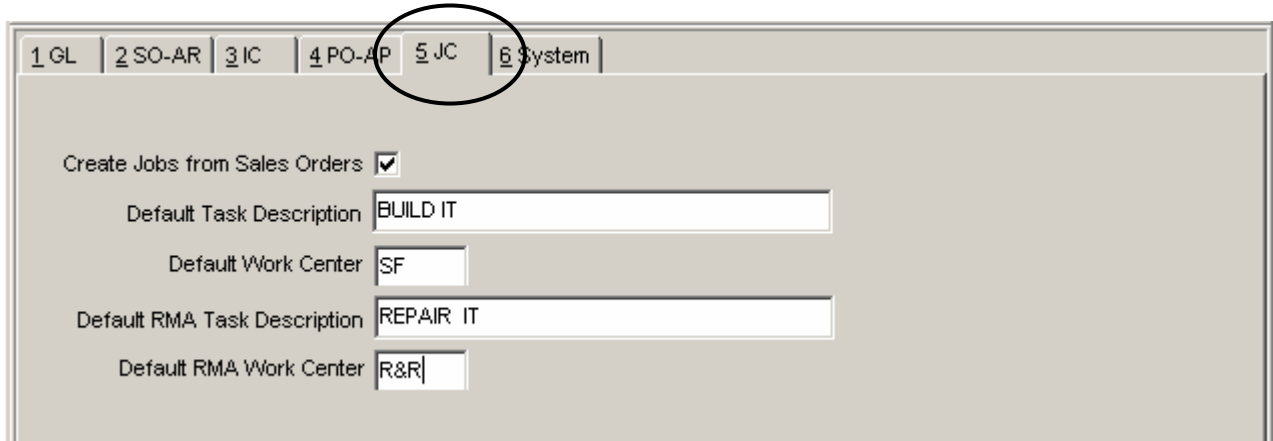


There are six Tabs on this screen, this text will cover only the JC tab that pertain to the Job Costing area of Expandable.



System – Parameters – System Settings Editor

The JC (Job Cost) Tab



The screenshot shows a software interface with a tabbed menu at the top. The tabs are labeled: 1 GL, 2 SO-AR, 3 IC, 4 PO-AP, 5 JC, and 6 System. The '5 JC' tab is circled in black. Below the tabs, there are several settings:

- Create Jobs from Sales Orders**: A checkbox that is checked.
- Default Task Description**: A text input field containing the text "BUILD IT".
- Default Work Center**: A text input field containing the text "SF".
- Default RMA Task Description**: A text input field containing the text "REPAIR IT".
- Default RMA Work Center**: A text input field containing the text "R&R".

Create Jobs from Sales Order Check this box to allow creation of a job during Sales Order entry. This parameter is used to indicate whether or not a user is allowed to create a job using the Job Editor while entering a sales order line in Sale Order Entry when a non-existing job is referenced on the line.


Default Task Description is the operation description to be used when creating one-step jobs for make-to-stock parts without routings.

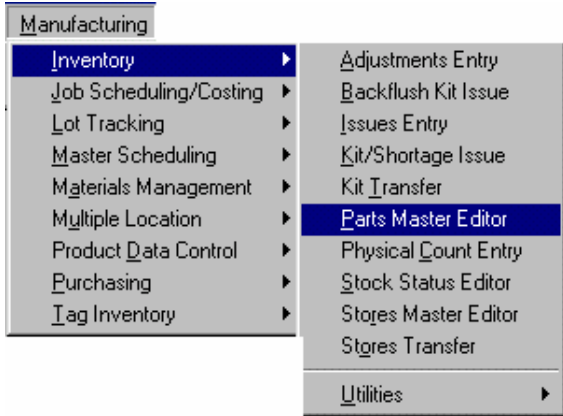
Default Work Center is the work center to be used when creating one-step jobs for make-to-stock parts without routings.

Default RMA Task Description is the operation description to be used when creating one-step rework jobs for RMA sales orders.


Default RMA Work Center is the work center to be used when creating one-step rework jobs for RMA sales orders.

Parts Master Editor

The Parts Master Editor may be accessed by clicking on **Manufacturing – Inventory - Parts Master Editor** from the Menu Bar or accessed directly from a user defined icon set on the Speedbar .



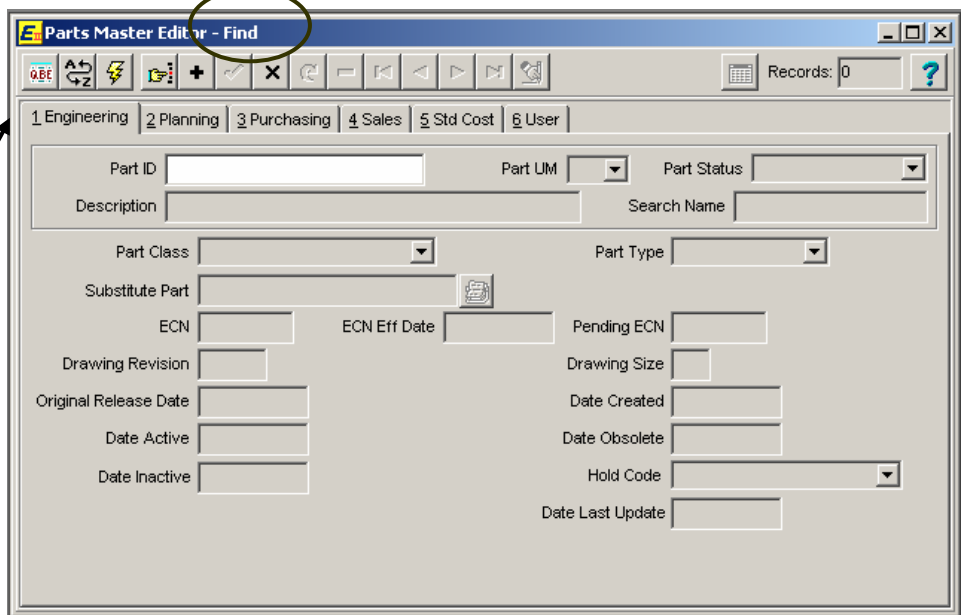
Quick Reference

Click the Speedbar button .

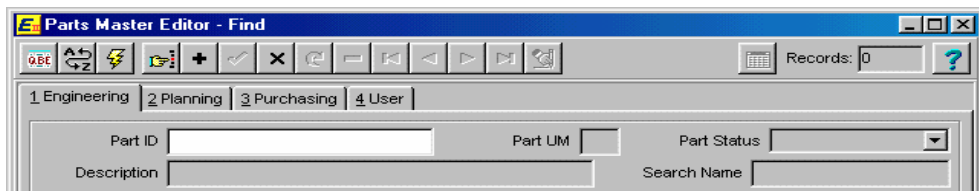
OR

1. Click **Manufacturing.**
2. Click **Inventory.**
3. Click **Parts Master Editor.**

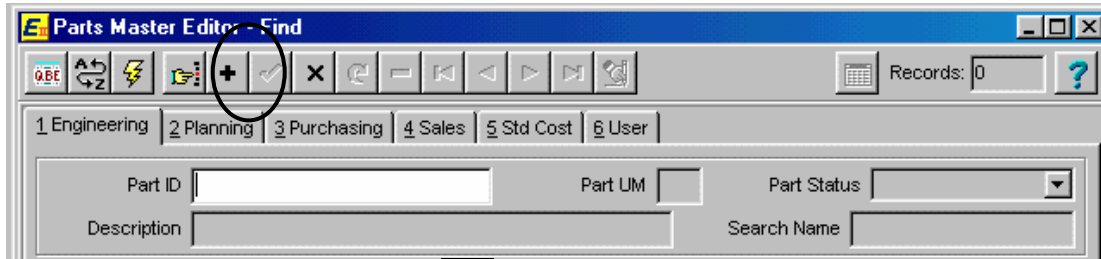
This program is used to maintain records on the Parts Master Table. The first screen displays the Parts Master Editor in the **Find** mode.




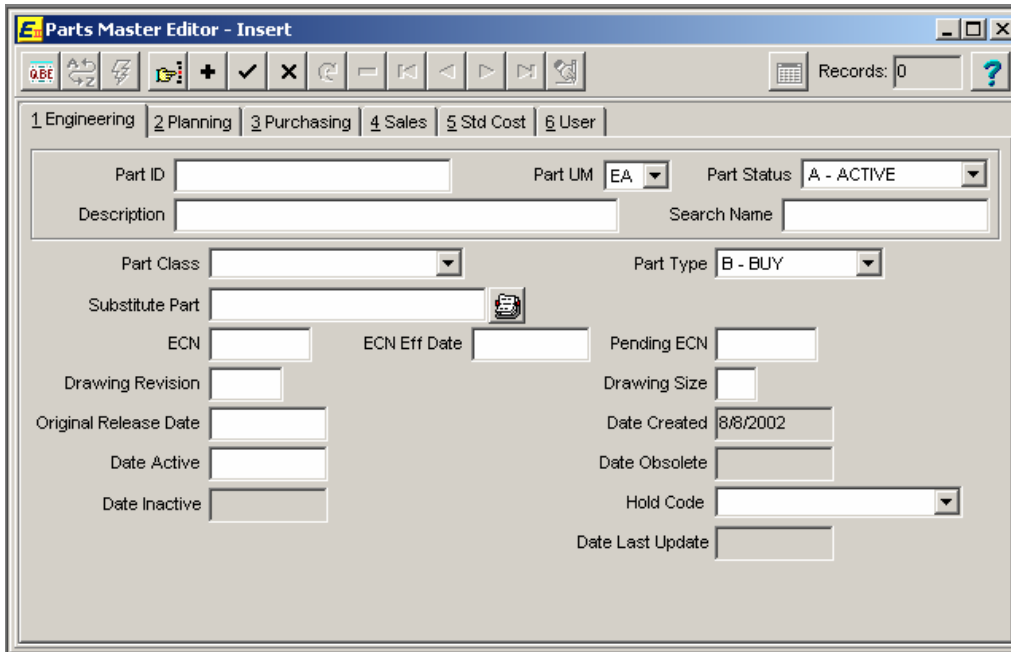
Note: The screen has 6 tabs that may be displayed. Each tab contains data pertinent to the corresponding jobs or work flow of the user. Within the security system, data can be maintained or for display only. Also for higher security, a tab may be completely removed from the user's access. In the example below, the sales and the costing information has been denied to the engineering department.






Parts Master Editor continued



To add (insert) a new part, press the circled Plus sign  on the Button bar. The following screens display the details on all the tabs.



Quick Reference

1. Click the **New Record** button .
2. Enter the new **Part ID**. Press the **Tab** key .
3. Enter the necessary data via the keyboard and Dropdown Combo Boxes in the white fields under the six tabs.
4. Click the **Save Record** button .

Parts Master Editor continued

The Engineering Tab

Part ID uniquely identifies a raw material, component, subassembly or product. A Part ID can contain up to twenty-five alphanumeric characters.

Part UM is a two-character Unit of Measure that identifies how the part is stocked in the storeroom. For example, EA (Each), LB (Pounds), GA (Gallons), etc. This field will be validated against records in the Table Values Editor. (Records in the Table Values Tables are user-defined.)

Status	A	Active
	I	Inactive
	O	Obsolete
	P	Pre-released

MPS will ignore any part with a status of I (Inactive) or O (Obsolete). Parts with a status of P (Pre-Released) may be optionally included when running the MPS Generation program.

The MRP Generation program does not use the Status field in its calculation.

Obsolete parts lose all Standard Cost value within the system when the next cost rollup is run.

Description is a forty-character alphanumeric field used to describe a part.

Search Name is an alphanumeric field used as an alternate description, such as a catalog or marketing description. When adding a new part, the Search Name will default to up to the first sixteen characters of the description and can be overridden by the user.

Part Class is a two-character alphanumeric field used to classify parts. This field will be validated against records in the Table Values Editor. (Records in the Table Values Tables are user-defined.)



Part Type is a one-character code used to categorize parts as follows:

B	Buy
M	Make
P	Phantom
X	Expense - Floor Stock

A **Buy** part is any part purchased from an outside vendor for stock or to be used in a Job.

A **Make** part is any part manufactured or assembled either in house or at an outside vendor.

A **Phantom** is a non-manufactured/non-stocked Part ID used to structure the Bill of Material. Kitting and backflushing process components of phantoms as though they were the components of the sub assembly in which the phantom was used.

An **Expense** or floor stock part is bought from an outside vendor. These parts are listed on the Bill of Material for engineering purposes but are issued to the floor in bulk, for example, nuts and bolts, wire, solder, etc. that are low in cost and stocked at the work center.

Parts Master Editor continued

The Engineering Tab continued

Substitute Part is a reference to an alternate part number.

Category Code is a one-character code that displays **only** if the Configuration Control (CC) module is installed. It designates if a part is used as a:

F	Feature
M	Model
O	Option
S	Standard Configuration
U	Unique Item in a configured Bill of Material

ECN is a six-character alphanumeric field to hold the most recent Engineering Change Number for the part.

ECN Eff Date is the date the ECN became effective.

Pending ECN is a six-character alphanumeric user defined field to flag the next engineering change to a part.

Drawing Revision is a four-character alphanumeric field used to store the current Drawing Revision of the part.

Drawing Size is a two-character field used to store the size of a part's drawing.

Original Release Date is a user-maintained field to enter the date a part became a Prerelease part.

Date Created is the date this part was entered into the system.

Date Active is the date the part became active. This field is user-maintained except when status is changed from A(Active) to a value that is not A. In that situation, Date Active will be set to 00/00/00.

Date Obsolete is the date the part's status was changed to "O" (Obsolete).

Date Inactive The date a part became active. Use Ctrl+L to display a calendar.

Hold Code is an identification code which signifies the reason a part is on shipping hold. Shipments>Returns Entry will not allow a part to ship if its code is not blank. This field can be set up to validate against records in the Table Values Editor by using the data element name of PART_HOLD_CODE.

Date Last Update is the date the update or change was made to this part.

Parts Master Editor continued

The Planning Tab

	Vend	Recv	Kit	Mfg	Ship	Plan	Cum
Lead Times	0	0	0	15	0	15	64

Planner ID is a three-character data element to identify the individual or organization responsible for planning the part. This field will be validated against records in the Table Values Table. (Records in the Table Values Table are user-defined.)

ABC Code is a one-character code to classify the Part either by value or usage and is used in Cycle Counting. The options are A, B, C and D.

Commodity Code is a four-character code usually used to categorize items by their National Motor Freight Class number. This field will be validated against records in the Table Values Editor. (Records in the Table Values Tables are user-defined.)

Product Line is an eight-character field used to identify a family of parts. This field may be tied to the Sales Order Parameter Table to designate which COGS and Sales accounts to be charged when the item is shipped. This field will be validated against records in the Table Values Editor. (Records in the Table Values Tables are user-defined.) However, when using a Table, the field is limited to four characters in length.

If the **MRP Flag** is checked the part is recognized when running MRP.

If the **MPS Code** is checked the Master Scheduling module plans the part.

Forecast Quantity is a field that is optionally updated during the MRP run. It is used for a quick check to see the total gross requirements for a part as of the last MRP run that updated the number.

Planning Horizon is the number of days a part is to be planned into the future. This is currently used for reference only.

Parts Master Editor continued

The Planning Tab continued

Order Quantity is the suggested lot size for make parts and the economic order point for purchased parts.

Max Order Quantity is the maximum number of this part to be purchased on a single Purchase Order Line or Processed on a Job.

Yield Factor is used for **Make Parts** only and is the percent of loss expected in the manufacturing process.

Default Stores Code is the most common storeroom this part is shipped from and or received into. When adding a new part this field is set to the Receive To Stores Code from the Manufacturing Parameters Editor.

If **Lot Control** is checked then the part is under Lot Control. This will display only if the Lot Tracking Module is installed.

Shelf Life is the number of days of shelf life of the part. Enter 0 (zero) if shelf life is not a concern. This will display only if the Lot Tracking Module is installed.

Stock Decimals is the number of decimal places allowed in the stocking unit of measure. This field will be validated against the System Settings Editor under the IC tab.

Lead Times:

Vend is the time it takes to obtain a buy or an expense part from a vendor.

Recv is the amount of time it takes for a part to go from the receiving dock to stock. This lead time should also include QC time.

Kit is how long it takes to pull the kit for a particular product and get it to the production floor.

Mfg is the amount of time it takes to produce a part once it has been kitted.

Ship is the total number of days it takes to process a sales order. (Used by the Sale Order Module).

Plan is the time in shop days it takes to order and receive a part from a vendor or the time it takes to order and receive a part from the plant. This includes total time from order release through receipt into inventory. This is the only field used for MRP processing.

Cum is the theoretical maximum length of time it will take to produce a part assuming nothing exists in stock. It must be greater than or equal to Plan LT. This field is only used by the Master Scheduling module.

Note: All lead time fields are in manufacturing days if the Shop Calendar Table is used; otherwise it is in calendar days.

Parts Master Editor continued

The Purchasing Tab

The screenshot shows the 'Parts Master Editor - Edit' window with the 'Purchasing' tab selected. The window contains the following fields and values:

- Part ID: 649N
- Part UM: EA
- Part Status: A - ACTIVE
- Description: JACK, HYDRAULIC FLOOR ROLLER, 2 TON
- Search Name: JACK, HYDRAULIC
- Buyer ID: DAL - DOROTHY A. LEWIS
- Preferred Vendor: (empty)
- Buy UM: EA
- Buy Conversion Rate: 1.0000
- Buy Decimals: 0

Buyer ID is a three-character data element to identify the individual who is responsible for the procurement of the part. This field will be validated against records in the Table Values Editor. (Records in the Table Values Tables are user-defined.)

Preferred Vendor is displayed if the part type is a buy part, used to flag the primary vendor. (This is a reference only field.)

Buy UM is the unit of measure used when purchasing a part. This is only prompted if the Buy Unit of Meas. Conversion box is checked under **System – Parameters – System Settings Editor – the IC Tab**.

Buy Conversion Rate is the buy conversion factor used to convert the buy unit of measure to the stock unit of measure. For example, if an item is purchased in dozens and is stocked in units, the buy conversion factor is 12. If an item is purchased in units and stocked in dozens, the buy conversion factor is 1/12 or 0.0833.

Buy Decimals are the number of decimal places related to the buy unit of measure.

Parts Master Editor continued

The Sales Tab

Parts Master Editor - Edit

Records: 1

1 Engineering 2 Planning 3 Purchasing 4 Sales 5 Std Cost 6 User

Part ID: 649N Part UM: EA Part Status: A - ACTIVE

Description: JACK, HYDRAULIC FLOOR ROLLER, 2 TON Search Name: JACK, HYDRAULIC

Weight: 28.0000 Volume: 0.0000

SO Order Quantity: 10 Minimum Sales Qty: 0

Quantity per Carton: 2 Serial Number Required:

Sale UM: EA Sale Conversion Rate: 1.0000

Sale Decimals: 0 Warranty: 120

UPC: _____ Freight Class: _____

ITF: _____

Originating Country: _____ Sales Market: _____

Notes:

Parts Master Editor continued**The Sales Tab continued**

Weight is the weight of one item in the stocking unit of measure. This field may be used to print the cum weight of the items on the pick/pack list

Volume is used to help determine the shipping method. The cum volume will print on the pick/pack list.

SO Order Quantity is the quantity of a part that is normally ordered by customers.

Minimum Sales Qty is the minimum quantity of a part that can be entered on a single line of a sales order.

If **Serial Number Required** is checked, serial numbers are prompted and must be entered at the time of shipping.

Sale UM is the unit of measure used when selling a part. Only prompted if the Sale Unit of Meas. Conversion box is checked under **System – Parameters – System Settings Editor – the IC Tab.**

Sale Conversion Rate is the sell conversion factor used to convert the sale unit of measure to the stock unit of measure. For example, if an item is sold in dozens and is stocked in units, the sale conversion factor is 12. If an item is sold in units and stocked in dozens, the sale conversion factor is 1/12 or 0.0833.

Sale Decimals is the number of decimal places related to the sale unit of measure.

Warranty The calendar days of warranty given for a particular product or service.

UPC The Universal Product Code for a particular item that is printed on the Packing Slip.

Freight Class A code that specifies an item's freight classification. This is printed on the Packing Slip.

ITF The UPC code for 'Interleaved Two of Five' used for the master pack coding on the outside carton of a product.

Originating Country The country of origin for a particular part. This may be required when creating import/export papers.

Sales Market An identification code that signifies the sales market for a particular part. Used in conjunction with the market area code on the Customer Master table to determine if a product can be sold within the customer's market area. The Market Approval table is used to tie a part's Sales Market to the customer's Market Area. If a part's Sales Market field is blank, no Market Approval check is performed during Sales Order entry. If a part's Sales Market field is not blank, the Market Approval check is performed. If a customer's Market Area field is blank or if no match is found on the Market Approval table, the customer will not be allowed to order the part.

Parts Master Editor continued

The Standard Cost Tab

This screen contains the data pertinent to the initial setting up of and the results of performing a standard cost rollup. Once a standard cost has been set for a part, the procedure calls for using the Product Data area to change standards (Cost Roll-Up).

The system processes all part transactions using Standard Unit Cost. This field is a sum of the fields circled on this screen. Different fields are used for different Part Types, and several of the fields are completely optional.

Note: This section of the text is meant as a general summary and introduction to the Standard Cost Editor. Each company has its own procedures on how to set and update Standard Costs. Be sure to check with the appropriate people in your company.

The first group of fields are only prompted for Make and Phantom parts. Labor Costs are used in conjunction with the Labor Distribution Module. Labor Types are defined using the Personnel Parameters Editor, and then can be used for Make Parts. The number of hours needed to manufacture one unit of the part number are defined for up to 3 labor types. The system then adds up the total hours to fill in Labor Hrs Added, and retrieves hourly rates to calculate the Labor Cost Added figure. The Cum: figures are filled in by the Cost Roll-Up procedure.

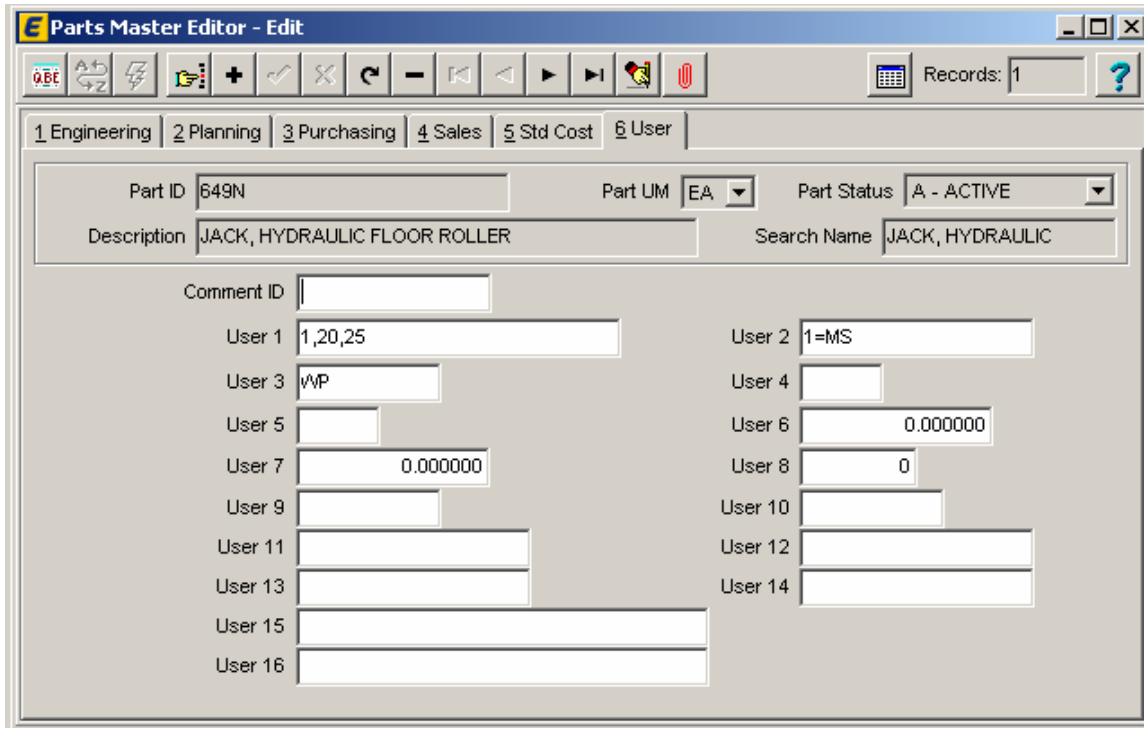
The second group of fields start with two fields that are only prompted for purchased parts (Part Type B or X). Material Overhead Pct can be defined for each Purchased and/or Outside processed part.

The two remaining prompts of Material Cost Added and Outside Cost Added can be used for all Part Types. Normally, only purchased parts will have a Material Cost Added, and only Manufactured parts will have Outside Cost Added. There may be some exceptions to this. The balance of the fields on this screen are calculated and filled in by the Cost Roll-Up procedure.

In order to have accurate records, all parts entered should have their standard costs set up as soon as possible, and definitely before transactions are done to move inventory.

Parts Master Editor continued

The User Tab:



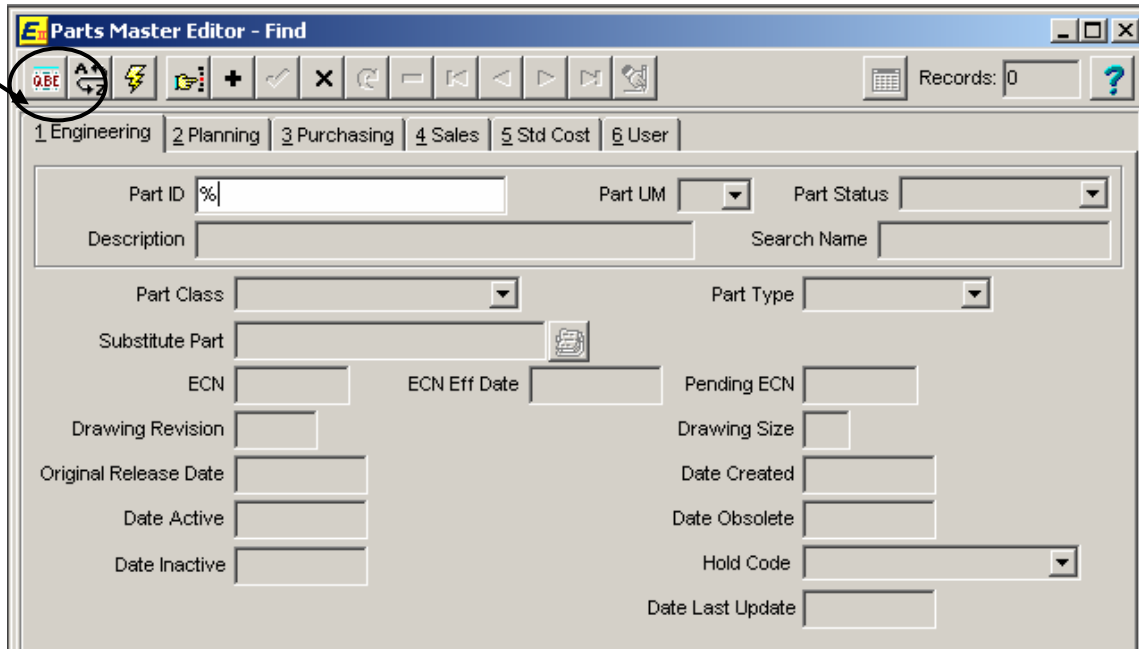
Comment ID is a twelve-character reference field used to associate a part with a standard comment.

There are 14 User Fields that can be used any way your company desires. Usually they are to be used in QBE (Query By Example) or Crystal report writing.

The label for all User fields may be changed in the Dictionary Editor. Refer to the Support Notes for more information on User Field Maintenance.

Parts Master List

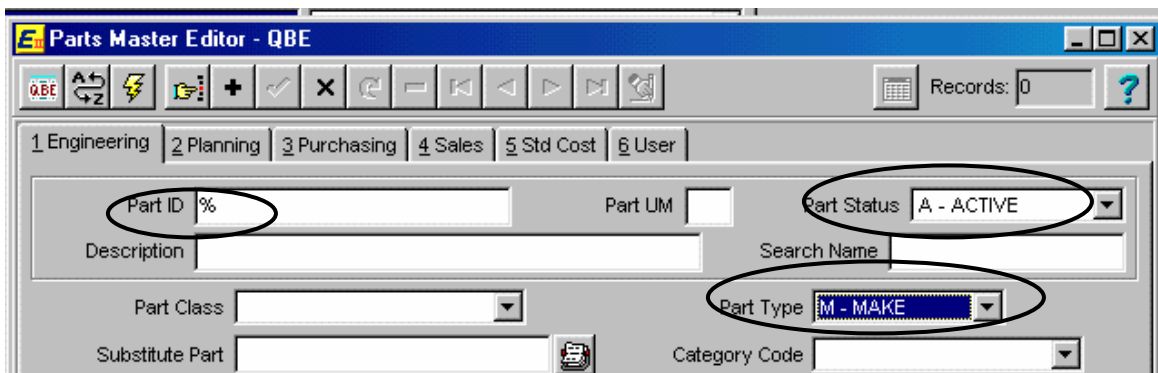
The Query By Example (QBE) may be run to create a list of data from the Parts Master Table. A selection criteria for a report can be generated under any data element that is not shaded. This report can be run for a range of Parts, Planners or Buyers. Selection criteria includes Part Type, Status, ABC Code and MPS Code. The grid headings may be arranged to fit your personal needs. The arrangement of the grid headings is assigned to the workstation. Thus allowing each user to arrange their inquires and printouts to fit their personal preference.



In the example below **All** Parts who's Status is **Active** and they are **Make** Parts were selected. Click the **Execute Query**

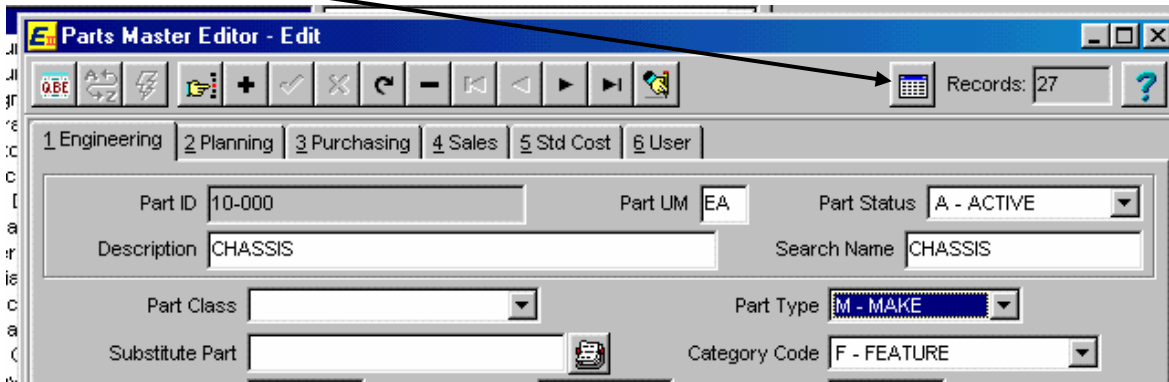


button to display the selected records.

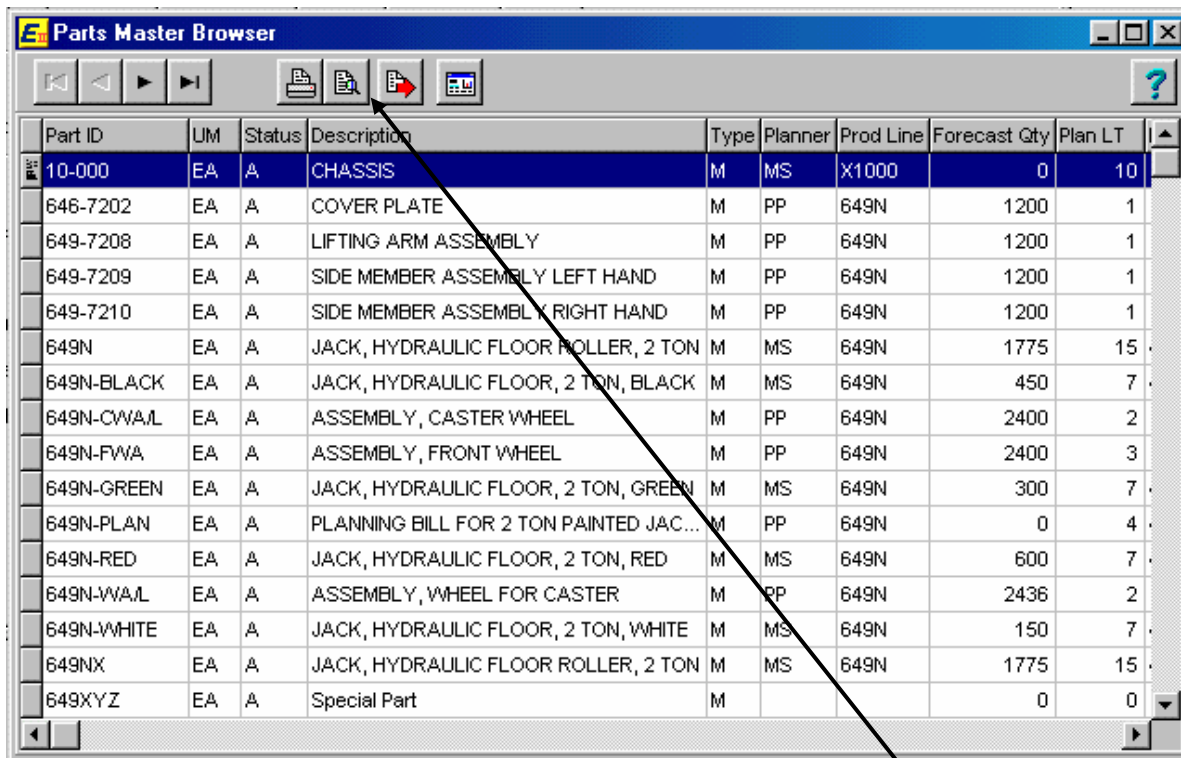


Parts Master List continued

Click the **Browse View** button to display the Grid Heading.



A sample report is displayed below. At this point the user may move the grid heading for easy viewing.



Turn this screen to a report format by clicking on the Print Preview Button . See the sample on the following page.

Parts Master List continued

09/18/2000 1:42:31 PM

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Page 1

Parts Master Browser Report

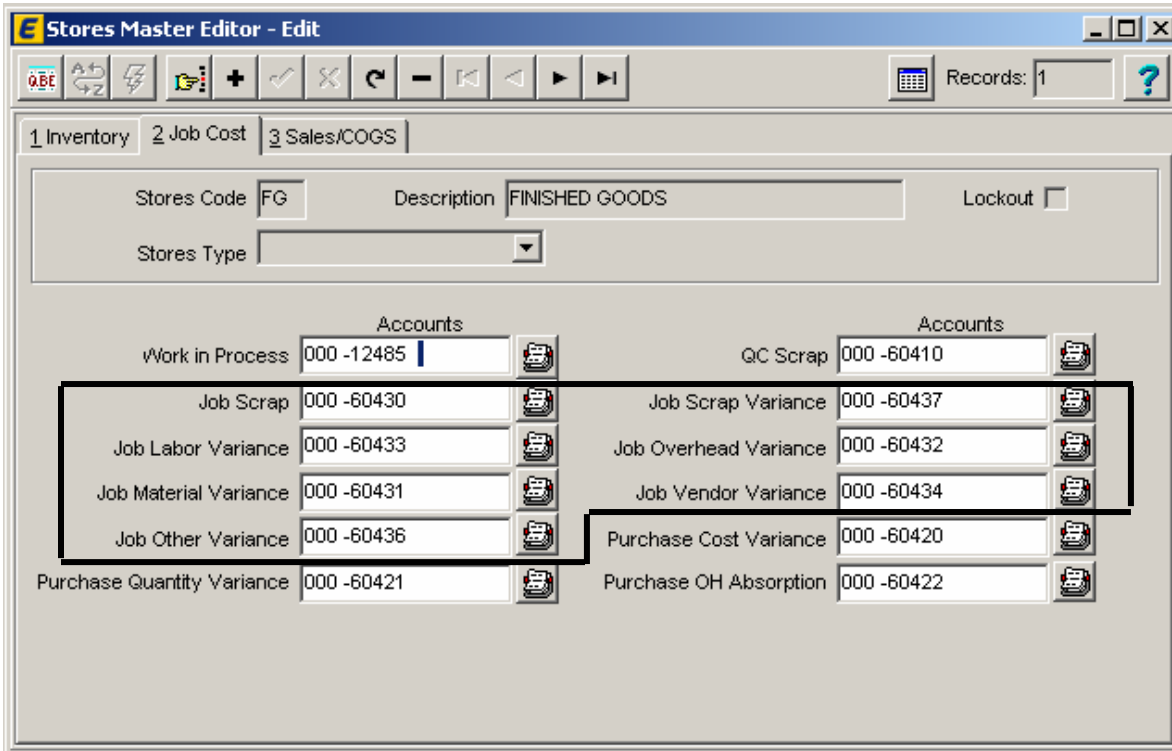
Part ID	UM	Status	Description	Type	Planner	Prod Line	Forecast Qty	Plan LT	ECN
10-000	EA	A	CHASSIS	M	MS	X1000	0	10	
646-7202	EA	A	COVER PLATE	M	PP	649N	1200	1	
649-7208	EA	A	LIFTING ARM ASSEMBLY	M	PP	649N	1200	1	
649-7209	EA	A	SIDE MEMBER ASSEMBLY LEFT HAND	M	PP	649N	1200	1	
649-7210	EA	A	SIDE MEMBER ASSEMBLY RIGHT HAND	M	PP	649N	1200	1	
649N	EA	A	JACK, HYDRAULIC FLOOR ROLLER, 2 TON	M	MS	649N	1775	15	4256
649N-BLACK	EA	A	JACK, HYDRAULIC FLOOR, 2 TON, BLACK	M	MS	649N	450	7	4256
649N-CWAAL	EA	A	ASSEMBLY, CASTER WHEEL	M	PP	649N	2400	2	
649N-FWA	EA	A	ASSEMBLY, FRONT WHEEL	M	PP	649N	2400	3	
649N-GREEN	EA	A	JACK, HYDRAULIC FLOOR, 2 TON, GREEN	M	MS	649N	300	7	4256
649N-PLAN	EA	A	PLANNING BILL FOR 2 TON PAINTED JACKS	M	PP	649N	0	4	4256
649N-RED	EA	A	JACK, HYDRAULIC FLOOR, 2 TON, RED	M	MS	649N	600	7	4256
649N-WAAL	EA	A	ASSEMBLY, WHEEL FOR CASTER	M	PP	649N	2436	2	
649N-WHITE	EA	A	JACK, HYDRAULIC FLOOR, 2 TON, WHITE	M	MS	649N	150	7	4256
649NX	EA	A	JACK, HYDRAULIC FLOOR ROLLER, 2 TON	M	MS	649N	1775	15	4256
649XYZ	EA	A	Special Part	M			0	0	
749N	EA	A	JACK, HYDRAULIC FLOOR ROLLER, 4 TON	M		749N	0	0	2071
A	EA	A	Widget A	M			0	0	
B	EA	A	Widget B	M			0	0	
E	EA	A	WIDGET E	M			0	0	
MAX	EA	A	sister	M			0	0	
MAX1	FT	A	gfgdgfd	M			0	0	
MOM	FT	A	mother	M			0	0	
SAND	EA	A	jdeje	M			0	0	
STARTER386	EA	A	STARTER 386 COMPUTER SYSTEM	M	MS	X1000	0	45	
TESTPART-02	EA	A	TEST NEW PDRDE EXCEPTION MESSAGES	M			0	0	
X1000	EA	A	COMPUTER SYSTEM MODEL	M	MS	X1000	0	45	

Stores Master Editor

The Stores Master Editor is used to define the 2 character Stores Codes which will be used for inventory transactions. The accounting side of the system is designed to make it easy for manufacturing and inventory control. If the correct Stores Code is used on a transaction, then the correct GL department and account will be hit by the transaction.

This table also contains 5 miscellaneous prompts related to MRP, MPS, Purchasing and availability of transaction processing.

Detailed below are the Dept/Accounts that affect Jobs.



Work in Process The default Dept/Account that will fill in on a work order, based on the Make For stores code used. This can be overridden, but this would usually only be done for Engineering Jobs.

Job Scrap The WIP Completions program allows you to scrap from any operation in a Job. The JS action type will relieve WIP for the Extended Standard Cost of the Quantity being transacted, and charge it to this Dept/Account based on the Make For Stores Code used.

Job Scrap Variance, Job Labor Variance, Job Overhead Variance, Job Material Variance, Job Vendor Variance, and Job Other Variance are the default Dept/Accounts that will be used when running the WIP Variance Create function at month end. This will be covered in more detail in chapter five of this text.

Bill of Material Editor

Below is a sample of the Bill of Material Editor screen along with a description of the all the fields.

The screenshot shows the 'Bill of Material Editor - Edit' window. The top toolbar includes icons for save, undo, redo, and other functions. The main area contains several input fields and dropdown menus. The top section shows 'Assembly ID' (649N) and 'Component ID' (646-3702). Below these are 'Part Type' (M - MAKE and B - BUY) and 'Part UM' (EA). A 'Drawing Item Code' field contains '0001'. The 'Required Quantity' field is set to '1.000000'. 'Component Type' is 'MC - MATL COMPONENT'. Other fields include 'Start Date', 'End Date', 'Start SN', 'End SN', 'Bills Type' (EP - BOTH ENG. & PROD.), 'Scrap Factor' (0.0), 'Operation Code' (0), 'Lead Time Offset' (0), and 'Date Last Update' (8/9/2002). A 'Remark' field is also present.

Assembly ID and **Component Part ID** These data elements are the Part ID's which will be tied to each other in the BOM. A part may be the Assembly part in one Bill of Material and also the Component of another assembly.

Dwg Item Code A four character Alphanumeric field that contains the engineering item number for this Bill of Material record. This field is optional - it can be left blank. However, it is required when adding multiple records of a Component to an Assembly.

Required Quantity The quantity of a component or raw material used in the assembly item. Up to six decimals may be used. This quantity is expressed in the Stocking Unit of Measure.

Component Type The system will automatically assign a code of MC for Material Component.

Start Date The date the component is to be added to the Bill of Material. A Bill of Material record with a Start Date less than or equal to the component plan date will be selected by Job Release, MRP, Cost Rollup and Backflush. The default value is blank, meaning the record is active for all previous dates.

End Date The date the component is to be removed from the Bill of Material. A Bill of Material record with an End Date greater than the component plan date will be selected by Job Release, MRP, Cost Roll-Up and Backflush. The default value is blank, meaning the record is active for all future dates.

Note: When stopping one component (End Date) and starting another (Start Date) the same date should be entered in those fields in both records. If different dates are used, the Job Release, MRP, Cost Roll-Up, and Backflush programs could select both components, or neither.

Bill of Material Editor continued

Start SN The first serial number of the assembly on which the component was used. Reference Only.

End SN The last serial number of the assembly on which the component was used. Reference Only.

Bills Type An identification code used to distinguish between engineering, production and combined assemblies. A combined assembly is effective in both engineering and production. The options are:

E	Engineering only
P	Production only
EP	Both Engineering and Production

Note: Bills Type E components will not be selected by MRP, Job Release specifically requested during its' creation or Cost Rollup. When designing a new Revision, the new parts may be added as a Bills Type E, with the parts expected to be removed from the BOM changed to a Bills Type of P. Then Job Release for an Engineering Job will include the new parts and the old by checking the "Include Bills Type E Components?" box on the screen.

Scrap Factor This represents the percentage of a particular component that is expected to be scrapped while that component is being built into a given assembly. Scrap is used for BUY or MAKE parts.

Calculation for a scrap factor of 20:

$$\frac{\text{Quantity Required}}{1 - \text{Scrap Factor}} = \text{Gross Required}$$

$$\frac{100}{(1 - .20) = .80} = 125$$

Kit From Stores The storeroom from which the component is to be kitted. Only used for exceptions to the Kit From Stores on a Work Order (Job) or Backflush program.

Operation Code A four character code that uniquely identifies an operation to be performed in manufacturing. When used in conjunction with Work Order (Job) operations, the system allows kitting by Operation, and after Job Release each operation can have different schedule kit dates for processing by MRP.

Lead Time Offset Lead Time Offset is the number of days after the start of an assembly's manufacturing process that this particular component is required. Used by MRP when scheduling components for the planned orders of an assembly, and by Job Release for setting the kit date while creating Kit Records.

Remark A sixteen character data element where the user may enter any notations about this particular item. Commonly used to reference the ECO that initiated or changed the record.