Chapter 1 covers the following topics:

- Setting up Work Order Operations
- Table Values Editor
- Shop Dates Generation Utility
- Shop Dates List
- Manufacturing Settings Editor
- Stores Master Editor – Set GL Defaults
- Systems Setting Editor
- Parts Master Editor

  Purchasing and Sales Tabs - Unit of Measure Conversion

  Standard Cost Tab – Setting Standards
- 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 **Operation Code** is a four character numeric only field. 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 nine standard schedules can be predefined in 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 the next two 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.

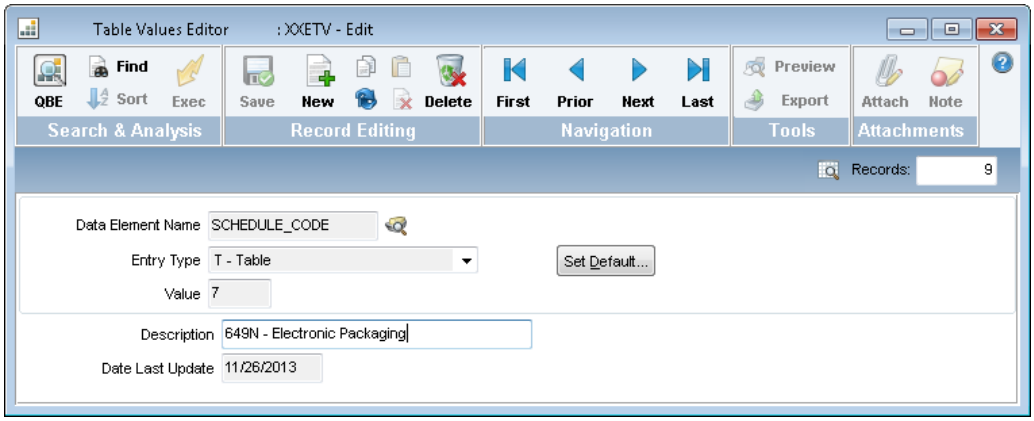
Standard Routings Using the Table Values Editor

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.

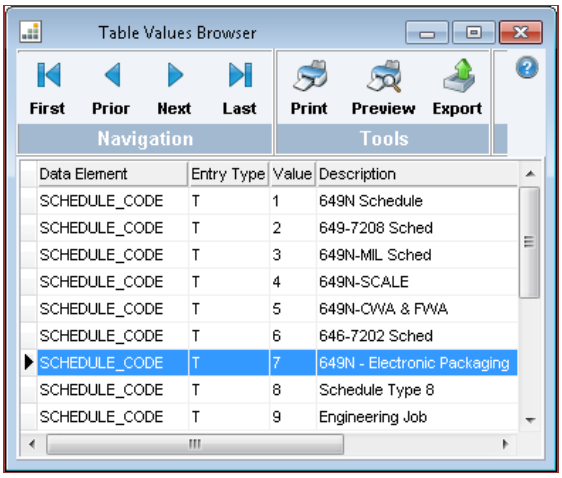
Steps

1. Establish Schedule Codes (a code which identifies a particular sequence of manufacturing steps). These Schedule Codes are already set up on your system. You need to define their descriptions.

   - Click **System | Parameters | Table Values Editor**.
   - Enter **Schedule_Code** in the **Data Element Name** field.
   - **Entry Type** is **T (Table)**. For **Value** enter a number between **1** and **9.**
   - **Description** Establish names for **Schedule Codes**. For example, Schedule Code 1 could be 649N Schedule while Schedule Code 7 could be 649N – Electronic Packaging. Both codes have different operations used during their respective assemblies.

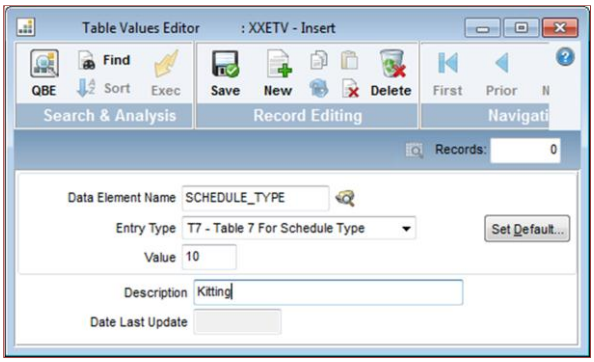


The system allows one manual code and up to 9 defined Schedule Codes. See the Dictionary Browser below.



Standard Routings Using the Table Values Editor continued

2. 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 | Parameters | 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** of the operation.

f) **Save the record** by clicking the **Save** 

button.

To add multiple operations, follow these steps.

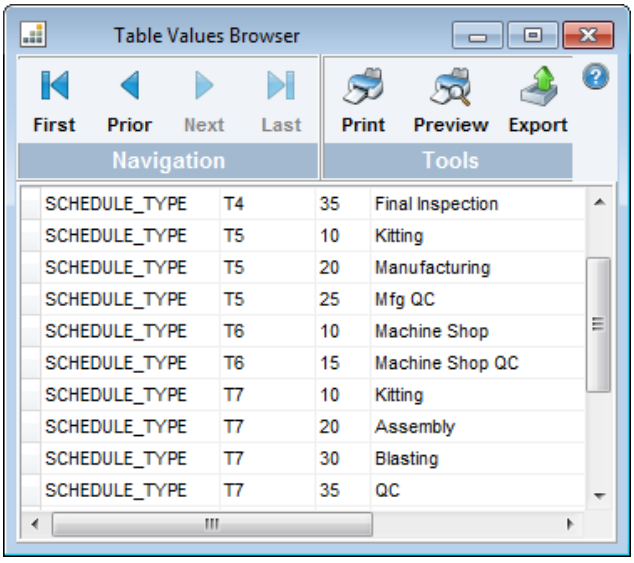
Click **Actions** on the menu bar. Then click **Copy** record.

Click the **New Record** button. Click **Actions |Paste Record**.

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

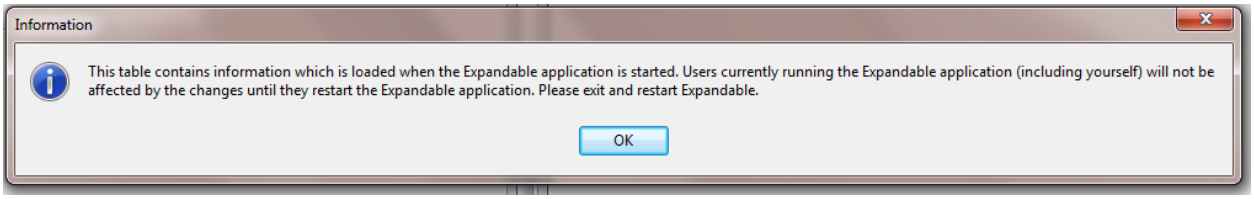
Click the **Save** button. Add as many operations (Schedule Types) as needed.

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

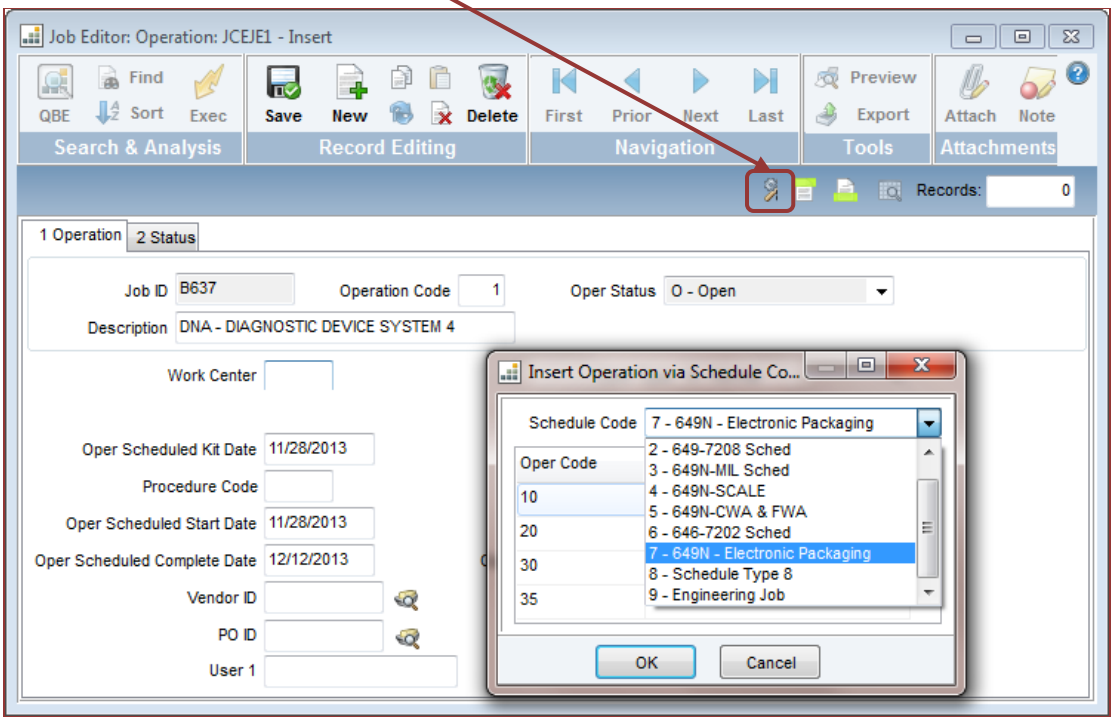


Standard Routings Using the Table Values Editor continued

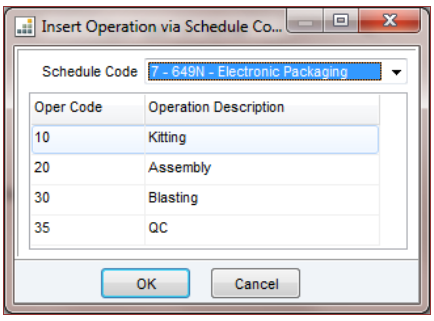
3. When the addition/change is saved, the system will display the message below. To activate the changes, exit Expandable and reenter Expandable.

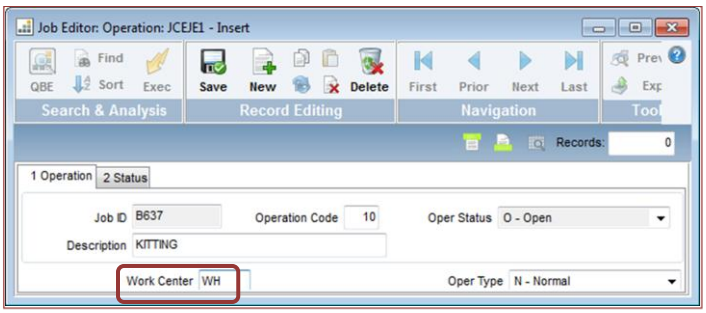


4. During Job Entry (**Manufacturing | Job Scheduling/Costing | Job Editor | Operations Window**), click the **Schedule Code** button and select the Dropdown Combo Box at **Schedule Code** to display the table. (In the example below, Schedule Type 7 was selected.



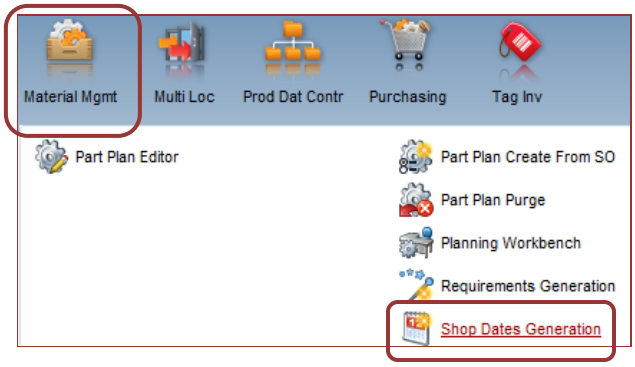
Click the desired **Schedule Type** and the **Operation Codes**. Operation Descriptions available for the Schedule Type will be displayed. A work center must be entered.





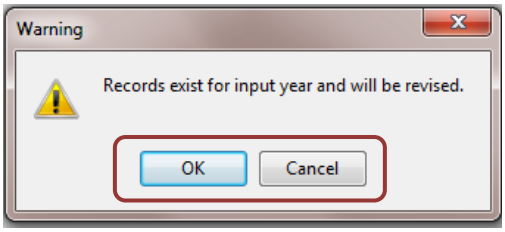
Shop Dates Generation Utility

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 **Cancel** will re-prompt the question. Clicking **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.

All the days of the week display. Leaving the box blank will assign a shop day of 0 to all corresponding days in the year.

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

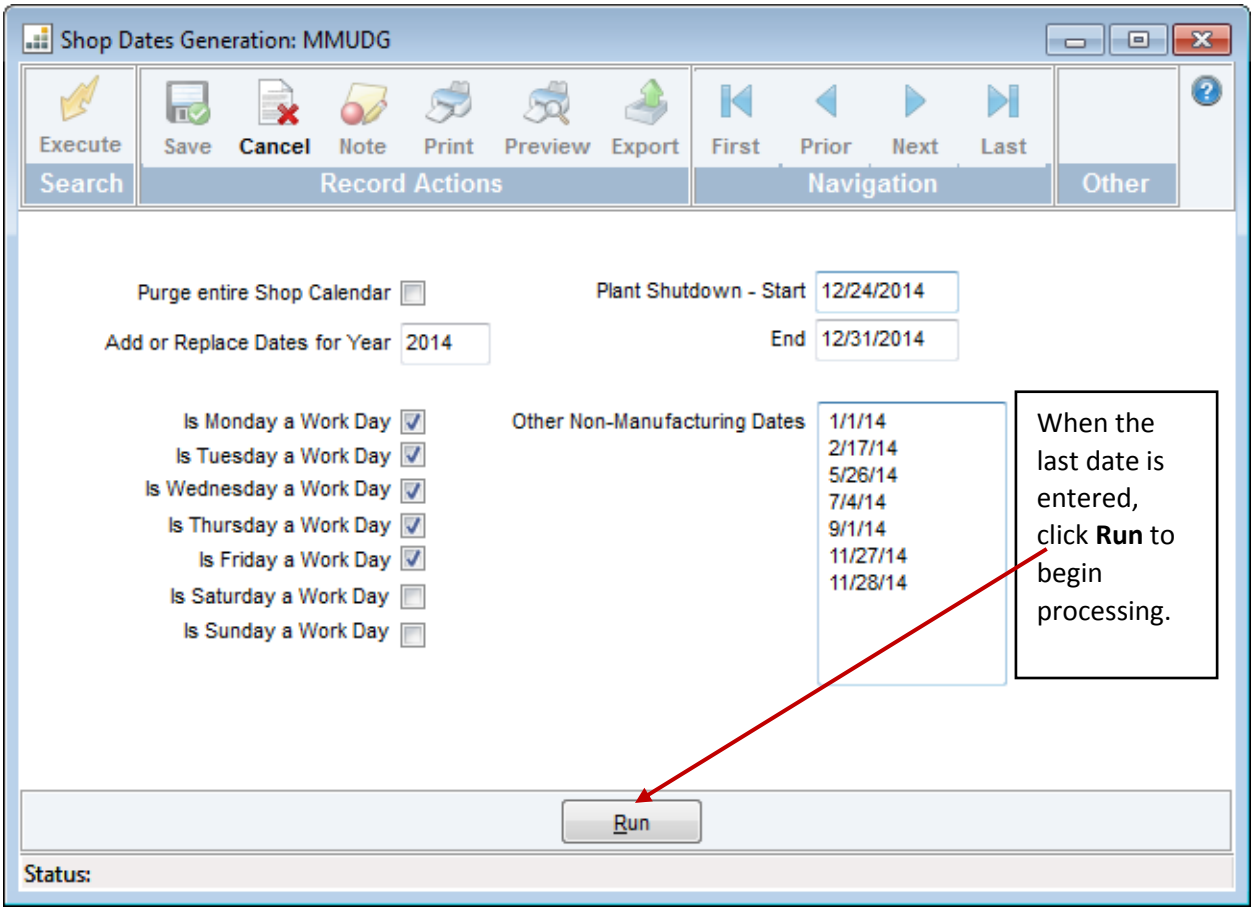
Other Non-Manufacturing Dates Enter all other non-manufacturing dates such as holidays.

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

Shop Dates Generation Utility continued

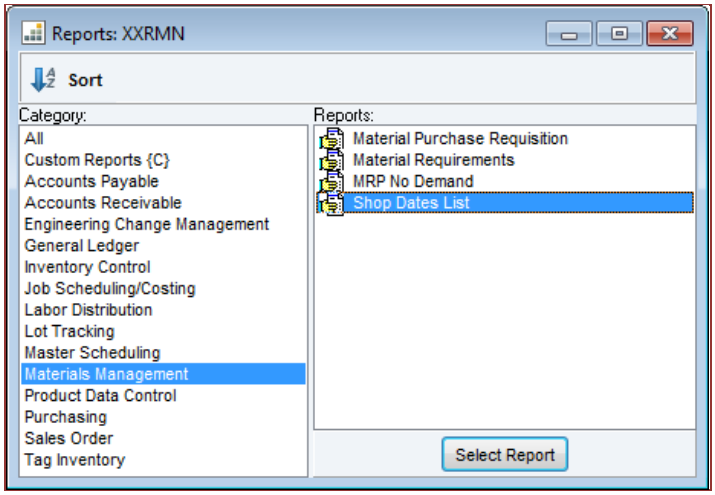
Click **Manufacturing | Materials Management | Shop Dates Generation**.

Use the screen below for data entry to add the year 2014.



Shop Dates List

If the shop calendar needs to be reviewed, the **Shop Dates List Report** 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 Presidents Day holiday.

Job Scheduling Training Class

Shop Dates List

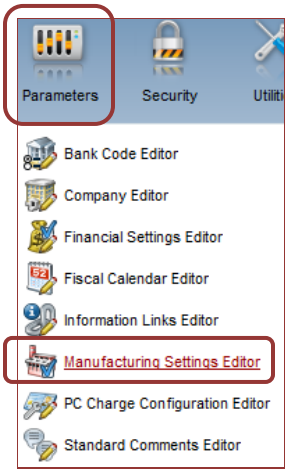
Shop Day	Shop Date	Day
519	2/4/2014	Tuesday
520	2/5/2014	Wednesday
521	2/6/2014	Thursday
522	2/7/2014	Friday
0	2/8/2014	Saturday
0	2/9/2014	Sunday
523	2/10/2014	Monday
524	2/11/2014	Tuesday
525	2/12/2014	Wednesday
526	2/13/2014	Thursday
527	2/14/2014	Friday
0	2/15/2014	Saturday
0	2/16/2014	Sunday
0	2/17/2014	Monday
528	2/18/2014	Tuesday
529	2/19/2014	Wednesday
530	2/20/2014	Thursday
531	2/21/2014	Friday
0	2/22/2014	Saturday
0	2/23/2014	Sunday
532	2/24/2014	Monday
533	2/25/2014	Tuesday
534	2/26/2014	Wednesday
535	2/27/2014	Thursday
536	2/28/2014	Friday
0	3/1/2014	Saturday
0	3/2/2014	Sunday
537	3/3/2014	Monday

Manufacturing Settings Editor

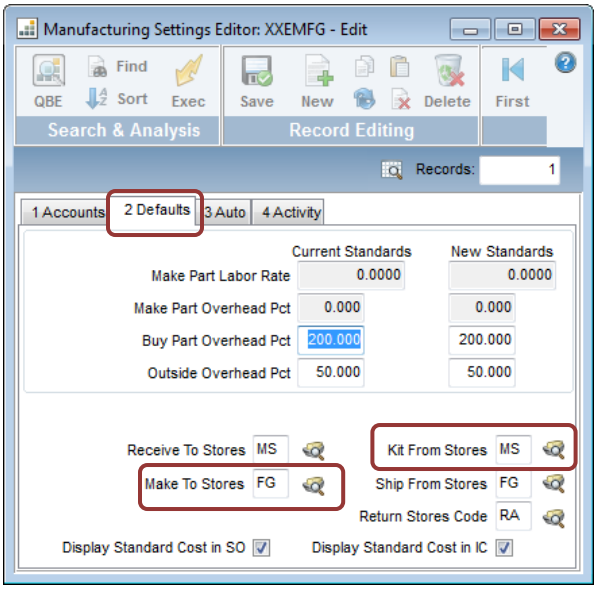
The **Manufacturing Settings Editor** is used to store system defaults and preferences related to the manufacturing side of the database.

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.**



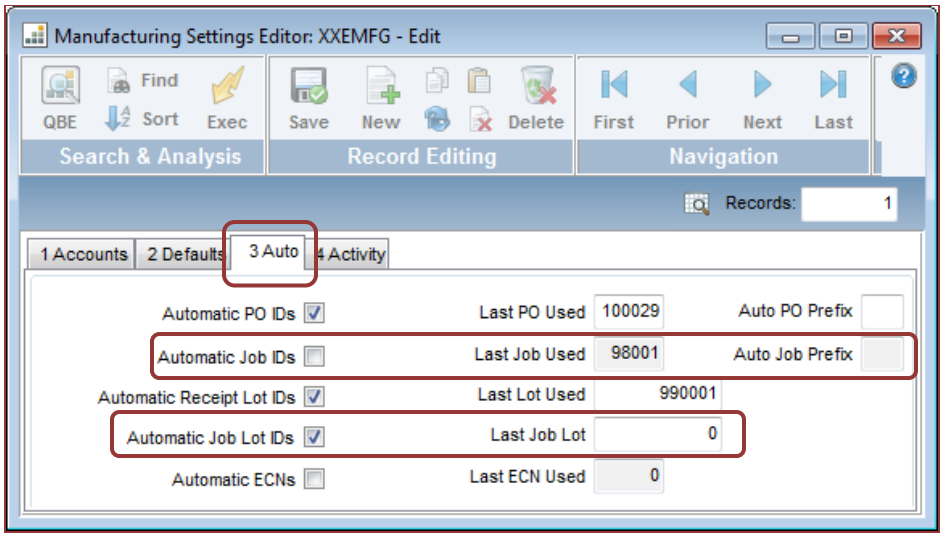
Defaults Tab



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.

Manufacturing Settings Editor (Auto Tab)



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

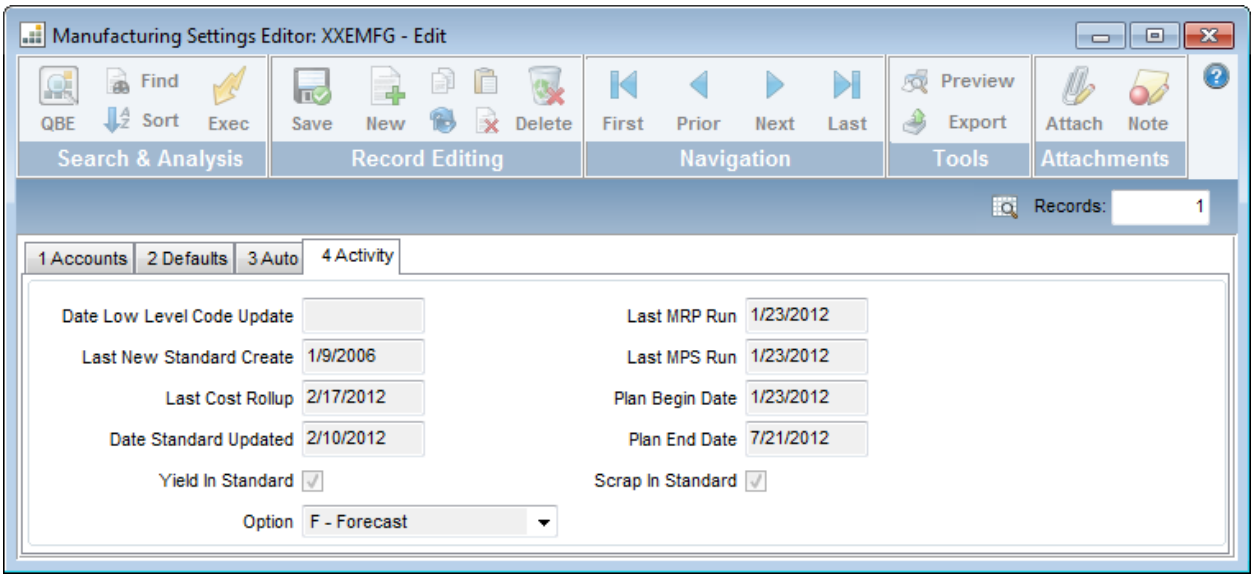
Last Job Used This field holds the last Job ID issued automatically by the system. When first setting up the system, it is filled in with the first number that should be assigned. When using Automatic Job ID, this field is six-character numeric only.

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 to Automatic Receipt Lot ID's or Automatic Job Lot ID's. A twelve character numeric value is entered.

Manufacturing Settings Editor (Activity Tab)

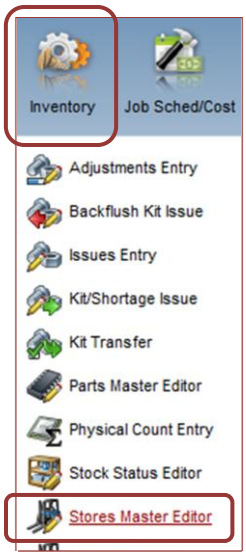
Below is the third (Activities) tab that stores the dates the last time some of the major programs were run. For example, this screen shows the last time the Standard Cost was rolled up and the last time MRP was run.



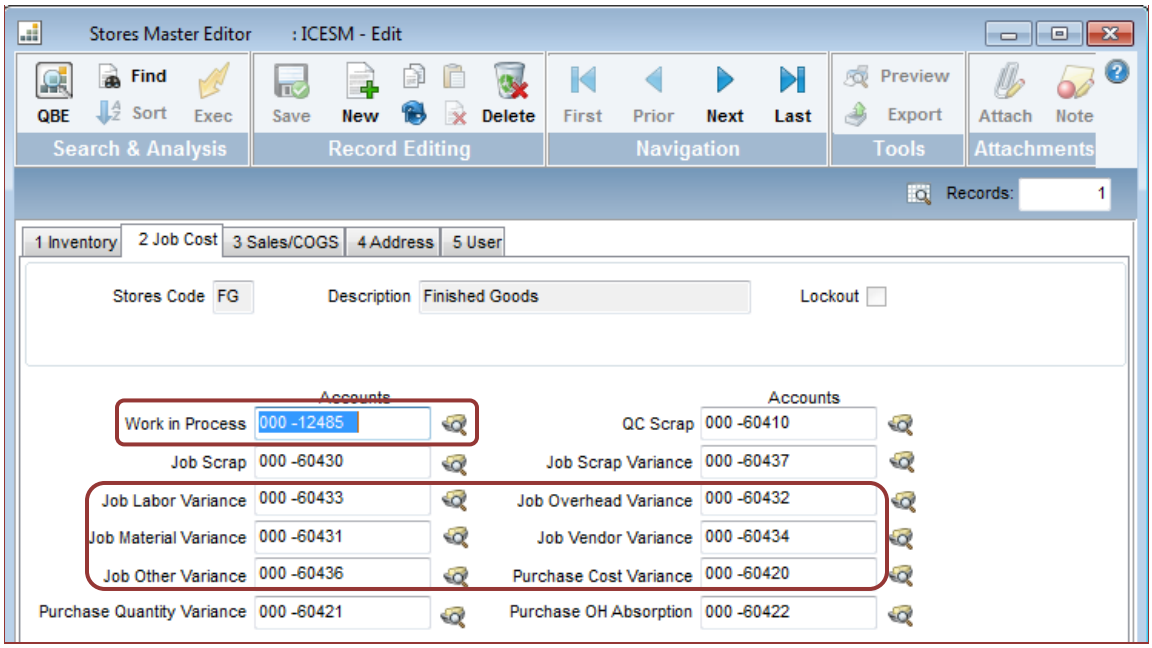
Yield in Standard Indicates whether a part's Yield Factor was considered when calculating its standard cost when the last full Standard Cost Rollup was run. Yield is a field in the Parts Master Table that applies only to Make parts (Part Type M). When analyzing Job Variance it is helpful to know how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

Stores Master Editor



Use **Manufacturing | Inventory | Stores Master Editor** to define the two 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, the correct GL department and account will be posted to by the transaction.



Work in Process This account and department number will default 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.

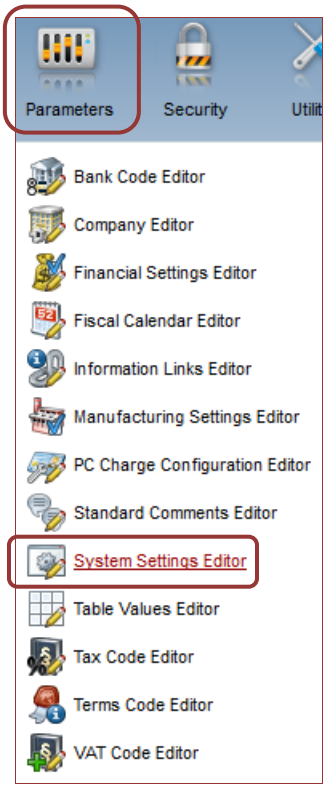
Job Scrap The WIP Completions program allows you to scrap from any operation in a Job. The JS action type will relieve WIP for the Extended Standard Cost of the Quantity being transacted, and charge it to this Dept/Account based on the Make for Stores Code used.

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.

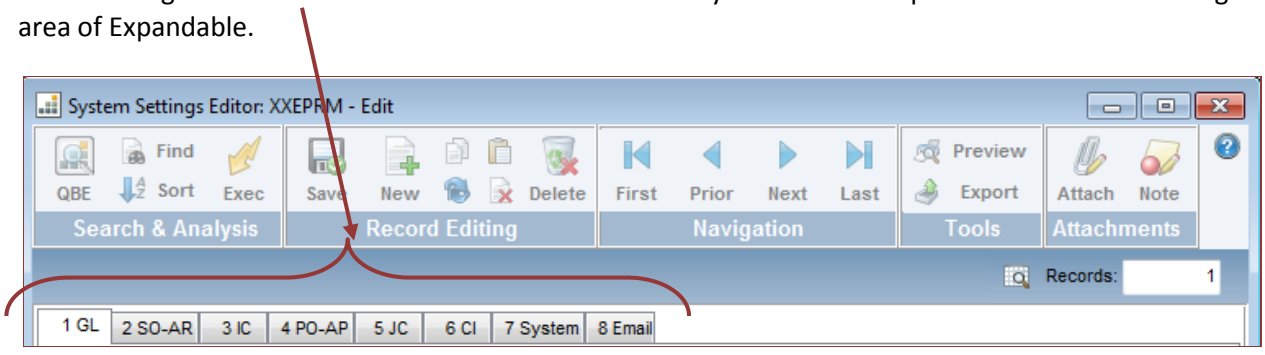
System Settings Editor

Use **System | Parameters | System Settings Editor** 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.

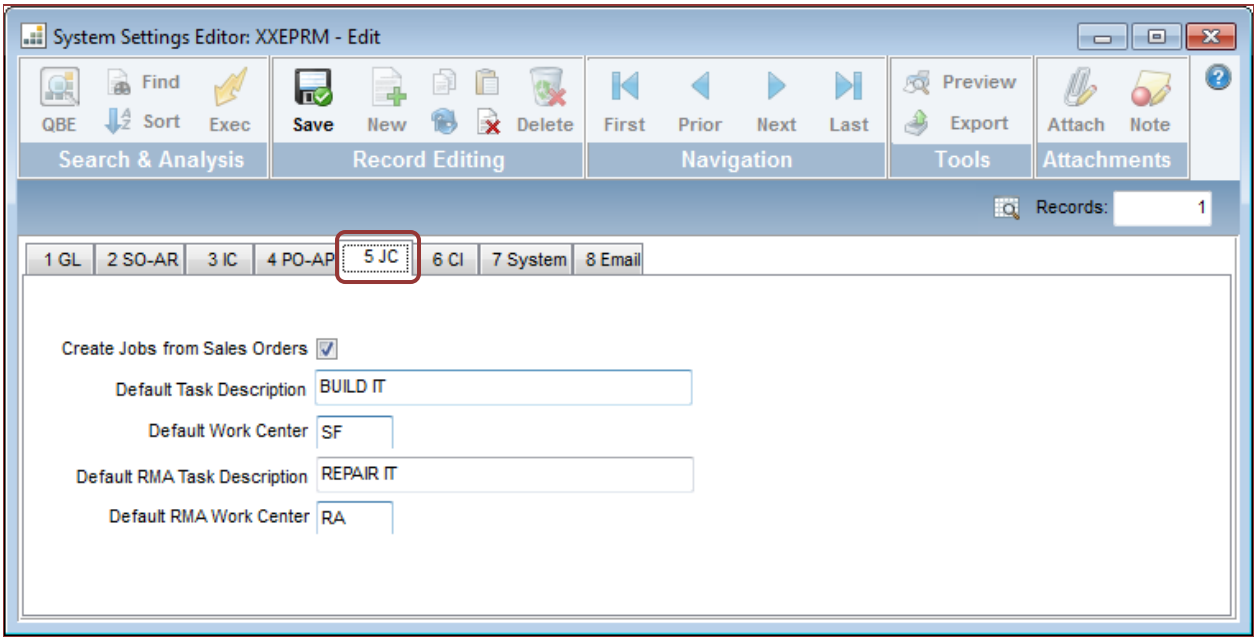
Following is a sample of the screens/fields that may be set in your company. Most of the options will be set using the screens below. However, there are a few exceptions that will be covered at the end of this section.



There are eight tabs on this screen. This text will cover only the **JC** tab that pertains to the Job Costing area of Expandable.



System Settings Editor (JC Tab)



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 the **Sale Order Editor** 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.

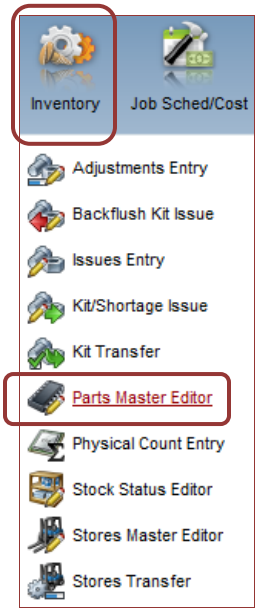
Default Work Center is the work center to be used when creating one-step jobs for make-to-stock parts without routings.

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

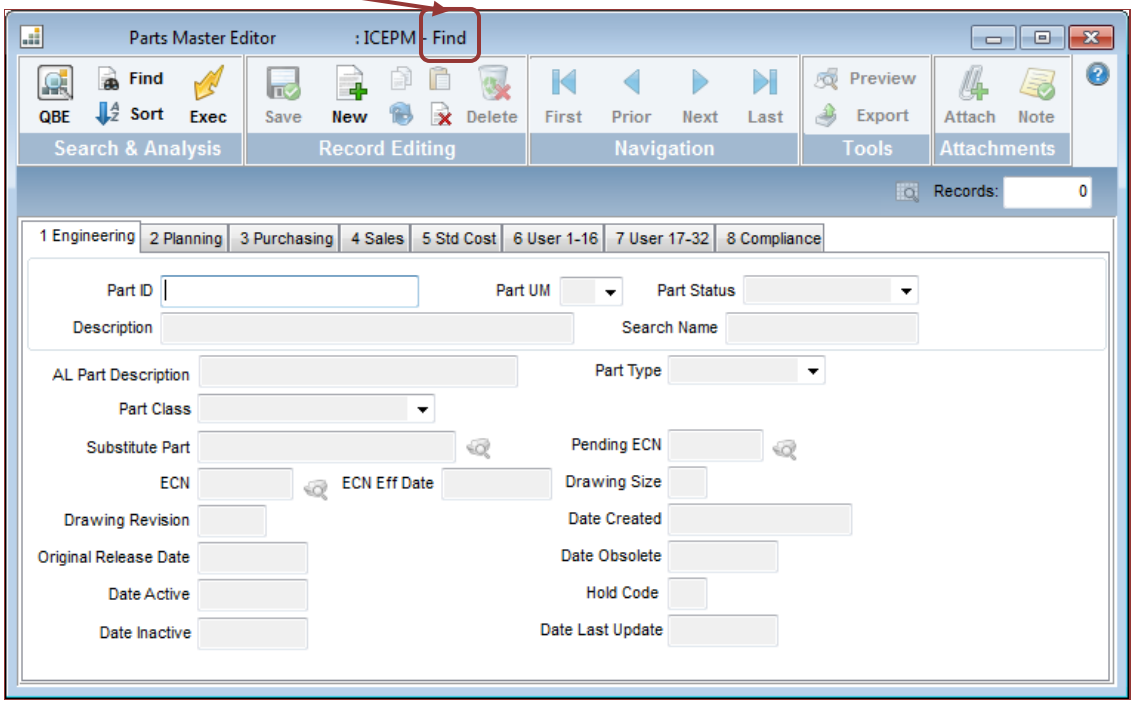
Default RMA Work Center is the work center to be used when creating one-step rework jobs for RMA sales orders.

Parts Master Editor

Access the Parts Master Editor by clicking **Manufacturing | Inventory | Parts Master Editor** from the Menu Bar or access it directly from an icon  on the Speedbar.

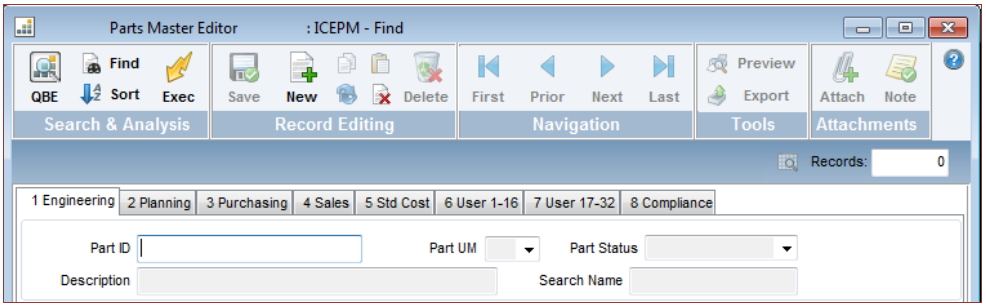


This program is used to maintain records on the Parts Master Table. The first screen displays the Parts Master Editor in the **Find** mode.

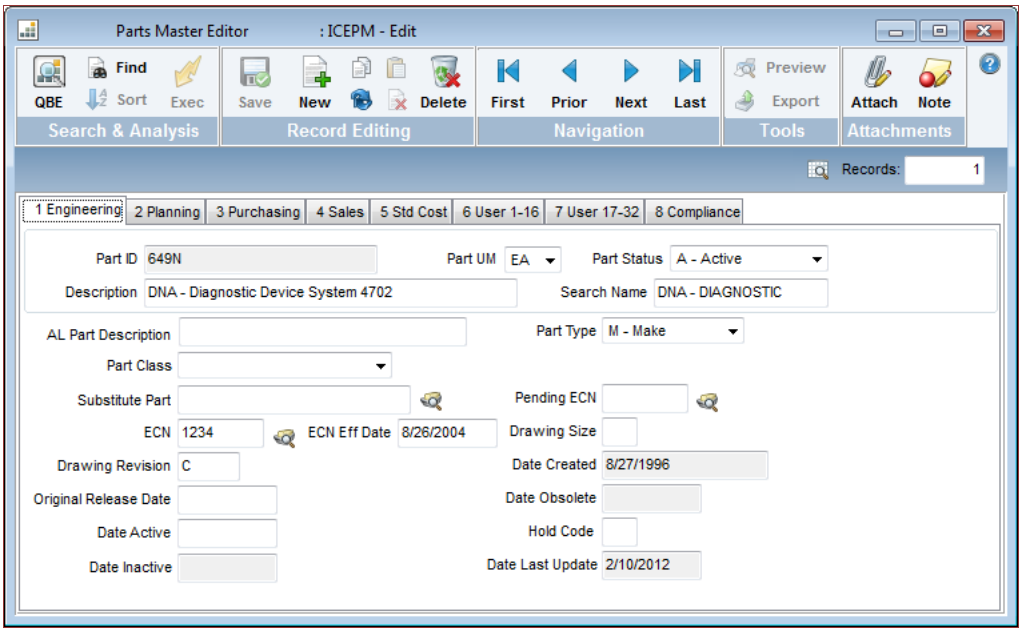


Parts Master Editor continued

To add (insert) a new part, click the **New Record**  button or press **Ctrl + N**.



The following screens show the details on all tabs for a part that was previously entered.



Quick Reference

1. Click the **New Record** button  or press **Ctrl + N**.
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 or press **Ctrl + S**.

Parts Master Editor (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 ID can be constructed of any combination of the twenty-six alphabet letters and the ten numerals (0 through 9) plus the dash (-) and the forward slash (/), for example, A1-B2/03C. Using any other character may result in unforeseen circumstances when processing the **Part ID**.

Part UM is a two-character user-defined 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. Use **Part_UM** as the Data Element Name.

Part Status is an identification code which classifies a part as

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.

If the part status is changed to **Obsolete,** the cumulative and standard unit costs remain the same until a cost rollup and rollover are done. When you do a standard cost rollup, the system will set the obsolete part's Cumulative Cost and Standard Unit Cost fields in the New Standards Table to zero.

Running the **Current Standards Update Utility** will set the value of the obsolete part's cumulative and standard costs to zero in the Parts Master Table. The on hand quantity of the obsolete part will be retained.

Refer to the **Work Flows | Standard Cost Rollup** on the Expandable website for the steps of performing the Cost Rollup.

Description is an alphanumeric field used to describe a part.

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

AL Part Description is the alternate language part description that allows entry of a part description in a language other than the local language. For example, in a system using Japanese characters, the English equivalent of the part description could be entered.

Parts Master Editor (Engineering Tab) continued

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

B	Buy
M	Make
P	Phantom
X	Expense - Floor Stock

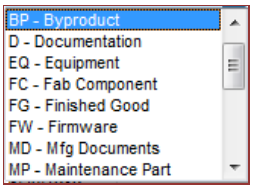
A **Buy** part is any part purchased from an outside vendor for stock or to be used in a Job.

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 Materials for engineering purposes but are issued to the floor in bulk. Examples include nuts and bolts, wire, solder, and other parts that are low in cost and stocked at the work center.

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



Substitute Part is a reference to an alternate part number.

Category Code is a one-character system-defined code that shows **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

Pending ECN is an alphanumeric user-defined field that flags an upcoming engineering change to a part. Use the Lookup button to view any additional pending ECNs.

ECN is an alphanumeric field that holds the most recent Engineering Change Number for a part.

ECN Eff Date is the date an ECN became effective. Use Ctrl + L to display a calendar.

Drawing Size is a character field that stores the size of a part's drawing.

Parts Master Editor (Engineering Tab) continued

Drawing Revision is an alphanumeric field used to store the current drawing revision of a part.

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

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

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

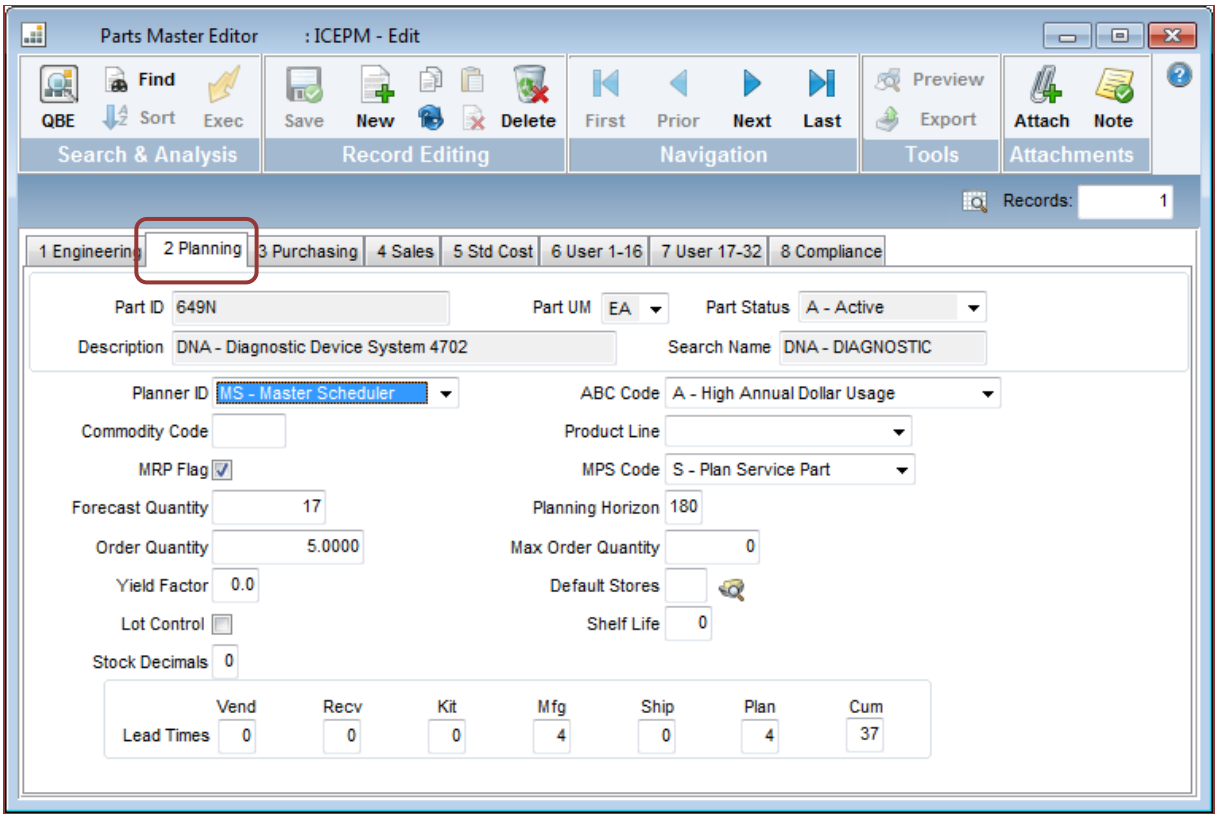
Date Active is the date this part became active. This field is user-maintained except when status is changed from **A** (Active) to any other value. In that situation, Date Active will be set to 00/00/00.

Hold Code is an identification code that 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 Inactive is automatically set to the current date when a part is made **I**nactive under the Part Status field above.

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

Parts Master Editor (Planning Tab)



Planner ID is a three-character user-defined code that identifies the individual or organization responsible for planning the part. This field will be validated against records in the Table Values Editor.

ABC Code is a one-character code that classifies 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 user-defined code typically used to categorize items by their National Motor Freight Class number to determine freight rates. This field will be validated against records in the Table Values Editor.

Product Line is a user-defined 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 general ledger accounts the part is to be charged to when shipped. The **Product Line** field will be validated against records in the Table Values Editor.

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 set to the total gross requirements for the part within the MRP planning horizon.

Parts Master Editor (Planning Tab) continued

Planning Horizon is the number of calendar days a part is planned into the future. The planning horizon is to be used for determining the End Plan Date used in MPS and MRP functions. This field is for reference only.

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 that is allowed on a single Purchase Order Line or processed on a Job. Order Quantity in purchase order entry and job entry and must be less than or equal to **Maximum Order Quantity**. If **Maximum Order Quantity** is set to zero, no check is performed during purchase order entry and job entry. The **Maximum Order Quantity** should be stated in the stocking unit of measure.

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

Default Stores 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 Settings Editor. The information in this field is used to set the Default Stores field in the Customer Part and the Vendor Part Tables.

If **Lot Control** is checked, this part is under Lot Control. This field shows 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 field will show 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 information in the **System Settings Editor** under the **IC** tab.

Parts Master Editor (Planning Tab) continued

Lead Times

Vend is the time it takes to obtain a buy or 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.

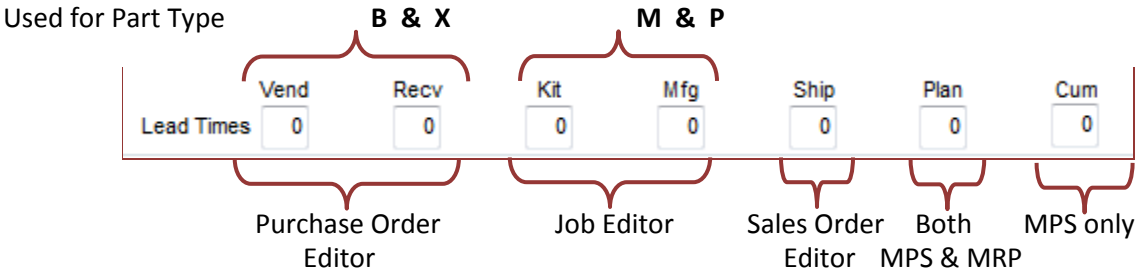
Ship is the total number of days it takes to process a sales order (used by the Sale Order Module).

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.

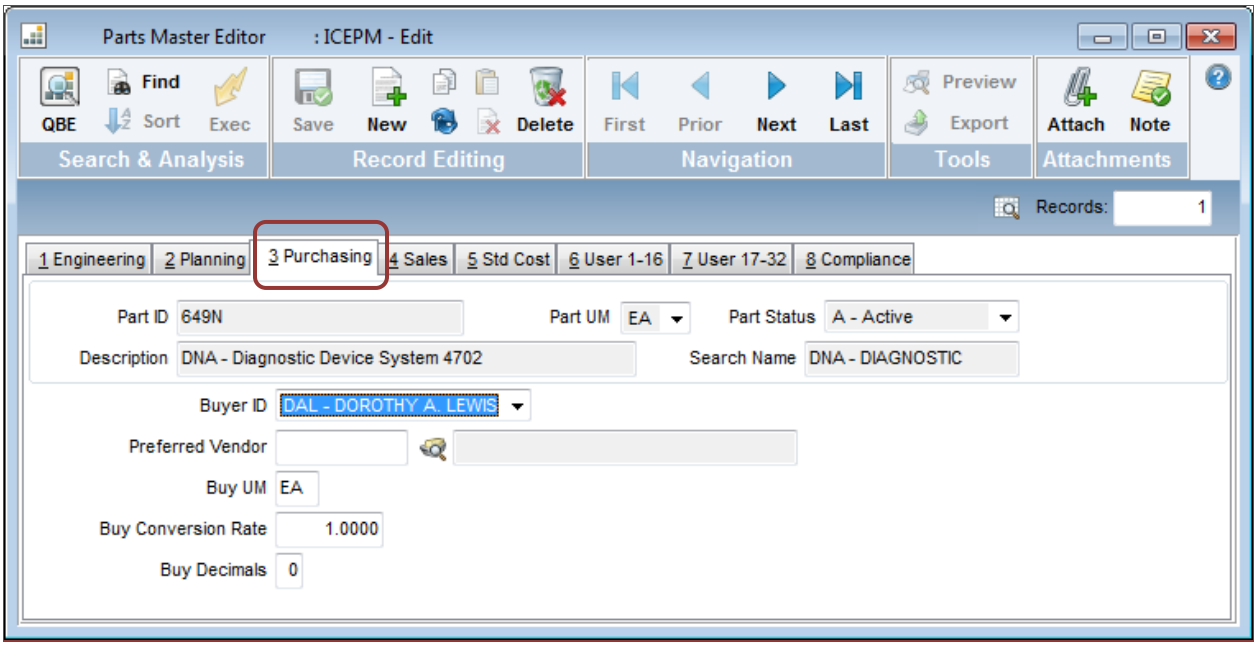
Cum is the theoretical maximum length of time it will take to produce a part assuming nothing exists in stock. This lead time must be greater than or equal to Plan lead time. This field is only used by the Master Scheduling module.

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

What programs use which Lead Times



Parts Master Editor (Purchasing Tab)



Buyer ID is a three-character user-defined data element that identifies the individual who is responsible for the procurement of the part. This field will be validated against records in the Table Values Editor.

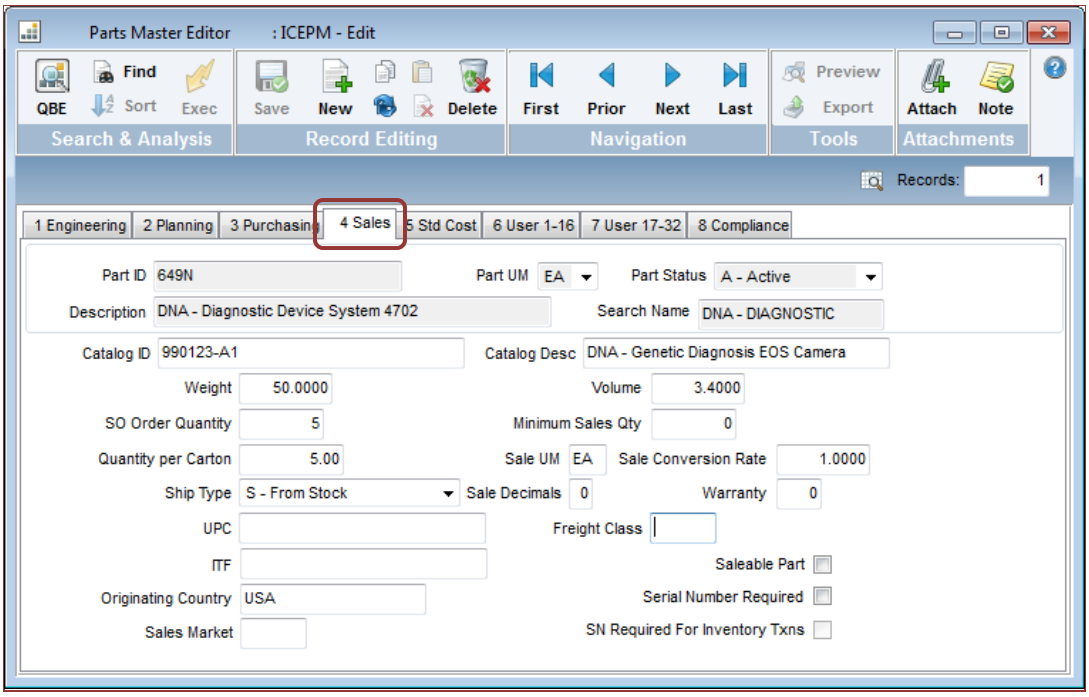
Preferred Vendor is displayed if the part type is a buy part, used to flag the primary vendor. (This is a reference only field.)

Buy UM is the unit of measure used when purchasing a part. This field is only prompted if the Buy Unit of Meas. Conversion box is checked under **System | Parameters | System Settings Editor | 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 factory 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 (Sales Tab)



Catalog ID is the sales identifier for a particular part that could be used on a web portal for the purpose of providing a catalog of products without using the Part ID.

Catalog Desc is a description that can be assigned to a particular part in a catalog of products for a web portal. The **Catalog Description** can be different from the **Part Description**.

Weight is the weight of one item in the stocking unit of measure. This field may be used to print the cumulative weight of the items on the pick list and the weight of the items actually shipped on the packing slip.

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

Quantity per Carton is the quantity of the part packed in each carton for shipping. This field can be used to print the number of cartons shipped on the packing slip.

Sale UM is the unit of measure used when selling a part. This field is only prompted if the Sale Unit of Meas. Conversion box is checked under **System | Parameters | System Settings Editor | 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.

Parts Master Editor (Sales Tab) continued

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

Warranty is the number of calendar days of warranty given for a particular product or service. This number prints on the Packing Slip.

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

Freight Class is a code that specifies an item's freight classification. The freight class is printed on the Packing Slip.

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

Saleable Part (CRM Part) If this box is selected, the part will be flagged as a saleable part whose information should be passed to the CRM system.

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

Sales Market is an identification code that signifies the sales market for a particular part. This code is 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.

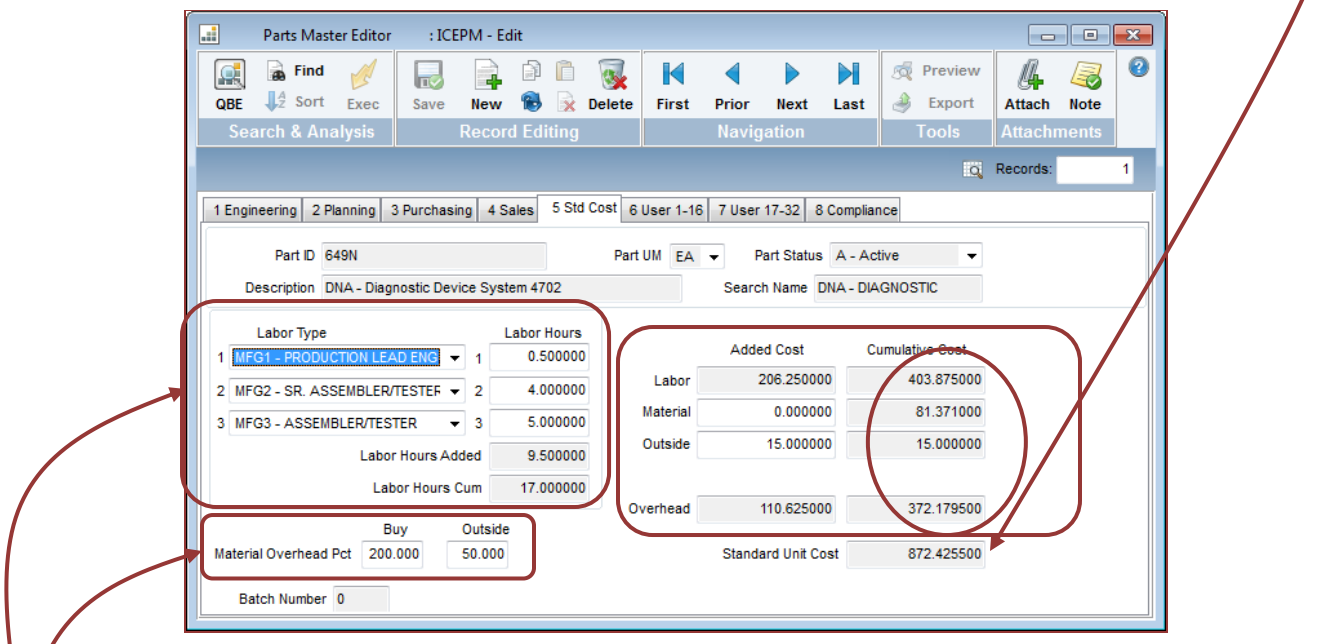
If **Serial Number Required** is checked, serial numbers are prompted and must be entered at the time of shipping.

SN Required for Inventory Txns This box must be checked if the user wishes to track the in-house serial number inventory. Refer to **Customer Support Notes | Marketing/Sales | Note numbers 19, 20 and 21** for detailed information on using this option.

Parts Master Editor (Standard Cost Tab)

This screen contains the data pertinent to the initial set up 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 module to change standards. This process is called the Standard Cost Rollup.

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.

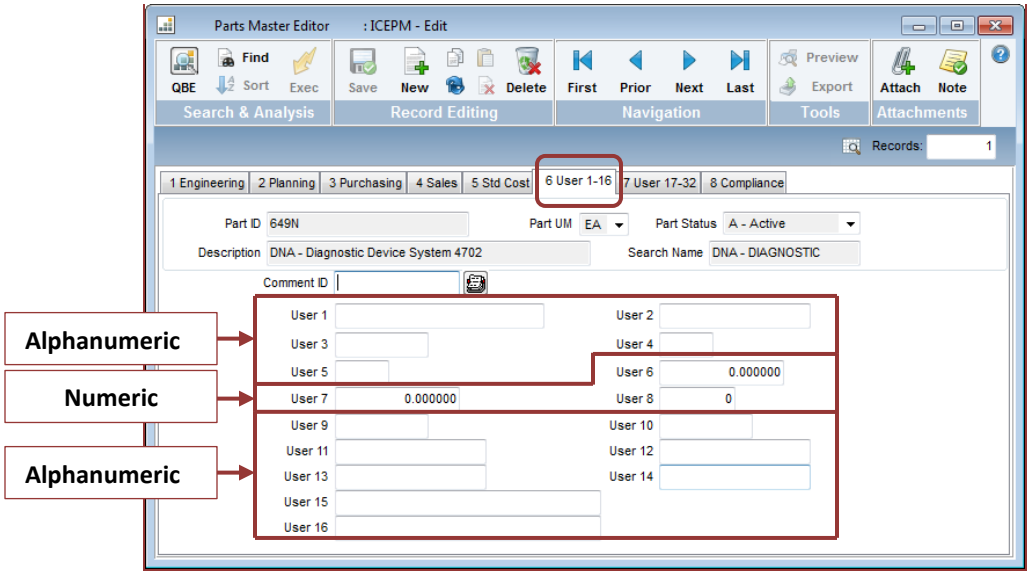
The first group of fields is only prompted for Make and Phantom parts. Labor Costs are used in conjunction with the Labor Distribution Module. Labor Types are defined using the Personnel Parameters Editor, and then can be used for Make Parts. The number of hours needed to manufacture one unit of the part number is 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 (User Tabs 1-16)

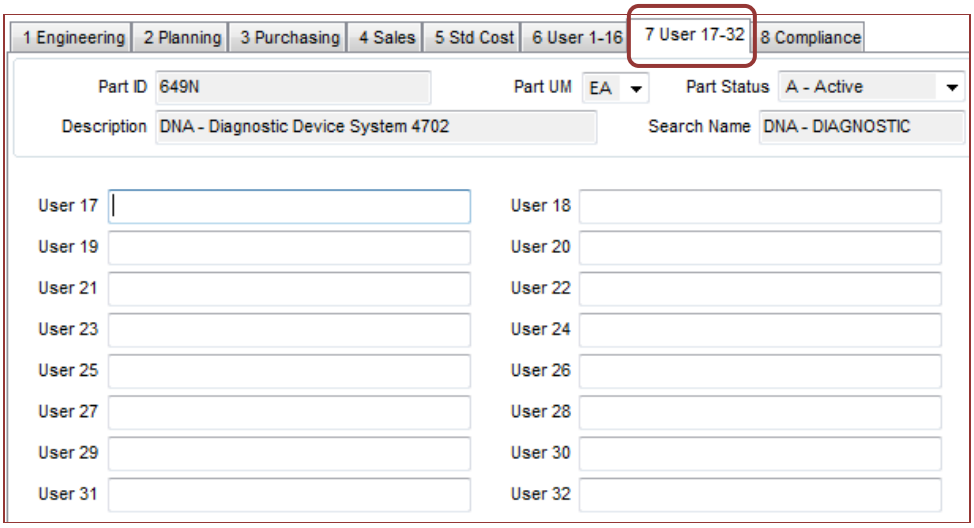


Comment ID is a twelve-character reference field used to associate a part with a standard comment.

User Fields 1 through 5 and **9 through 16** are alphanumeric fields of varying lengths.

User Fields 6 through 8 are numeric fields. Fields 6 and 7 will allow up to six decimals. Field 8 must be a whole number only.

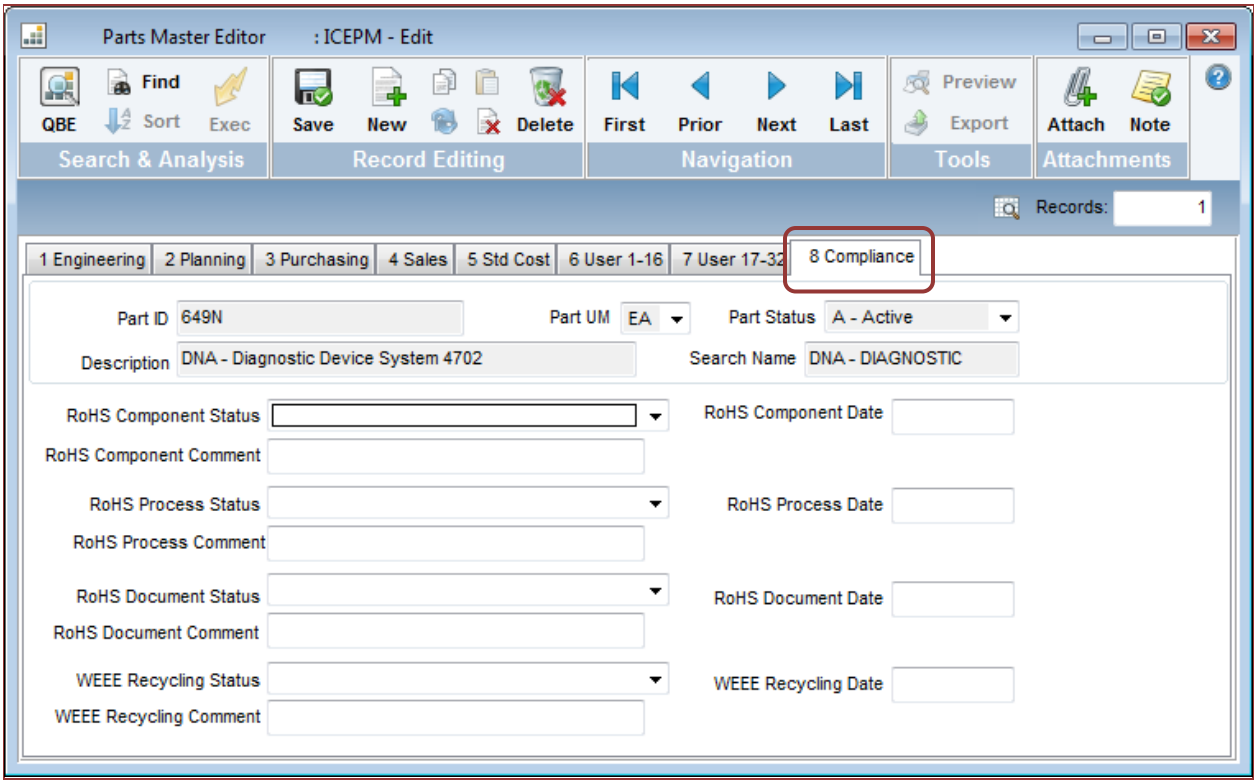
Parts Master Editor (User Tabs 17-32)



User Fields 17 through 32 are alphanumeric fields that can accommodate 255 characters.

The labels for all user fields can be changed using **System | Utilities | User Field Names Maintenance Editor**. Refer to the Customer Resource Center on Expandable's website for information on changing User Field Names. To make changes to the Parts Master User Field, select User Field IDs which begin with ICFPM.

Parts Master Editor (Compliance Tab)

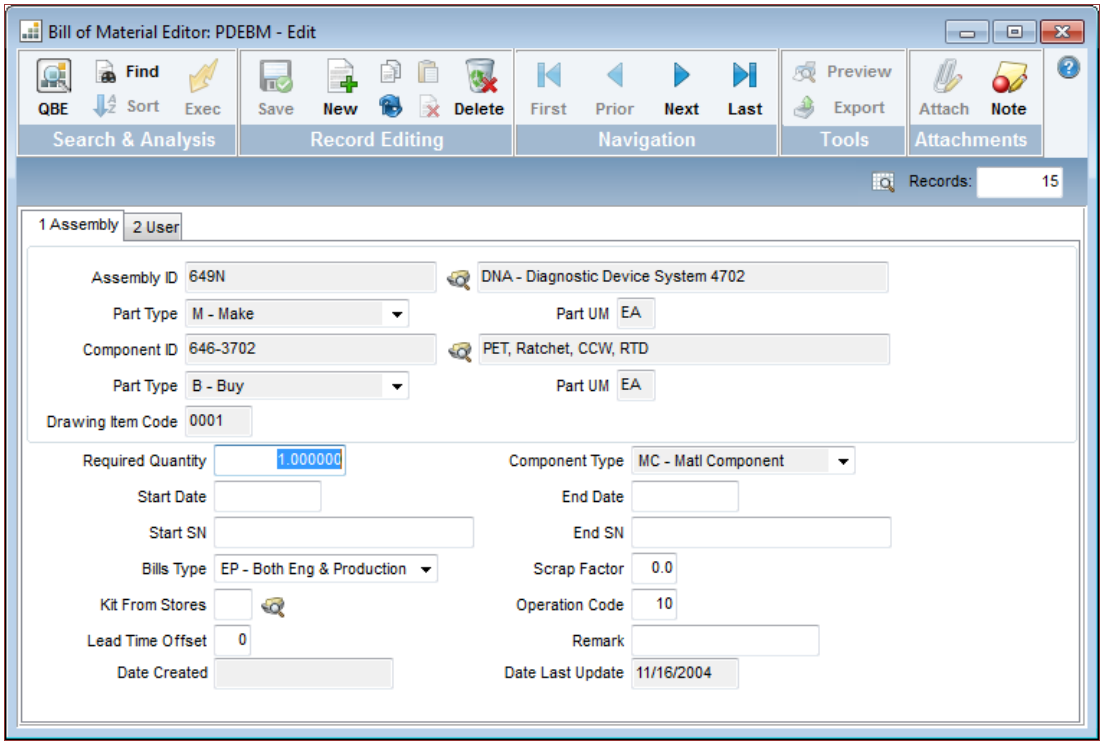


Use this screen to track RoHS and WEEE statuses for the use of certain hazardous substances.

There are five system-defined identification codes that signify whether a part is exempt (X), compliant (C), conditionally compliant (5), not compliant (N), awaiting certification or whether the certification is in process (I) per the European Union directive on the restriction of the use of certain hazardous substances (RoHS) in electrical and electronic equipment (for example, mercury, lead, cadmium, chromium).

Bill of Material Editor

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



Assembly ID and **Component Part ID** 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.

Drawing Item Code is 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, **Drawing Item Code** is required when adding multiple records of a component to an assembly.

Required Quantity is 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 is 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 is 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 is the first serial number of the assembly on which the component was used. This field is reference only.

End SN is the last serial number of the assembly on which the component was used. This field is reference only.

Bills Type is 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 and 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 and 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 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 is the storeroom from which the component is to be kitted. It is used for exceptions to the **Kit from Stores** on a Work Order (Job) or Backflush program.

Operation Code is 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. After Job Release each operation can have different schedule kit dates for processing by MRP.

Lead Time Offset (LTO) is the number of days after the start of an assembly's manufacturing process that this particular component is required. LTO is 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 is a sixteen character data element where the user may enter any notations about this particular item. This field is commonly used to reference the ECO that initiated or changed the record.