

SMMS 6.0 - NEW FUNCTIONS AND FUNCTIONAL ENHANCEMENTS

If you're already familiar with the main modules of SMMS, here's an overview of some of the enhancements in store for you in Version 6!

Work Order Management

Ease of use, rapid system navigation and quality system auditability are the major goals of our work order management enhancements in Version 6.

We've added significant database capabilities to our work order module, including separate auditable history files for work order tasks and equipment safety & hazardous materials plans.

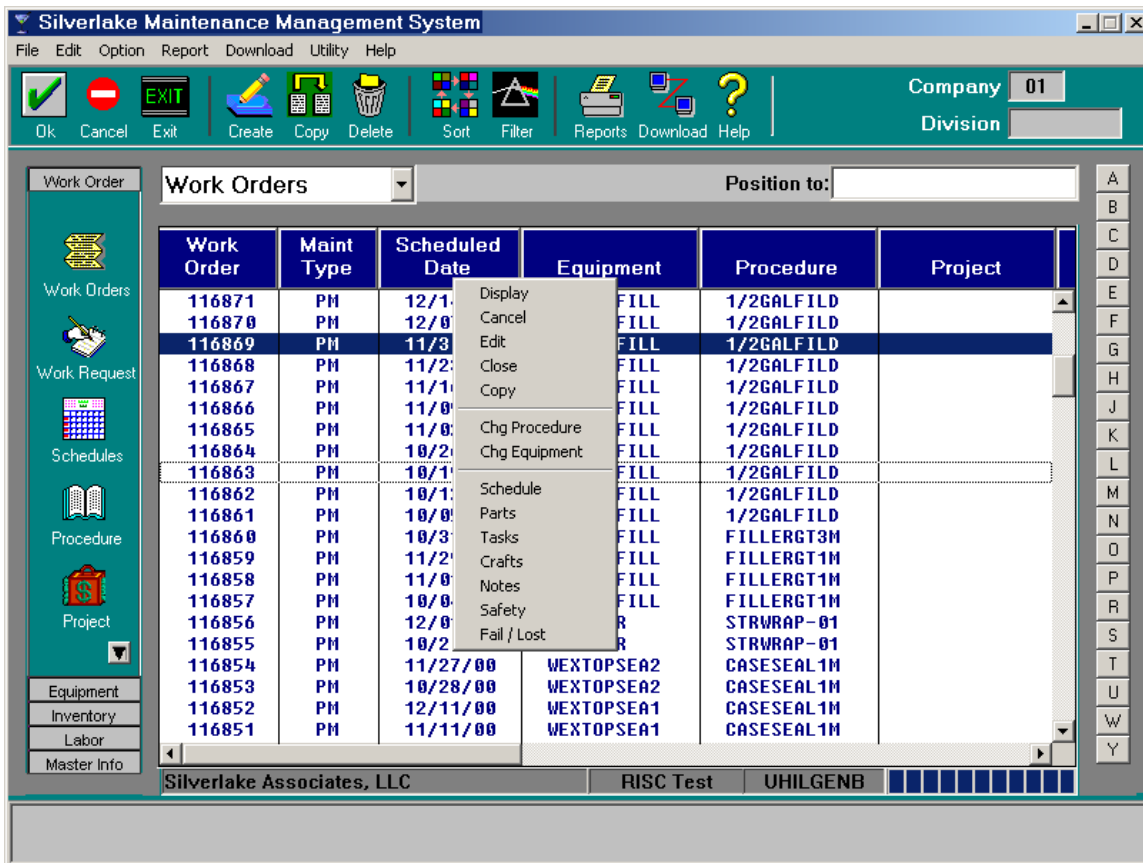


FIGURE 1

Figure 1 illustrates the work order list from the main SMMS screen. This list can be sorted by all of the major work order categories, including Work Order number, Equipment, Procedure, Project, Schedule date, Cost Center and Assigned to.

You can also filter the list by Maintenance Type, Skill and Plant Shutdown code.

As noted above, sort and filtering defaults for all of the SMMS system are defined for each user in the user security file, and can be changed by the user while the program is running. You can also change the sort and filter settings while the program is running without affecting your default settings.

When you select a work order from the list, and press the right mouse button, a pop-up menu displays all of the options available for work order management. The pop-up menu appearance differs based on user security authorizations; the window shown in Figure 4 reflects a fully authorized user.

By selecting a pop-up menu option, you are transferred to the work order maintenance screen for the function and work order you selected!

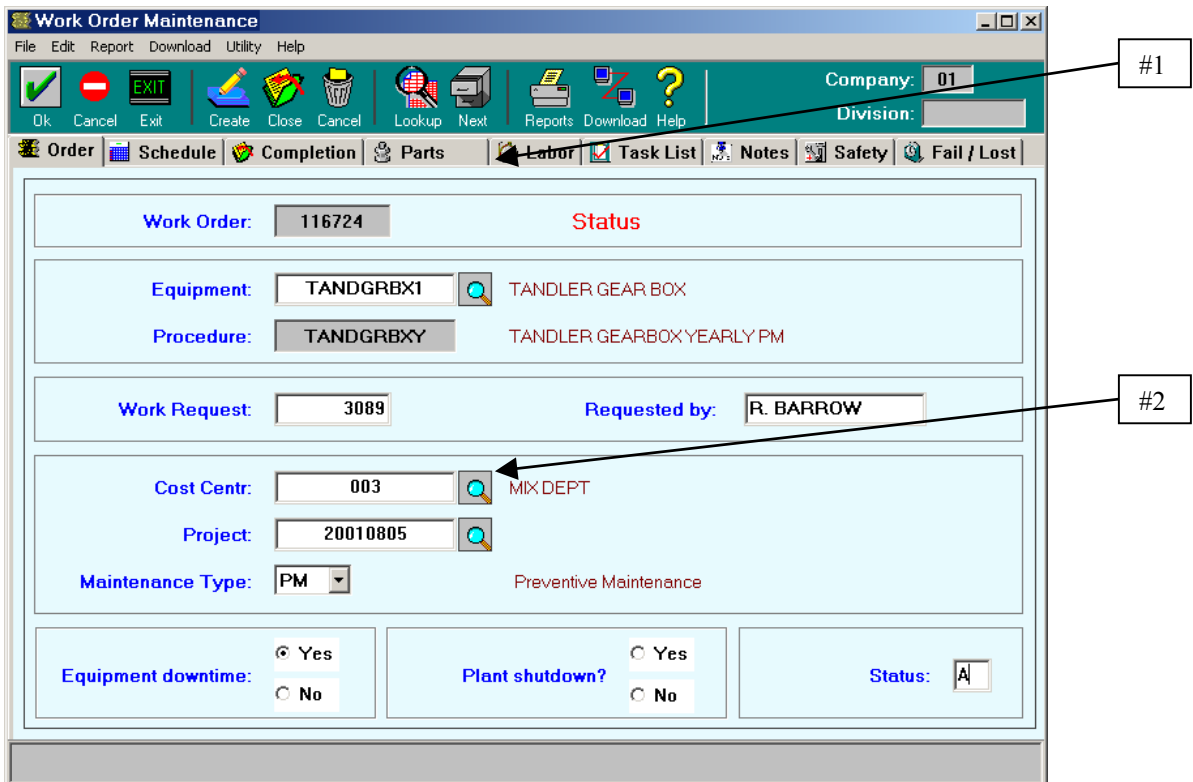


FIGURE 2

Figure 2 shows the maintenance screen for a selected work order. The screen is presented in “notebook style” with nine notebook pages representing each of the major work order management functions: general information, scheduling, completion, parts required & used, labor, tasks, notes, safety & HAZMAT plan, and lost time codes.

Refer to Figure 2, which displays the “general information” tab:

1. Select a different “notebook page” by clicking on the tab with the mouse.
2. You can “look up” codes by clicking on the “spyglass” box to display a selection window.

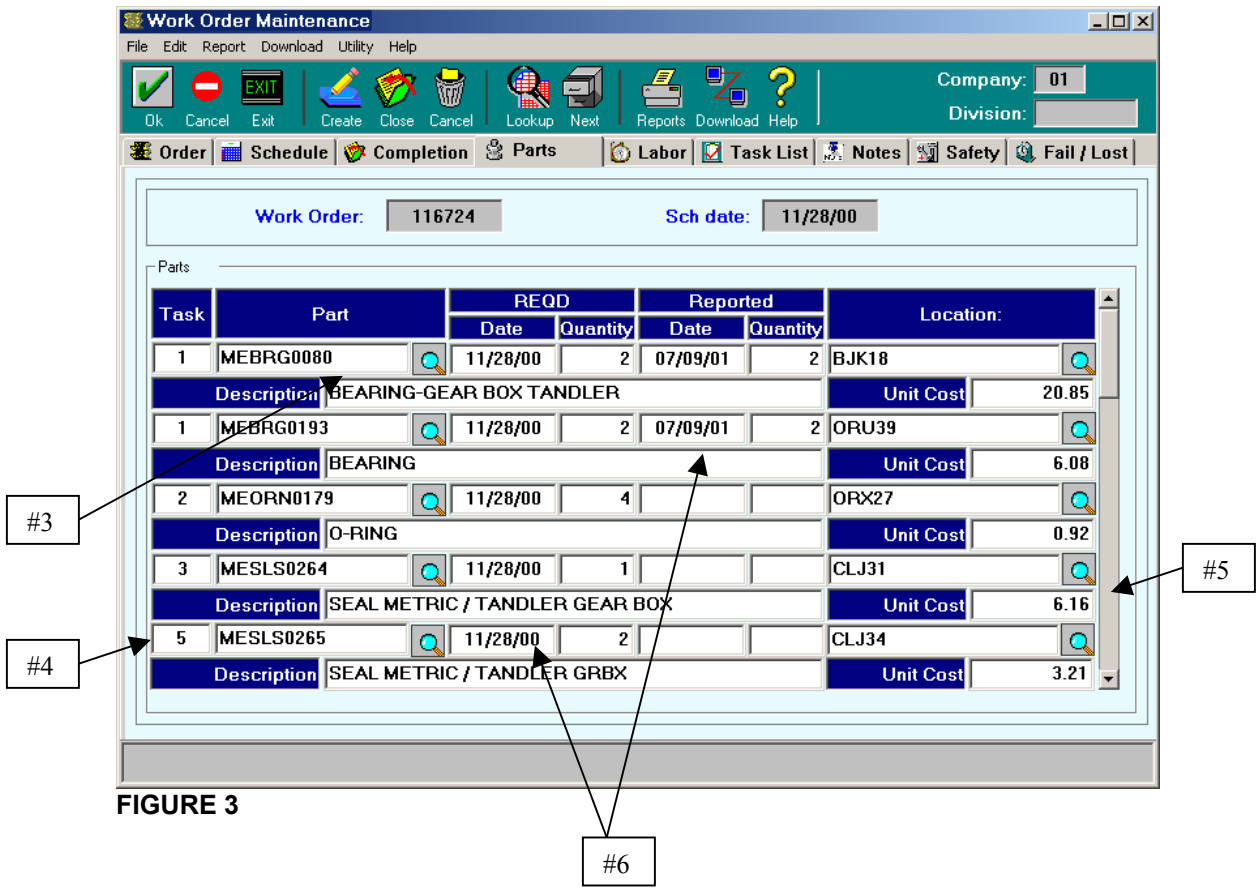


FIGURE 3

Figure 3 illustrates part requirements and usage reporting, which have been combined to a single screen for Version 6.

3. You can add parts required and parts used for a work order by scanning the part number with a wedge scanner, selecting it from a popup selection list, or typing the part number in directly. As with earlier versions, “lookup” screens are available for Parts and Locations.

4. Required parts can be linked to a specific Task Id, which are independently schedulable in Version 6.

5. If you’re using the actual (or “replacement”) costing method, you can enter the part cost directly on the work order screen as the parts are used.

6. “Double-click” on any date to display a calendar window.

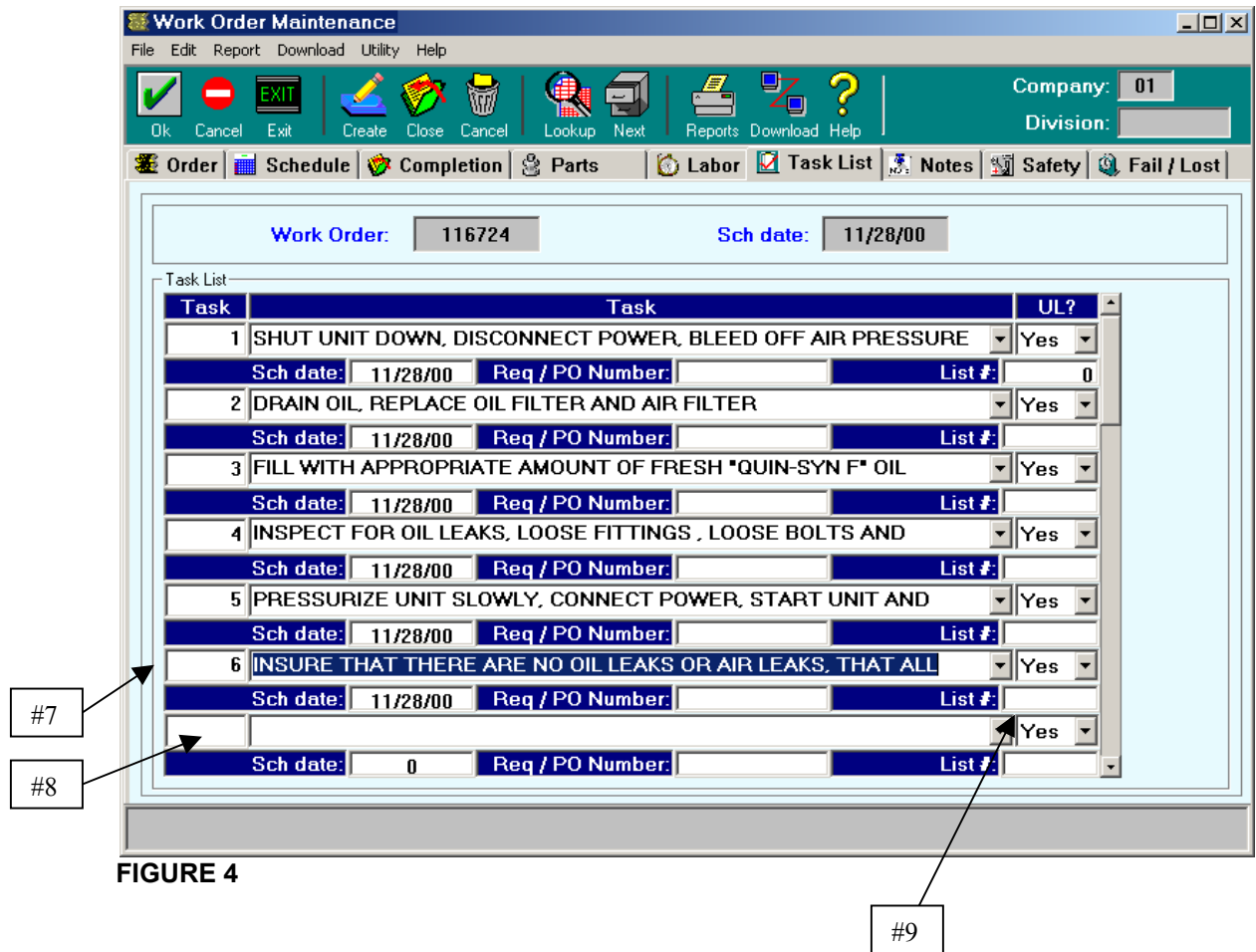


FIGURE 4

Figure 4 shows a sample work order task list.

7. Version 6 tasks are sequentially numbered and each task can be independently scheduled. The ability to independently schedule tasks allows you to link purchase order requirement dates, fine-tune your labor schedule, and tie-in sub-contract work orders to contract maintenance.

8. You can also add, remove, and change tasks applicable to this work order only. In prior versions of SMMS, this feature was available only for "temporary" procedures (**TEMP procedures).

9. Work order procedures that have "outsource requirements" can automatically create a purchase order for the outside service, based on the Contract List number defined on the procedure.

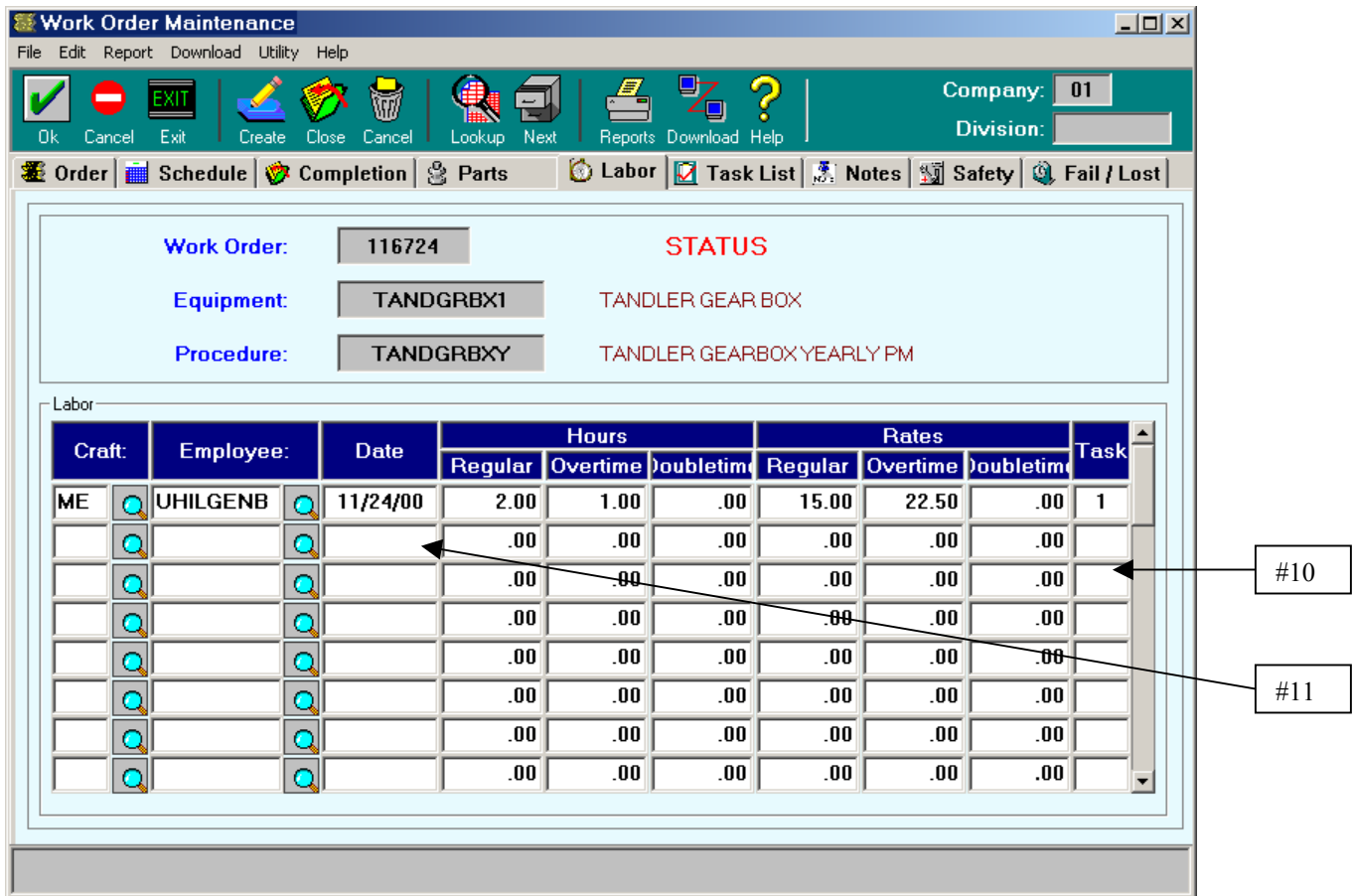


FIGURE 5

10. Labor reporting maintains the same familiar interface-style for version 6 (Figure 5) with the added feature of being able to tie specific labor hours in to specific work order tasks.

11. Double-click on any date field to display a calendar screen from which you can select a date.

Additional Work Order Enhancements

Other new work order features include the ability to store Safety and Hazardous Materials handling plans based on equipment id, rather than as part of the work order notes (as required in prior versions.) In Version 6, your safety and HAZMAT plans are stored permanently and separately for each Work Order and can be tailored to the needs of the work order. This provides a permanent, work order-based audit trail.

Work orders can be closed or canceled as a group, *en masse*, instead of one at a time – as in prior releases. This is accomplished by selecting multiple work orders (the orders you want to close or cancel), right clicking to get the pop-up menu, and selecting “Multiple Close” or “Multiple Cancel”.

Clients using generic work orders for nonscheduled maintenance can enter multiple work orders, up to 999 at one time, for the same equipment and procedure id. This enables you to create multiple “TBD” orders for your nonscheduled maintenance all at once.

Parts & Inventory Management Enhancements

Based on user suggestions, Version 6 adds inventory consolidation features, additional costing methods, and integrates inventory management features with the new functions added for work orders and purchasing.

The screenshot shows the 'Part Maintenance & Inquiry' window for part ELBLB0019 (BULB 75W REFLECTOR S82054). The interface includes a menu bar (File, Edit, Report, Download, Utility, Help), a toolbar with icons for Ok, Cancel, Exit, Create, Copy, Delete, Lookup, Next, Reports, Download, and Help, and a company/division selector (Company: 01, Division:). Below the toolbar is a tabbed interface with 'Status' selected. The main area is divided into four sections:

- Cost Status:**
 - Average Cost: 6.20
 - Weighted Average: 6.11
 - Standard Cost: 6.15
 - Replacement Cost: 6.40
- Purchase Background:**

Receipts	Quantity	Unit Cost	Extension
Last: 8/14/00	50	6.20	310.00
Middle Receipt:	25	6.40	160.00
First Receipt:	100	6.00	600.00
Total:	175		1,070.00
- Inventory Status:**
 - On Hand: 45
 - Committed: 25
 - On Order: 50
 - Available: 20
- Locations:**

Location	Quantity
D2152	20
T1212	19
T1321	6

FIGURE 6

NEW COSTING METHODS (Figure 6). Version 6 allows you to use one of four costing methods for your inventory. In addition to the traditional “average cost” approach:

- **Weighted Average Cost.** Uses the “weighted average” of receipts and total cost over the most recent three receipts to calculate a part cost.
- **Standard Cost.** Uses a cost standard defined for the part and manually assigned periodically (for example, in conjunction with annual budgets.)
- **Replacement (Actual) Cost.** Enter the part cost at the time it’s used on a work order, based on the actual or replacement value.

The part costing method you choose is selected at the Company or Division level.

Part Maintenance & Inquiry

File Edit Report Download Utility Help

Ok Cancel Exit Create Copy Delete Lookup Next Reports Download Help

Company: 01
Division:

Part Inventory Status User Defined Adjustments Notes Vendors Equipment Orders

Part Id: ELBLB0019 BULB 75W REFLECTOR S82054

Unit of Measure: EA Each

Cost Centr

Item Class: EL
Sub-class: BLB

Reorder Information: Reorder Don't Reorder

Category: Part Assembly Sub-assembly

Rules: Usual Order Quantity: 5 Max Order Qty: 6 ABC Code: A
Minimum Inventory: 2 Cycle Count Code: 90

CORP: Corporate Part Id: ELBLB0019 BULB 75W REFLECTOR S82054

FIGURE 7

MEASUREMENTS AND STANDARDIZATION (Figure 7). A new “Unit of Measure” master file helps validate and standardize part unit of measure reporting in Version 6. Also, there are now three categories of parts you can define to the system:

- Basic parts
- Sub-assemblies
- Assemblies

You can now purchase, inventory, and use assemblies and sub-assemblies on work orders! (In Version 7, we’ll add Bill of Material processing in order to provide complete definitional capabilities for assemblies.)

The “Corporate Part Id” shown near the bottom of the screen is designated to be the “master” part id for your corporation. This enables us to provide a “Consolidated Inventory Display” and “Consolidated Inventory Report” that you can use to locate substitution parts in other divisions of your Company --- even if the other divisions all use a different part numbering scheme than you!

The “Consolidated Inventory Display” is sortable by Company, Division, Corporate Part Id and local Part Id to enable easy cross-reference. The Consolidated Inventory screen is accessed from the “Inventory” outlook bar on the main system display.

FIGURE 8

MANUFACTURER DATABASE AND MANUFACTURER PART NUMBER (Figure 8). Finding the correct SMMS part number when you only have the Manufacturer’s Part Number available is an important cross-reference capability.

In Version 6 of SMMS, we’ve added a “Manufacturer” database to store and track critical information about equipment and part manufacturers. We’ve also added a new tracking capability to the Part Master database to allow you to sort and lookup part numbers by the Manufacturer’s part number.

Additional Inventory Enhancements

- You can now have up to 99 “user defined” fields on the part master and related master information screens, allowing you to define your own data elements to track and store in the SMMS system.
- Receive a part into a warehouse location without the need to first define that location for the part in Part Maintenance.
- The Part Maintenance & Inquiry screen contains a notebook tab showing ALL purchase orders (open and history) that acquired the part!

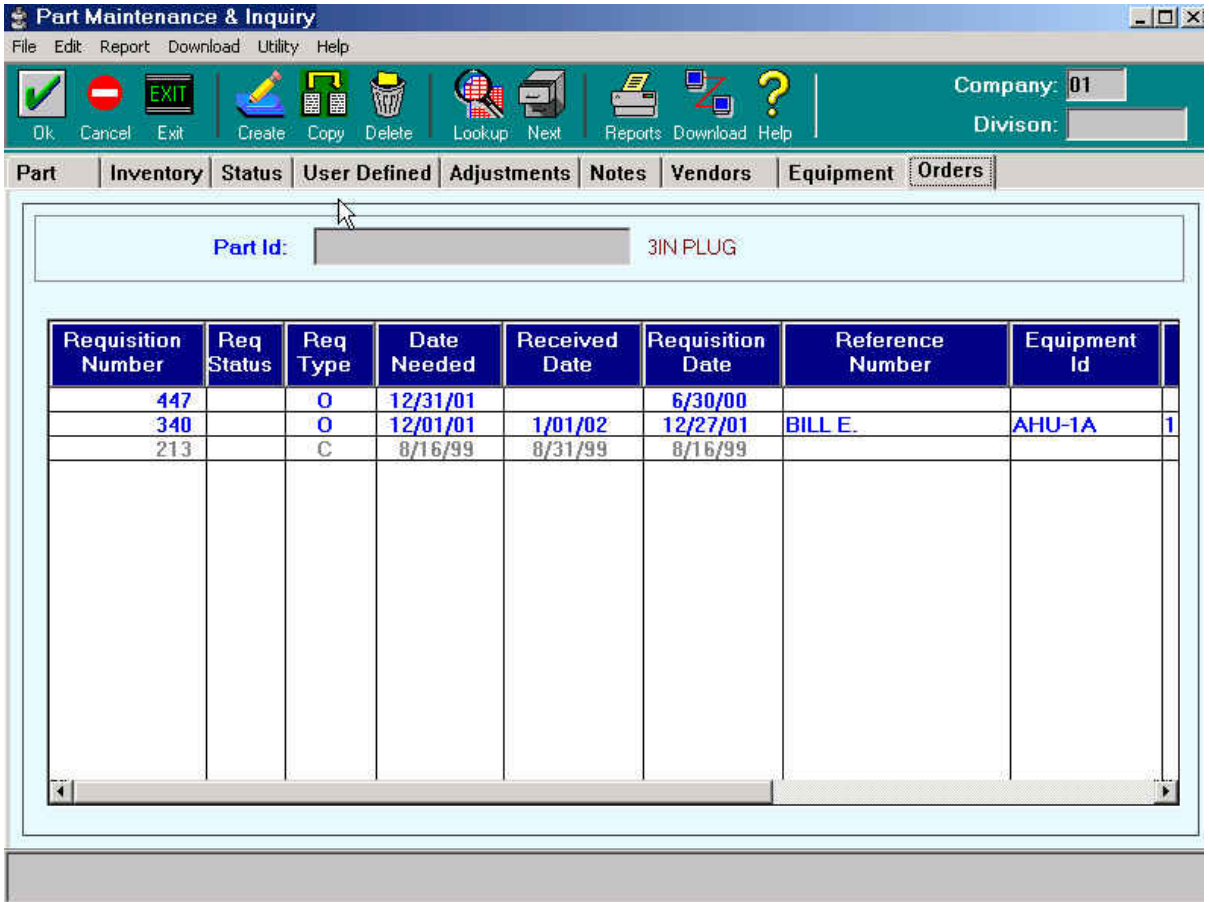


Figure 9

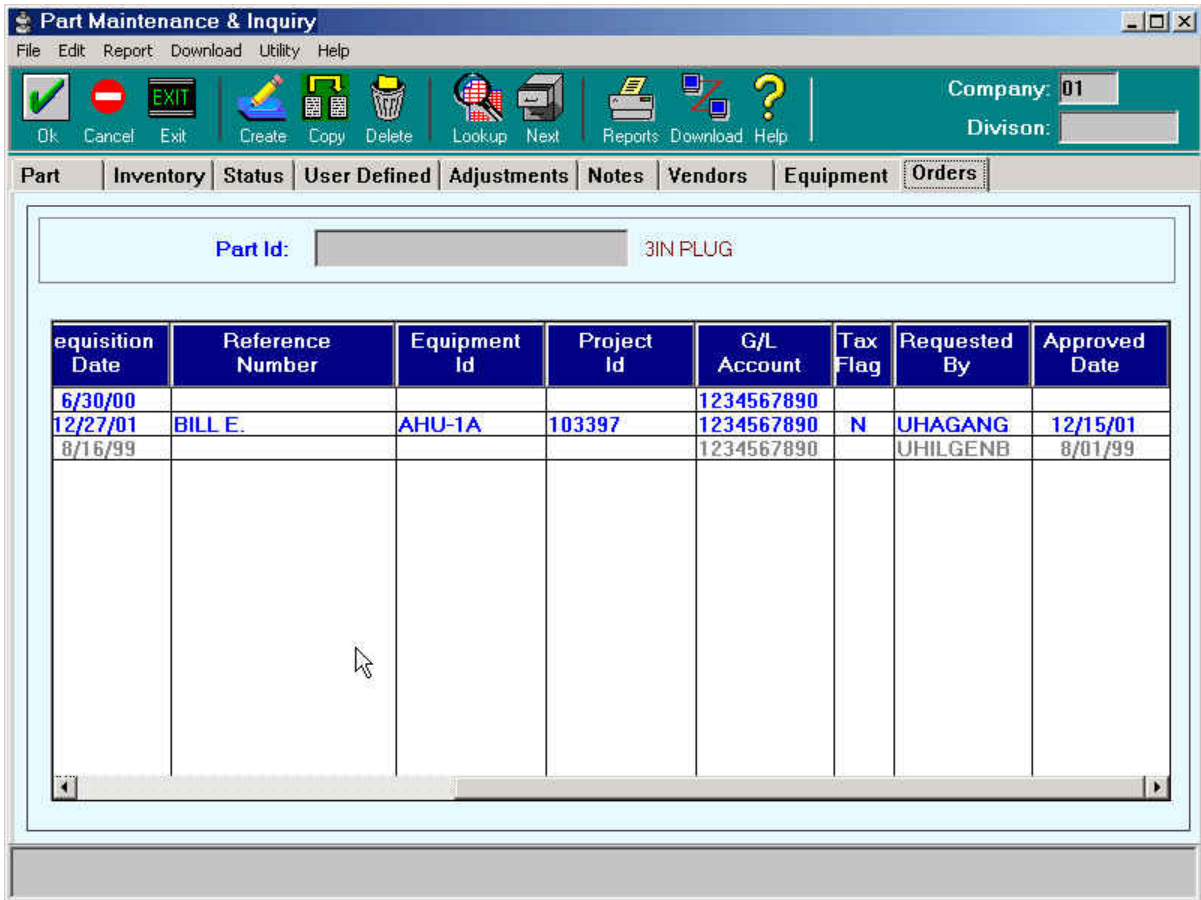


Figure 10

- There is also a separate tab that shows the complete inventory adjustment history for each part in the Part Maintenance & Inquiry program.

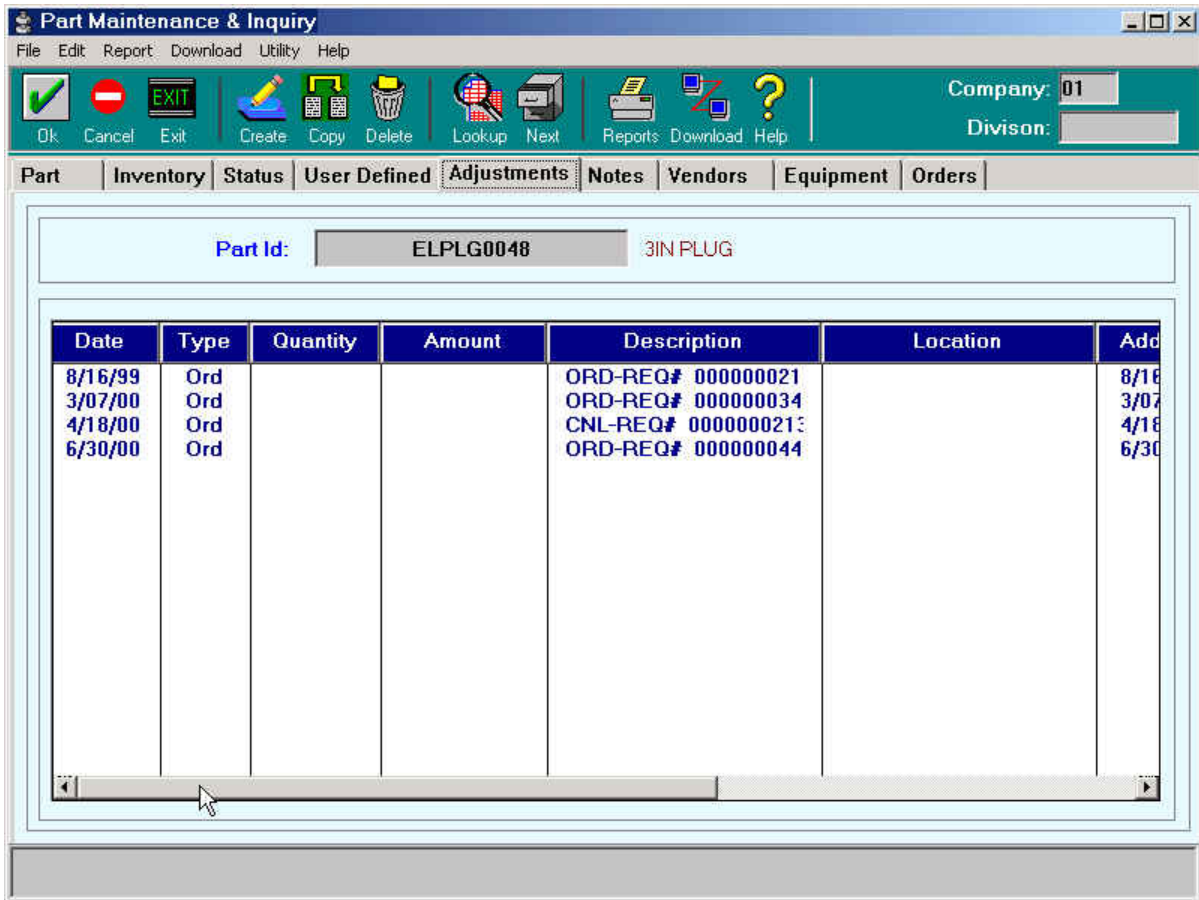


Figure 11

Purchasing

SMMS Version 6 significantly increases the power and flexibility of our purchasing module while preserving simplicity and ease of use.

To meet this goal, we've improved the processing and information flow through the purchasing module, provided new linkages to expand the SMMS interface with other systems, and provided a means to use vendor contract maintenance for outside services and work orders.

The screenshot shows the 'Requisition/P O Maintenance' window. The title bar includes 'File Edit Report Download Utility Help'. The menu bar contains 'Ok Cancel Exit Create Close Cancel Lookup Next Reports Download Help'. The 'Company' field is set to '01' and 'Division' is empty. The 'Order Heading' tab is active, showing the following details:

- Req / PO Number: 340
- Status: (empty)
- Requisition Type: MANUAL
- Vendor: ALLOYEQU (ALLOY EQUIPMENT CORP)
- PO Number: P3924
- Requested by: UHAGANG
- Approved by: UHILGENB
- Reference: BILL E.
- Order Dates:

Required Date:	12/27/01
PO Date:	12/15/01
Date needed:	1/08/02
Last Receipt Date:	12/24/01
Approved date:	12/15/01
- Cost Cent: 9162618 (GEN PLANT AND BUILDING)
- Project: 103397 (VENT HOOD FOR BATCH ROOM DUST CONTROL)
- Equipment: AHU-1A (AIR HANDLING UNIT #1A P)

FIGURE 12

Figure 12F shows the new header screen for Requisitions & Purchase Orders.

A major enhancement in Version 6 is that you can enter manual requisitions and purchase orders *without* using existing order proofs, as required by prior versions. This provides greater flexibility in ordering as “rush” orders need not be tied-in to existing proofs.

As with earlier versions of SMMS, the system will assign a requisition number for each order processed; your use of the manual Purchase Order number field is optional.

We’ve enhanced the tie-ins for purchasing and inventory in Version 6, making it easier for you to interface SMMS inventory and purchasing to your corporate ERP system, while maintaining the integrity and scope of maintenance inventory information.

The screenshot shows a software window titled "Requisition/P O Maintenance". The menu bar includes File, Edit, Report, Download, Utility, and Help. The toolbar contains icons for Ok, Cancel, Exit, Create, Close, Cancel, Lookup, Next, Reports, Download, and Help. The "Company" field is set to "01" and "Division" is empty. The "Order Heading" tab is selected, showing "Delivery" as the active sub-tab. The main form area contains the following fields:

- Req / PO Number:** 340
- Status:** (empty)
- Requisition Type:** MANUAL
- Ship To Information:**
 - Ship to Name: SILVERLAKE ASSOCIATES, LLC
 - Street Address: 3209 YORKTOWN AVENUE
 - SUITE 172
 - City / State / Zip: DURHAM NC 27713
- Contact:**
 - Contact Name: JOHN CALDWELL
 - Contact Phone: 9193619727
- Work Order:**
 - Work Order: 115660
 - Task: 1
 - List #: (empty)
- Other Fields:**
 - Taxable: NO
 - Revision: 3
 - Rev Date: 12/21/01
 - FOB Point: OUR PLANT
 - Ship Via: BEST WAY
 - Terms: NET 30 DAYS

FIGURE 13

Figure 13 shows the Delivery screen for Requisitions and Purchase Orders. This screen contains the shipping instructions for the order.

You can explicitly tie-in to a work order task by entering the work order number and task id into this screen. Likewise, you can use the "List" field to indicate the contract list to be performed on the requisition. When you enter a quotation list number into this screen, the system will print out the tasks and other special information related to a vendor sub-contract or "outsourced" maintenance activity.

Also new for Version 6 is the ability to track order revision and revision dates. The system will automatically increment the revision number and revision date when key purchasing values change, such as quantity, price, delivery date, and item numbers.

The Order Completion screen (not shown) allows you to close orders, and shows receiving and related details. In Version 6, you can use this screen to receive parts complete and close the order, all with a single click of the mouse! This saves the labor of receiving the line items one-by-one before you can close the order.

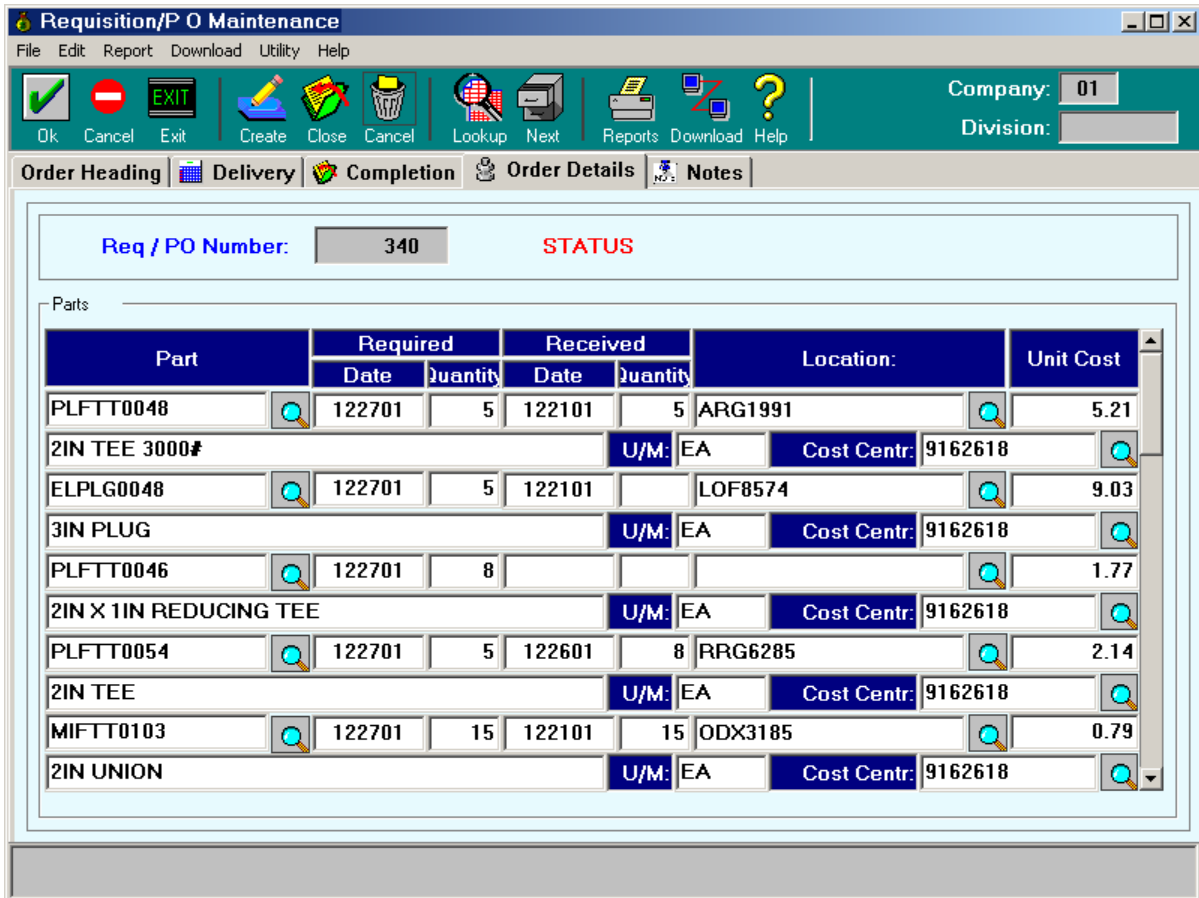


FIGURE 14

Figure 14 shows the Order Details screen, listing the parts on the order. Now you can enter, change and receive line items on the same screen. (There is also a “rapid entry” screen for receiving use with bar code scanners.)

Version 6 also allows you to use special items for overhead lines such as premium freight, rush order charges, and other order-related charges.

For sub-contract and outsource maintenance, this screen will show a special item referring to the quotation number from the Delivery panel. An additional notebook page (not visible here) also shows the quotation task list, which is printed to accompany the order to the vendor.

Additional Purchasing Enhancements

When you enter a new Work Order that requires an outside contract operation, the SMMS system will automatically create a vendor requisition for the Vendor Quotation linked to the WO’s Procedure Task List.

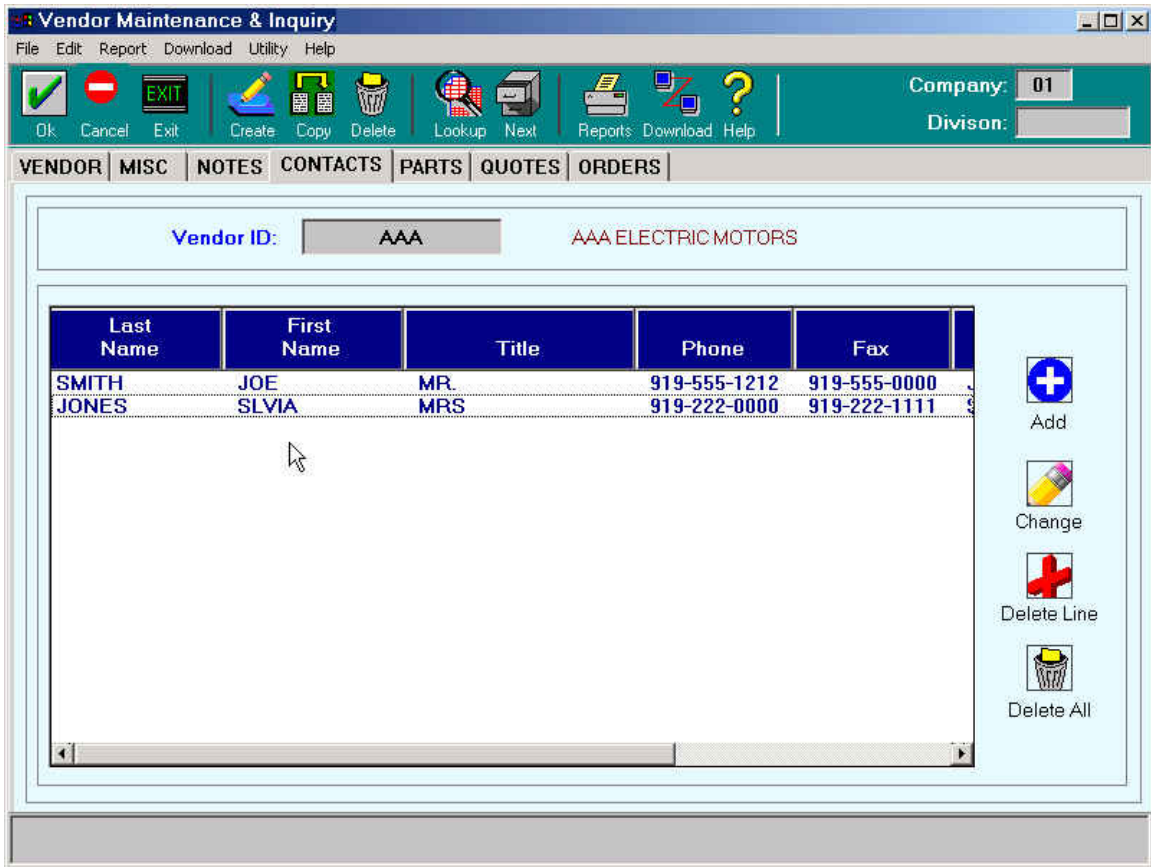


Figure 15

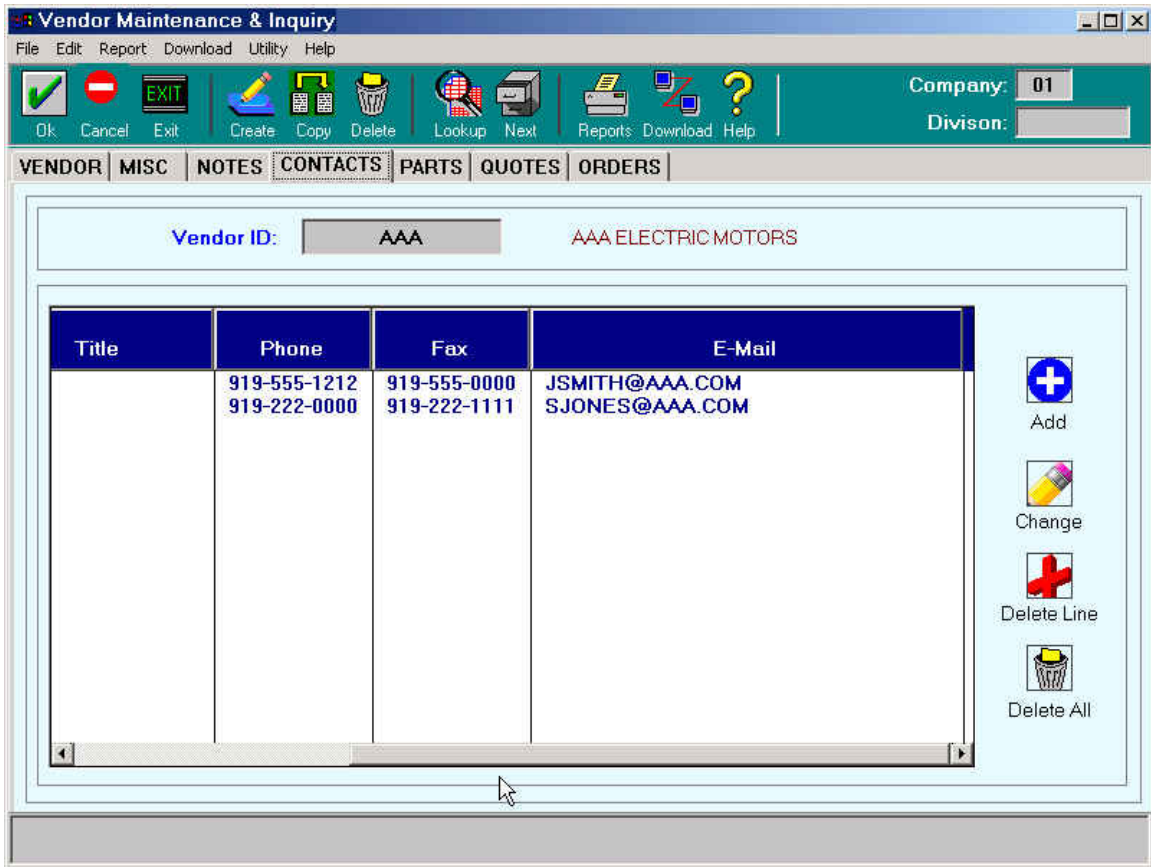


Figure 16

In Vendor Maintenance, we've added a new "Contacts" screen that allows you to enter multiple vendor contact names, phone numbers and email addresses...enabling you to store all of your vendor relationships online. There's also a "corporate" vendor id, enabling you to define a hierarchical relationship between vendors of related companies.

Master Information Enhancements

Many of the Master Information databases have been expanded to allow you to store additional maintenance information:

- **User-Defined Fields** – Many times the "standard" information stored in the system is not adequate to meet your Company's needs. For that reason, we've added "user-defined" fields to the Equipment, Employee, and Parts files. These "user defined" fields allow you to define and store up to 99 additional data fields for each file.

Order #	Status	Procedure	Type	Schedule Date	Completed	Project	Skill	Plan hutdown
116093	Open	AHU301A	PM	12/06/00			MECH.	
116092	Open	AHU301A	PM	10/22/00			MECH.	
116091	Open	AHU-200	PM	10/22/00			MECHANICAL	
115706	Completed	AHU301A	PM	9/07/00	9/18/00		MECH.	
115370	Completed	*TEMP2307!	NS		8/04/00		CONTRACTOR	
114993	Open	AHU301A	PM	7/24/00			MECH.	
114992	Open	AHU-200	PM	7/24/00			MECHANICAL	
48537	Open	AHU301A	PM	7/05/00			MECH.	
46463	Canceled	AHU301A	PM	1/07/00				
44965	Canceled	AHU301A	PM	8/25/99				
44342	Canceled	AHU301A	PM	7/11/99				
43807	Canceled	AHU-200	PM	6/02/99				
43738	Canceled	AHU301A	PM	5/27/99				
43168	Canceled	AHU301A	PM	4/12/99				
42537	Canceled	AHU-200	PM	3/04/99				
42423	Canceled	AHU301A	PM	2/26/99				

FIGURE 17

- Figure 17 shows a sample of the “Order List” now included with many of the master information screens. The “Order List” shows the complete order history for equipment, parts, vendors, schedules, procedures, and crafts.

The order list shown in Figure 17 is the work order history for the equipment file, and is part of the Equipment Maintenance & Inquiry screen. Note that the order list is comprised of all open, closed and canceled orders, providing a complete “order history” picture for the equipment item.

- Safety & Hazardous Materials – Safety and HAZMAT plans are now defined separately for each equipment item, and they are stored separately with each work order. This allows segregation of the safety plans from the Notes files, and the Safety plan can be customized for each work order.
- Equipment Locations and Sub-Locations -- Now you can define distinct equipment locations and sub-locations as part of your Equipment database.
- Work Order tasks are also now maintainable and stored separately with each work order... you’ll always have an accurate work order history, even if the tasks were customized.

- Additional scheduling flexibility is provided through separately assigning and scheduling each work order task. You can also link tasks with labor reporting and parts utilization, as well as vendor “outsourced” maintenance.
- “Equipment Categories” are now a part of the Equipment file, permitting you to refine and categorize equipment name standards. Examples of equipment categories might be: Motors, Compressors, Conveyors, Boilers.

The screenshot shows the 'Equipment Maintenance & Inquiry' software window. The 'Nameplate' tab is selected, displaying the following information:

- Equipment Id:** ACP490.1 (QUINCY-AIR COMPRESSOR NO.3)
- Category:** COMPR (Compressor)
- Manufacturer Id:** CODE
- Manufacturer Model:** 490 ASDF
- Serial Number:** SIO4ACA3MG92842

Below this information are two sub-tables:

Electrical

A/C Area:	COMP ROOM
Electrical Line:	4810
Phase:	3
Voltage:	480
Amperage:	2.00
Kilowatts:	560.0

Nameplate

Description	Value
Leak	313
PSI	470
Refrigerant	717

FIGURE 18

Define and store “Name Plate” information for equipment items based on the Equipment Category, by creating standardized categories for equipment information normally appearing on the equipment “name plate.” In Figure 18, the Name Plate information shown for the Compressor is unique to the COMPR Equipment Category.