

Maintenance Management Module

With Ross ERP you have all of the current and historical data you need to control and effectively manage this area of your business, ensure consistently high levels of equipment reliability, regulatory compliance, and cost containment, and extend the life of significant capital assets.

Repair Work Orders

By enabling you to manage your work orders electronically, Ross ERP enables you to eliminate costly and time-consuming paper shuffling.

You can verify availability and status of required spare parts, tooling, supplies and personnel before releasing work orders. You get consistent, complete estimating, planning, approval and tracking of all forms of work orders. And up-to-the-minute status of all work orders is available online, allowing you to view progress against any work order.

Initiating / Creating Work Orders

Choosing the right type of work order helps you define the type of maintenance to be performed and its cost, and you can select from a broad range of work order types, including:

- Corrective: provide for planning, supervisory review and approval.
- Emergency: used for immediate repair work.
- Short-form: accommodate short duration, unplanned repair work.
- Project: used for capital projects or major repair work such as overhauls, upgrades and reconfigurations, and provide the additional accounting, scheduling and coordination detail that these type of projects require.

Ross ERP provides you with instant equipment selection or account number lookup in the work order initiation process based on whatever your user happens to know about the asset.

- You can select a parts list for inclusion in any of the work order steps. And you can verify availability and status of required spare parts, tooling, and supplies before releasing work orders, and can add to or remove parts at any time before approval.

It makes it easy for you to work safely and efficiently with work orders that include:

- Safety requirements, such as permits, safety equipment and other equipment that you need to obtain before carrying out the work order.
- Work order steps that have unique safety-requirement information associated with them.
- Priority codes to establish the scheduling priority of a work order according to the urgency of the request.
- Work order notebooks, such as text files that specify information such as work instructions and required tools.

Recording Work

You can document the activities that are done during each step of the work order. This includes completion comments, cause and effect codes, machine downtime, and the identity of the individual accomplishing the administrative completion of the work order.

- Job start activities: releasing jobs maintenance.
- Machine time activities: details of machine-related costs, if appropriate, such as date used, time started and units or time allocated, plus updated and calculated overhead allocations.
- Labor functions: direct labor cost information from time cards, including employee, work order and step, subdivided into standard time, overtime and two levels of premium time, plus user comments for each time card to supplement the work order history.
- Job inquiries: full detailed inquiries on each job that you enter.
- Material issue functions: materials from inventoried and directly purchased materials.

Issuing and Returning Materials

Within Ross ERP, procurement functions are integrated with maintenance scheduling so you can reduce your inventory stocking levels, and the availability of accurate historical records improves your decision-making.

You can issue or purchase additional materials - even after work has begun -and these materials will appear in history as a variance, but with all the accounting and cost roll-ups still in effect.

- You can easily see if material is on hand, reserved or on order, and the status of the requisitions or purchase orders.
- You can return material from a work order step and indicate the returned quantity.

Completing/Closing a Work Order

Completing/closing a work order is important for keeping maintenance programs on schedule. When you close a work order the data is removed from open or active status and it is automatically moved to work order history status.

- Closed work order costs can be automatically rolled up through the levels of an equipment tree so that you can establish summary points in the equipment structure, and generate real-time cost summaries at each of these points

Equipment Records

Equipment records define any location, process or asset against which maintenance repair costs and history are accumulated. They provide vital and technical information (detailed descriptions, specifications, operating instructions and safety precautions) to those who need it, and virtually all equipment and maintenance activities within Ross ERP relate back to an equipment record.

- The equipment expense history can show repair and preventive work order costs and hours accumulated through closed work orders for the equipment, broken down according to period-, year- and life-to-date.

You can manage your maintenance functions better because it lets you identify cause or effect for equipment failure and classify work performed for later analysis.

You can review and update information quickly:

- You can view system-maintained material and labor estimates and actual costs for an entire work order or for each of the steps within the work order.
- You can access work orders that have been closed and saved in a history file.
- You can view the total maintenance history for a component or location, regardless of the number of relocations that have occurred. And you can view all closed work orders, sorted by work order number, equipment, location, equipment type, or cause and effect codes, and can reuse this information to create new work orders.
- You can view a list of inventoried catalog parts and non-stock items associated with specified equipment via a bill of material summary.
- You can view equipment expense history to see repair and preventative work order costs and hours accumulated through closed work orders for the equipment, broken down according to period-, year-, and life-to-date. This makes it easy for you to assess the costs associated with specific equipment in order to create budgets. The cost summary displays the equipment, and all of its children.

Flexible search capabilities make it easy for you to find desired equipment.

- You can browse for and sort and group equipment records by key characteristics such as equipment type and maintenance area.
- You can use drawings, which are a special form of detailed information associated with equipment summaries, to create a cross reference between equipment and drawings.

Equipment Specifications

Equipment specifications help you address information that is unique to a specific item or type of equipment – without placing limitations on the size, number or type of data maintained.

- They consist of user-defined specification items and equipment, or type-specific values. Typical specification items can include horsepower, phase, coupling type, seal material, or any other equipment detail.
- A group of related specifications and associated values can be assigned to one or more equipment records sharing common design features, enabling you to view and work with all specifications defined for your factory.

Component / Location Tracking

Utilizing a component and location tracking capability, you can view a list of all of the components ever assigned to a specific location or all the locations where a specified component has been assigned.

- You can track the spares under three simultaneous schemes:
 1. As a functional description in the enterprise, i.e. #1 HVAC compressor motor.
 2. As a serialized component (Motor #123) that may currently be fulfilling a function in spare parts inventory or in repair.
 3. As a spare part number under which all like components are inventoried.
- This information is stored in history for each work order so that you can retrieve the total maintenance history for a component or location, regardless of the number of relocations that have occurred. And when you relocate the component, you can identify the new component with the new location, and at the same time you can record the disposition of the removed component.

Preventive and Predictive Maintenance (PM)

PM tasks can be defined for any work that is performed on a repeated basis and requires recorded history, such as defining the trade, crew, shift and labor requirements for each planned work order function.

Ross ERP automatically creates repetitive maintenance work orders on the first occurrence of a trigger: on a calendar interval (elapsed period of time such as weekly, quarterly or yearly), or when a monitored operational parameter (miles, hours, pressure, temperature) exceeds a predefined threshold, or on a manual override.

Meter Readings

A meter record tracks the equipment conditions that can trigger a PM task.

- You can define a meter for any quantifiable parameter, regardless of the source of data.
- You can change an existing meter record's description, location, maximum value or unit of measure.
- You can view current and previous readings and dates.
- It automatically evaluates all tasks associated with the meter and assigns the current day as the date for any task whose meter trigger point is exceeded.

Bill of Materials (BOM)

A BOM is a list of part numbers, both stock and non-stock, that have some form of common usage – typically to describe the parts list for one or more equipment records that use the same parts. They may also be used to define repair “kits” for specific repairs or to define the list of parts required for a preventive maintenance task, in which case the parts on the PM BOM are automatically reserved at the time of PM scheduling. The primary benefit of the BOM is to help your maintenance planners quickly determine necessary spare parts and assist in the planning of repetitive tasks and work orders.

With Ross ERP, you can:

- Create a new BOM identifier, description, and associated part list or change an existing BOM and its associated part list.
- Review and update lists of cataloged, warehoused parts and non-warehoused items associated with a specific BOM, equipment associated with a specific BOM, all BOMs that contain a specific part or all BOMs and their descriptions.

Accounting Information

Ross ERP enables you to define all accounting detail for a specific type of work that will be charged to a general ledger account code and control the normal accounting of maintenance activities related to that equipment.

- You can let authorized users override any default.
- You can assign specific work orders or work order steps to different charge accounts and thereby direct related costs to different points in the GL.

Charge Accounts

Charge accounts provide you with the ability to forecast/budget labor and material costs for all maintenance activities related to the equipment tracked and compare forecasts to accumulated actual labor and actual material costs.

- You can post actual costs to the GL during the processing of time cards, inventory issues and returns, additional work order costs, and purchase order receipts, invoices and credit memos.
- You can view and track actual cost-to-date against the estimated cost of any work order, and quickly determine if a cost overrun is likely.
- You can setup charge accounts that are useful in the management of capital projects. And you can use multiple charge accounts to define the GL structure for various phases of the project with related work orders referencing the appropriate charge account to provide automatic posting to the proper GL account.
- When used in conjunction with Ross ERP Business Analytics, you gain additional analysis dimensioning capabilities.