

JOBSCOPE®

Jobscope, the most comprehensive job costing and integrated business information system for your order-driven company, balances critical requirements, function, and technology while offering the comfort and confidence necessary to overcome your unique business challenges.



*Production Planning
and Control*

Production Planning and Control



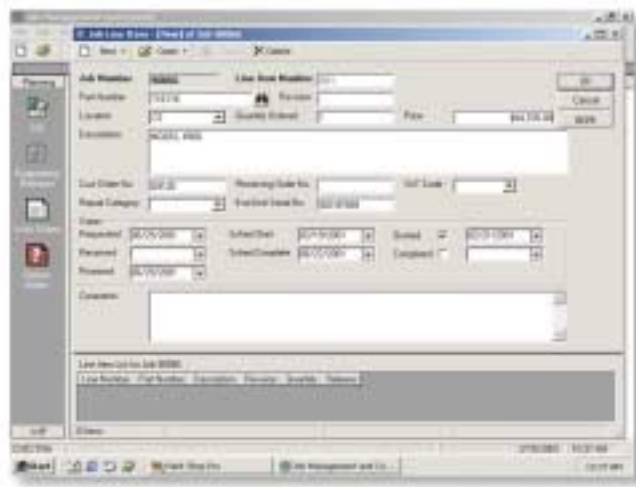
After the Engineering Departments prepare the work for release, the Production Planning and Control Department makes the final arrangements for actually performing the work. Production Planning and Control determines the jobs needed and what will be produced on each job, whether items will be purchased outside or produced in house, and the detailed schedule for performing the work.

The Production Planning and Control Department creates the necessary jobs, creates the work orders required to perform the work, schedules the work orders, and forwards special material requirements to purchasing. Requirements for materials to be issued from inventory and purchased to the job are automatically generated by the work order creation process.

With the work in progress, Production Planning and Control uses the Job Management and Control Module to monitor the progress of the work and keep the jobs on schedule.

In Production Planning and Control, Engineering information is translated into activities for actually accomplishing the work.

- Provides for purchasing and tracking long lead-time items prior to engineering completion.
- Shows material availability prior to committing work to the shop
- Provides the capability to release pre-engineered lower level items prior to releasing the overall assembly.
- Creates multiple work orders for a complex assembly in a single process.
- Maintains complex work order dependencies and schedules the work orders accordingly.
- Provides a selection of both forward scheduling from a start date or backward scheduling from a completion date.
- Ensures that work may be changed from “make” to “buy” either before or after the work begins.
- Allows employees to log on and off work, perform QA inspections, and view electronic documents and drawings.
- Automatically updates the shop schedule and job cost when employees log on/off the system.
- Displays graphical views of work order and shop status.



This screen allows you to view and enter information on jobs.

Features

- Interfaces to Microsoft Project.
- Creates either a single job or multiple jobs to perform the work for a contract.
- Provides Engineering Releases to track the work through the process from receipt of contract to the shop floor and purchasing.
- Allows Design Engineering, Manufacturing Engineering, and Production Planning and Control to electronically “send” work to the next department.
- Maintains records on pending work in Design Engineering, Manufacturing Engineering, and Production Planning and Control.

Project Management

After the Project Manager defines the work in Microsoft Project, the Engineering and Production Planning and Control departments may link the engineering releases and production work orders to the project tasks. This allows engineering release and production work order status to be reported by project task. In addition, the project manager may change project task dates and send the new date requirements to the shop scheduling system.

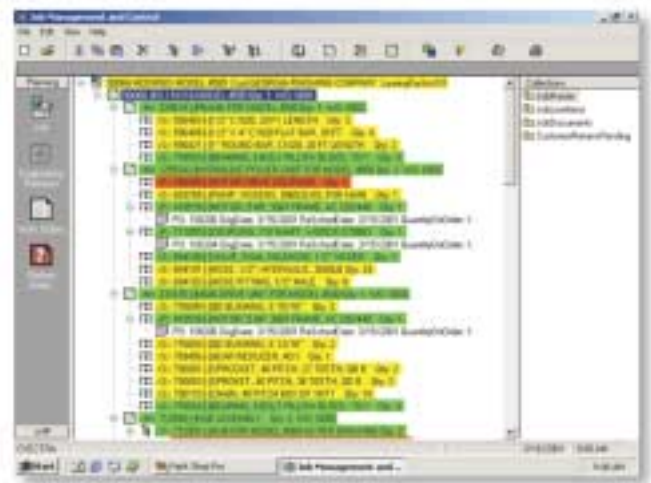
Engineering Releases

Production Planning and Control receives the Engineering information in the form of engineering releases. The engineering releases track the work through the engineering and production planning process. As each department completes its work on an engineering release, the department electronically sends the work to the next department, allowing tracking of where the work is, how long it stayed in each department, and how much backlog each department has. Production Planning and Control turns these releases into work orders and purchasing requirements.

The engineering release contains engineering release line items, or lines, which identify the drawings, bills of material, and other data that are being released. Some of the release line items, or lines, require routings to be created. This work is done in Production Planning and Control.



This screen tracks engineering releases.



This screen shows the full, multi-level BOM.

Engineering release lines may release drawings and bills of material for items, which are part of larger assemblies not yet released. Jobscope's Production Planning and Control subsystem explodes each engineering release line into planning work orders and shows like items previously released on the job. The production planner may then decide how to disposition these lower level items.

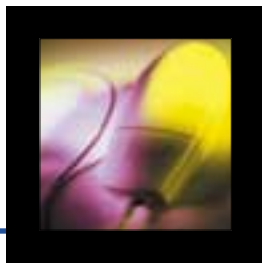
The production planner may disposition a planning work order or group of planning work orders in a number of different ways.

- Create shop work orders from the planning work order(s)
- Purchase the item or items on the planning work order(s)
- Designate that the planning work order(s) is covered on another engineering release
- Designate that the planning work order(s) will be superseded by a another release (such as design engineering errors)
- Substitute an alternate item
- Combine the planning work order with an existing work order

The results of these dispositions are routed automatically to the Shop Floor, Purchasing, or back to Engineering.

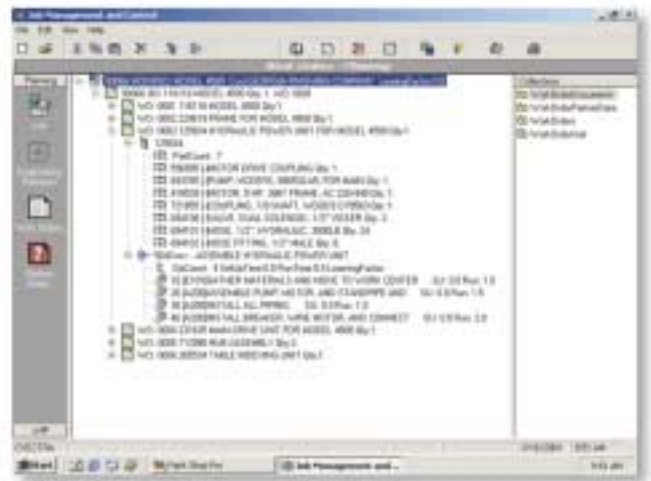
Procuring Materials

The project may require long lead-time materials, which must be ordered immediately after the order is received. These items may be ordered immediately and tracked to avoid duplicating the orders when the engineering is completed. Items, which are normally produced in the shop may need to be ordered outside due to shop load problems. This "make to buy" change may be made at any time in the process, and the resulting adjustments made for scheduling and accounting automatically. Material requirements that are part of the item bill of materials are generated automatically at work order creation time and sent inventory and purchasing.



Work Orders

A large, complex, overall assembly requiring extensive engineering may have lower level subassemblies, which are already engineered. These lower level subassemblies may be released for production prior to completion of the engineering for the overall assembly. When the engineering for the overall assembly is complete and ready for production, the subassemblies released earlier are identified to prevent duplication. Dependencies between work orders (what is used on what) are automatically created when the work orders are created. These dependencies may quickly be changed in the event that the work is to be performed in a different sequence that the engineering design would indicate. The shop floor scheduling system takes these dependencies into account.



This screen shows the complete work order listing.

Production Scheduling

Scheduling allows you to maintain calendars of planned activities for work centers.

Scheduling in JOBSCOPE means that an operation is assigned a beginning and ending time, and the block of time for the operation is reserved in the appropriate work center. Operations are scheduled according to the priorities of the releases and work orders to which they belong. Operations with higher

priorities are scheduled before operations with lower priorities. However, a release or work order can be firmed, which means that it can be scheduled for a certain time and will not be moved.



Build Calendar creates a calendar for a work center showing when the work center is available for work.



The Adjust Schedule screen allows you to adjust the schedule for an entire release or an end work order.

Work can be scheduled in one of two ways. From the Release Line Items screen, work can be scheduled using Online Scheduling. Work orders are automatically created for the line items and appropriately scheduled according to their priorities. However, this method schedules only the final-level assembly for the line item. Parts and subcomponents that are used on the line item are not scheduled. Work can also be scheduled with the Schedule Production option accessed from the Scheduling menu. This method does not automatically create work orders; they must have been previously created through the Production Orders system.

Adjust Schedule

The Adjust Schedule screen allows you to adjust the schedule for an entire release or an end work order. The release or work order should have already been scheduled through Online Scheduling or the Production Schedule menu before this screen is accessed. This screen is broken into four sections. The first is used to specify the release, and should be completed regardless of whether you are changing an entire release, a work order, or an operation. The second is used to adjust the schedule for an entire release (including all work orders and operations within that release); the third adjusts the schedule for a particular work order (including all operations within that work order); the fourth section allows you to view the schedule for a specified operation.

Schedule Production

Work may be scheduled through Online Scheduling (accessed through the Route/Schedule button on the Job Line Items screen) or through Schedule Production. Schedule Production allows you to choose the operations that are to be scheduled in several ways; for example, you may schedule all in-completed work, all work that has not yet been scheduled, work associated with specified releases, and work that has been displaced by other operations with higher priorities.

When production is scheduled, the system determines the time required for a block of work and looks at the existing "holes" in the schedule of the appropriate work center. If, given the constraints assigned by finite percentages and priorities, the "hole" is large enough to accommodate the work, the production is scheduled; if not, then the system continues to look for a suitable time to schedule work.



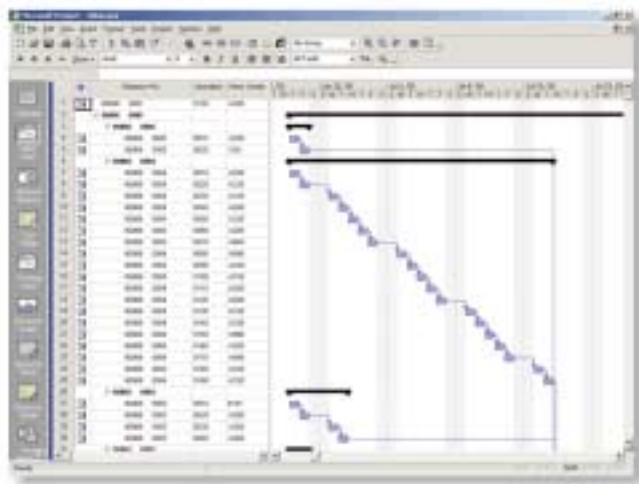
The Schedule Production screens allow you to globally schedule or reschedule production.

Schedule Board

The Scheduling Board is used to display schedules and projects.



This screen allows the JOBSCOPE Production Schedule to be exported to Microsoft Project.



This screen displays the JOBSCOPE Production Schedule in Microsoft Project.

Changes

Changes due to customer requirements, shop load, installation delays, and many other causes, can upset the schedule. The work orders may be changed, or cancelled and purchased outside, or cancelled altogether. Additional work orders may be quickly created to handle the change, and rework work orders quickly created to handle QA rejects.

Bringing The System To The Shop Floor

Workstations on the shop floor provide for direct interface to the system. The employees may log on and log off the work order operations, either by selecting the operations or scanning bar codes. These log on/log off transactions update scheduling, job cost, the accounting

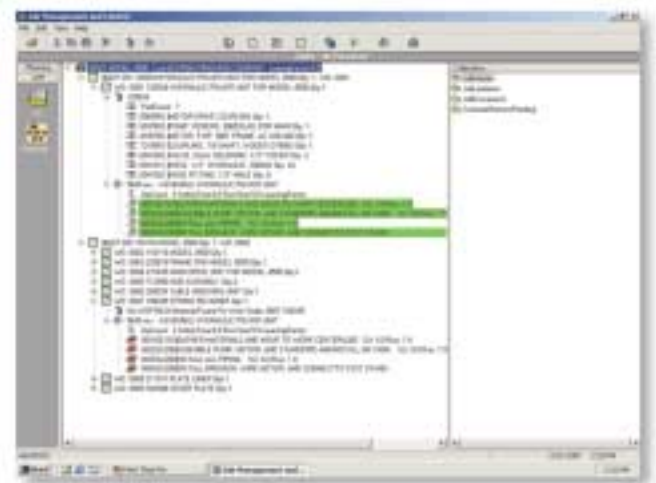
system, and employee records. QA inspectors may view the inspection instructions and requirements for tools, fixtures, and equipment. The inspectors may report inspection results on these workstations. Both direct employees and inspectors may view the electronic documents linked to their work on these same workstations.



The legend defines the colors and symbols in the BOM.

Office and Shop Floor Status

The status of work orders, materials, and work center backlog may be viewed with graphical aids. Behind schedule work is highlighted to draw attention to scheduling problems. Material availability is color coded to point out material problems. Status symbols show where the work is in the engineering process, or only for the cumulative number entered.



This screen allows you to view the status of a specific job.





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