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Glossary of Terms

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Introduction

Work Order Overview

The Work Order module in Microsoft Dynamics® SL allows managers to track production costs and revenue, as well as monitor their inventory usage, in a fully-integrated and easy-to-use system. The Work Order module is intended for light manufacturing firms or firms requiring advanced inventory management tools to track work in process (WIP), job costing, and after-the-fact actual or standard costing. The Work Order module streamlines work order setup, daily production and inventory operations, and the complexities of project costing.

Use the Work Order module to set up manufacturing work orders (including routings), issue materials to work orders, monitor work order production progress (including subassemblies incorporated into higher assemblies), and track work order production costs and revenue. Also use it to perform work order management-level operations: modifying existing work orders, transferring or return components to inventory, reporting production complete, and closing completed work orders.

The Work Order module generates a variety of useful reports that assist with such tasks as reporting work order production status, identifying work order component shortages, and forecasting work center capacity consumption. In addition, Work Order provides the capability to generate key inventory management and shop floor documents such as material pick lists and production routings.

The Work Order module can be used to manage work order production and costing in a manufacturing company or a project-based company.

Work Order and the Manufacturing Market

From an accounting standpoint, the Work Order module addresses all major concerns of work order-based manufacturing operations. These include full General Ledger WIP synchronization plus the ability to obtain comprehensive operations management viewpoints through all stages of the work order life cycle such as:

- Creating plan-status work orders with material and labor requirements defined
- Firming the work orders (allocating component inventory) and releasing to production
- Charging and costing work order resources used; tracking WIP; monitoring work order status
- Reporting completion of production and closing the work orders
- Analyzing work order cost or profitability

Work Order is ideal for discrete manufacturers (companies that produce specific items for stock) who are mostly concerned with tracking work in process (WIP), job costing, and after-the-fact actual or standard costing. However, job shop manufacturers (companies making products engineered for specific customer requirements) will appreciate Work Order’s ability to link work orders to customer sales orders and report work order profitability. Build-to-suit or engineer-to-order manufacturers (project-oriented design-build firms) will also appreciate the ability to attach work orders to any project task and provide full staging and inventory allocation.

Work Order and the Project-Based Market

Project-based companies face many of the same issues that manufacturing companies face, with an added dimension of having to manage numerous details of projects that involve, as a subset of their goals, manufacturing operations. A company that installs network cabling in office buildings, for example, has a different scope of concern than a company that builds bicycles.

The bicycle-building company would benefit from the power of the Work Order module because their primary deliverable is an inventory item such as a bike. In contrast, the cabling company is completing a large multi-layered task: installing cables for a computer network in a client’s office space.
The project-oriented network cabling company is not simply building lengths of network cable to place into stock inventory for later sale. Rather, the project-based company is engaged in a project that results in the cabling of an office for a computer network. This project has many dimensions, ranging from designing the cable layout for the client’s office, to administrative affairs involving meetings with the office building’s landlord. Obtaining components and subassemblies needed by the cabling crews to install the network cables among the cubicles and server rooms are only parts of what the network cabling company must do to complete the job.

The Work Order module leverages the design of Project Management and Accounting. Fully integrated with financial and operational modules, Project Management and Accounting collects cost information from the Payroll, Accounts Payable, Purchasing, Inventory, and General Ledger modules, as well as revenue information from the Accounts Receivable module. The Work Order module builds on this by accumulating its costs to the same database tables as the Project Controller module. The net effect is that transactions charged to Work Order work orders are actually charged to Project Management and Accounting projects.

Although based on the Project Management and Accounting architecture, the Work Order module simplifies setup and daily operations to mask the usual complexities associated with project costing. The result is an easy-to-use work order-based production or project-based system. However, because the modules complement each other, companies requiring both project costing and work order capabilities can run the Work Order module alongside Project Controller, and vice versa, and benefit from full compatibility.
Work Order Interaction

The diagram below illustrates the interaction between Work Order and various modules.

Figure 1: Work Order Interaction
General Ledger Interaction with Work Order
The software processes generate entries to the General Ledger. The Work Order module generates General Ledger entries for transactions where no standard process exists. These include:

- Production completion to stock, where an inventory receipt is generated, and Work Order creates the corresponding General Ledger entry, as required.
- Production completion to another work order or to a project/task, where Work Order creates the appropriate WIP relief entry for the source work order and a corresponding debit to WIP or project expense.
- Transfers from work order to work order. Work Order generates a General Ledger entry that transfers work in process (WIP) costs, if required. A work order can also receive costs from a General Ledger journal entry.

Accounts Payable Interaction with Work Order
Work Order retrieves work order-related entries from Accounts Payable Voucher and Adjustment Entry (03.010.00) through its integration with Project Controller.

Accounts Receivable Interaction with Work Order
Work Order retrieves work order-related entries from the Accounts Receivable Invoice and Memo (08.010.00) through its integration with Project Controller. Also, if you choose to use Project Controller to track open accounts receivable balances or cash receipts related to projects (work orders), you can retrieve accounts receivable cash receipts that are connected to projects and work order invoices.

Purchasing Interaction with Work Order
Work Order integrates tightly with the Purchasing module to ensure that almost real-time inventory visibility is maintained. Order quantities and expected receipt dates on purchase orders and receipts are monitored by Inventory Status Inquiry (10.220.00) and Work Order’s Planned Inventory Position (12.630.00) report so you can see what is in the warehouse, and what you will have at any date in the future (based on existing data).

Note:

- For fixed allocations, the plan date for the sales order schedule is the later of the requested pick date on the schedule line or the ETA date (promised date) on the incoming stock.
- The plan date for the purchase order is always the ETA date.
- If the ETA date on the incoming purchase order moves to a later date, the plan date on the sales order may also need to be moved to a later date (if the requested pick date is prior to the ETA date) to correspond with the new purchase order ETA date.
- If the purchase order promised date is after the requested pick date for the sales order schedule, a warning is printed on the Exception Analysis Report (40.791.00).

Order Management Interaction with Work Order
Work Order is tightly integrated with the Order Management module. It provides you with the ability to create Build To Order work orders. Inventory Status Inquiry (10.220.00) and Work Order’s Planned Inventory Position (12.630.00) report ensure accurate inventory visibility through constant monitoring of order quantities and expected ship dates on sales orders. You can view your future order commitments, including whether you will have enough product on hand to satisfy outstanding orders, and create work orders to directly satisfy sales demands.

Note:

- Sales orders are bound to a work order on a line item basis; this differs from purchase orders, which can be bound to the sales order on a schedule line basis.
- A sales order bound to a work order is always planned at the requested pick date; the planned end date is not considered.
• Work order requests can only be created in Sales Orders (40.100.00).
• Line items in work order requests cannot be included on a shipper.
• The Customer Priority Scheduling (CPS) fields on the Other tab of Order Management Setup (40.950.00) are disabled when the Work Order module is installed. See Order Management online help or user guide for more information on CPS.

**Inventory Interaction with Work Order**

Any inventory activity that affects work orders should be handled within the Work Order module. Work Order drives all material planning, issues, and production completions. All necessary inventory batches are created and accounted for by the Work Order module. Inventory activity and setup tasks that do not affect work orders should be handled within the Inventory module (for example, creating inventory IDs and inventory kits).

**Note:** Customer Priority Scheduling (CPS) cannot be used when the Work Order module is installed. CPS must be Off in IN Setup (10.950.00). See the Inventory online help or user guide for more information.

**Bill of Material Interaction with Work Order**

Work Order uses the Bill of Material module as a source for bills of material and routing definitions. Material Requirements/Issues (12.250.01) and Routing/Operations (12.250.02) enable you to make a work order-specific copy of any material requirements list or routing from an existing inventory kit or bill of material definition. Once the work order copy is made, changes made to the original source kit, bill of material, or routing definition are fully independent and are not reflected in the work order copy.

**Work Order Features**

• Work orders are staged and inventory is allocated
• Work orders can be fully defined and held prior to release
• Work orders can be linked to parent work orders
• Charges are applied to work orders from subsidiary modules
• Work in process can be monitored
• Work in process is kept synchronized with General Ledger
• A routing defines each production step and resources required (with Bill of Material)
• Split work orders can be used to create production items only
• Production quantities can be placed on QC hold
• Cost adjustments can be performed
• Stock inventory components can be rapidly transferred from one work order to another or back to stock
• Actual costs are tracked, but the inventory items are valued based on the item’s specified valuation method
• Actual cost compared to budget can be reported upon and examined
• A shop packet containing all necessary operational documentation can be printed
• Work order status can be reported
• Work center loading can be reported
• Projected cost to complete can be calculated
• Actual completion date versus promise date can be examined
• Work orders can be linked to sales orders
• Work order profitability can be reported
User Guide Overview

This user guide provides information regarding the setup and use of the Work Order module. Reviewing the user guide can help you make informed decisions regarding the implementation of the Work Order module in your business.

What is Covered in the User Guide?

The user guide consists primarily of procedures and checklists that describe how to perform the various tasks featured in the Work Order module. The user guide also contains topics that help you become better acquainted with the capabilities of the module. Topics are arranged in a logical order that builds on information previously presented in other user guides.

Who Should Use the User Guide?

The user guide is designed for readers who are new to Microsoft Dynamics SL. The guide provides the information necessary for making decisions regarding how to use the Work Order module in order to get the most from your system.

How to Use the User Guide

Read the appropriate section of the user guide before proceeding with any system customizations. To assist you in locating information, the user guide contains:

- A “Table of Contents” of logically organized activities and tasks.
- An alphabetized “Quick Reference Task List” of commonly performed tasks.
- An alphabetized “Index” of the information provided in the user guide.
Implementation Hints and Tips

The following information is useful to help you get the Work Order module up and running.

Screen Revisions

This section explains changes you see in certain modules with Work Order implemented.

Work Order is a WIP-based system built to be tightly integrated with Project Controller. Work Order automatically displays the appropriate WIP account in many screens as soon as you enter a project and task designated as a work order. Once you select a project and task, the Work Order module automatically replaces the account and subaccount from the default to the appropriate WIP account as defined in Work Order.

This account replacement works in the following applications:

- General Ledger Journal Transactions (01.010.00)
- Payroll Time Entry (02.010.00) and Time and Dollar Entry (02.020.00)
- Advance Timesheet Entry (58.010.00)
- Timecard Entry (TM.TCE.00) and Project Timesheet Entry (TM.PTE.00)
- Accounts Payable Voucher and Adjustment Entry (03.010.00)
- Purchasing Purchase Orders (04.250.00)

Handling Security Issues

Work Order security works within the standard security framework and security rights take precedence in all Work Order module processes.

Example: If a user does not have rights to General Ledger’s Journal Transactions (01.010.00), then that user will not be able to drill down through the Work Order module to any transaction that requires access to that screen (for example, WIP transactions through Event History Inquiry (12.304.00)).

There are two different Work Order screens that can be used to issue materials to work orders: Material Requirements/Issues (12.250.01) accessible only from Work Order Entry (12.250.00); and Material Issues (12.400.00), accessible from the Work Order module menu. The availability of Material Issues (12.400.00) means you can completely separate a user’s rights to issue materials from rights to view and modify Work Order setups and their ability to view and modify material requirements and routing lists. To implement this type of security, give users access to Material Issues (12.400.00) to issue materials, but do not grant access to Work Order Entry (12.250.00).

Note: Both material issues screens, Material Requirements/Issues (12.250.01) and Material Issues (12.400.00), require the Material Issues driver program (12.ISS.00) and Work Order FTT (12.FTT.00) to run. Therefore, any user to whom you assign rights to access Material Requirements/Issues (12.250.01) or Material Issues (12.400.00) also needs to be given rights to the Material Issues driver program, Material Issues driver program (12.ISS.00), and Work Order FTT (12.FTT.00).

Generally, it is recommended that security be set up so that only the system administrator has rights to Initialization mode in any screen. This is a good idea, as Initialization mode allows the entry of one-sided accounting transactions. However, in the Work Order environment, Initialization mode can be used to reverse a work order’s processing stage (for example, from Fin.-Closed back to Ops-Closed).

Example: Under certain circumstances, you may want to give an accounting or production manager initialize mode rights to Work Order Entry (12.250.00). Some costs, such as currency revaluations, freight charges, and outsourced costs, may not be determined until after the point at which you want to close a work order. By giving someone Initialize mode rights, a work order can be closed to all but specifically approved transactions. It can be reopened to account for those legitimate transactions and then closed again.

The propriety of setting up security in this matter depends greatly on your company’s specific needs.
Concepts

This section contains information that will help you understand how the Work Order module operates. The section includes information about:

- Interaction with the Project Management and Accounting modules
- What is a Work Order?
- Account Categories
- Accounting Flow
- Auto-Financial Transaction Transfer
- Build To Sales Order Work Orders
- Collecting Charges from Other Modules
- Cost Methods
- Inventory Issues Entry
- Issuing Materials
- Labor Costs
- Lot/Serial Tracking
- Routings
- Transferring Materials and Returning Items to Stock
- Using Kits, Bills of Material, and Work Orders
- Work In Process (WIP) Tracking
- Work Order Process Flow Chart
Interaction with the Project Management and Accounting Modules

It is important to remember that the Work Order module is built on top of Project Management and Accounting data tables and that a work order is also considered a special kind of project. All internal accounting functions are handled the same way for Work Order orders and Project Management and Accounting projects (Account Categories, Revenue Recognition, etc.).

When Work Order is installed, Project Controller is installed along with it. Note that Project Controller may be installed without a Project Controller license being purchased. However, the Project Controller screens will only be accessible from the Work Order menu. If you plan to create and manage projects unrelated to work orders, licensing the Project Controller module will unlock Project Maintenance (PA.PRJ.00).

All existing Project Management and Accounting processes and functions operate normally and are available for use with both standard Project Management and Accounting projects and Work Order projects (work orders). Thus, you can use the Project Controller interface to accumulate payroll or time and expense for project expenses to work orders; you can enter direct charges to work orders using Project Charge Entry (PA.CHG.00); and you can use Flexible Billing, Allocation Processor Audit (PA.450.00), and so on, with work orders.

Furthermore, the Work Order module feeds data to many Project Management and Accounting processes including Budget Maintenance (PA.BSM.00), where you can choose to update the Labor Account Category or Materials Account Category whenever routings or material requirements are updated.

What is a Work Order?

A work order is a record that defines a list of required materials (the material requirements list) and a list of processing steps (the routing) that must be completed to produce inventory items such as components, subassemblies, or finished goods.

The result may be placed in stock inventory, automatically issued to satisfy an outstanding sales order line or automatically issued as a component to another work order.

All work orders are specialized project/task combinations that exist within Project Management and Accounting. The system automatically creates the appropriate project/task records to contain the work order and its end result. Unlike Project Management and Accounting projects, which allow multiple tasks per project, there is only one task for a Work Order module project; the identifier for this task is automatically set to the value entered in Manufacturing Task in Work Order Setup (12.950.00).

The Work Order module enables you to create four basic types of work orders:

- Build To Stock
- Build To Sales Order
- Build To Manufacturing Work Order
- Build To Project/Task

Build To Stock Work Orders

Use Build To Stock work orders to build discrete items that are placed in stock to sell to customers, or to build items that will be used as assemblies in a higher level manufacturing process. Most manufacturing companies will build to stock at some point in their operations.
Build To Sales Order Work Orders

If you pre-engineer deliverables for a customer, you will most likely use Build To Sales Order work orders. The part being built will not be put into stock, but rather will be issued directly to fulfill a customer’s order. This type of work order may be used to attach an inventory kit or bill of material to a sales order, and to define a routing required to produce the product on the order. The Build To Sales Order work order should be used only when the specified part is being built solely to fulfill a customer sales order.

Build To Manufacturing Work Orders

Use Build To Manufacturing work orders when the part is being built to satisfy a component part requirement of another work order. Manufactured parts, whether stock (on-hand quantities tracked by the Inventory module) or non-stock (on-hand quantities not tracked by the Inventory module), which are to be issued to another work order, are often handled by this type of work order. Examples are:

- Manufacture of subassemblies for another work order
- Separate costing for manufacturing rework
- Separate costing for a non-stock assembly or subassembly, with an option to fold in all the costs to the material cost component of the parent work order, or roll up the cost to its corollary in the parent work order (material to material, labor to labor, etc.).

Build To Project/Task Work Orders

Use Build To Project/Task work orders when you are working on projects for your company and the items or services you need will be used in a project defined in Project Management and Accounting.

Example: If you work at a bicycle manufacturing company and this company attends a bicycle manufacturing trade show once every year, there might be a project/task code for the bike trade show. And imagine that every year, two models of each bike your company makes are sent along with the marketing staff to the trade show display booths. You would use Build To Project/Task work orders to build those bikes, because they are not going to be placed into stock in your warehouses nor made to fulfill a customer’s sales order.
Account Categories

A work order is a special kind of project in Project Management and Accounting. As such, a work order interacts with account categories to track things like labor, materials costs, and other costs you may define.

Early in the implementation process of the system with Project Management and Accounting, account categories are established using Act Category Maintenance (PA.ACC.00). This screen allows the definition of categories for revenue, expense, assets, and liabilities that summarize the chart of accounts in the financial system and organize them into friendly groupings for use in project accounting. Account categories for assets (such as Accounts Receivable and Work in Process), liabilities (such as Deposits), revenue (such as Service Sales and Labor Revenue), and expenses (such as Labor, Subcontract, Travel, and Materials) are established to meet each site’s needs for project information. These same account categories are used by the Work Order module to track actual costs and work-in-process costs through General Ledger.

The Account Category Report (PA.040.00) and the Account Category and GL Account Xref (PA.080.00) reports within Project Management and Accounting show the relationship and translation of general ledger account numbers to Project Management and Accounting account categories. Even if you have not licensed Project Controller, all screens in Project Controller except Project Maintenance (PA.PRJ.00) are available to you. If the appropriate account categories for your use of Work Order were not included when your system was initially set up, you may need to establish the process for creating account categories using Act Category Maintenance (PA.ACC.00). See the Project Controller and Project Allocator online help or user guide for more details on that process. However, if the appropriate account categories and general ledger accounts already exist, you still need to use Account Category/GL Interface (12.280.00) to set up and maintain your work-in-process accounts and their corresponding account categories.

In the Work Order module, each account category collects costs into itself. When you issue materials to a work order, the issuing of those components and assemblies fills appropriate work in process categories. When you complete production on a work order, work in process is decremented by each account category.
Accounting Flow

Most of the setup defaults used in work-in-process (WIP) processing are directly related to the General Ledger and Project Controller modules. Virtually all WIP processing is accomplished through Work Order-launched and controlled processes that already exist in the environment.

Example: Work Order automatically creates accounting batches in the Inventory and General Ledger modules and launches a limited automatic Financial Transaction Transfer in Project Controller to keep WIP synchronized accurately. This action also accounts for inventory issues to a work order.

Other aspects of WIP processing are left up to routine, user-initiated processing. For example, Work Order must still run the General Ledger Post Transactions routine to bring transactions generated in the subledgers into the General Ledger. Similarly, in Project Controller, you must run the Financial Transaction Transfer routine (for transactions initiated outside the Work Order module) and the Allocation Processor (if you have Project Controller allocations set up for the work order).

When the issue material event is triggered successfully, the following accounting events occur:

- **Inventory Issues Batch** — An inventory issues batch is created, with the period to post set to the current inventory period (or as set in the issue, then auto-released). The Inventory module creates a general ledger batch to credit each item’s asset account/subaccount and debit the WIP account/subaccount. The item’s cost is determined by the Inventory module and depends on its costing method.

When production completion of a Build To Stock work order is successfully processed, the production item being completed is placed into stock and the following accounting events take place:

- **Inventory Receipt Batch** — An inventory receipt batch is created and auto-released to increment inventory quantities for the part to build. The actual unit cost is calculated by the Work Order module and used as the item cost if the valuation method is other than standard. The item’s asset account is debited and the accounts payable clearing account is credited. However, if a Receipt Reason Code is defined in Work Order Setup, its associated account category is credited. See “Receipt Reason Code” on page 178 for more details. If the work order standard cost method is used, the difference from the actual cost is charged to a variance account.

- **General Ledger Batch** — The Work Order module accesses Account Category/GL Interface (12.280.00) to determine the proper WIP account to use. A General Ledger entry is created to debit the accounts payable clearing account and work order subaccount and credit the WIP account and work order subaccount for each account category that contains work in process costs. The period to post is set to the current inventory posting period (or as set in Production Completion (12.402.00)).

The entries are:

- Accounts payable clearing account \$cost
- Work Order’s WIP acct / work order subacct \$cost

- **Project Charge Completion Batch** — Reports completion to each account category in the Completion Cost Allocation area. The value of WIP is removed for each account category and added to the associated completion account category.
Auto-Financial Transaction Transfer

The Project Controller Financial Transaction Transfer (PA.TRN.00) is key to processing within the Work Order module. Financial Transaction Transfer (PA.TRN.00) transfers financial data between the Project Controller environment and the General Ledger environment. The Work Order module automatically launches a limited Work Order FTT (12.FTT.00) process whenever a process occurs that affects inventory balances; for example, issuing inventory to a work order. In this way, inventory visibility is kept as current as possible.

Note: Work Order FTT (12.FTT.00) only applies to a limited class of inventory transactions. It is very important that you run the standard process periodically using Financial Transaction Transfer (PA.TRN.00) to ensure that all transactions that affect work orders (such as Payroll, Accounts Payable, etc.) are brought into the work order.

Build To Sales Order Work Orders

The Work Order module gives you the ability to create work orders in response to a request from a sales order. The following steps outline the general flow of process for a Build To Sales Order work order:

1. Enter Sales Order. Order entry operator enters a line on a sales order to sell an item that must be manufactured.

2. Create a Work Order Request. The order entry operator clicks the Work Order Request button (which became enabled after the sales order was saved) to create a tickler record for the production department. This request record is the link to the originating sales order line record, which provides all the information needed to create a work order to supply the item.

   Note: No one can create a Build To Sales Order work order for that sales order unless the Work Order Request button was clicked for a specific line on a sales order.

3. Create a Work Order. The production department periodically reviews the work order requests. When a request appears, the work order entry operator creates a work order that is linked to the sales order requesting the production.

4. Make the Item. The work order is processed according to normal rules. When the production is completed, the item is costed and placed into inventory, specifically earmarked for this sales order.

5. Ship the Item. The item is scheduled for shipment, as with any other item sold from stock.

6. Transfer the Revenue. The revenue billed for the sales order line is passed to the work order for profitability analysis.

7. Close the Work Order. The Work Order Closing process will report on any orphaned completion records that may have resulted from shipping conditions changing after production was reported complete.

To properly process Build To Sales Order work orders, be aware of the following issues:

- Any part to be produced by a Build To Sales Order work order must be set up in Inventory Items (10.250.00) as a stock item. The item must be a stock item because the background processing, which occurs when issuing an item produced by a work order to its target sales order, puts the item into stock in a special restricted inventory layer. Order Management’s Process Manager then produces a shipper for the now available inventory. Build To Sales Order work orders provide accurate profitability information on sales orders and work orders. If any other costing method, besides Actual, is used, the Work Order module cannot attribute the actual production costs (COGS) to the target sales order at the time of inventory issue and invoicing.

- Each sales order line record can be associated with one work order.

Example: A sales order person takes an order for 10 bikes and requests that a work order be created to build the bikes for that sales order by clicking the Work Order Request button after saving the sales order. Now a worker out on the shop floor goes into Work Order Entry (12.250.00) and sees the request for 10 bikes and builds them. As soon as he creates that work order, the Work Order module
creates a link between that work order and the sales order line that requested those 10 bikes. The bikes are produced through the typical work order process.

At production completion time, the 10 bikes go into stock inventory, but the Inventory module puts those bikes into a special layer, much like reserved inventory. A fixed allocation between that reservation and a sales order line enables the Process Manager application to see that the bikes are available and it produces a shipper just as it would if it found the inventory for a regular sales order that was selling out of stock inventory.

With the Work Order module, you can build any particular item to stock inventory or to a sales order. Clicking the **Work Order Request** button triggers a request from the sales order to the shop, and ties the goods produced on a specific work order to a specific line on a sales order. Also, a normal sales order can be entered without clicking the **Work Order Request** button, and the parts may be made to stock. Once made to stock, they are treated as any other inventory items and will be placed on shippers to fulfill sales orders.

### Collecting Charges from Other Modules

Work orders are fully functional Project Management and Accounting projects. Project Management and Accounting collects charges from almost any module using *Financial Transaction Transfer* (PA.TRN.00). For your convenience, a link to *Financial Transaction Transfer* (PA.TRN.00) is available on the Work Order menu by selecting **Post External Costs to Work Order**, as well as on the Project Controller menu.

Work Order is designed to work within a real-time inventory system; there are various inventory-related events in which all accounting and project-related transactions are fully automated. For example, during material issues, the appropriate inventory batch is generated and released, the necessary General Ledger entries to keep WIP synchronized are made, and a limited financial transaction transfer is run to bring all the transactions related to the inventory issue into the Project Management and Accounting environment.

### Cost Methods

How you track costs through the life of each work order is one of the fundamental aspects of using Work Order. The Work Order module enables you to set a specific cost method for each work order, based upon your needs and preferences.

**Standard Cost** method prices the item on a work order at its inventory standard cost. When you build something on a work order, the cost of its production will be tied to its assigned standard cost in the Inventory module. This method would not reflect actual reality on the shop floor but would cost the component’s production at a fixed value.

**Actual Cost** method prices the item on a work order using the most current information on prices for materials and labor. A widget made last week might be costed differently if made this week, based on the changing prices of materials and labor, or even the amount of labor actually required to build the item. Also, the potential for damaged items during production can burden a work order with unexpected costs if an item was accidentally harmed, requiring that it be reworked, or totally ruined, requiring that it be completed to scrap. Using actual costing results in different work orders of the same item being produced for different costs.

Because it is common for manufacturing processes to happen too quickly for all actual costs to be recorded simultaneously on a work order, the Work Order module provides a cost method called **Work Order Standard Cost**. In this cost method, the Work Order Standard Cost applies probable actual costs to the work order, which is especially useful when doing partial completions of work orders. Work Order Standard Cost options include **Last**, **Average**, **Estimate**, and **Standard**. See “Work Order Entry, Costs Tab” on page 84 for more details.
### Inventory Issues Entry

The Work Order module enables you to issue materials to a work order by using Material Requirements/Issues (12.250.01) or Material Issues (12.400.00). As a convenience, Inventory Issues (10.020.00) is on the Work Order menu so that you can use it to check on the inventory status of materials that may be needed by a work order or already have been issued to work orders. However, you should not attempt to issue inventory to a work order using Inventory Issues (10.020.00).

### Issuing Materials

Available inventory is reserved (allocated) for stock inventory IDs when the processing stage for a work order is changed from Plan to Firm or Released. Material can be issued only while the work order processing stage is Released.

Material may be issued from Material Requirements/Issues (12.250.01) or from Material Issues (12.400.00) to facilitate security arrangements that separate material issues from work order entry tasks. For example, if the person who sets up work orders and defines material requirements is also the person who processes material issues, then only one screen is needed to both identify the material requirements and to issue materials: Material Requirements/Issues (12.250.01).

However, if stockroom or shop floor personnel record material issues, they can be granted access to Material Issues (12.400.00) to process issues without having access to the root work order and its ability to change material requirements lists.

While the material issues process is identical for Material Requirements/Issues (12.250.01) and Material Issues (12.400.00), the materials list definition processes for those two screens are not. The difference between defining material lists in Material Requirements/Issues (12.250.01) and doing the same in Material Issues (12.400.00) is that materials added in Material Requirements/Issues (12.250.01) are locked, once defined in Material Issues (12.400.00); you cannot change the inventory ID or the quantity. However, if you add materials lines on Material Issues (12.400.00), such as when you need to add certain parts for strengthening to fix a manufacturing inconsistency, then you have full control over those lines, and can change inventory IDs and quantities.

The purpose for these differences is that, if a material line is entered in Material Requirements/Issues (12.250.01) by a production manager, the people on the shop floor cannot independently change it. However, if people on the shop floor add lines in a materials list in Material Issues (12.400.00), then those people have full control to issue whatever they need, and can add changes and make further revisions to handle whatever issues arise as they build the subassemblies or finished goods.

The default quantity of each component to be issued can be determined in one of two ways, based on a specified quantity to build for the part. The default issue quantities may be individually edited on the issue grid so that the exact quantity issued is recorded for each component.

The **Issue Now** quantity is calculated as:

\[
I = (W / C) \times B \text{ and } I \leq R
\]

Where:

- **I** = Issue Now
- **W** = Work Order Quantity Required
- **C** = To Build, Current
- **B** = Issue to Build
- **R** = Total Quantity Remaining to Issue

By changing the Issue to Build quantity to a value other than the quantity remaining to build (default), you can easily control the issue of materials to correspond with partial build requirements.

This calculated quantity is automatically entered in **Issue Now** when the **Grid Pop** button is clicked. You have the option to override the calculated amount for any line.
**Labor Costs**

Each work order you create has a materials list in which you record the materials and quantities of materials needed for the work order. Another key part of work orders that you need to record is the labor used to build the items on the work orders.

You can record labor costs for work orders using one of several methods or in combinations of them. The first methods, external to the Inventory and Work Order modules, include using modules such as Payroll, Time and Expense, and General Ledger.

The other method for entering labor costs into work orders is to create a special category of inventory items for your company that represents a description of labor instead of a specific item that can be held in inventory. Because a person's labor cannot be stored in a warehouse bin location like a stock inventory item, you can create a non-stock part for labor costs, where you record labor costs for a work order on their own line on the work order's material list.

**Example:** For the labor needed to rework a broken item, you might want to track it separately from the labor normally used on the routing for building that item. To do so, you would define a non-stock inventory item to represent labor rework hours. By adding a quantity of rework hours to the materials list of a rework work order, you can ensure that those extra labor hours get charged to the work order.

Depending on how you organize your implementation of the system, you may combine both methods of recording labor against work orders.

**Note:** If your system has the Bill of Material module installed, the decimal precision in labor hours fields in the Work Order module is set by the **Decimal Places – Hours** default value from the **Options** tab of **Bill of Material Setup** (11.950.00). If your system does not have Bill of Material installed, the decimal precision in labor hours fields in the Work Order module defaults to three decimal places.

**Lot/Serial Tracking**

The Work Order module and the Inventory module are tightly integrated in the system. To aid in your control and tracking of inventory, the Work Order module enables you to build items that are lot/serial tracked. Work Order also enables you to pull lot/serial tracked items from stock. See the sections on lot/serial numbers in the Inventory online help or user guide for more detail.

**Routings**

The Work Order module allows you to access a predefined routing from the Bill of Material module. You may also elect to create a unique routing for any work order “on the fly,” without relying upon a pre-existing routing from the Bill of Material module.

Before creating a routing in the Bill of Material module, create the companion bill of material (see **Bill of Material Maintenance** (11.250.00) for more information). The bill of material/routing pair must have the same inventory ID, site ID, and status. Routings must be created before you can complete **Compute Cost Rollup** (11.540.00) (a Bill of Material function), as well as other processes involving routings.

Before creating routings, create the following:

- Work centers
- Operations
- Labor classes
- Tools
- Machines

For more information on the set up and use of routings, refer to the Bill of Material online help or user guide.
Transferring Materials and Returning to Stock

On occasion, materials issued for a work order are not used for that work order. The following reasons are possible:

- Material issued to one work order is required for another work order
- More material was issued to a work order than was needed
- Some material may have been scrapped during production

To manage such events, use Material Transfers/Returns (12.401.00). It provides a flexible mechanism to move materials that have been issued to one work order to another destination (such as back to stock, to scrap, to another work order, or to a project/task).

Using Kits, Bills of Material, and Work Orders

Inventory kits and bills of material are two types of recipes that detail how to build an item that has been defined in the Inventory module. An inventory kit is a list of ingredients for an assembly, which is available to you even if you have not licensed the Bill of Material module (see the Inventory online help or user guide for details on creating kits). A bill of material comprises material and routing requirements for an assembly and is available to you if your company has licensed the Bill of Material module. If the item that you want to build has an inventory kit or bill of material already created for it, then defining material requirements for a work order is easy. The initial material requirements list is formed from the components defined in the kit or bill of material.

If variations from the standard components defined by the kit or bill of material are desired, then the initial list may be modified by adding or deleting components or changing the required quantity. If, for example, you anticipate additional material losses (scrap) or need to use alternate or substitute materials, simply enter the differences from the normal definition for that work order.

**Note:** Once the work order is saved, any changes made to kits or bills used as a source will not be reflected in the material list specific to this work order. Changes to bills of material, including superseding an entire bill from within the Bill of Material module, are not reflected in the Work Order module material lists or routings. Once a work order is created, the bill of material is copied from the Bill of Material module (or an inventory kit). This local copy may then be modified specifically for this work order without impacting the bill of material or kit definition. Likewise, changes to the bill of material or kit definition do not impact the material list for this work order.

Once you have specified the part to build for the order, if neither a kit nor a bill of material definition has been established for the part to build, you must manually list each required component and its required quantity “on-the-fly.” Each component must have a valid inventory ID. Valid inventory IDs may include stock as well as non-stock items such as labor.

The date required for each component defaults to the planned start date identified for the order during Work Order setup. You may edit this date if, for example, some of the materials are not required until later in the production process and you wish to provide the component just in time. The routing step during which the component is used may also be identified.
Work In Process (WIP) Tracking

One of Work Order's strengths is its ability to track work in process (WIP) for any work order. Without Work Order, WIP must be tracked using General Ledger journal entries or Project Controller, where manual adjustments are necessary to keep WIP accurate and synchronized. Work Order automatically makes all appropriate accounting entries to track WIP and to ensure synchronization between the General Ledger and the Work Order environment.

Work Order Process Flow Chart

The following flow chart describes the general process of using the Work Order module.

![Work Order process flow chart]

Figure 2: Work Order process flow
Task Guidelines

Quick Reference Task List
This list contains tasks that are commonly performed with the Work Order module. Each task is cross-referenced to a specific page in this user guide.

How Do I...?

- Set up Work Order — see “Setup and Maintenance” on page 22.
- Create a new work order — see “Creating a New Work Order” on page 34.
- Create a materials list for a work order — see “Defining Material Requirements” on page 38.
- Add other costs in addition to the usual costs for a work order — see “Defining Other Costs” on page 44.
- Create routings for a work order — see “Defining Routings and Operations” on page 46.
- Advance a work order through its processing stages — see “Changing the Processing Stage of a Work Order” on page 48.
- Issue materials for a work order — see “Issuing Materials” on page 16.
- Apply costs to a work order — see “Applying Costs” on page 57.
- Create a Build To Sales Order work order for an outstanding sales order — see “Viewing Quantity Details” on page 53.
- Transfer materials back to stock — see “Transferring Materials Back to Stock” on page 58.
- Transfer materials to scrap — see “Scrapping Components” on page 59.
- Transfer materials to another work order — see “Transferring Materials to Another Work Order” on page 59.
- Complete production on a work order — see “Completing Production” on page 60.
- Print the picking paperwork for a work order — see “Printing the Picking Paperwork” on page 63.
Setup and Maintenance
The following information is useful to help you get the Work Order product up and running.

Implementation Checklist: Module Installation Sequence
Work Order is built on the General Ledger, Inventory, and Project Controller modules. These modules must be installed and set up prior to implementing Work Order (the other modules listed below are optional). The following module implementation sequence is recommended:
1. General Ledger (required), Accounts Receivable, and Accounts Payable
2. Inventory (required), Order Management, and Purchasing
3. Bill of Material and Payroll or Advanced Payroll
4. Project Controller (installation required, licensing is not) basic implementation
5. Work Order
In addition, the following step must be completed before using the Work Order module:
6. Project Controller: Identify the account categories to be used by Work Order, along with the corresponding completion account categories.

Note: It is possible to start the Project Controller or Payroll modules before the Inventory and Order Processing modules (Inventory, Order Management, and Purchasing). However, many of these modules rely on other modules (for example, Inventory must be installed before Bill of Material) and must be implemented in the appropriate sequence.
Once the basic Project Controller environment is in place, you can implement Work Order. Work Order setup can begin, provided Project Controller setup has been performed using Project Controller Setup (PA.SET.00). Work Order verifies that all the necessary Project Controller processes are completed.

Implementation Checklist: General Suggestions
The following steps should be performed prior to implementing the Work Order module:
1. Investigate your company’s needs and expectations.
2. Become familiar with the Project Controller module.
3. Become familiar with Work Order.
4. Configure the Work Order module to meet your company’s needs and expectations.
5. Use Work Order to verify the system’s desired functionality.
6. Refine the system and repeat step 5 until known issues are resolved.
7. Train system users.
8. Refine the system based on user input.
9. Conduct a pilot project using a representative cross-section of transactions, and test the operational and accounting flow.
10. Refine the system as needed.
11. Perform parallel processing.
Throughout this process, constantly evaluate your company’s needs and whether the system design meets those needs.
Setting Up Prerequisite Modules
The first steps in setting up the Work Order module are to perform the setup tasks for the prerequisite modules that interface with Work Order.

- Shared Information
- General Ledger
- System Manager
- Accounts Receivable
- Inventory
- Purchasing
- Accounts Payable
- Payroll
- Project Controller (license not required)
- Customization Manager
- Crystal Reports

In the lists below for each module, the screens labeled Required must be completed before Work Order can be set up. Screens labeled Optional are not necessary to complete prior to setting up Work Order. Complete all screens in the order in which they appear.

**Shared Information Module**
1. **Tax Maintenance** (21.280.00) — Required
   - Any tax IDs used in Invoice Entry (SD.202.00) must have a **Calculation Type** of Document.
2. **Tax Group Maintenance** (21.340.00) — Optional
3. **Terms Maintenance** (21.270.00) — Required

**General Ledger Module**
1. **Chart of Accounts Maintenance** (01.260.00) — Required
2. **GL Setup** (01.950.00) — Required
3. **Subaccounts Maintenance** (01.270.00) — Required

**System Manager Module**
1. **User Maintenance** (95.260.00) and **Group Maintenance** (95.280.00) — Optional
   - Define all users in **User Maintenance** (95.260.00) and groups in **Group Maintenance** (95.280.00), and define passwords for all users of Work Order screens and reports.
2. **Access Rights Maintenance** (95.270.00) — Optional
   - Set the appropriate access rights for all Work Order users and groups in **Access Rights Maintenance** (95.270.00) for the Work Order module.
   - Click **Preload** to open **Preload Screens** (95.270.01) and Work Order from the list to view the screens for the Work Order module.
   - Specify the appropriate level of rights for each screen for each Work Order user or group.
Accounts Receivable Module
1. Statement Cycle (08.280.00) — Required
2. Customer Class (08.290.00) — Required
3. AR Setup (08.950.00) — Required
4. Customer Maintenance (08.260.00) — Required

When converting customers from a legacy system, if the legacy system did not have a one-to-many relationship between customers and sites, the data may require modification before the conversion process.

Inventory Module
1. IN Setup (10.950.00) — Required
2. Product Classes (10.280.00) — Required
3. Warehouse Bin Locations (10.340.00) — Required
4. Unit Conversions (10.270.00) — Required
5. Sites (10.310.00) — Required
6. Inventory Items (10.250.00) — Required
   - Create one miscellaneous inventory item as taxable, such as Miscellaneous Materials - Taxable. This item is non-stock with a valuation method of User-Specified.
   - Create one miscellaneous inventory item as non-taxable, such as Miscellaneous Materials - Non-Taxable. This item is non-stock with a valuation method of User-Specified. For example, when invoicing for equipment rented, you probably will not pay sales tax.
   - If you are going to enter labor as an inventory item, enter all labor hourly rates as non-stock inventory items. For any item entered as labor, the inventory account is actually an accrued wages payable account. Stock Base Price defaults to the unit price during flat rate entry and during invoicing. For all labor inventory items, the labels for Inventory Account and Sub should be modified to Invt/Wages Acct and Sub using Customization Manager, as labor items are charged to the Accrued Wages Payable account.

Accounts Payable Module (Optional)
1. AP Setup (03.950.00)
   Vouchers depend on the setup option in Work Order.
2. Vendor Maintenance (03.270.00)
   Associate with detail line items to create purchase orders, receipts, and vouchers.

Purchasing Module (Optional)
1. PO Setup (04.950.00)
   The following Purchasing screens integrate with Work Order:
   - Receipt/Invoice Entry (04.010.00)
   - Purchase Orders (04.250.00)

Payroll (Optional)
The following Payroll screens integrate with Work Order:
- Time and Dollar Entry (02.020.00) can be used to apply hours and dollars to a work order, even if you do not use the Payroll module to process payroll in your company.
- PR Setup (02.950.00)
- Employee Maintenance (02.250.00)

Refer to the Payroll online help or user guide for details.
Project Controller

1. Project Controller Setup (PA.SET.00) — Required
   - See the Project Controller and Project Allocator online help or user guide for specific information about this screen.
   - Select the Auto FTT feature if you do not want to have to manually transfer costs to work orders.

2. Acct Category Maintenance (PA.ACC.00) — Required
   - A primary account category must be defined for each type of cost that will be collected against a work order (such as Labor, Materials, Overhead, and Subcontract).
   - A completion account category must be defined for each primary account category defined above. For further discussion, please refer to “Keeping WIP Synchronized” on page 28.
   - See the Project Controller and Project Allocator online help or user guide for specific information about this screen.

3. Code File Maintenance (PA.CFM.00) — Optional
   - Provides for defining validation of segments within the work order number.
   - See the Project Controller and Project Allocator online help or user guide for specific information about this screen.

4. Code Type Maintenance (PA.COT.00) — Optional
   - Supports the Code File Maintenance (PA.CFM.00) option.
   - See the Project Controller and Project Allocator online help or user guide for specific information about this screen.

5. Flexible Key Maintenance (PA.FKM.00) — Optional
   - Provides for the segmentation of the work order number (project) and task.
   - See the Project Controller and Project Allocator online help or user guide for specific information about this screen.

Customization Manager (Optional)

Customization Manager gives users the ability to modify Work Order screens to meet the unique requirements of an organization. For example, new fields and controls can be added, data fields and objects can be hidden, and default values for data fields can be set. To make data entry more efficient, objects can be moved to other positions on a screen and the tab order of data fields can be modified.

Although there are no setup procedures required for the Customization Manager, the module must be purchased and installed separately if you want to make modifications to Work Order screens.

Crystal Reports (Optional)

Crystal Reports gives users the ability to modify Work Order reports to meet the requirements of an organization. For example, new labels and fields can be added while data fields and objects can be removed.

Although there are no setup procedures required for Crystal Reports, the module must be installed in order to make modifications to Work Order reports.
Work Order Setup Sequence

**Note:** Be sure to complete the steps in “Setting Up Prerequisite Modules” on page 23 before you set up Work Order.

Work Order’s flexible setup options allow you to tailor its operation to the specific needs of your company.

During setup, you typically:

1. Define the task identifier that should be attached to all work orders. Unlike other Project Management and Accounting projects, a work order has only one task; the identifier entered in **Manufacturing Task** in *Work Order Setup* (12.950.00) is automatically added by the system as the sole task for reporting work order activity.
2. If you have not licensed the Project Controller module, define how Work Order will auto-number work orders using the **Work Order Numbering** tab in *Work Order Setup* (12.950.00).

![Figure 4: Work Order Setup (12.950.00), Work Order Numbering tab](image)

**Do the following:**

- Click **Flex Key Maintenance** to display **Flexible Key Maintenance (PA.FKM.00)** from the Project Controller module. Define **Project** as having one numeric segment, then save it and close the screen. See “Flexible Key Maintenance (PA.FKM.00)” in the Project Controller online help or user guide for more information.

- Select **Auto Work Order numbering** on the **Work Order Numbering** tab.

- Select the **System-wide**.

  See “Work Order Setup, Work Order Numbering Tab” on page 182 for more information.

3. Define the inventory item ID to be used for production scrap account defaults. The inventory ID entered in **Production Scrap ID** in *Work Order Setup* (12.950.00) is used as the source for the default value of the inventory account charged with production scrap costs in General Ledger.

4. Define the inventory item ID to be used for component scrap account defaults. The inventory ID entered in **Component Scrap ID** in *Work Order Setup* (12.950.00) is used as the source for the default inventory account charged with component scrap costs in General Ledger (**Scrap-Comp**). Component scrap costs arise when material that was issued to a work order is transferred from work order to scrap using **Material Transfers/Returns** (12.401.00).

   While there is provision for reporting scrapped components to General Ledger, at this time no General Ledger entry is made for scrapped components, as all related costs remain in WIP for the work order. The result of this is that the work order is burdened with the costs of any scrapped components, and the cost of the new replacement components and the scrapped components are applied to the total cost for the work order. For example, if you had a work order to produce five bikes, and one set of handlebars was damaged during production, Work Order module would add the cost of the sixth set of handlebars to the total cost for all five bikes. The cost for the additional set of handlebars would not be pulled out into a separate General Ledger entry.

5. Define how you will attribute production costs items that are issued in the case of a Build To Mfg. Work Order. Determine if you will report production costs to the parent account categories corresponding to the account categories in the work order that generated the costs. Charges to the work order **Labor Account Category** would be rolled up into the parent’s **Labor Account Category**, and materials would be treated similarly.
6. Determine if the Work Order module will create general ledger entries for zero impact inventory transactions. This occurs when the same general ledger account/subaccount combination is debited and credited by the same amount because the inventory item involved in the transaction has its cost-of-goods-sold (COGS) account already set to be the WIP account. This can be helpful from an audit standpoint, but it can also clutter General Ledger.

7. Determine which options should be chosen for the remaining Work Order Setup (12.950.00) fields.

**Note:** See “Work Order Setup (12.950.00)” on page 171 for a complete description of all setup fields.

With the Work Order setup parameters defined, you are now ready to create work orders. Once you begin creating work orders, you will proceed to define material lists, define routings, issue materials, apply costs, and record production.

### Keeping WIP Synchronized

Work Order automatically makes all appropriate accounting entries to track WIP and to ensure synchronization between the General Ledger and the Project Management and Accounting environments.

The following Work Order Setup (12.950.00) fields can be categorized as either Project Controller-related or General Ledger-related:

- **Project Controller Defaults**
  - Manufacturing Task
  - Material Account Category
  - Labor Account Category

- **General Ledger Defaults**
  - Mfg. WO Subacct
  - General Ledger Entries for Zero Impact Xfers
  - Unapplied WIP Account

The above elements provide the system with the primary system defaults used in WIP processing. However, the central screen in work order WIP processing is Account Category/GL Interface (12.280.00). This is the screen in which you specify how WIP is accounted in your system.

If you only need a few WIP classifications (for example, to track labor, materials, outside processing, and overhead), then the Work Order module is simple to set up and use, but still tracks every WIP entry by project/task. Likewise, if you need a more complex system of account categories to track WIP, such as five classes of labor costs, you can create those additional classifications and use them with Work Order.
In *Account Category/GL Interface (12.280.00)*, you create the relationships to connect Project Controller with the appropriate General Ledger WIP accounts. The ability to track different classes of Work Order-related costs is limited only to the number of account categories for which you can:

1. Come up with a name.
2. Link Work Order WIP costs to a defined general ledger account.
3. Create a separate account category to hold costs that have been transferred out of WIP through production completions.

Most of the setup defaults used in Work Order WIP processing are directly related to General Ledger and Project Controller because Work Order-launched and controlled processes already exist in the environment.

**Example:** Work Order automatically creates accounting batches in Inventory and General Ledger, and launches a limited automatic Financial Transaction Transfer in Project Controller to accurately keep WIP synchronized and account for inventory issues to a work order.

Other aspects of WIP processing are left up to routine, user-initiated processing. For example, the General Ledger Post Transactions routine must still be run in order to bring transactions generated in the subledgers by Work Order into the General Ledger. Similarly in Project Controller, the user must still run the Financial Transaction Transfer routine and the Allocation Processor (if you have Project Controller allocations set up for the work order). For your convenience, the General Ledger Post Transactions routine and the Financial Transaction Transfer routine are available from the Work Order menu.

All of the appropriate processes are comprehensively discussed in the documentation for their respective modules. This manual, therefore, focuses on Work Order-unique processes despite the inter-related nature of the modules.

Two common accounting-significant Work Order events are discussed below:

- **When the issue material event is successfully triggered, the following accounting events take place:**
  - **Inventory Issues Batch** — An inventory issues batch is created, with the period to post set to the current inventory period (or as set in the issue, then autoreleased. The Inventory module creates a general ledger batch to credit each item’s asset account/subaccount, and debit the WIP account (as related to the Material Account Category) and the work order’s subaccount. The item’s cost is determined by the Inventory module and depends on its costing method.

- **When production completion is successfully processed, and the production item being completed is being placed into stock, the following accounting events take place:**
  - **Inventory Receipt Batch** — Quantities for the part to build. The actual unit cost is calculated by Work Order and used as the item cost if the valuation method is other than standard. If the work order standard cost method is used, then the difference from the actual cost is charged to a variance account. Likewise, if the production item’s inventory valuation method is standard cost, it is used, and the difference is charged to a variance account. The inventory receipt process credits the accounts payable clearing account.
  - **General Ledger Batch** — A General Ledger entry is created to debit the accounts payable clearing account, and credit the WIP account and work order subaccount associated with each account category, as defined in *Account Category/GL Interface (12.280.00)*.
  - **Project Charge Completion Batch** — Report completion to each account category in Completion Cost Allocation area.
Work Order Process

The process for a work order, from creation to closing, is outlined below. Primary screens you use to accomplish each task are listed next to the steps.

1. Create the work order — Work Order Entry (12.250.00)
2. Define the characteristics of the work order — Work Order Entry (12.250.00)
3. Define the target(s) of production — Work Order Entry (12.250.00)
4. Manage the processing stages — Work Order Entry (12.250.00)
5. Manage material requirements and optionally issue materials — Material Requirements/Issues (12.250.01)
6. Save the work order — Toolbar
7. Firm the work order — Work Order Entry (12.250.00)
8. Review the inventory availability for the requested components
9. Release the work order — Work Order Entry (12.250.00)
10. Prepare the picking paperwork — Work Order Entry (12.250.00)
11. Issue the material to fulfill the work order’s requirements — Material Issues (12.400.00)
12. Record labor as needed for the work order — Time and Dollar Entry (02.020.00), appropriate screens in the Time and Expense module from Project Management and Accounting, Journal Transactions (01.010.00), or special non-stock inventory item in Material Issues (12.400.00)
13. Record other costs as needed for the work order — Voucher and Adjustment Entry (03.010.00), Journal Transactions (01.010.00), or special non-stock inventory items in Material Issues (12.400.00)
14. If Auto FTT was not enabled in Project Controller setup, be sure to transfer costs manually to the work order by running Post External Costs to Work Order (PA.TRN.00)
15. If using Allocator, run Allocation Processor (PA.PRO.00)
16. Complete the work order — Production Completion (12.402.00)
17. Close the work order — Work Order Closing (12.403.00)
Setting Up Account Categories

General ledger accounts and account categories are defined during the setup of your system. To use Work Order, you need to define how some specific account categories and work in process (WIP) account categories will interact with General Ledger.

The following procedure instructs you on how to designate an account category for each cost classification you want to use in Work Order. Each of these cost classifications must have only one primary account category and a corresponding completion account category. To maintain integrity in your work in process accounts, define only one WIP general ledger account for each completion account category.

1. Create the primary account category using the **Master Information** tab in **Acct Category Maintenance (PC.ACC.00)**. The account type must be Expense for the cost classifications (for example, a primary account category for labor costs could be named LABOR).

![Figure 6: Acct Category Maintenance (PC.ACC.00), sample view 1](image-url)
2. Create the corresponding completion account category using the **Master Information** tab in **Acct Category Maintenance** (PC.ACC.00). For completion account categories, the account type must be Non Accounting. For example, the completion account category to match the labor account category could be called LBR COMP.

![Acct Category Maintenance (PC.ACC.00), sample view 2](image)

*Figure 7: Acct Category Maintenance (PC.ACC.00), sample view 2*

3. Associate the primary account category with one or more general ledger expense accounts, as well as the related work in process general ledger account, using **Chart of Accounts Maintenance** (01.260.00).

![Chart of Accounts Maintenance (01.260.00)](image)

*Figure 8: Chart of Accounts Maintenance (01.260.00)*
4. Associate a project expense general ledger account with each account category. These accounts are used when Work Order drives costs into a standard project through completion of production. Work in process accounts are credited on the work order and the associated project expense account is debited for each account category. Be sure that the non-accounting completion categories are unique within the whole grid.

![Figure 9: Account Category/GL Interface (12.280.00)](image-url)
Creating a New Work Order

Use Work Order Entry (12.250.00) to define a work order and all the components needed to build an item. From Work Order Entry (12.250.00), you establish the materials requirements and, optionally, the routing for the work order.

When you create a work order, records are created that specifically contain the work order and the anticipated result of the work order. The creation of a manufacturing work order results in the creation of a project task that has an ID identical to the work order ID.

![Work Order Entry (12.250.00)](image)

Figure 10: Work Order Entry (12.250.00)

**Work Order Entry (12.250.00) Required Fields**

The following data is required for all work orders:

- **Work Order ID** (step 2)
- **Company** (step 3)
- **Status** (step 4)
- **Item** (step 5)
- **Site** (step 6)
- **Plan** (step 8)
- **Build To** (step 9)
Steps to Create a Work Order

To create a work order:

1. Choose Module | Work Order | Work Order Entry from the menu. The Targets tab of Work Order Entry (12.250.00) appears.

![Work Order Entry (12.250.00), Targets tab](image)

2. In Work Order ID, type the identifier for this work order.
   
   Most work orders begin with a two-letter prefix identifying the work order type.

   **Example:** WO could be used to designate normal work orders, CS may be used for a custom work order, and AE may be used for work orders made for the Acme company. Refer to “Code File Maintenance (PA.CFM.00)” in Project Controller to set this up.

   Alternatively, you can click the auto-numbering button located next to Work Order ID. This button displays Flexible Key Entry (PA.FEN.00), which allows you to set the work order ID and increment numbers for work orders according to your needs. See “Flexible Key Maintenance (PA.FKM.00)” in the Project Controller online help or user guide for details about using this button.

3. Verify the correct company ID appears in Company.
   - If the company ID is unknown, press F3 or double-click the right mouse button. A list of all company IDs appears.
   - To select a company ID, highlight the ID and click OK, or double-click on the ID.

4. Verify Status is set to Active.

5. In Item, type the ID of the part you want to build.
   - If the item ID is unknown, press F3 or double-click the right mouse button. A list of all inventory items appears.
     - To select an item ID, highlight the ID and click OK, or double-click on the ID.
   - Clicking Edit on the Inventory Item List accesses Inventory Items (10.250.00), enabling you to modify information for an existing inventory item.
   - Clicking Insert on the Inventory Item List accesses Inventory Items (10.250.00), enabling you to add new inventory items to the system.
6. Verify that the value in **Site** is set to where Work Order will look for a valid bill of material. This site will also be used as the default production site when creating targets of production.
   - If the site ID is unknown, press F3 or double-click the right mouse button. A list of all site IDs appears.
   - To select a site ID, highlight the ID and click **OK**, or double-click on the ID.

7. Select the location of the component from **Component Site Defaults From**. If a valid bill of material is located, the default will be BOM. See “Component Site Defaults From” on page 77 for details about the available options, which include:
   - BOM
   - Work Order
   - Component

8. In **Plan**, type a new date if the planned date to start the work order is different from today’s date.

9. Select the type of work order production target you are creating in **Build To**. The following production target options are available:
   - Stock — Select this option when the end result of the work order will be placed into stock in a warehouse. Use **Build To Stock** work orders to build discrete items that are sent to stock and later sold to customers, or to build items that can be used as assemblies in a higher-level manufacturing process.
   - Sales Order — Select this option if the item on the work order is being built to fulfill a sales order.

   **Note:** You may not manually set this option to establish a **Build To Sales Order** type of work order because a sales order must precede the creation of the **Build To Sales Order** work order. The **Build To** value is automatically set to Sales Order when a work order request from Order Management is processed. This functionality is accessed using the **WO Requests From OM** button, which automatically links an existing sales order with the required work order to fulfill the sales order.
   - Mfg. Work Order — Select this option when the part being built on the work order will be used to satisfy the requirement for a component of another work order that you have already created. When building complex assemblies with multiple work orders, create the finished parent assembly work order first, then refer all child work orders to that parent work order.

   **Example:** A Build To Mfg. Work Order work order may be for the manufacturing of subassemblies for another work order; separate costing for manufacturing rework; and separate costing for a non-stock assembly or subassembly, with the option to fold in all the costs to the material cost component of the parent work order.
   - Project/Task — Select this option when the work order’s production is to be sent directly to a Project Management and Accounting project/task.

10. If **Build To** is set to Stock, complete the following fields:
    - **Site ID**
    - **Whse Bin Location**
    - **Current Quantity**
    - **Customer ID**

11. Complete information in the following fields if required by your site or if different from the default.
    - **Current Quantity**
    - **Customer ID**
    - **QC Hold**
    - **Build to WO**
    - **Change Reason**
    - **Target Description**
12. Click **Save** on the toolbar.
Defining Material Requirements

Use *Material Requirements/Issues* (12.250.01) to associate or connect a list of required materials to the work being done. Available and on-hand quantities for each component are displayed in *Material Requirements/Issues* (12.250.01). This screen provides you with an early indication of whether there may be shortages for some components and if an issue request will be successful. Defining material requirements allows you to issue the materials to the work order when you move the work order to the Released processing stage.

The list of requirements can be entered into *Material Requirements/Issues* (12.250.01) three different ways:

- If kit components have been defined using *Kits* (10.320.00) for the part you are building, the existing kit list is used as a template to create an initial work order material list.

- If a bill of material structure has been defined using *Bill of Material Maintenance* (11.250.00) for the part you are building, a single layer of the bill of material defined for this part at this site ID is used as a template to create an initial work order material list. Additional layers of subassemblies may be manually imported into the material list, in effect flattening the bill so that all components regardless of level appear in the material list. As an alternative, multiple layers can be assigned to separate work orders, with this work order as the target for production. Using this method, costs are rolled all the way up through the bill to ultimately arrive at this parent work order.

- You can also manually enter a materials list. Note that you must always manually enter the materials list if a kit or bill of material definition does not exist for the part you plan on building.

While the work order’s processing stage is set to Plan, the material list is compared to the current kit or bill of material whenever the material list is accessed. By doing so, any changes to the bill can be incorporated into this work order, until the work order status is changed to Firm.

Using Kits and Bills of Material

Inventory kits and bills of material are two types of recipes that detail how to build an item that has been defined in the Inventory module. An inventory kit is a list of ingredients for an assembly, which is available to you even if you have not licensed the Bill of Material module (see the Inventory online help or user guide for details on creating kits). A bill of material comprises material and routing requirements for an assembly and is available to you if your company has licensed the Bill of Material module. If the item that you want to build has an inventory kit or bill of material already created for it, then defining material requirements for a work order is easy. The initial material requirements list is formed from the components defined in the kit or bill of material.

If there are variations from the standard components defined by the kit or bill of material, then the initial list may be modified by adding or deleting components or changing the required quantity. For example, if you anticipate additional material losses (scrap) or need to use alternate or substitute materials, simply enter the differences from the normal definition for that work order.

If a part to build has not been specified for the order and/or neither a kit nor a bill of material definition has been established for the part to build, list each required component and its required quantity. Each component must be an inventory item defined as a stock part or a non-stock part (labor costs can be defined as a non-stock part and added to the material list of a work order).
The date required for each component defaults to the planned start date identified for the order during Work Order setup. You may edit this date if, for example, some of the materials are not required until later in the production process and you wish to provide the component just in time.

![Figure 12: Material Requirements/Issues (12.250.01)](image)

**Material Requirements/Issues (12.250.01) Required Fields**

The following data is required when entering materials:

- **Work Order ID** (step 2)
- **Sequence #** (step 4)
- **Component ID** (step 5)
- **Site ID** (step 6)

**Note:** The steps in this procedure are best performed with *Material Requirements/Issues (12.250.01)* in grid view, enabling you to see all the line items as they are entered.

**Steps to Define Material Requirements without Kits or Bills of Material**

To manually define material requirements:

1. Choose **Module | Work Order | Work Order Entry** from the menu. The **Targets** tab of *Work Order Entry (12.250.00)* appears.
2. In **Work Order ID**, type the identifier for the work order whose material list you want to define.
   - If the work order ID is unknown, press F3 or double-click the right mouse button. A list of all work order IDs appears.
     - To select a work order ID, highlight the ID and click **OK**, or double-click on the ID.
3. Click **Material Req/Issues**.
   *Material Requirements/Issues (12.250.01)* appears.
4. Click in **Sequence #**.
   10 appears, indicating this is the first item in the material list.
5. In **Component ID**, type the component ID of the first item.
   - If the item ID is unknown, press F3 or double-click the right mouse button. A list of all inventory items appears.
- To select an item ID, highlight the ID and click OK, or double-click on the ID.
- Clicking Edit on the Inventory Item List accesses Inventory Items (10.250.00), enabling you to modify information for an existing inventory item.
- Clicking Insert on the Inventory Item List accesses Inventory Items (10.250.00), enabling you to add new inventory items to the system.

6. Verify that the values in Site ID and Whse Bin Location are correct for this item. If the values are incorrect, change the default to reflect the proper site ID and warehouse bin location for this item.

7. In WO Qty. Required, type the number of units this work order needs. For example, if you are building five assemblies that each require three of this component, enter 15, which represents the total for the entire work order.

8. Select the value for Stock Usage. Usually the default value that appears here is what you want. (The Stock Usage value defaults from Inventory Items (10.250.00) or from the bill of material and is explained in detail in “Material Requirements/Issues (12.250.01)” on page 91. Options are:
   - Normal
   - Build Only
   - Stock Only
   - (None)
   - Non-Stock

9. Enter values for the remaining fields as required.

10. On the next blank row in grid view, click in Sequence #.
    
    **Note:** This new sequence number has increased by 10.

11. Repeat steps 5 through 10 until all items for the material list have been added.

12. At any time, you may check on the status of an item you plan to add to the list by highlighting the item and clicking Material Check. Clicking this button displays Material Check (12.251.00), from which you can note any shortages of materials that may impact your issuing them to the work order. See “Material Check (12.251.00)” on page 111 for more information.

13. Click OK when you have completed adding all materials to the list.
**Note:** You can insert an item between two existing lines by clicking **Sequence #** in the next blank row and manually entering a number between the two existing item lines. For example, to insert an item between sequence numbers 10 and 20 below, click in the next blank row; when 30 appears, change it to 15. A new blank row appears between the rows with 10 and 20 in Sequence #.

![Material Requirements/Issues (12.250.01)](image)

**Figure 13: Material Requirements/Issues (12.250.01)**

After repeated inserts, you may use all available sequence numbers. To create more sequence numbers, click the **Renumber Seq** button, which renumbers all lines in the material list in increments of 10.

14. Click **OK** to save your material list and close this screen. Note that the number on **Material Req/Issues** on **Work Order Entry (12.250.00)** has changed to reflect the number of lines in the material list for this work order.
Steps to Use a Kit to Define Material Requirements

To use an existing kit to define material requirements:

1. Choose Module | Work Order | Work Order Entry from the menu. The Targets tab of Work Order Entry (12.250.00) appears.

2. In Work Order ID, type the identifier for the work order whose material list you want to define.
   - If the work order ID is unknown, press F3 or double-click the right mouse button. A list of all work order IDs appears.
     - To select a work order ID, highlight the ID and click OK, or double-click on the ID.

3. Click Material Req/Issues.
   Material Requirements/Issues (12.250.01) appears.

4. Notice that the number of component lines is displayed on the Material Req/Issues button. If an inventory kit exists for the item being manufactured, it will be used as the source to create the material list. You will see the appropriate Component ID and WO Qty Required values fill in automatically based on the inventory kit.

5. Verify that the values in Site ID and Whse Bin Location are correct for this item. If the values are incorrect, change the default to reflect the proper site ID and warehouse bin location for this item.

6. In Stock Usage, select the proper value. Usually the default value that appears here is what you want. The Stock Usage value defaults from Inventory Items (10.250.00) or from the bill of material and is explained in detail in “Material Requirements/Issues (12.250.01)” on page 91. Choose between:
   - Normal
   - Build Only
   - Stock Only
   - (None)
   - Non-Stock

7. Tab through the remaining fields and change as required.

8. Click OK when you have completed adding all materials to the list.
Steps to Define Material Requirements Using a Bill of Material

To use an existing bill of material to define material requirements:

1. Choose Module | Work Order | Work Order Entry from the menu. The Targets tab of Work Order Entry (12.250.00) appears.

2. In Work Order ID, type the identifier for the work order whose material list you want to define.
   - If the work order ID is unknown, press F3 or double-click the right mouse button. A list of all work order IDs appears.
     - To select a work order ID, highlight the ID and click OK, or double-click on the ID.

3. Click Material Req/Issues. Material Requirements/Issues (12.250.01) appears.

4. Notice that the number of component lines is displayed on the Material Req/Issues button. If a valid bill of material exists for the item being manufactured, the top layer of that bill will be used as the source to create the material list. You will see the appropriate Component ID and WO Qty Required values fill in automatically based on the bill of material.

5. Verify that the values in Site ID and Whse Bin Location are correct for this item. If the values are incorrect, change the default to reflect the proper site ID and warehouse bin location for this item.

6. In Stock Usage, select the proper value. Usually the default value that appears here is what you want. (The Stock Usage value defaults from Inventory Items (10.250.00) or from the bill of material and is explained in detail in “Material Requirements/Issues (12.250.01)” on page 91. Choose between:
   - Normal
   - Build Only
   - Stock Only
   - (None)
   - Non-Stock

7. Tab through the remaining fields and change as required.

8. Click OK when you have completed adding all materials to the list.
Defining Other Costs

Not only is the Material Issues (12.400.00) process used for moving items and their costs from Inventory to Work Order (and subsequently to WIP), but virtually any standard cost may be applied to the work order using the same mechanism. These costs must be defined as inventory items just like a physical component would be defined. Some examples of defining other costs in a work order would be:

- Apply 2.5 hrs @ $10/hr for each unit of production
- Apply labor burden of $3 for each unit of production
- Charge the work order for $27 of shop overhead for each unit of production

Use Material Issues (12.400.00) to apply standard costs to a work order just as you would issue materials to a work order.

Figure 14: Material Issues (12.400.00)

To define other costs for a work order:

1. Choose Module | Work Order | Material Issues from the menu. If you have already defined inventory items for the cost(s) you want to add to the work order, continue to step 5.

2. Create a non-stock part in Inventory Items (10.250.00) with the following properties:
   - **Type** — Labor (non-stock), Machine Overhead (non-stock), Other Direct Costs (non-stock), or Other Type of Item (stock or non-stock)
   - **Valuation Method** — Standard Cost for stock items
   - **Verify Quantities** — Cleared

3. Set Stocking Unit in Inventory Items (10.250.00) according to your requirements.
   - For Labor, where you want to track hours, set the stocking unit to Hour and the standard cost to the hourly rate. Issue the number of hours at the rate you desire.
   - If you do not need to track hours, but simply want to apply labor dollars, set the stocking unit to Dollar and the standard cost to $1. This way you can issue the dollars you want by issuing the number of units.
4. Set up the general ledger accounts for the new cost in *Account Category/GL Interface* (12.280.00).
   - Set the inventory asset account to the offset to WIP, for example, Labor Applied.
   - Set the inventory cost of goods account to an account that is associated with the account category to which you wish the costs to transfer, for example, 4050 Productive Labor, which is associated with the labor account category.

   **Note:** If the previous step is not set up properly, costs will not properly transfer to the work order, or may not transfer at all. If the account category cannot be found in *Account Category/GL Interface* (12.280.00), the materials account category is used.

5. Select *Material Issues* (12.400.00) from the Work Order menu.

6. Enter the work order ID for the work order for which you want to define other costs. You can double-right-click to see a list of possible work orders.

7. In the material list in the Detail area, click below the last component line. A new line appears for you to use.

8. In the **Component** column, add the defined inventory item for the cost you want to add to the work order. You can double-right-click for a list of possible components.

9. Click **Issue Material**.

   The following happens when this special material, which is really a cost, is issued:
   - The special item’s *Sales Account* is determined and its *Account Category* is retrieved.
   - The WIP account is determined by looking up the account category in the account category cross-reference table and finding the related WIP account.
   - If there is no account category affiliated with the general ledger sales account or it cannot be located, then the work order’s material account category is used.
Defining Routings and Operations

Use **Routing/Operations (12.250.02)** to set up and edit the list of steps required to complete this specific work order. Often you will simply use the routing that is copied from a component’s bill of material. However, you can also add or delete steps, and you can change the hours required to complete each step, the labor class used to complete the step, and the work center where the step is to be performed, using **Routing/Operations (12.250.02)**. Operations to be performed to accomplish a task may be identified as routing steps in **Routing/Operations (12.250.02)**.

If a routing for the part to build has already been defined in the Bill of Material module, that routing will automatically appear as the starting point for this work order. Those steps may be modified, including additions or deletions, to become a set of operations specific to this individual work order. Changes made in this screen are not reflected back to the generic routing as defined for this part in the Bill of Material module.

If routing steps have not been defined for the part to build, you may manually enter all the steps that are to be performed. Note that you may click **Copy Routing** to quickly fill in routing steps from a bill of material that may exist for a similar part with a different inventory ID. You may also use **Copy Routing** to bring in routing steps for subassemblies that you may want to include on this work order.

![Figure 15: Routing/Operations (12.250.02)](image)

**Routing/Operations (12.250.02) Required Fields**

The following data is required when entering routing steps or operations:

- **Work Order ID** (step 2)
- **Step** (step 4)
- **Operation Code** (step 5)
- **Work Center** (step 6)
- **Labor Class** (step 8)

**Note:** The steps in this procedure are best performed with **Routing/Operations (12.250.02)** in grid view, enabling you to see all the line items as they are entered.

**Steps to Define Routing/Operations**

To manually define routing steps:

1. Choose **Module | Work Order | Work Order Entry** from the menu. The **Targets** tab of **Work Order Entry (12.250.00)** appears.
2. In **Work Order ID**, type the identifier for the work order whose routing steps you want to define.
   - If the work order ID is unknown, press F3 or double-click the right mouse button. A list of all work order IDs appears.
     - To select a work order ID, highlight the ID and click OK, or double-click on the ID.

4. Click in **Step**.
   10 appears, indicating this is the first step in the routing or operation list.
5. In **Operation Code**, type the ID of the first operation or routing step.
   - If the ID is unknown, press F3 or double-click the right mouse button. A list of all operation codes appears (**Operations List**).
     - To select an operation ID, highlight the ID and click OK, or double-click on the ID.
     - Clicking **Edit** on the **Operations List** accesses **Operation Maintenance (11.280.00)**, enabling you to modify information for an existing operation.
     - Clicking **Insert** on the **Operations List** accesses **Operation Maintenance (11.280.00)**, enabling you to add new operations to the system.

   **Note:** The Bill of Material module must be installed for this functionality to work.

6. In **Work Center**, type the ID of the work center where the operation is performed.
   - If the ID is unknown, press F3 or double-click the right mouse button. A list of all work centers in the system appears (**Work Centers List**).
     - To select an item ID, highlight the ID and click OK, or double-click on the ID.
     - Clicking **Edit** on the **Work Centers List** accesses **Work Center Maintenance (11.270.00)**, enabling you to modify information for an existing work center.
     - Clicking **Insert** on the **Work Centers List** accesses **Work Center Maintenance (11.270.00)**, enabling you to add new work centers to the system.

   **Note:** The Bill of Material module must be installed for this functionality to work.

7. Verify that the values in **Planned Start, Actual Hours, Labor Hrs/Unit, Machine Hrs/Unit, Step Hours, and Budget Hours** are correct for this routing. If the values are incorrect, change the default to reflect the proper information for this routing step or operation.

8. In **Labor Class**, type the ID of the type of labor performing the operation.
   - If the ID is unknown, press F3 or double-click the right mouse button. A list of all labor classes in the system appears (**Labor Class List**).
     - To select a labor class ID, highlight the ID and click OK, or double-click on the ID.
     - Clicking **Edit** on the **Labor Class List** accesses **Labor Class Maintenance (11.290.00)**, enabling you to modify information for an existing labor class.
     - Clicking **Insert** on the **Labor Class List** accesses **Labor Class Maintenance (11.290.00)**, enabling you to add new labor classes to the system.

   **Note:** The Bill of Material module must be installed for this functionality to work.

9. Change the remaining fields as required.
10. In the next blank row, click in **Step**.

   **Note:** This new step number has increased by 10.

11. Repeat steps 5 through 10 until all items for the material list have been added.
12. Click **OK** to save your routing steps.

   **Note:** The number on routings has changed to reflect the number of steps or operations in the routing list for this work order.
Changing the Processing Stage of a Work Order

Processing stages determine the fundamental timing rules that are applied to all work order transactions. Processing stages identify the progress of the work order, and control the point at which the various work order actions can be performed. The following processing stages are available:

- **Plan** — When a work order is first entered, it is automatically set to Plan. Progress beyond the Plan stage occurs as a result of entries made in Work Order Entry (12.250.00).

- **Firm** — In the Firm stage, inventory is automatically allocated according to the quantities on the material list, and a commitment has been placed for the production item. The order may be left in this state, rather than progressing to a Released stage, so that charges to the work order will not begin prematurely. The key impact of going to a Firm state between the Plan and Released states is that it can create demand visibility for the required components on the material list, and supply visibility of the production item. This visibility can be enabled in IN Setup (10.950.00) and viewed in Inventory Status Inquiry (10.220.00).

- **Released** — The Released stage is used to enable material issues and other charges to be applied to the work order.

- **Ops-Closed** — The Ops-Closed (closed to operations transactions) stage is used to prevent acceptance of any further labor, material, and other transactions. This stage is intended to provide some buffer time before the work order is completely closed, during which any financial transactions that may be lagging can be processed. This stage value may be set using Work Order Entry (12.250.00) or using completion processing in Production Completion (12.402.00).

- **Fin-Closed** — The Fin-Closed (financially closed) stage means no further transactions can be applied to the work order. The work order is moved to this stage by Work Order Closing (12.403.00) or by Work Order Entry (12.250.00).

The descriptions of procedures for Work Order tasks include steps where you change the processing stage. When you first enter a work order, Processing Stage is automatically set to Plan and disabled (grayed out). The first time you save the work order, Processing Stage becomes enabled.

The various effects of the work order processing stages appear in the following table for easy reference and comparison.
## Processing Stages and Their Operations

<table>
<thead>
<tr>
<th></th>
<th>Plan</th>
<th>Firm</th>
<th>Released</th>
<th>Ops-Closed (closed to operations)</th>
<th>Fin-Closed (financially closed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add build to targets</td>
<td>Yes</td>
<td>Depends on WO Setup option</td>
<td>Depends on WO Setup option</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edit material list</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Enter a PO</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Remaining quantity for components on the material list appears as demand in Inventory</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes Unissued material may optionally be de-allocated</td>
<td>Unissued material has been de-allocated</td>
</tr>
<tr>
<td>Materials may be issued from Inventory to Work Order</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Remaining quantity of part to build appears as supply in Inventory</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Uncompleted quantity of part to build has been decommitted</td>
</tr>
<tr>
<td>Production completion</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Transactions occurring external to Work Order:</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>PO transactions</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>AP transactions</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>AR transactions</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>GL transactions</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>IN transactions</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>PR transactions</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Work Order Data Entry Status (Project Status)</td>
<td>Not active</td>
<td>Active</td>
<td>Active</td>
<td>Active</td>
<td>Not active</td>
</tr>
<tr>
<td>Work Order Closing (12.403.00) available?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
### Progression of Stages

<table>
<thead>
<tr>
<th>Current Stage</th>
<th>Can arrive from...</th>
<th>Can go to...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>—</td>
<td>Firm, Released</td>
</tr>
<tr>
<td>Firm</td>
<td>Plan</td>
<td>Released</td>
</tr>
<tr>
<td>Released</td>
<td>Plan, Firm</td>
<td>Ops-Closed</td>
</tr>
<tr>
<td>Ops-Closed</td>
<td>Released</td>
<td>Fin-Closed</td>
</tr>
<tr>
<td>Fin-Closed</td>
<td>Ops-Closed via Work Order Closing (12.403.00)</td>
<td>—</td>
</tr>
</tbody>
</table>

### Progression of Stages in Initialize Mode

<table>
<thead>
<tr>
<th>Current stage</th>
<th>Possible stages to go to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>Firm, Released</td>
</tr>
<tr>
<td>Firm</td>
<td>Plan, Released</td>
</tr>
<tr>
<td>Released</td>
<td>Firm, Ops-Closed</td>
</tr>
<tr>
<td>Ops-Closed</td>
<td>Released, Fin-Closed via Work Order Closing (12.403.00)</td>
</tr>
<tr>
<td>Fin-Closed</td>
<td>—</td>
</tr>
</tbody>
</table>
Issuing Materials

Use Material Issues (12.400.00) to issue material for a work order. On firm and released work orders, a demand appears on the inventory items required for the work order, but those items remain in the warehouse in the inventory system, although allocated to the work order. The issuing operation removes the allocated items completely from the warehouse/inventory system and allocates their costs to the work order. Material can be issued only while the work order processing stage is Released. For information on processing stages, see “Changing the Processing Stage of a Work Order” on page 48.

The list of materials in Material Issues (12.400.00) has been set up in Material Requirements/Issues (12.250.01). Generally, this list of requirements remains constant. Components placed in this list using Material Requirements/Issues (12.250.01) may not be changed or deleted. However, new components may be added and subsequently modified using Material Issues (12.400.00). For components added and subsequently modified using Material Issues (12.400.00), the value of Component Added is Matl Issue.

To issue material to a work order:

**Note:** If the work order has already been released, skip to step 6.

1. Choose Module | Work Order | Work Order Entry from the menu. The Targets tab of Work Order Entry (12.250.00) appears.
2. In Work Order ID, type the identifier for the work order whose material you want to issue.
   - If the work order ID is unknown, press F3 or double-click the right mouse button. A list of all work order IDs appears.
     - To select a work order ID, highlight the ID and click OK, or double-click on the ID.
3. Change Processing Stage to Released.
4. Type the date you plan on the work order to be completed in Plan – End Date. This date may have already been entered when you firmed the work order, but review it again now to see if it meets your needs.
5. Click Save on the toolbar.
6. Choose **Module | Work Order | Material Issues** from the menu. **Material Issues (12.400.00)** appears.

7. In **Work Order ID**, type the identifier for the work order whose material you want to issue.
   - If the work order ID is unknown, press F3 or double-click the right mouse button. A list of all work order IDs appears.
     - To select a work order ID, highlight the ID and click **OK**, or double-click on the ID.
   - If you need to issue additional inventory items to this work order, add materials in the Detail area of **Material Issues (12.400.00)** for new items you want to include. At a minimum, the following fields must be completed:
     - **Sequence #**
     - **Component ID**
     - **Whse Bin Location**
     - **WO Qty Required**

8. At any time, you may check on the status of an item you plan to issue from the list by highlighting the item and clicking **Material Check**. Clicking this button displays **Material Check (12.251.00)**, from which you can note any shortages of materials that may impact your issuing them to the work order. See “Material Check (12.251.00)” on page 111 for more information.

9. Enter the multiplier to use in **Issue Now**, for example, to issue enough components to build 2 production items, enter 2.

   **Note:** You cannot issue material to a work order that is already allocated to a project. Use **Availability (21.410.00)** to examine the inventory allocated to projects.

10. Click the **Grid Pop** button to fill in the required quantities in **Issue Now**. Edit individual component requirements as needed.

11. Click **Issue Material**.

12. To respond to the message, “Are you Sure?”, click **Yes**.

13. Click **OK** when the process has completed.
Viewing Quantity Details

For the life of a work order, a great deal of material movement happens. *Quantity Details* (12.250.04) enables you to see what has happened with any item from any line of a work order material list. Simply click any material list line in *Material Requirements/Issues* (12.250.01) and then click *Qty Details*.

This screen also enables you to track lot and serial numbers for items that have been assigned to a specific work order. For example, suppose you have a work order to build 10 bicycles. The bicycles are serialized, so that when you complete production they go into stock with their own serial numbers. In addition, suppose the frames have their own serial numbers so you can track them separately. When you highlight the frame material line in *Material Requirements/Issues* (12.250.01) and click *Qty Details*, *Quantity Details* (12.250.04) displays the lot/serial numbers of frames that were issued to this work order in the Lot/Serial Assignment area. The information does not tell you which serialized frame went with which serialized bicycle. However, it does state that these 10 serialized frames were used to complete these 10 serialized bicycles.
Creating Build To Sales Order Work Orders

The high-level flow for creating a Build To Order work order is described below.

1. In Sales Orders (40.100.00), create a sales order for the item that a work order will have to build. Your company must have licensed the Order Management module to create sales orders.

   ![Figure 18: Sales Orders (40.100.00)]

2. After entering the item and its information on the sales order line, click WO Request. This action informs the Work Order module that this sales order requires a corresponding work order.
3. Create a work order in Work Order Entry (12.250.00) by entering an ID and clicking Save. Any unfilled requests for work orders from sales orders appear as numbers in parentheses on the WO Requests From OM button.

![Figure 19: Work Order Entry (12.250.00)](image)

4. Click WO Requests From OM in Work Order Entry (12.250.00) to connect the work order to one or more sales order lines building the same item. The Work Order Requests (12.250.05) screen shows any outstanding requests from sales orders.

![Figure 20: Work Order Requests (12.250.05)](image)

5. Select the box for the line(s) you want to build on the new work order, and then click OK.

**Note:** If Allow unlike items is selected on the Work Order Setup (12.950.00), Defaults tab, you can select different inventory items on the same work order.

6. Note how the work order target data is automatically filled in for the items selected.
7. Process the work order as usual.
   
   - *Production Completion* (12.402.00) sends the properly costed items to a special inventory layer specifically pegged to the sales order line(s).
   
   - *Process Manager* (40.400.00) ships accordingly.
**Applying Costs**

Work Order provides two basic methods for processing completion costs: assigning work order standard costs, and applying actual costs using *Apply Completion Costs* (12.402.01).

In the first method, you assign a work order standard cost to each work order. That work order standard cost can be derived from the production part’s last, average, standard, or budget cost, or you can enter the cost manually when creating a work order. This work order standard cost method smoothes the fluctuations in costing that are often caused by partial completions.

The second method allows you to process completion costs at actual cost using *Apply Completion Costs* (12.402.01). When you open *Apply Completion Costs* (12.402.01), the system takes all costs that have accumulated against the work order and automatically calculates the value attributable to the items being produced according to the following equations:

\[
\text{(Value of Completion)} = \text{(Accumulated Costs)} \times \text{(% Completion)}
\]

\[
\text{(Value Per Item)} = \frac{\text{(Value of Completion)}}{\text{(# of Items Produced)}}
\]

There are many cases where a simple calculation based on the above rules may not accurately reflect the costs of the items completed.

**Example:**

- You complete six units of a ten-unit work order.
- You have issued materials on the material requirements list to the work order in sufficient quantity to build all ten bicycles.
- You have accumulated labor costs to the work order to complete the first six bikes, but you have not started on the remaining four.

In this case, the work order calculation that 6/10ths of the materials costs are related to the items being completed is probably correct, but it may be that virtually all of the labor costs entered to date are directly attributable to the six items already completed. *Apply Completion Costs* (12.402.01) lets you view the system-calculated completion costs and to make whatever changes are necessary.

For more detailed discussion of costing and its application in your work order situations, see “Work Order Entry, Costs Tab” on page 84.
Transferring Materials

You can transfer materials to the following destinations using *Material Transfers/Returns* (12.401.00):

- **To Stock** — When you want to use the item(s) again for a future work order
- **To Mfg. Work Order** — When you want to use the item(s) for another work order
- **To Project/Task** — When you want to use the item(s) for a project/task
- **To Scrap** — When an item is damaged beyond repair or otherwise unusable

Transferring Materials Back to Stock

Use *Material Transfers/Returns* (12.401.00) to transfer stock inventory components previously issued to a work order back to stock.

**Example:** Imagine you work in a bicycle factory and there is an outstanding work order to build 100 bicycles to stock. Then, an important client orders 50 bicycles for an urgent need that your sales department considers a rush job. If there are only enough components on hand to make those 100 initially ordered bikes, you could use *Material Transfers/Returns* (12.401.00) to transfer 50 bicycles worth of components to the rush job’s Build To Sales Order work order so the client gets the 50 bikes as soon as possible. While doing so, you could select Yes to a Re-allocate option so the components for an additional 50 bikes to fulfill the original 100 bike work order to stock would appear as an unfulfilled demand.

![Material Transfers/Returns (12.401.00)](image)

Figure 22: *Material Transfers/Returns* (12.401.00)

If material is being returned to stock from a specific work order, you can identify the work order and, if only one part is being returned, the item’s inventory ID. If you are looking for material from any work order to satisfy another work order, use the wildcard selection capability to select alternate or substitute parts that are similarly named.

1. Select *Material Transfers/Returns* (12.401.00) from the Work Order menu.
2. In **Work Order ID**, enter the ID of the work order from which you want to transfer or return materials and click **Refresh**. The Transfer Issued Components To area fills in with the issued components for that work order. For long lists of issued components, you may want to specify which part you want to see issues for by entering its name into **Part Issued** and again clicking **Refresh**.
3. The issued transactions that match the search/filter criteria from step 2 are presented in a grid for selecting items to transfer and their destination. For each item to transfer, indicate in the Transfer Issued Components To area:
   - The transfer quantity
   - The transfer type
   - The transfer destination (a site ID for return to stock or a transfer to component scrap, or a work order/project/task ID for a transfer to another material list)

4. Click Begin Processing. The Work Order module transfers the components.

Scraping Components

Use Material Transfers/Returns (12.401.00) as described in “Transferring Materials Back to Stock” on page 58 to scrap a component on a work order. The mechanics of scrapping are the same as transferring back to stock, except you indicate a To Scrap Transfer Type. When Component Scrap ID on the Work Order Setup (12.950.00), Codes/Control tab is blank, the related costs remain in the WIP costs for the work order, and a notation is made on the work order that the item was scrapped. In this case, no Inventory return issues batch is created. When Component Scrap ID is filled in with a “scrap inventory item,” the related costs are removed from WIP. A notation is made on the work order that the item was scrapped. An Inventory return issues batch is created, and the scrap inventory item's inventory account is used for the account number.

Transferring Materials to Another Work Order

On Materials Transfers/Returns (12.401.00), the Transfer From selection criteria may consist of a work order ID to which issues were made, as well as a Part Issued ID where wildcard values may be entered. Enter those transfer selection criteria and then click Refresh to fill in the Transfer Issued Components To area.
Completing Production

Use Production Completion (12.402.00) to report when a built-to item is completed for the work order. Once you have completed work order production, whether it was completed fully or partially, this process transfers the cost of the items produced from WIP to their ultimate destination.

Work orders can be completed either fully or partially. A full completion indicates that the total initial quantity is being built. A partial completion indicates that less than the original quantity for the production run is being completed at this time. Subsequent partial completions can be entered later to indicate production runs coming off the line, or a work order may ultimately be closed short, never having produced the full quantity of production originally requested.

In addition to specifying quantity to Complete Now when recording a completion for a work order, you also specify:

- Multiple targets — Use this option when any quantity recorded to be completed should be associated with a different Build To type than what was originally defined for the order. You can redirect a portion of the inventory using ReDirect on the Targets tab of Production Completion (12.402.00).

- Costing information — If the work order standard cost is actual, costs accumulated in work in process (WIP) for the order, as well as the dollar amount to be applied to the completion quantity, are recorded.

![Production Completion (12.402.00)](image)

Figure 24: Production Completion (12.402.00)
Specifying Build-To Destinations for Production Completions

Select the work order for which you want to report completion using Production Completion (12.402.00). Then indicate how many units you wish to complete under Complete Now and where you want the items to go using Build To. You can report completions to the original Build To type of the work order or to any other destination.

Note: Production cannot be redirected to a sales order, as the Build To Sales Order process is initiated only by clicking the WO Request button from a sales order line in Sales Orders (40.100.00).

Completion Cost Methods

A vital step in processing completions is to check the completion costs that are used to calculate the COGS or inventory value of the items produced. Work Order provides two basic methods of processing completion costs.

A work order standard cost (not to be confused with the inventory standard cost) can be assigned to each work order. This work order standard cost can be defaulted from the production part’s last, average, estimated, or standard cost. It also can be entered manually during Work Order setup. This work order standard method can be used to smooth the fluctuations in costing that are often caused by partial completions.

Steps to Record Production Completion

To record production completion of a work order:

1. Choose Module | Work Order | Production Completion from the menu. The Targets tab of Production Completion (12.402.00) appears.
2. In Work Order ID, type the identifier for the work order on which you want to record completion.
   - If the work order ID is unknown, press F3 or double-click the right mouse button. A list of all work order IDs appears.
     - To select a work order ID, highlight the ID and click OK, or double-click on the ID.
3. In Complete Now, enter the quantity of the item you want to complete.
4. Click Begin Processing.
5. Answer Yes to change the processing stage to Ops Closed, if applicable.

Steps to Redirect Completion

Redirecting completion of an item is very similar to completing production, but with the addition of a redirection step.

To redirect completion of an item:

1. Choose Module | Work Order | Production Completion from the menu. Production Completion (12.402.00) appears.
2. In Work Order ID, enter the identifier for the work order from which you want to redirect completion of an item(s).
3. On the Targets tab, lower the Complete Now quantity of an item by how many of that item you want to redirect. For example, If the quantity here is 10 and you want to redirect 1, then you would enter a 9 here. Note that lowering the value in Complete Now enables the ReDirect button because you have now made room in the Complete Now amount for the redirected completion.
4. Click ReDirect. Redirect Completion (12.402.03) appears.
5. Select the redirected build-to destination in Build To.
6. Enter the amount of the item to redirect in Complete Now.
7. Click OK, Redirect Completion (12.402.03) closes.
8. Click Begin Processing on Production Completion (12.402.00).
Working with Build To Sales Order Work Orders

Work Order gives you the ability to create work orders that produce stock to fulfill the requirements of existing sales orders.

To properly process Build To Sales Order work orders, be aware of the following issues.

- Any part to be produced by a Build To Sales Order work order must be set up in Inventory Items (10.250.00) as a Stock Item with either a Standard or User-Specified valuation method. The item must be a stock item because the background processing that occurs when issuing an item produced by a work order to its target sales order puts the item into stock and then issues it to the sales order. The need for a Standard or User-Specified valuation is because the purpose of Build To Sales Order work orders is to provide sales order profitability information on sales orders and work orders. If any other costing method is used, the Work Order module is unable to attribute the actual production costs (COGS) to the target sales order at the time of inventory issue and invoicing.

- The need to attribute exact per-unit, work order-based costing to the sales order at the time of production completion also raises another issue: conditions may involve partial completions and partial shipments against the sales order. As completions occur, for a Build To Sales Order type, Work Order keeps its own layer of the costs for each completion. As shipments are made against the sales order, then the costs associated with the layer are retrieved and applied to the shipment. If shipments are made that cross layers, then the costs are prorated according the number shipped and the layers used.
Creating a Rework Work Order

If an item has been damaged during production, yet is not damaged totally and completed to scrap, you can rework a work order that you create specifically to repair the item. The rework process involves creating a new work order and then redirecting completion of the item to be repaired to it. All other processes occur as with any normal work order.

To create a rework work order:
1. Choose Module | Work Order | Work Order from the menu. The Targets tab of Work Order Entry (12.250.00) appears.
2. Type an identifier for this rework work order in Work Order ID.
3. Verify the correct company ID appears in Company.
4. Verify Status is set to Active.
5. Enter the ID of the item you want to rework in the Item field.
6. Select the Rework selection box.
7. Enter a zero quantity of that item in Current Quantity. The quantity for this rework work order will be defined by how many of the item you redirect to this rework work order in Production Completion (12.402.00).
8. Choose Module | Work Order | Production Completion from the menu.
9. Redirect completion of the items you want to rework to the work order ID you defined in step 2.
10. Report any additional materials needed to repair the item(s) for the rework work order through Material Requirements/Issues (12.250.01).
11. Using Production Completion (12.402.00), report production completion to the rework work order when appropriate.

Printing the Picking Paperwork

To print the picking paperwork for a work order:
1. Choose Module | Work Order | Work Order Entry from the menu. The Targets tab of Work Order Entry (12.250.00) appears.
2. In Work Order ID, type the identifier for the work order whose routing steps you want to define.
   - If the work order ID is unknown, press F3 or double-click the right mouse button. A list of all work order IDs appears.
     - To select a work order ID, highlight the ID and click OK, or double-click on the ID.
3. Verify Processing Stage is set to either Firm or Released.
4. Click Quick Print Traveler to start the paperwork process.
   When the process completes, the paperwork will be sent to your default printer.
Collecting Charges from Other Modules

Work orders are also fully functional Project Management and Accounting projects. One of Project Controller’s best features is its ability to collect charges from almost any module, including Accounts Payable, Accounts Receivable, General Ledger, Inventory, and Payroll. This feature is encapsulated in the Financial Transaction Transfer (PA.TRN.00) process. For your convenience, this Project Controller feature can be launched directly from Work Order by selecting Module | Work Order | Post External Costs to Work Order from the menu.

Financial Transaction Transfer (PA.TRN.00) retrieves all project-related (work order-related) transactions from all modules integrated with Project Controller, and posts them to the appropriate project/task/work order. For more information on this feature, refer to the Project Controller and Project Allocator online help or user guide.

The Work Order module is designed to work within a real-time inventory system, so there are various inventory-related events in which all accounting and project-related transactions have been fully automated. For example, during material issues, the appropriate inventory batch is generated and released, the necessary General Ledger entries to keep WIP synchronized are made, and a limited financial transaction transfer is run to bring all of the transactions related to the inventory issue into the Project Management and Accounting environment. This process also updates the Work Order module.

Note: Financial Transaction Transfer (PA.TRN.00) must be run standalone; that is, only one transfer process may run at a time. In addition, this program may not be run while Time and Expense for Projects’ Labor Commitment Load (TM.LCL.00) is running. When the system detects that a second process of either type is attempting to run, it generates an error message. In this case, wait until the first process completes before commencing the second.

An Already in Progress error message appears when the previously run update process is terminated abnormally due to a hardware problem, software problem, or user intervention, which includes clicking Cancel in the status box during processing. Click Yes to allow the transfer to proceed.
Closing a Work Order

Closing is the last stage in a work order's life. In Work Order Closing (12.403.00), you have the opportunity to close any or all work orders that have a processing stage of Ops-Closed. Closing a work order involves de-allocating unissued material, writing off late charges and unapplied WIP, and setting the processing stage for the work order to financially closed (Fin-Closed).

Effects of Closing a Work Order

Running the closing process does the following things to each selected work order:

- Changes the work order’s processing stage to Fin-Closed, ending its life as a project that can be the target of work order-related financial transactions. (See “Processing Stage” on page 74 for a more detailed discussion of Fin-Closed.) Once a work order’s processing stage is set to Fin-Closed, it cannot be altered in any way but it is available to view for historical purposes. The only exception to this is when the processing stage is moved backwards by a user who has activated Initialize mode (see “Handling Security Issues” on page 7).

- Sets the work order’s Work Order and Project Controller status to Purge or Hold, depending on the selection in After Close Status:
  - Purge — Indicates that once the retention period (defined in Months to Retain Work Orders in Work Order Setup (12.950.00)) has passed, work order detail can be deleted from the system. The system will not delete the work order detail until WO Integrity Check (12.980.00) is run after the specified retention period has elapsed. Remember that the clock starts ticking the day that you set a work order’s status to Purge.
  - Hold — Tells the system not to allow any financial transactions to reach the work order, but allows users to easily change the status back to Active.

- The system generates and releases all of the financial transactions necessary to close the work order. Costs (such as exact outbound freight charges) that have been attributed to the work order after all production completions have been entered and the processing stage has been set to Ops-Closed may be transferred from WIP to a miscellaneous production expense general ledger account (for example, Late Charges).
Unapplied WIP

If there are any unusual circumstances (such as unapplied WIP) with any of the orders being closed, the following warning appears:

This work order cannot be closed for the following reasons: [Condition List].

At this point, you can assign uncompleted costs to accounts other than the default Disposal Account. Occasionally there are timing issues that occur during the closing process. For example, if a work order is closed on a Thursday, and an employee booked time to that work order on Tuesday but his timesheet has not been released yet, then there will be a problem created when the timesheet (containing transactions for a now-closed project) is eventually released. All charges of this type are booked to the account you listed in Unapplied WIP Account in the Closing tab of Work Order Setup (12.950.00).
Work Order Inquiry Tasks

The Work Order module provides you with many on-line inquiry screens that enable you to immediately retrieve information necessary for managing your operations efficiently. In all of these screens, you can filter the data displayed so that you see only the information that is most significant to you.

Viewing Work Order Inquiry

Access Work Order/Project Inquiry (12.300.00) from the Work Order module menu, Work Order Entry (12.250.00), or Work Order Closing (12.403.00). This inquiry screen is the starting point for conducting a detailed drill-down analysis of a work order. Work Order/Project Inquiry (12.300.00) gives you summary and comprehensive information about the financial status (budget, actual, and variance amounts) of the selected work order, based on account category, task, revenue/cost, or any combination thereof.

To obtain more detailed information regarding any item on Work Order/Project Inquiry (12.300.00), select the line for which you want more data and click the Transaction Detail button. Work Order Transaction Inquiry (12.301.00) opens. See “Viewing Work Order Transactions” for more information.

Viewing Work Order Transactions

Use Work Order Transaction Inquiry (12.301.00) to view detailed work order transactions. Work Order Transaction Inquiry (12.301.00) provides comprehensive information about all financial transactions that have occurred during the life of the selected work order. The transaction detail is broken down by transaction date, period, inventory ID, employee, vendor, Project Controller and subledger/general ledger batch, account, subaccount, task, and account category. Transactions can be filtered based on employee, vendor, inventory ID, date, task, and/or account category.

In Work Order Transaction Inquiry (12.301.00), all transactions making up the inquiry line are displayed. From Work Order Transaction Inquiry (12.301.00), the originating data entry screen for each detail line can be viewed.

Figure 28: Work Order Transaction Inquiry (12.301.00)
To view work order or project transactions:

1. Choose Module | Work Order | Work Order Transaction Inquiry from the menu.
2. Select Include projects in lookup if you want to view both project and work order transactions.
3. In Work Order ID, type the identifier for the work order whose transactions you want to review.
   - If the work order ID is unknown, press F3 or double-click the right mouse button. A list of all work order IDs appears.
     - To select a work order ID, highlight the ID and click OK, or double-click on the ID.
4. In Task, type the identifier for a task, if desired.
   - If the task ID is unknown, press F3 or double-click the right mouse button. A list of all task IDs appears.
     - To select a task ID, highlight the ID and click OK, or double-click on the ID.
   - You can use wildcard characters such as * and/or ? to narrow your search.
5. In Account Category, type the identifier for an account category, if desired.
   - If the account category is unknown, press F3 or double-click the right mouse button. A list of all account categories appears.
     - To select an account category, highlight the account category and click OK, or double-click on the account category.
   - You can use wildcard characters such as * and/or ? to narrow your search.
6. Click Refresh to fill in the Detail area with transactions based on your selection filters and other criteria.
Viewing Inventory

Use *Inventory Status Inquiry* (10.220.00) to view the details of an inventory item. You can look up the quantities of an inventory item that are on hand, on purchase orders, on kit assemblies, on transfer orders, in transit, on sales orders, on back orders, on work orders, on shippers, in locations not available, shipped not invoiced, and available, as well as the value of this item in all sites.

For your convenience, *Inventory Status Inquiry* (10.220.00) appears as a choice on the menus for both the Work Order and the Inventory modules. It is the same screen for each module.

To view the status of an inventory item:

1. Choose **Module | Work Order | Inventory Status Inquiry** from the menu.
2. In **Inventory ID**, type the identifier inventory item whose details you want to view.
   - If the inventory ID is unknown, press `F3` or double-click the right mouse button. A list of all inventory IDs appears.
     - To select an inventory item, highlight the ID and click **OK**, or double-click on the ID.
3. View information as desired. Refer to the Inventory online help or user guide for more information on this screen.
Work Order System Maintenance Tasks

Using the Integrity Check

Periodically, use WO Integrity Check (12.980.00) to run an integrity check. This process verifies that the Work Order module’s records and transactions are logically consistent and referentially correct.

![Figure 30: WO Integrity Check (12.980.00)](image)

WO Integrity Check (12.980.00) performs the following actions:

- Rebuilds Inventory Plan
- Deletes work orders with a Purge status and an end date older than today’s date

Rebuilding the Inventory Plan is identical to the same Integrity Check option in Order Management, Purchasing, and Inventory. When CPS is off (which it must be to use Work Order), the rebuilding process:

- Deletes the SOPlan table
- Goes through every document in Order Management, Purchasing, Work Order, and Inventory and rebuilds the SOPlan table
- Rebuilds the ItemSite, Location, and LotSerMst tables from SOPlan

Work Order uses the Project Controller function Delete Project Detail (PA.PUR.00) to purge work orders in a manner identical to purging Project Controller projects. This purge function will not include work orders unless a work order has been designated for purging from within the Work Order module.

Work orders are purged according to the following flow:

1. Close a work order financially, using Work Order Closing (12.403.00), setting the After Close Status to Purge, or ...
2. In Work Order Entry (12.250.00), select a Fin-Closed work order and set its status to Purge.

   **Note:** Steps 1 and 2 only set the work order header status to Purge. The project header record’s status value is set to Inactive at this time.

3. In WO Integrity Check (12.980.00), select Delete Work Orders closed on or before (date) and click Begin Processing. The following takes place:
• **WO Integrity Check (12.980.00)** selects any work orders that have a processing stage of Fin-Closed (C), have a status of Purge (P), and fall within the specified date as calculated by reference to the Work Order Setup (12.950.00), **Codes/Control** tab.

• **Delete Project Detail (PA.PUR.00)** processes project records that are related to a work order.

• When **Delete Project Detail (PA.PUR.00)** deletes a work order’s project records, a special stored procedure is called that deletes the related work order records.

Because work orders are a special kind of Project Management and Accounting project, maintenance for the Project Controller module also applies to Work Order. See the Project Controller and Project Allocator online help or user guide for further maintenance details.
Data Entry Screens

Work Order Entry (12.250.00)

Use Work Order Entry (12.250.00) to create a work order and all the information required to build an inventory item. From this screen, the material requirements and (optionally) the routing may be established for a work order. This screen is used to create and manage work orders and enables you to perform the following tasks:

- Open a new work order
- Define characteristics of a work order
- Specify production targets
- Manage processing stages
- Manage material lists
- Manage routings

Figure 31: Work Order Entry (12.250.00)
The following are field descriptions for Work Order Entry (12.250.00).

**Work Order ID**

A work order ID is a unique number assigned to this work order. The work order ID is used to tie operations to a specific work order history. This is important because several work orders can exist simultaneously, all building the same quantity, of the same part, to the same target, and with the same description. The work order ID uniquely identifies each work order as a distinct and individual project for tracking purposes.

There is a corresponding project record and a single project/task record for each work order. These are created in Project Management and Accounting automatically, and are largely invisible from the Work Order module. If Project Management and Accounting is licensed, you may prefer to prefix the work order ID (when creating work orders) with WO to distinguish them from other projects.

**Company**

The current company ID is displayed for reference purposes and can be changed only if the work order has not accumulated any project-to-date costs.

**Processing Stage**

The processing stage records and displays the stage of the order as it progresses from the Plan stage to the Firm, Released, Ops-Closed, and Fin-Closed stages. When you first enter a work order, **Processing Stage** is automatically set to Plan and disabled (grayed out). The first time you save the work order, **Processing Stage** becomes enabled.

Stages include:

- **Plan** — When you create a work order, the Work Order module initially assigns the new work order to be in the Plan processing stage, with **Processing Stage** disabled. That field becomes enabled when you save the work order for the first time.

- **Firm** — Use this stage when you want to reserve allocations for a work order materials list. This stage enables supply and demand visibility for the work order without allowing transactions to be recorded against the work order.

- **Released** — This stage enables full operational ability against a work order, allowing for all operations and transactions to occur against the work order. This includes the issuing of materials from inventory, the transferring of materials between work orders, the recording of labor from time and expense entry or payroll, accumulation of other charges, and the recording of production to deliver actual quantities to the defined production targets.

- **Ops-Closed** (closed to operations) — Use this stage when you want to prevent any further manufacturing operations against the work order while financial transactions finish accumulating costs. This stage prevents acceptance of any further labor, material, and other operations. It provides buffer time before the order is completely closed during which any financial transaction batches that have been entered but not yet released can be processed. This stage may be set here or by using completion processing on **Production Completion** (12.402.00).

- **Fin-Closed** (financially closed) — Use this stage when you want to close the work order permanently so that no more transactions may be accumulated against it. This stage prevents further transactions against the work order, which is now historical information.

Two important inventory events may occur as the result of a change in processing stage. They are:

- **Allocation** — Marks a quantity of inventory as needed or reserved, without actually reducing the current quantity on hand, regardless of allocations. Quantity on hand is the actual parts or subassemblies in warehouse bins, regardless of allocations. Quantity available is the count of inventory items that have not had allocations reserved against them yet by other work orders.

- **Commitment** — Represents a potential in-bound supply if the work order is carried through to completion according to plan. It does not increase available inventory on hand, it just indicates a potential new in-bound supply.
**Processing Stage** identifies the current point in the lifecycle of the work order. **Processing Stage** also limits which work order actions can be performed at any given point. In a Plan stage, there is no impact on the inventory in terms of actual quantities on hand or potential supply and demand. When the work order is set to the Firm processing stage, the system indicates that the materials required for the work order will appear as a demand to be reserved against available on-hand quantities. Similarly, the production target of the work order appears as a potential inbound supply of the target item being produced.

However, in a Firm stage, no actual operations may be performed against the work order. Changing the work order from Firm to Released does not change the visibility of supply and demand, but it does unlock the work order so that operations such as material issues and labor charges may now be processed against this work order.

In a Firm stage, inventory has been allocated to the material list. The work order may be left in this state, rather than progressing to a Released stage so that charges to the work order will not begin prematurely.

For more information about the limits placed by processing stages on operations that can be performed, see “Changing the Processing Stage of a Work Order” on page 48.

**Status**

Defines the interaction of the work order within the system. Options are:

- **Active** — No restrictions on processing of the work order, other than those imposed by **Processing Stage**.
- **Hold** — Prevents any further transactions from being entered against the work order. Held work orders do not appear in PV (Possible Values) lists, but you can still look them up in inquiry screens such as Work Order/Project Inquiry (12.300.00). You may want to place a hold on a work order for reasons such as:
  - You are waiting for a customer commitment to buy an order you are about to produce.
  - Your engineering team discovers a flaw in a design and they need to fix the product before commencing manufacturing operations.
  - You are waiting to receive a down payment or process a credit check prior to starting to build the items.
- **Purge** — Only available for work orders in Fin-Closed processing stage. Work orders with this status are eligible for purging, which indicates to the system that, once the retention period (defined in Months to Retain Work Orders in Work Order Setup (12.950.00)) has passed, work order detail can be deleted from the system. The system will not delete the work order detail until WO Integrity Check (12.980.00) is run after the specified retention period has elapsed. Remember that the clock starts ticking the day that you set a work order’s status to Purge.

**Rework**

Select **Rework** if the item on the work order is repairing a damaged production item from another work order. For example, imagine you released a work order to build five finished bicycles, and a forklift accidentally ran into one of them. If the bike is not completely ruined (a ruined bike would necessitate your completing it to scrap), you can open a new work order to rework the damaged bike. See “Creating a Rework Work Order” on page 63 for details.

**Material Req/Issues (button)**

**Material Req/Issues** opens Material Requirements/Issues (12.250.01), allowing you to define material requirements in a materials list for this work order, as well as issue materials.

**Routing (button)**

**Routing** opens Routing/Operations (12.250.02), allowing you to enter and view routing or operational steps for the completion of this work order.
Quick Print Traveler (button)

Quick Print Traveler prints the picking paperwork for this work order. The traveler shows the routing steps and material requirements. This button is disabled until the work order is placed into the Released processing stage.

WO Inquiry (button)

WO Inquiry opens Work Order/Project Inquiry (12.300.00) for this work order. This screen provides a thorough look at the work order’s revenue, costs, and profitability. Detailed transaction drill-down inquiry is also available.

Inv Status Inq (button)

Inv Status Inq opens Inventory Status Inquiry (10.220.00) for this work order’s part to build. This screen displays inventory status details, including the inventory transactions for this item and the sources and uses for this part.

Event History (button)

Event History opens Event History Inquiry (12.304.00) for this work order. This screen shows all operational and accounting events during the life of the work order. Included are all the accounting batches that were generated by this work order, and drill-down inquiry is available.

Info (button)

Info in the lower-left corner of the screen opens Work Order Information (12.290.00) for this work order. It provides high-level information about the work order selected. This button and information are available on most screens that reference work orders.
Work Order Entry, Targets Tab

Use the Targets tab of Work Order Entry (12.250.00) to specify quantities of the part to be built and their destination.

![Work Order Entry Screenshot](image)

**Figure 32: Work Order Entry (12.250.00), Targets tab**

Following are the field descriptions for the Targets tab of Work Order Entry (12.250.00).

**Item**

An Item indicates the part to build on this work order. It must be a valid inventory ID as defined using Inventory Items (10.250.00). Item can also be an inventory kit. If components have been defined for the inventory ID with inventory kits or for the specified inventory/site ID combination in Bill of Material Maintenance (11.250.00), the initial list of components on the material requirements screen will automatically default to these predefined components. Item Desc displays the description for the item from Inventory Items (10.250.00). BOM Desc displays the associated bill of material definition for the part, if any.

**Site**

Indicates the default site where the production takes place and where inventory quantities for the part to build are incremented. This ID may also be used as the default source site ID for component materials (see Components Site ID Defaults From). If the part to build is non-stock, the default source site ID appears. The value entered here will be used as a default when entering records in the Build To area on the Targets tab.

**Start-End Dates**

- Planned Start — The expected date for issuing components on the material requirements list. The default value is the current date.
- Planned End — The date that completion of production is expected. This is a required field for the Firm stage and beyond, and must be manually entered.
- Actual Start — The date the system automatically fills in when the work order is moved from Plan or Firm to Released.
• Actual End — The date the system automatically fills in when the work order is closed by *Work Order Closing* (12.403.00).

**Component Site Defaults From**

Sets the source site ID default for the component parts for this work order. The source site is where materials will be drawn from during the issues process. This default value may be overridden for an individual component on the material requirements list on a line by line basis. Options are:

• **BOM** — If a pre-existing bill of material definition exists for the part, then the source site ID for each component defaults to the component’s site ID as defined in *Bill of Material Maintenance* (11.250.00).

• **Work Order** — When selected, the default source site ID for each component defaults to the work order site ID.

• **Component** — When selected, the default source site ID for each component is set to the inventory item’s default site as set up in *Inventory Items* (10.250.00).

**WO Requests From OM (button)**

*WO Requests From OM* allows you to link a specific sales order’s demand for items with a work order that is building the same thing. When entering sales orders using Order Management’s *Sales Order* (40.100.00), the user may request that a work order be created to fulfill the sales order. Clicking on the *WO Request* button on *Sales Order* (40.100.00) places a request into a special queue that you can view by clicking the *WO Requests From OM* button on *Work Order Entry* (12.250.00). If you have already entered a part to build, all work order requests for that part appear. If you have not entered a part to build, work order requests for all parts appear, and you may select the part that you want to build.

**Build To**

Enter the desired target for your production here. This target is the intended destination of production when running *Production Completion* (12.402.00). If your plans change, you may be able to redirect your initial build-to target at production completion time, depending on whether your destination change is allowed. For example, you cannot change production destination from Stock to Sales Order if there is no sales order asking for that part.

The four *Build To* types are:

• **Stock** — Work Order will place the item into on-hand inventory, at a specific site ID and warehouse bin location, at production completion time. The quantity on hand may then be accessed as any other inventory item (issued from inventory, transferred to a different location, allocated to a sales order, etc.).

• **Sales Order** — The part being built will not be put into stock, but rather issued to fulfill a customer’s order. You cannot select this option manually. Rather, you must click on the *WO Request From OM* button to select a sales order target. Then a work order can be created to build to a sales order, and this field will display the target as a sales order.

**Note:** A *Build To* Sales Order work order requires the Order Management module.

• **Mfg Work Order** — The part is being built as a subassembly to satisfy a component requirement of another manufacturing work order. The part to build as identified on this screen must be on the material requirements list for the other work order designated here.

• **Project/Task** — The part is being built to a project/task that has been set up using Project Management and Accounting. Projects can have one or more tasks as components of the project, and the target of production within the project must be a specific, single task. For example, a bicycle making shop may build several bikes to an annual bicycle convention project code. The bikes will not be placed into stock for sale or used to fulfill a customer sales order. Rather, they are built to be taken to the convention for display in a marketing booth. By building those bicycles to the convention project, they will not be placed into stock and their costs will be added to the overall project costs for the convention.
Note You cannot issue material to a work order that is already allocated to a project. Use Availability (21.410.00) to examine the inventory allocated to projects.

Inventory ID
The inventory ID of the part to build, repeated from Item.

Site ID
The value entered here determines the actual site that will receive the production of this work order as it is completed. This field is used only for building to stock, where the completed item is going into a warehouse. This field is disabled for the other Build To types.

Whse Bin Loc
The value specified here designates the single warehouse location (or bin location) that will receive the production of this work order as it is completed. This field is used only for building to stock, where the completed item is going into a warehouse. This field is disabled for the other Build To types.

Current Quantity
The current required quantity for this production item. If the Build To type of the work order is Sales Order, this quantity is set from the corresponding sales order line and should not be modified here.

For other types of work orders, Current Quantity may be changed at any time before the processing stage is set to Ops-Closed. If this field is changed after the processing stage has moved to Firm, you are prompted to confirm the change and record the reason for the change. An audit history record is maintained of changes to the work order quantity.

Note: A change to Current Quantity requires a change to the quantities on the material list. The system asks if the material requirements in WO Quantity Required on Material Requirements/Issues (12.250.00) should be revised, with an explanation of what will take place if Yes is selected.

Remaining
Remaining contains the quantity that is yet to be completed to production targets for this work order, calculated as Current Quantity less Complete (&Cstd). This field is display-only and is automatically updated during Production Completion (12.402.01).

Completed
This field allows you to note that the production to this build-to target line has been completed. This field is display-only here, and is updated via operations performed using Production Completion (12.402.00).

Customer ID
This field is optional and may be used to identify the customer for whom you are building this work order. If this work order is to be a Build To Sales Order work order, Customer ID is automatically filled in via the WO Requests From OM process.

Sales Order
Sales Order is automatically filled in during the WO Requests From OM process for build to sales order types. It is unused for other build-to types.

SO Pick Date
For Build To Sales Order work orders, this field indicates the earliest sales order pick date for all the schedules for the sales order line, and is display-only.
SO Schedules
For a Build To Sales Order work order, this field is the number of schedule lines for the sales order line.

SO Hold
For a Build To Sales Order work order, this display-only field displays any holds on any schedule lines.

QC Hold
Enter a quantity here if you want to withhold one or more items from completion, to test the items for quality control purposes. If they pass the inspection, you can set QC Hold back to 0 and complete the items to production.

Any quantity entered here reduces the quantity available to complete for this production item record. That is, the quantity remaining to complete is left untouched, but Production Completion (12.402.00) cannot be reported on the units in QC Hold.

Out to Rework
When a quantity is transferred (completed) to Rework, this field is incremented. When the quantity on the rework work order is completed back to this work order, this field is decremented. This field is display-only and is updated during Production Completion (12.402.00).

Scrap
Scrap indicates that some quantity of the items produced on this build-to line were scrapped instead of making it to their intended destination. For example, if you have a work order for five assembled bicycles and one of them is wrecked in a forklift mishap on the factory floor, you complete one assembled bicycle to production scrap. This action credits WIP and debits scrap expense. This field is display-only and updated during Production Completion (12.402.00).

Completed (&Cstd)
The quantity on this production item record that has been reported complete through Production Completion (12.402.00).

ReDirected
The quantity of this production item that has been redirected to another destination through Production Completion (12.402.00). This field is display-only and updated during Production Completion (12.402.00).

Specific Cost ID
Specific Cost ID displays a user-defined identification number of a particular cost layer for an item. This only applies to inventory items that are defined as having the Specific ID costing method. See the Inventory online help or user guide for more information.

Build to WO
Reports completion of the order to a work order, with the part to build automatically issued to the requirement on the target work order’s material requirements list. Used only for the Build To Work Order type.

Build to Project
Reports completion of a work order to a project or task. Used only for the Build To Project/Task type.

Build To Task
Reports completion of a work order to a specific task within a Project Management and Accounting project. Used only for the Build To work order to Build To Project/Task type.
Build To Line Ref
Indicates the line number on the sales order for the item on the work order. Completion is reported to this specific line on a designated sales order. Used only for the Build To Sales Order type.

Change Reason
This field is used to record the reason for a change in the current quantity to build for that production target line. The entry made here is recorded in the audit history file for this work order. This is a required field if the current quantity to build is changed.

Target Description
The description of the inventory item being built on this particular target line. Since a single work order can have several target lines to the same target, you may wish to indicate what makes this particular individual target line unique.
Work Order Entry, Quantity Summary Tab

Use the Quantity Summary tab of Work Order Entry (12.250.00) to view quantity information related to production of this work order. The Quantity Summary tab displays the status of the quantity targets and progress, quantities on hold, and what remains to be completed for this work order.

![Work Order Entry (12.250.00), Quantity Summary tab](image)

Figure 33: Work Order Entry (12.250.00), Quantity Summary tab

Following are the field descriptions for the Quantity Summary tab of Work Order Entry (12.250.00).

**To Build, Original**

To Build, Original contains the original targeted quantity for this work order. While the work order’s processing stage is set to Plan, this quantity is automatically updated to display the sum of the current quantity for each line item on the Targets tab. Once the order’s processing stage is moved to Firm, the original quantity is locked and To Build, Current will change to indicate the revised sum of all production targets.

**To Build, Current**

To Build, Current reflects the sum of the quantity for all production targets on this work order. The current quantity displays the total including any adjustments that may have been made after the work order was moved to Firm, whereas the To Build, Original quantity reflects the original total as calculated during the Plan stage. This field is display-only and is automatically recalculated any time that changes are made to the build-to-target lines.

**QC Hold**

This display-only field indicates how many items have been put on QC Hold status. The quantity of items on QC Hold will reduce the quantity available to complete. The quantity remaining to complete is left untouched, but Production Completion (12.402.00) cannot be reported on the units in QC Hold.

**Rework**

Rework is display-only and indicates the total of the rework counts on all of the target lines for this work order.
Rework Complete
This field indicates the Rework work order items completed so far on the work order. When the quantity on a Rework work order is completed, this field is incremented. This field is display-only and updated during Production Completion (12.402.00).

Scrap
Scrap indicates that an item in a work order was defective or damaged and did not make it to the intended destination. For example, if you have a work order for five assembled bicycles and one of them is wrecked in a forklift mishap on the factory floor, you complete one assembled bicycle to production scrap. This action credits WIP and debits scrap expense. This field is display-only and updated during Production Completion (12.402.00).

Completed
Completed contains the quantity of production items for this work order delivered to their targets. This field is display-only and updated during Production Completion (12.402.00).

Remaining
Remaining contains the quantity that is yet to be completed to production targets for this work order, calculated as Current Quantity less Completed (&Cstd). This field is display-only and is updated during Production Completion (12.402.00).
Work Order Entry, Costs Tab

Use the Costs tab of Work Order Entry (12.250.00) to set and display the costing method for production completion for a work order. The Costs tab displays last, average, and standard costing information, as well as estimated and actual costs to date for the work order.

The tab has two purposes:

1. **Set Work Order Standard Cost** — If you set the default cost method on Work Order Setup (12.950.00) to WO Standard costs for future work orders, then each work order must have a work order standard cost assigned to it when it is created. A work order standard cost, compared to an actual cost, is a method of establishing consistent cost methods to be used when reporting partial completions for the work order.

In general, the Work Order module collects costs as they are recorded. The completion process applies the costs that have been recorded to the items being completed and sends those items on their way to their destination (stock, another work order, etc.). These costs reflect actual costs if all costs have been recorded.

However, it is common for processes to happen too quickly for all costs to be recorded. In those cases, the work order standard cost applies the probable actual cost to the work order. Options are:

- Last — Sets the work order standard cost as the production parts’ last cost.
- Average — Sets the work order standard cost as the production parts’ average cost.
- Estimate — Sets the work order standard cost as the production parts’ estimated cost.
- Standard — Sets the work order standard cost from Standard Cost - Current.
- Actual — Sets the work order standard cost as the actual cost. If an item is valued at standard cost, then the actual costs will be compared to standard cost and a variance will be booked. This method does not work well if you do partial completions of work orders.

**Note:** The work order standard cost is separate from an inventory item’s standard cost used for inventory valuation.

2. **Display Work Order Costs** — You can compare the accumulated work order costs against standard and historical costs for this part, independent of this work order.

Following are the field descriptions for the Costs tab of Work Order Entry (12.250.00).
Report Completions At
This choice indicates which costing method you will use for a work order. The initial value is the default set in Work Order Setup (12.950.00).

- Select Actual Cost if you want the item you are building to be valued at the real cost of production. The Actual Cost method takes the real costs to build the first item and put it into inventory and spreads them over the remaining quantity to build for the work order. For example, a work order for 10 bicycle cranks built in May could be completed for an actual cost of $5.00 per crank. But a work order for 10 bicycle cranks built in July might have an actual cost of $5.50 per crank, due to an increase in the price of metal.

- Select WO Standard Cost if you want to value the item you are building at one of the WO standard costs, which become enabled when you select this option.

- If the part to be built is valued at inventory standard, the Standard Cost option is selected and you may not change it to Actual Cost or WO Standard Cost during the life of the work order. When the item is completed to production and placed into inventory, it goes in at inventory standard cost, regardless of whether the raw materials or labor charges have changed from the predefined inventory standard cost expectations. Any variance between the predefined inventory standard cost and the actual cost to put that item into inventory will be booked separately for tracking purposes.

WO Standard Cost Defaults From
This choice indicates the work order standard cost for this work order. Once a work order moves beyond the Plan processing stage, its work order standard cost cannot be changed. The default value is set in Work Order Setup (12.950.00) and will be one of the following, which you can alter here:

- Last — Sets the work order standard cost to the current last cost value for the part to build for the work order from Inventory Items (10.250.00).

- Average — Sets the work order standard cost to the current average cost value for the part to build for the work order from Inventory Items (10.250.00).

- Estimate — Reflects the total amount of materials and labor defined for this work order. When a new work order is entered, these values come from the work order's material and routing lists. Later, if other budget items are added to the work order, the budget values will reflect those additional items.

- Standard — Sets the work order standard cost to the current inventory standard cost value for the part to build from Inventory Items (10.250.00).

Actual Cost - Completed
Actual Cost - Completed indicates the current actual costs accumulated for the work order that have been applied to completions using Apply Completion Costs (12.402.01). The Unit Cost is calculated as the total dollars that have been applied to completions divided by the number completed. The Quantity is the current completed quantity for the work order. Extension is the cost of all currently completed items. This row is display-only.

Actual Cost - WIP
Actual Cost - WIP (Work In Process) contains total dollars currently costed to WIP less the dollars allocated to completions for this work order; that is, the dollars still in WIP for the work order. Extension represents the total dollars currently costed to work in process less the dollars applied to completions for this work order. This row is display-only.

Standard Cost - Original
The standard cost value for the part to build from Inventory Items (10.250.00) at the time the processing stage for the work order was changed to Firm. Quantity is the number of items to build and Extension is the cost per item multiplied by the number of items to build. This row is display-only.
Standard Cost - At Last Completion
The standard cost value for the part to build from Inventory Items (10.250.00) at the time the most recent completion was recorded for the work order using Production Completion (12.402.00). Quantity is the number of items to build and Extension is the cost per item multiplied by the number of items to build. This row is display-only.

Standard Cost - Current
The current standard cost value for the part to build from Inventory Items (10.250.00). Quantity is the number of items to build and Extension is the cost per item multiplied by the number of items to build. This row is display-only.

Last Cost
Last Cost is maintained in Inventory Items (10.250.00) and is updated any time the item is received into inventory, either through production completion or by the company purchasing items from a vendor. Quantity is the number of items to build and Extension is the cost per item multiplied by the number of items to build.

Average Cost
Average Cost indicates the current average cost value for the part to build from Inventory Items (10.250.00). Quantity is the number of items to build and Extension is the cost per item multiplied by the number of items to build.

Estimate Cost
Estimate Cost represents the work order quantity required times the unit cost.

WO Standard Cost
WO Standard Cost contains the work order standard cost to be used at completion. This field is enabled when you select WO Standard Cost in Report Completions At, and the cost initially reflects what you selected in WO Standard Cost Defaults From. For instance, if you selected Last in WO Standard Cost Defaults From, the values for Last Cost and WO Standard Cost will be the same.

You can always edit the value in WO Standard Cost directly if you want to adjust the cost for this work order. The value in this field is the unit cost that will be used when reporting completion.
Work Order Entry, Bill of Material Info Tab

You can view engineering changes to build items from a bill of material by using the Bill of Material Info tab of Work Order Entry (12.250.00). The Bill of Material Info tab, which is display-only, documents changes to a bill of material, its start/stop dates, revisions number, and engineering change order number. The availability of this tab in Work Order is a convenience for users of Bill of Material.

Figure 35: Work Order Entry (12.250.00), Bill of Material Info tab

Following are the field descriptions for the Bill of Material Info tab of Work Order Entry (12.250.00).

Standard Lot Size

Standard Lot Size displays the quantity of an item that is most economical for your company to build at one time. For example, a bicycle factory may produce frames in lots of 10 because setting up and operating the assembly line for only one frame would not be an economical use of the changeover time and labor involved. Lot sizes are defined in Bill of Material, if installed, or in Inventory, if you use that module to define inventory kits.

Revision Number

Revision Number displays the modified number or version of the associated bill of material. This number was set in the Bill of Material module when an engineering change was recorded to the bill of material. This field is display-only.

Engineering Change Order

Engineering Change Order displays the order that authorized the changes to the component of a bill of material. This field is display-only.

Engineering Drawing Number

Engineering Drawing Number displays the ID for the engineering drawing, design, or process document from which the bill of material (or the latest revision) is copied.
Start Date

**Start Date** displays the date when the bill of material and associated routing (if routings are used) become active. This field is copied from the Bill of Material module as a display-only field for completeness.

Stop Date

**Stop Date** displays the date when the bill of material and associated routing (if routings are used) become obsolete. This field is copied from the Bill of Material module as a display-only field for completeness.

Supersedes

**Supersedes** indicates a prior bill of material that may now be obsolete, and has been replaced by a new bill of material definition. This is an informational field that can offer a historic perspective on how bills of material evolve over time, and how one bill can replace another.

Superseded By

**Superseded By**, in a similar manner to **Supersedes**, indicates a later bill of material that has replaced this one. This is an informational field only and is used to record a historical perspective on bills of material and their relationship at the time of production.

Work Order Entry, Shop Floor Control Info Tab

The **Shop Floor Control Info** tab functionality is not available in this version of Work Order.
Work Order Entry, Other Info Tab

Use the **Other Info** tab of *Work Order Entry (12.250.00)* to set up additional information needed to manage work orders.

![Figure 36: Work Order Entry (12.250.00), Other Info tab](image)

Following are the field descriptions for the **Other Info** tab of *Work Order Entry (12.250.00)*.

**GL Subaccount**

Because a work order is a special kind of project in Project Management and Accounting, and because every project in The software needs a subaccount, this field contains a default subaccount value that was set in *Work Order Setup (12.950.00)*. On a work order by work order basis, you can change that default subaccount value per your company’s needs.

**Material Account Category**

*Material Account Category* is the account category used to track material for this work order. The default account category is defined in *Work Order Setup (12.950.00)*. The cost estimate (budget) for a work order is linked to its material account category and its labor account category. A possible values lookup is available for all account categories.

**Update Estimate (in Plan Stage) (Material Account Category)**

Displays an option to update the *Material Account Category* estimate when the material list is changed while in the Plan stage. Leave it unchecked if you do not want to update your material budgets from the material requirements screen on any work order. For example, if you have given a customer a quote based on an estimate for a work order, and you do not want any future changes to the work order to affect that estimate, then you would leave **Update Estimate** deselected.

**Labor Account Category**

*Labor Account Category* is the account category used to track labor for this work order. The default account category is defined in *Work Order Setup (12.950.00)*. The cost estimate (budget) for a work order is linked to its material account category and its labor account category. A possible values lookup is available for all account categories.
**Update Estimate (in Plan Stage) (Labor Account Category)**

*Update Estimate* displays an option to update the *Labor Account Category* estimate when the material list is changed while in the Plan stage. Leave it unchecked if you do not want to update your material budgets from the material requirements screen on any work order. For example, if you have given a customer a quote based on an estimate for a work order, and you do not want any future changes to the work order to affect that estimate, then you would leave *Update Estimate* deselected.

**Data Entry Status**

*Data Entry Status* is the work order status from the project record. When set to Inactive, the work order does not appear in any transaction entry screen in the system. You cannot enter any transactions against a work order whose data entry status is Inactive. However, transactions already entered will process normally. When you create a work order, the Plan stage has a data entry status of Inactive so that you can sketch out a work order without making it known to the rest of the system. Also, placing a work order into Hold or Purge status makes its data entry status Inactive.

If *Data Entry Status* is set to Active, data entry is available for this work order throughout the system.

**Work Order Description**

This field’s value is copied from *Item Desc* on the *Targets* tab of *Work Order Entry (12.250.00)*.

**Project Description**

This field’s value is copied from the first 30 characters of the work order description. The value in this field consists of “MWO:” plus either the work order item’s description from *Inventory Items (10.250.00)* or, if the part to build on the work order is from a bill of material, the *Description* field in *Bill of Material Maintenance (11.250.00)*.

**Allocation Method Code**

The allocation method code is a value from the project record for the work order. Work orders are a special kind of project in Project Management and Accounting. The value for *Allocation Method Code* defaults from the work order setup record. If *Allocation Processor (PA.PRO.00)* is to be used to generate additional charges on the work order, it will use the allocation method code attached to this work order.

**Allocation Rate Table ID**

The allocation rate table ID is a value from the project record for the work order. Work orders are a special kind of project in Project Management and Accounting. The value for *Allocation Rate Table ID* defaults from the work order setup record, and is a more advanced implementation of allocations. See the Project Controller online help or user guide for more information.

**Priority**

The value in *Priority* will be used in the scheduling process of the Shop Floor Control module. It appears on this tab, rather than the *Shop Floor Control* tab, so that it may be used for reporting purposes. The *Shop Floor Control Info* tab functionality is not available in this version of Work Order.
Material Requirements/Issues (12.250.01)

Use Material Requirements/Issues (12.250.01) to define the material requirements list for a work order and for issuing material. Access this screen by clicking Material Req/Issues on Work Order Entry (12.250.00). This screen is used by project managers to define and manage material lists. It may also be used by project managers to issue materials.

Material Issues (12.400.00) is virtually identical to Material Requirements/Issues (12.250.01) but is designed for use by shop floor personnel for the day-to-day issuing of material. Access rights should be assigned accordingly.

The list of requirements in Material Requirements/Issues (12.250.01) may be derived in four different ways:

1. Manual Entry — A material list may be entered manually. This will be the case for work orders where no kit or bill of material definition exists for the part to build.
2. Kit — If kit components have been defined for the part to build using Inventory’s Kits (10.320.00), this initial material list will display the kit component list.
3. Bill of Material — If components have been defined for the part to build using Bill of Material Maintenance (11.250.00), the initial material list will display the top layer of the bill of material component list.
4. Template — The Kit/Bom button opens a separate screen to allow the designation of any valid kit or bill of material to use as a template to identify additional material requirements. Using this technique, the user may also combine kits/BOMs from several assemblies into a single work order. This is often useful when creating one work order for a single bill containing several subassemblies.

In all cases, Material Requirements/Issues (12.250.01) allows you to change almost any field on its screen; for example, any item may be added, deleted, or changed. One exception is that if material has already been issued for a component, that component record may not be deleted from the material list.

While the work order is in the Plan processing stage, each time the material list is accessed, it will be compared to the current kit or bill of material. If a difference is found, the user will be prompted as to whether or not the material list should be rebuilt.

Following are the field descriptions for Material Requirements/Issues (12.250.01).
Work Order ID
A work order ID is a unique number assigned to this work order. The work order ID is used to tie operations to a specific work order history. This is important because several work orders can exist simultaneously, all building the same quantity, of the same part, to the same target, and with the same description. The work order ID uniquely identifies each work order as a distinct and individual project for tracking purposes. This field is display-only.

WO Type
WO Type contains the original category of the work order:

- Manufacturing (which comprises the four Build To types Stock, Sales Order, Mfg. Work Order, and Project/Task)
- Rework
This field is display-only.

Processing Stage
Processing Stage indicates the work order’s current processing stage. The value is set by Work Order Entry (12.250.00) and cannot be changed here.

Issue To Build
When issuing material for a work order, enter the number of units of the order’s part to build here. This field defaults to the remaining quantity to build.

Note: Issues may only be processed when the work order is in the Released processing stage.

Grid Pop (button)
This button calculates the Issue Now quantity on a line-by-line basis and fills in the Issue Now column so that you do not have to manually enter the Issue Now value for each line.

By changing the Issue To Build quantity to a value other than the quantity remaining to build (default), you may easily control the issue of materials to correspond with partial build requirements.

If you only wish to issue enough materials to build 3 of the 10 items you are building for this work order, enter 3 and click Grid Pop. The result will be to set the Issue Now quantities for each component to the quantity required to build three items. Grid Pop handles multiple quantities per parent item.

At any time, the Issue Now quantities are fully editable in the component list grid. This allows you to override the automatically calculated values from Grid Pop, or to set a simple issue of a manually entered list of components.

Material Check
Click Material Check to display Material Check (12.251.00), which allows you to do a last-minute check on component inventory status before issuing materials. Various options allow you to constrain or widen the view for each item. See “Material Check (12.251.00)” on page 111 for more details.

Period
Period is used when issuing material to a released work order. The default value for this field is determined by the Period to Post value in the Defaults tab of Work Order Setup (12.950.00) (the choices are either to synchronize with the inventory period from the Inventory module or to define your own period for your work orders). The issue material process generates inventory receipts and general ledger WIP batches, and this period is used for these batches.
Sequence #
This is the line number used to order the components in the material requirements list. If copied from a bill of material, these sequence numbers match the bill of material sequence numbers. When you click the Renumber Seq. button to renumber a list, it renumbers the list in increments of 10.

Component ID
Component ID is the inventory ID for materials required to produce this work order. An entry must have been entered using Inventory Items (10.250.00) as a stock or non-stock item. Stock items must be one of the following material item types, for which inventory balances may be edited and for which inventory transactions are processed:
- Component
- Finished Goods
- Raw Materials
- Sub Assembly
- Other Type of Item
In contrast to stock items, special non-stock or non-material items may be set up and used to transfer non-material costs to the work order through the normal Material Requirements/Issues (12.250.01) and Material Issues (12.400.00) processes. Non-material costs are not a physical part of an item but add to the cost of production; for example, overhead costs or recycling charges. Such non-stock parts must be set up as one of the following item types:
- Labor
- Machine Overhead
- Other Direct Cost
Possible values of all inventory items are available by double-clicking the right mouse button in this field.

Site ID
Indicates the site from which the component parts are to be drawn during material issues. If the part to build is non-stock, the default Site ID value is used. Its default value is displayed from the Targets tab of Work Order Entry (12.250.00) in Component Site Defaults From. The site ID may be changed; for example, if you need to build an assembly and the stock site ID does not have enough quantity of components on hand.

Whse Bin Location
The warehouse location (or bin location) from which the components will be pulled when you issue materials to a work order.

Issue Now
The quantity to issue during this session. Material issues to work orders may be performed in multiple batches. You do not have to issue all the materials at once. The value may be set by clicking Grid Pop or entering the value manually. This quantity will be issued when you click the Issue Material button. If this quantity is greater than the remaining quantity, a warning is given. Overissues, where you deliberately issue more quantities of components than are necessary for building an assembly, are allowed.

WO Qty. Required
The standard quantity/of components per unit to build times the quantity to build, current for the work order. This field is calculated from Std Qty/Unit and the quantity to build. You can change this field manually to account for scrap or other material consumed during the production process. If you manually override the calculated quantity here, then it will not be recalculated if you change Current
**Quantity** on the **Target** tab of *Work Order Entry* (12.250.00). If the value is zero, a warning will be displayed.

**Material In**

**Material In** displays the quantity of an item issued or transferred to the work order.

**Material Out**

**Material Out** displays the quantity of an item transferred out of the work order.

**Remaining**

The remaining quantity to issue for this component. The value in this field drives allocation of inventory and is display-only.

**Specific Cost ID**

**Specific Cost ID** displays a user-defined identification number that identifies the particular cost layer for the item. See the Inventory online help or user guide for more information.

**Stock Usage**

**Stock Usage** controls how items are used from stock in *Material Requirements/Issues* (12.250.01). The **Type** field on the Information Tab in *Inventory Items* (10.250.00) is used to determine how the **Stock Usage** field will default when being added in *Material Requirements/Issues* (12.250.01) or *Material Issues* (12.400.00).

For items which have a **Type** of Finished Good, this field defaults as Normal. For items that have a **Type** of Subassembly, this field indicates whether the required quantity of the item should be satisfied by using the stock quantity of the subassembly or by building more units of the subassembly from its components. This field defaults (display-only) from the value entered in stock usage in the bill of material. If it is not included on a bill of material, the field defaults to Normal. The options are:

- **Normal** — If sufficient quantity exists, use all the required units of this component subassembly from stock. If quantity is insufficient, use the subassembly units available, and rely upon a second, separate work order to build the remaining units from its components. Only the quantity on hand will be issued during this materials issue process, leaving a shortage condition for this component for this work order.

- **Build Only** — Regardless of whether any stock quantity exists, do not use any units of this component subassembly from stock. Instead, build all required units from its components via separate work orders designating this parent work order as the build-to target.

- **Stock Only** — Regardless of whether the stock quantity is sufficient, use all required units of this component subassembly from stock. When using Stock Only, be aware that it will force negative stock quantity if you allowed negative stock quantity in *IN Setup* (10.950.00).

- **Non-stock** — When materials are issued, components with this designation will be skipped.

For inventory items set to any other **Type** in *Inventory Items* (10.250.00), the **Stock Usage** will default as (none).

**Note:** Where the stock usage requires a build, the build is accomplished by manually creating another work order for the component, with this work order as the designated build-to target of that other work order.

**Stocking UOM**

The stocking unit of measure is used to control stock for the component. It is specified on *Inventory Items* (10.250.00) and is display-only. All transactions in the Work Order module are handled using the stocking unit of measure.
**Std Qty/Unit**

The amount of the component needed for each unit being built. For example, a bicycle has two wheels, so in this case the standard quantity of wheels needed for each bicycle to build would be two. For a kit or a bill of material item, the value defaults from the material list. For components copied in from a bill of material or kit, this field is display-only. For components created manually, this field is enabled. Changes to this field will result in recalculation of **WO Qty. Required** as the product of the quantity to build times the standard quantity per unit.

If the item is entered individually (not a component on a bill of material or kit), this value defaults to 1 and may be changed.

**Date Required**

The date when this component is required to be available to fulfill the work order. It defaults to the planned start date from the work order.

**Note:** It is important that this date be set as accurately as possible, as it helps drive planned inventory position, which is important for accurate and helpful **Available** fields on this screen.

**Unit Cost**

**Unit Cost** displays the per-unit cost of the item (the amount that the company paid for the item). **Unit Cost** is adjusted for **Stocking UOM**.

**Routing Step**

**Routing Step** is an information-only field that Shop Floor Control will use to schedule materials. A possible values list is available to look at the work order’s routing.

**Comment**

You can enter comments into this field regarding any changes if you add any material to issue on this screen.

**Component Added**

**Component Added** displays the origin of this entry in the material requirements list. This field is display-only. Options are:

- **WO Entry** — This component was added to the materials list using **Material Requirements/Issues** (12.250.01). Components that have this designation may not be removed from the materials list using **Material Issues** (12.400.00). These are components that are maintained by the project manager.

- **Material Issue** — This component was added to the materials list using **Material Issues** (12.400.00). Components that have this designation may be edited and deleted using either **Material Requirements/Issues** (12.250.01) or **Material Issues** (12.400.00). These are components that may be entered and edited on the shop floor.

**Note:** In either case, a component may not be deleted from the material list if issues have occurred.

**Available at Site**

The current available quantity for this component at its site, based on the quantity on hand, plus any planned additions to inventory (allocations), minus any planned withdrawals from inventory (commitments). This field is display-only.

**Available-All Sites**

The current available quantity for this component at all sites, plus any planned additions to inventory (allocations), minus any planned withdrawals from inventory (commitments). This field is display-only.
**On Hand At Location**
The current on-hand quantity for this component at its site and its bin location. This quantity is different from Available because it does not include any planned allocations or commitments. This field is display-only.

**On Hand-All Sites**
The current on-hand quantity for this component at all sites. This quantity is different from Available because it does not include any planned allocations or commitments. This field is display-only.

**Estimate Cost**
The cost estimate for this component, which multiplies the quantity of the component by the unit cost.

**Reumber Seq (button)**
As you are adding components to the materials list during the setup phase, you may wish to change numbers, insert items, etc. By clicking this **Reumber Seq** button, you can renumber the sequence numbers in a list of materials, incrementing the numbers by 10.

**Kit/Bom (button)**
**Kit/Bom** opens **Kit/Bom Selection (12.250.03)**, allowing you to copy the components from a predefined inventory kit or a bill of material. This is useful when you do not want to hand-type the materials list and a previously defined bill of material or kit exists for the item the work order is building. For a bill of material component, **Kit/Bom Selection (12.250.03)** also includes an option to copy the routing at the same time the bill of material is copied.

**Inv Status Inq (button)**
**Inv Status Inq** opens **Inventory Status Inquiry (10.220.00)** for the currently selected component. This inquiry screen presents a detailed view at inventory status, including a detailed look at the inventory transactions for this item, as well as sources and uses for this item.

**Qty Details (button)**
**Qty Details** opens **Quantity Details (12.250.04)** for the currently selected component. This inquiry screen presents a detailed view at inventory quantities and lot/serial information for this item.

**Issue Material (button)**
**Issue Material** begins the automated process of pulling components from physical inventory and transferring their associated costs to the WIP accounts for this work order. This button is enabled only when some components have an issue quantity entered and the work order has a processing stage of Released. Note that an issue cannot take place if the company you are currently logged onto does not match the work order’s company ID.

The following steps are performed by the software:

- **Update Material Budget** — If the work order is set up to update material account category budgets and the work order quantity required has changed since the initial budget was set, a prompt asks whether you wish to update the material account category budget for the corresponding work order or project/task with the change.

- **Inventory Issues Batch** — Generate an inventory issues batch to credit Inventory and debit work in process (WIP). **Period To Post** is set to the period entered at the top of this screen. The batch is autoreleased.

- **Update Issued Quantity** — Update the issued quantity for each component in the materials list for which there is an issue quantity.

- **Decrement Allocated** — At each component’s site, decrement the allocated quantity by the issued quantity.
• Update Allocated — If there have been changes to the work order quantity, increment or decrement the allocated quantity by the change quantity at each component’s site.

• Auto FTT — Financial Transaction Transfer (PA.TRN.00) is invoked, causing the issue of inventory to be immediately recorded in the appropriate project records. FTT generates the general ledger batch to transfer the costs from COGS to WIP.

• Update Quantity on Hand — Decrement the quantity on hand for the associated sites and warehouse bins from where the components were drawn.

OK (button)
OK closes Material Requirements/Issues (12.250.01).

Info (button)
Info opens Work Order Information (12.290.00) for this work order. It provides high-level information about the work order selected. This button and information are available on most screens that reference work orders.

Estimate
Estimate indicates the total of the estimated cost of each line item in the Materials Issues Detail area, the materials portion of which is the source for the materials budget.
Routing/Operations (12.250.02)

Use Routing/Operations (12.250.02) to define the labor, hours, machines, tools, and operations to produce the product for this work order.

The routing steps on this screen will be copied from the steps defined for the inventory ID using Bill of Material Routing Maintenance (11.260.00), if Bill of Material is installed. A routing can also be manually copied from a bill of material. In either case, you can then modify the existing routing definition. The routing stored with the work order is a local copy, unique to that work order, and changes made here will not affect the routing on the bill of material, and vice versa.

In all cases, this screen is fully editable; for example, any item may be added, deleted, or changed. When the routing is first displayed, the budget hours for a routing step are calculated based on the labor hours per unit and the quantity to build, current for the work order. The standard rate for the labor class assigned to this routing step is used to calculate the budget dollars. The planned start date for each step is determined based on the work order planned start date as defined in the Start – End Dates area on the Targets tab of Work Order Entry (12.250.00).

Figure 38: Routing/Operations (12.250.02)

Following are the field descriptions for Routing/Operations (12.250.02).

Work Order ID

A work order ID is a unique number assigned to this work order. The work order ID is used to tie operations to a specific work order history. This is important because several work orders can exist simultaneously, all building the same quantity, of the same part, to the same target, and with the same description. The work order ID uniquely identifies each work order as a distinct and individual project for tracking purposes. This field is display-only.

WO Type

WO Type was defined when this work order was created using Work Order Entry (12.250.00). This field is display-only. Options are:

- Manufacturing — A work order that builds an item(s) to put into stock, to fill a sales order, or to build an assembly for another work order.
- Rework — A work order that repairs and completes an item from another work order where that item was damaged.
Processing Stage

Processing Stage indicates the stage of the work order. Choices are:

- **Plan** — Enables the work order to be defined, including routing steps, without representing any commitment to build the item or consume the necessary components. Plan stage work orders are often used as placeholders for anticipated production, allowing the definition of the work before actually committing to do the work.

- **Firm** — Enables supply and demand visibility for the work order without allowing transactions to be recorded against the work order.

- **Released** — Enables full operational ability against a work order, allowing for all operations and transactions to occur against the work order. This includes the issuing of materials from inventory, the transferring of materials between work orders, the recording of labor from time and expense entry or payroll, accumulation of other charges, and the recording of production to deliver actual quantities to the defined production targets.

You can modify routing steps in the Plan, Firm, and Released processing stages of a work order. The value is set on the **Defaults** tab of *Work Order Entry (12.250.00)* and adjusted by other processing; this field is display-only here.

Routing Step

If you have Bill of Material installed, the sequential number assigned to a routing step fills in from the bill of material routing. Routing step values are used to order the operations. In grid view, you can enter a step between two other steps by clicking in one of the step numbers and typing a new number between that number and the step number above or below it. A new line appears in the appropriate location with that new number in which you can add the additional routing step.

If you do not have Bill of Material installed, these are fields into which you can enter anything you want. They will not be validated by the Bill of Material module. You can define a routing (the steps needed to produce the goods), and enter this routing manually for any work order. If you want a file of existing routings to use as a template, or validation of data entered here, then you would need to license Bill of Material.

Operation Code

The operation code describes the process to be performed for this routing step. If Bill of Material is installed, this code is validated against the bill of material operation codes.

If Bill of Material is installed, a possible values lookup is available for all operation codes. If it is not installed, this field lets you enter a free-form entry for your own purpose.

Work Center

A work center is a production facility consisting of machines and/or workers that can be considered one unit. *Work Center* displays the work center ID that identifies the production facility where the operation referenced by the routing step is to be performed. If the step is copied from bill of material routing specifications, the value assigned by those specifications is displayed here but may be edited.

If Bill of Material is installed, the work center ID is validated against *Work Center Maintenance (11.270.00)* values. A possible values lookup is available for all work centers. If the Bill of Material module is not installed, this field lets you enter a free-form entry for your own purposes. When the operation in **Type** is Outside, a work center is not required.

Type

**Type** identifies the type of operation that was assigned to the **Operation Code** in the Bill of Material module. There are three operation types:

- **Setup** — The operation is preparing machines and work areas to perform subsequent operations. A setup operation is done once per an entire lot size.
- **Run** — A runtime operation is done once per each item produced in a lot size. For example, the lot size for producing cranks for a bicycle may be 10 cranks. The setup operation would be done once for those 10 cranks, and the run operation would be done 10 times for the 10 cranks.

- **Outside** — The operation is performed by an outside contractor. A work center is not required for an outside routing step.

The value assigned to the operation code using **Operation Maintenance** (11.280.00) is displayed in **Type**. If the Bill of Material module is not installed, this field lets you enter a free-form entry for your own purposes.

### Planned Start

The planned start date for this routing step. It is calculated from the budget hours and the planned start date for the work order. Non-production days (holidays, etc.) are maintained in a table. When a routing step is added manually, then the start date defaults from the work order’s start date. The user may edit the default start date(s).

### Actual Hours

**Actual Hours** is a reference-only annotation field. You can enter the actual hours spent at a routing step here to be used for comparison reporting; this field is not updated by anything and does not update anything.

### Labor Hrs/Unit

The number of labor hours the step takes under normal conditions without producing any scrap. If the step has a Setup operation type, this value indicates the hours are for a standard lot size. If the step has a Run operation type, this value indicates the hours are for a single unit. You can alter the value in this field for any special circumstances.

If the step is copied from the bill of material routing specifications, the value specified for the step is displayed; otherwise, the value is zero.

### Machine Hrs/Unit

The number of machine hours the step takes under normal conditions without producing any scrap. If the step has a Setup operation type, the hours are for a standard lot size. If the step has a Run operation type, the hours are for a single unit.

If the step is copied from the bill of material routing specifications, the value specified for the step is displayed; otherwise, the value is zero. You can alter the value in this field for any special circumstances.

### Step Hours

Step hours are calculated and displayed as the greater of the labor or machine hours per unit multiplied by the current work order quantity to build. This field helps provide a rough estimate of the number of hours to complete this step for this work order.

### Estimate Hours

**Estimate Hours** defaults to the value shown in **Step Hours**. You can override the calculated value by manually entering the actual estimated hours here.

### Labor Class

This field contains the labor class code that identifies default labor rates required to perform the operation that was referenced by the routing step. Labor rates contribute to the labor budget costs. If the step is copied from bill of material routing specifications, the value assigned by those specifications is displayed here but may be edited.

The labor class is validated against **Labor Class Maintenance** (11.290.00) values. If Bill of Material is installed, a possible values lookup is available for all labor classes. If the Bill of Material module is not installed, you can enter a free-form entry for your own purposes.
Standard Rate
Standard Rate specifies a previously established rate for the labor class based on Bill of Material. If Bill of Material is not installed, this value defaults to zero and you can enter a value manually.

Estimate Cost
The budgeted dollars for the labor defined in the routing to complete this step, calculated by multiplying the budget hours by the rate associated with the labor class using Labor Class Maintenance (11.290.00). You may edit the default value.

Estimate
The total of the estimated cost for all routing steps defined for the work order/task.

Renumber Seq (button)
As you add routing steps during the setup phase, you may wish to change numbers, insert items, etc. This button lets you renumber the routing step sequence numbers, incremented by 10.

Copy Routing (button)
Copy Routing prompts you to identify a bill of material/site record from which to copy a routing. For example, imagine you have ten different colors of bikes. They all have separate part numbers: BIKE-BLU, BIKE-RED, BIKE-YEL, etc. All the bikes are identical, except for the color of the paint that is applied. The paint appears in the material list and is the sole difference on the BOM for each bike. For the routing, though, the steps to make (and paint) the bike are identical. Instead of having to maintain ten routings, you can have a routing called BIKE-ROUTING and then copy that routing here using this button – regardless of the color of the bike you were building.

Also, you can use Copy Routing to import routing steps of subassemblies the same way that you can use Kit/Bom on Material Requirements/Issues (12.250.01).

OK (button)
OK closes Routing/Operations (12.250.02) and returns you to Work Order Entry (12.250.00).

Info (button)
Info in the lower-left corner of the screen opens Work Order Information (12.290.00) for this work order. It provides high-level information about the work order selected. This button and information is available on most screens that reference work orders.
Kit/Bom Selection (12.250.03)

Use Kit/Bom Selection (12.250.03) to fill in the material list (and optionally the routing) from a kit or bill of material. Access it by clicking Copy Routing on Routing/Operations (12.250.02) or by clicking Kit/Bom on Material Requirements/Issues (12.250.01). If the Bill of Material module is not installed, then only kits are available.

![Kit/Bom Selection (12.250.03)](image)

Figure 39: Kit/Bom Selection (12.250.03)

Following are the field descriptions for Kit/Bom Selection (12.250.03).

**Kit/BOM**

The kit or bill of material ID. This value must be a valid inventory ID for which a kit or bill of material has been previously established. The currently highlighted material list item is provided as the default value.

**Site**

The site ID is used to determine which bill of material record (which contains a material list and a routing) to use. Bills of material can be created with different site IDs, but kits should use the global site ID.

**Quantity**

Quantity is the number of an item to apply when you copy components, routings, or both. For example: if a bill of material defines a bike as having two wheels, and you enter a quantity of 10 bikes in Quantity, then the wheel component will appear with a WO Qty Required of 20 in the material list in Material Requirements/Issues (12.250.01).

**Copy Routing**

This field is visible only if Kit/Bom Selection (12.250.03) was called from Material Requirements/Issues (12.250.01). If selected, this option copies the routing steps into Routing/Operations (12.250.02) along with the material components.

**Insert Position in Material List - Current**

The kit/BOM components selected are inserted into the material list starting at the currently highlighted line.

**Insert Position in Material List - End of List**

The kit/BOM components selected are inserted into the material list at the end of the current list.

**Insert (button)**

Insert performs the insert operation and closes Kit/Bom Selection (12.250.03).
Cancel (button)

Cancel does not perform the insert operation and closes Kit/Bom Selection (12.250.03).
Quantity Details (12.250.04)

Quantity Details (12.250.04), accessed from Material Requirements/Issues (12.250.01), has many purposes. It provides details about an individual line on a work order’s material list. It shows all activities relevant to that line and shows the underlying calculation supporting the quantity remaining number. In addition, it is used to assign lot/serial numbers when required.

![Quantity Details (12.250.04)](image)

Figure 40: Quantity Details (12.250.04)

The following are field descriptions for Quantity Details (12.250.04).

**Component ID**

The name of the component from Inventory or from the materials list for this work order.

**WO Quantity Required**

This is a display-only field that displays the quantity required of the component identified in Component ID at the top left of the screen from the work order. This field defaults from the item’s line on the material list.

**Material In**

This is a display-only field that indicates the total material quantities of this component received into this work order from issuing it, auto-issuing it from a child work order, or being transferred in from another work order.

**Material Out**

This is a display-only field that indicates the total material quantities of this component removed from this work order (via material transfers) and reallocated, and defaults from the item’s line on a material list.
**Quantity Remaining**
This is a display-only field that indicates how many components are required by the work order, calculated as **WO Quantity Required** minus **Material In** plus **Material Out**.

**Issue Now**
This display-only field indicates the value that you entered in **Issue Now** on **Material Issues** (12.400.00) and indicates the amount of an item you are about to issue to a work order.

**Issued**
This display-only field indicates the quantity of an item you issued in **Material Issues** (12.400.00) to a work order. When this field is selected, the grid below displays Inventory issues batches supporting the items issued.

**Auto-issued from child work orders**
This display-only field indicates any quantities of items issued to the material list line by another work order (its child work order, which supplies a part to its parent work order). For example, if you are building a bicycle to stock, you would have previously created a Build To Mfg. Work Order for the seat assembly for that bicycle, and the seat assembly is automatically issued to the bicycle work order. When this field is selected, it displays the Project Controller/Project Allocator charge completion batches supporting these items in the Issued area.

**Auto-issued from purchase orders**
Reserved for future use.

**Transferred in from work orders**
This display-only field indicates any quantities of items that were transferred from other work orders to complete the components required for this line of a material list. When this field is selected, the grid below displays Project Controller/Project Allocator charge material transfer batches supporting this number of items.

**Scrapped and reallocated**
This display-only field indicates the quantity of an item that was scrapped and reallocated for the work order. When this field is selected, the grid below displays Project Controller/Project Allocator charge material transfer batches supporting this number.

**Transferred out, reallocated**
This display-only field indicates the quantity transferred out (to stock or another work order) and still required on this work order. When this field is selected, the grid below displays Project Controller/Project Allocator Charge material transfer batches supporting this number.

**Scrapped and not reallocated**
This display-only field indicates the quantity transferred to scrap and no longer required on this work order. When this field is selected, the grid below displays Project Controller/Project Allocator charge material transfer batches supporting this number.

**Transferred out, not reallocated**
This display-only field indicates the quantity transferred out (to stock or another work order) and no longer required on this work order. When this field is selected, the grid below displays Project Controller/Project Allocator charge material transfer batches supporting this number.

**Batch Number**
This display-only field indicates the batch number (Inventory or Project Controller/Project Allocator) for this set of transactions.
Date
This display-only field indicates the processing date of the batch on this line.

User
This display-only field indicates the user ID of the person who created the batch.

Quantity
This display-only field indicates the total batch quantity.

Description
This display-only field indicates the type of batch (for example, an issues batch).

Batch Details (button)
Below this button is the batch number that is current. Executes Issues (10.020.00) (in display-only mode) for the current batch.

Lot/Serial Number
If the Issue Now radio button is selected, this field displays the lot/serial number to issue. These are auto-assigned based on the next value as setup in Inventory Items (10.250.00). These numbers may be changed and/or deleted. If the Issue Now radio button is not selected, this field displays the lot/serial numbers that were assigned for the currently highlighted batch.

Quantity
Quantity to issue. If a serialized item, then this value is always 1 and display-only. If a lot tracked item, then this field is enabled and can be changed (must be less than or equal to quantity to issue).

Batch Number
Not used.

Mfgr Lot/Serial Number
This display-only field indicates the manufacturer’s lot/serial number when received.

Expiration Date
This display-only field indicates the expiration date from issue.

Container Code
This display-only field indicates the shipping container code.

OK (button)
Closes Quantity Details (12.250.04).
Work Order Requests (12.250.05)

The Work Order Requests (12.250.05) screen is accessed by clicking the WO Requests From OM button on the Work Order Entry (12.250.00) screen in Order Management. This screen provides details about an individual line on a sales order that a user has requested to be bound to a work order using the WO Request button in the Sales Order Entry (40.100.00) screen. This only shows information for sales orders that have not had the bound work order created for them yet. The WO Requests From OM button becomes available after entering a Work Order ID into the Work Order Entry (12.250.00) screen.

![Work Order Requests (12.250.05)](image)

**Figure 41: Work Order Requests (12.250.05)**

**Select**

Select specifies by sales order line whether or not a line should be added to the Targets tab in the Work Order Entry (12.250.00) screen.
- Checked — Add the sales order line
- Unchecked — Do not add the sales order line.

**Inventory ID**

Inventory ID displays the inventory item that appears on the sales order line.

**Sales Quantity**

Sales Quantity displays the quantity of the inventory item that has been ordered by the customer.

**Sales UOM**

Sales UOM displays the unit of measure in which the inventory item is being sold on the sales order.

**Quantity to Build**

Quantity to Build displays the quantity of the inventory item that needs to be built to fulfill the sales order line.
Build/Stocking UOM
Build/Stocking UOM displays the unit of measure in which the inventory item is being built or stocked on the work order.

Pick Date
Pick Date displays the date a quantity should be available for picking in order for the sales order to reach the customer on time. This is the date a shipper would be created by the system. This date defaults from the sales order line.

Request Date
Request Date is the date when the customer requested delivery (valid for sales orders only). Request Date is display-only and defaults from the sales order line.

Site ID
Site ID displays the site id that the inventory item will be built to and shipped from.

Customer ID
Customer ID displays the customer that appears on the sales order.

Order Number
Order Number displays the sales order number to which the work order will be bound.

Line Reference
Line Reference displays the reference number for the sales order line to which the work order will be bound.

Company ID
Company ID displays the company ID that appears on the sales order.

Credit Hold
Credit Hold displays whether the sales order line is on credit hold and the date the sales order line was placed on credit hold.

Schedule
Schedule displays the number of lines that appear for this sales order line in the Shipment Schedule (40.106.00) subscreen of the Sales Orders (40.100.00) screen in Order Management.

Select All (button)
Select All selects all unbound sales order lines. Select All is a quick way to select every sales order line listed.

Clear All (button)
Clicking Clear All deselects all unbound sales order lines. This helps ensure that any unbound sales order lines not to be bound are not bound to the work order. After clicking Clear All, use Select to specify only those sales order lines to be bound.

OK (button)
Click OK to bind the selected sales order lines to the work order.
Order Number Filter

Order Number Filter allows you to filter the list of unbound sales order lines based on the sales order number. To use Order Number Filter, type part or all of the sales order number and then press Tab. If you part of the sales order number make sure to end with a wildcard such as an asterisk (*) or a percent sign (%).

View Order (button)

Click View Order to view the sales order for the sales order line that is highlighted in the Requests area. To use View Order, use the pointer to put focus on a sales order line and then click the View Order button. The Sales Orders (40.100.00) screen will appear.
Material Check (12.251.00)

Material Check (12.251.00) allows you to check on component inventory status before issuing materials. By selecting various options, you can constrain or widen your search for materials that may have a shortage.

Figure 42: Material Check (12.251.00)

Following are the field descriptions for Material Check (12.251.00).

Work Order ID

A work order ID is a unique number assigned to this work order. The work order ID is used to tie operations to a specific work order history. This is important because several work orders can exist simultaneously, all building the same quantity, of the same part, to the same target, and with the same description. The work order ID uniquely identifies each work order as a distinct and individual project for tracking purposes. A description of the work order appears below this field.

Quantity to Build

This value defaults from the work order’s quantity remaining to build. If the work order’s quantity to build was 15 bikes and 3 bikes were built already, the remaining quantity to build would be 12 and would appear in this field.

If you had a shortage in materials for those remaining 12 bikes, you can lower the value in Quantity to Build and click Refresh again to check whether there are enough materials to construct that quantity. If you have materials to build 10 bikes, then you can click OK and issue materials to build those 10 right away.
Check current item only
When selected, this option limits the search for shortages to only the item currently highlighted in the work order’s material list. When unchecked, the screen searches for any shortages throughout the entire material list.

On Hand-Component Site (Shortage Checks)
Each component on a work order’s materials list has a default component site location. Selecting On Hand-Component Site will limit the search for shortages to that default site only.

On Hand-All Sites (Shortage Checks)
Each component on a work order’s materials list has a default component site location. Selecting On Hand-All Sites directs the search for shortages to all of your company’s component sites.

ATP-Component Site
ATP stands for Available To Promise. Selecting this option directs the search for shortages to materials expected to be arriving at the component site by the date that the work order needs to be filled. Thus, a shortage today of bike handlebars may not matter if the work order does not need to be filled until tomorrow, when a quantity of new handlebars is expected to arrive at the default component site.

ATP-All Sites
ATP stands for Available To Promise. Selecting this option directs the search for shortages to materials expected to be arriving at any component site by the date that the work order needs to be filled. Thus, a shortage today of bike handlebars may not matter if the work order does not need to be filled until tomorrow, when a quantity of new handlebars is expected to arrive at any component site.

ATP Date Option
Selecting either ATP-Component Site or ATP-All Sites requires you to select the date by which the component is needed for the work order. The choices are:

- Component Date — The date in Date Required on the material list.
- As of — A date you enter that overrides the Component Date.

Refresh
Click this button to fill in the Shortage Detail fields below according to the criteria you selected for searching for any shortages.

Sequence #
This is the same sequence number displayed on the item’s material list.

Inventory ID
This is the same inventory ID displayed on the item’s material list.

Site ID
This is the same site ID displayed on the item’s material list.

Date Required
This is the same date required displayed on the item’s material list.

Quantity Required
If this value is 0, there is no shortage of the component. If this value is a negative number, that number indicates the amount of the shortage.
On Hand-Component Site (Shortage Detail)
If this value is 0, there is no shortage of the component at the default component site. If this value is a negative number, that number indicates the amount of the shortage at this component’s default site.

On Hand-All Sites (Shortage Detail)
If this value is 0, there is no shortage of the component across all component sites. If this value is a negative number, that number indicates the amount of the shortage of this component across all component sites.

Notes
If any notes were entered for an item on its materials list, those notes appear here.

OK
Click this button to return to the previous screen (either Material Requirements/Issues (12.250.01) or Material Issues (12.400.00)).
Work Order Information (12.290.00)

*Work Order Information* (12.290.00) is accessed by clicking **Info** in the lower-left corner of most Work Order module screens. It displays high-level work order or project information.

![Work Order Information](image)

Figure 43: Work Order Information (12.290.00)

Following are the field descriptions for *Work Order Information* (12.290.00).

**Work Order ID**

A work order ID is a unique number assigned to this work order. The work order ID is used to tie operations to a specific work order history. This is important because several work orders can exist simultaneously, all building the same quantity, of the same part, to the same target, and with the same description. The work order ID uniquely identifies each work order as a distinct and individual project for tracking purposes.

**Data Entry Status**

If set to Active, data entry is available to this work order throughout the system. If set to Inactive, data entry is disabled, but transactions already entered will process normally.

**Part to Build**

The inventory item that the work order is building. This field is display-only.

**Description**

The description of the inventory item being built or the description entered on *Work Order Entry* (12.250.00).

**Site**

The description where the item will be sent when the work order is complete. This field applies only to Build To Stock work orders.

**Component Dflt**

Displays the source site ID default for the component parts for this work order.

**Single Build To**

Displays the **Build To** type for this work order. Options are:

- **Stock** — Work Order targets of Build To Stock will place the item into on-hand inventory, at a specific site ID and warehouse bin location at production completion time. This quantity on hand
may then be accessed as any other inventory item—issued from inventory, transferred to a
different location, allocated to a sales order, etc.

- **Order** — The part being built will not be put into stock, but rather issued to fulfill a customer’s
  order. This option was selected when the associated purchase order was created. Then a work
  order can be created to build to a sales order and this field will display the target as a sales order.

- **Mfg WO** — The part is being built to satisfy a component part requirement of another
  manufacturing work order. The part to build, as identified on this screen, must be on the material
  requirements list for the other work order designated here.

**Sales Order ID (Single Build To)**
When the **Build To** type for the work order is **Order**, **Sales Order ID** appears in the **Single Build To**
area to display the ID for the sales order.

**Work Order ID (Single Build To)**
When the **Build To** type for the work order is **Mfg. WO**, **Work Order ID** appears in the **Single Build To**
area to display the ID for the manufacturing work order.

**Quantities**
These fields display the status of the quantities already built on this work order as well as the
quantities to be built to complete the work order.

- **To Build, Original** — The original required quantity for this work order. While the work order’s
  processing stage is set to Plan, this quantity continues to reflect the sum of the current quantity
  for each line item in the production item grid. Once the order’s processing stage is moved to Firm,
  only the current quantity (next field) can change.

- **To Build, Current** — The current required quantity for this work order.

- **QC Hold** — This field indicates how many items have been put on **QC Hold** status. The quantity of
  items on **QC Hold** will reduce the quantity available to complete for this production item record.
  That is, the quantity remaining to complete is left untouched, but **Production Completion** (12.402.00)
  cannot be reported on the units in **QC Hold**.

- **Rework** — When a quantity is transferred (completed) to **Rework**, this field value is incremented.
  This field is display-only and updated during **Production Completion** (12.402.00).

- **Rework Complete** — When the quantity on a rework work order is completed, this field is
  incremented. This field is display-only and updated during **Production Completion** (12.402.00).

  **Note:** The net quantity out to rework is calculated as Rework less Rework Complete.

- **Scrap** — The production quantity completed to scrap on this work order. This field is display-only
  and updated during **Production Completion** (12.402.00).

- **Completed** — The quantity completed on this work order. This field is display-only and updated
during **Production Completion** (12.402.00).

- **Remaining** — The quantity remaining on this work order, calculated as **To Build, Current** less
  **Completed**. This field is display-only and updated during **Production Completion** (12.402.00).
Work Order/Project Inquiry (12.300.00)

This inquiry screen is used to review and analyze manufacturing work orders and, if you have Project Controller licensed, Project Management and Accounting projects as well. It displays quantity, revenue, and cost information. You can restrict the inquiry to only revenue or costs and to specific account categories. This screen is used strictly for inquiry and is display-only.

Work Order/Project Inquiry (12.300.00) is a starting point for a detailed drill-down analysis for a work order or project. Within the Detail area, information is shown at the highest level. On any detail line, you can then drill down via the Transaction Detail button to the transaction detail supporting that revenue or cost line. In Work Order Transaction Inquiry (12.301.00), all transactions making up the inquiry line are displayed and the originating data entry screen for the detail line can be viewed.

Figure 44: Work Order/Project Inquiry (12.300.00)

Following are the field descriptions for Work Order/Project Inquiry (12.300.00).

Work Order ID

Work Order ID is where you enter the work order ID or, if you have licensed Project Controller, the project ID. If you enter a work order ID, summary information from Work Order Entry (12.250.00) appears below. If you enter a project ID, summary information from Project ControllerSetup (PA.SET.00) appears. Additional information for the work order or project is available by clicking Info in the lower-left corner of the screen.

Include projects in lookup

Select Include projects in lookup when you want to search for Project Management and Accounting projects as well as work orders. Leave this box unchecked if you are using Work Order/Project Inquiry (12.300.00) only to find work orders.

Data Entry Status

Data Entry Status is the work order status from the project record. If set to Active, data entry is available to this work order throughout the system. If set to Inactive, data entry is disabled, but transactions already entered will process normally.
Customer
This field indicates the customer for whom the work order or project is being fulfilled.

Part to Build
This field indicates the item to be built by this work order.

To Build, Orig.
This field indicates the quantity entered to be built by the work worker when it was created, before revisions (if any).

To Build, Curr.
This field indicates the quantity of the item to be built at present. If any items have been completed to production, completed to scrap, or transferred from the work order, this number will differ by that amount from the To Build, Orig. value.

Completed
This field indicates how many items to be built have been completed to production so far.

Remaining
Remaining contains the quantity that is yet to be completed to production targets for this work order, calculated as Current Quantity less Completed (&Cstd). This field is display-only and is automatically updated during Production Completion (12.402.00).

QC Hold
This field indicates how many items have been put on QC Hold status. The quantity of items on QC Hold will reduce the quantity available to complete for this production item record. That is, the quantity remaining to complete is left untouched, but Production Completion (12.402.00) cannot be reported on the units in QC Hold.

Rework
This field indicates how many items have been completed to a rework work order because they were damaged on the shop floor, but not so damaged as to be scrapped.

Scrap
This field indicates how many items from this work order have been completed to Scrap because of their being destroyed though mishap on the shop floor.

Build To
If a work order is a child to a parent work order, the parent work order ID appears here. This field does not appear for work orders that simply build to stock.

Revenue/Cost Filter
Controls which detail lines are displayed in the Detail area. Options are:
- Rev&Cost — Displays both revenue and cost detail.
- Revenue — Displays only revenue detail.
- Cost — Displays only cost detail.
Account Category filter
Controls whether the detail lines are restricted to specific account categories. If left blank, then all account categories are shown. You can enter a single account category or a masked category. For a masked category, you can use ? and * to mask the categories; for example, ?E* would show all account categories with any character in position 1, an E in position 2, and any characters in the remaining positions. A possible values lookup is available for all account categories.

Task Filter
This field only appears if you select Include projects in lookup. The task filter is used to restrict the detail lines to specific tasks. If left blank, then all tasks are shown. You can enter a single task or a masked task. For a masked task, you can use ? and * to mask the categories; for example, ?5* would show all tasks with any character in position 1, a 5 in position 2, and any characters in the remaining positions. A possible values lookup is available for all tasks for this project.

Row #
The row number of the detail grid line. Row numbers are sequential beginning with 1.

Rev/Cost
Designates if this row in the grid is a revenue or cost row.

Account Category
The account category for this row. This field changes depending on what is selected in the button directly below it, so that you can view high level or low level of detail.

<table>
<thead>
<tr>
<th>Button Text</th>
<th>What You see in the Account Category Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account Category</td>
<td>All. This means you are viewing the total of all account categories in Estimate.</td>
</tr>
<tr>
<td>All</td>
<td>Each account category on its own line so you can see the costs broken out instead of combined for the estimate.</td>
</tr>
</tbody>
</table>

Estimate
This display-only field displays the current estimated total for the work order or for the account category in Account Category.

Actual (to date)
This display-only field displays the actual costs/revenue to date for the work order.

Variance (to date)
Variance indicates the amount by which the actual costs of the work order differ from what was expected in the budget allotted for the work order.

% of Estimate
This field indicates the proportion of scheduled production targets that have been completed for the work order.

EAC Actual
This display-only field displays the actual costs/revenue expected at completion of the work order.

EAC Variance
This display-only field displays the variance between actual and budgeted costs for the work order expected at completion.
Account Category/All (button)
When the screen is first activated, the value of Account Category for the selected work order is ALL, meaning a total of all categories (for example, labor and materials) are included in Estimate. If you want to see Estimate according to separate account categories (with their associated Detail grid items) instead of as a total of all categories, click the Account Category button while in grid view. This shows the breakdown and the button’s name changes to All. Clicking this All button reverts the grid back to showing all categories in one total for Estimate.

Transaction Detail
This button opens Work Order Transaction Inquiry (12.301.00). The currently active line in the grid of Work Order/Project Inquiry (12.300.00) is passed to Work Order Transaction Inquiry (12.301.00), which displays the transaction detail for that line.

Info (button)
Opens an information screen on the currently selected work order or project. This button is common to most manufacturing work order screens.
Work Order Transaction Inquiry (12.301.00)

Work Order Transaction Inquiry (12.301.00) can be accessed from the Work Order menu or via the Transaction Detail button on Work Order/Project Inquiry (12.300.00). Use this inquiry screen to view detailed work order transactions. Work Order Transaction Inquiry (12.301.00) provides comprehensive information about all financial transactions that have occurred during the life cycle of the selected work order. The transaction detail is broken down by transaction date, period, inventory ID, employee, vendor, Project Controller and subledger/general ledger batch, account, subaccount, task, and account category. Transactions can be filtered based on employee, vendor, inventory ID, date, task, and/or account category.

![Work Order Transaction Inquiry](image)

Figure 45: Work Order Transaction Inquiry (12.301.00)

This screen also provides further direct drill-down inquiries to the root subledger/General Ledger transaction screens using View Batch. Simply highlight the line item of interest and click View Batch to open the root transaction screen.

In addition to the work order ID (or project), task, and account category, you can use the additional fields in the Selection Filters area to further focus your selection.

**Note:** The task, account category, inventory ID, employee ID, and vendor ID can all accept masking characters to help facilitate the search. Masking characters include ? and *. For example, typing ?E* in Account Category would show all account categories with any character in position 1, an E in position 2, and any characters in the remaining positions. Please note that a blank field is the same as an asterisk (*), meaning select all for this value.
Following are the field descriptions for Work Order Transaction Inquiry (12.301.00).

**Work Order ID**
A unique ID assigned to this work order, or optionally a project ID if Include projects in lookup is selected. A possible values lookup is available.

**Account Category**
The work order account category. A possible values lookup is available for all account categories. The account category description is displayed to the right. If Work Order Transaction Inquiry (12.301.00) was opened from Work Order/Project Inquiry (12.300.00), this field defaults to the selected account category (if ALL, then blank).

**Include projects in lookup**
When selected, both work orders and projects can be entered into Work Order ID, as well as looked up on possible values lists. When unselected, only work order IDs are valid entries.

**Date From - To**
The date range to further filter your selection. You may enter a low and high date to bracket your selection.

**Inventory ID**
Use this field to filter the detail transactions by inventory ID. A possible values lookup is available for all inventory IDs. Masking is available on this field.

**Employee ID**
Use this field to filter the detail transactions by employee ID. A possible values lookup is available for all employee IDs. Masking is available on this field.

**Vendor ID**
Use this field to filter the detail transactions by vendor ID. A possible values lookup is available for all vendor IDs. Masking is available on this field.

**Refresh (button)**
This button is used to reload the Detail area based on the current heading and selection filter criteria. It is only enabled when one of the heading or selection filter entries has changed.

**Txn Date**
The date when the transaction occurred.

**Inventory ID (Detail)**
The inventory ID for the item involved in the transaction.

**Inventory ID Description**
This unlabeled field to the right of Inventory ID contains the description of the inventory item involved in the transaction.

**Spec Cost ID**
The specific cost ID for the inventory item.

**Employee**
The ID of the employee who initiated this transaction.
Employee Name
The name of the employee who initiated this transaction.

Vendor
The ID of the vendor associated with the work order involved in this transaction.

Vendor Name
This is the name of the vendor for the work order in this transaction.

Ref Nbr.
Unique numeric code assigned to each document. Used to track the document through the system. You cannot have duplicate reference numbers.

Project Batch
The project batch number associated with the transaction.

Sys
The system code for the transaction batch. Options are:

<table>
<thead>
<tr>
<th>System Code</th>
<th>Entry Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA</td>
<td><em>Project Charge Entry</em> (PA.CHG.00)</td>
</tr>
<tr>
<td>GL</td>
<td><em>Journal Transactions</em> (01.010.00)</td>
</tr>
<tr>
<td>AR</td>
<td><em>Invoice and Memo Entry</em> (08.010.00)</td>
</tr>
<tr>
<td>AP</td>
<td><em>Voucher Entry</em> (03.010.00)</td>
</tr>
<tr>
<td>IN</td>
<td><em>Issues</em> (10.020.00)</td>
</tr>
<tr>
<td>IT</td>
<td><em>Issues</em> (10.020.00)</td>
</tr>
<tr>
<td>PR</td>
<td><em>Time and Dollar Entry</em> (02.020.00)</td>
</tr>
</tbody>
</table>

Comment
The comment, if any, attached to the item’s ID.

Task
The project task for the work order or project, as defined in the *Codes/Control* tab of *Work Order Setup* (12.950.00).

Period
The inventory period in which this work order occurs.

Site ID
This is the site ID where the transaction took place, as indicated in the batch.

PO #
If a voucher has been processed for a PO that purchases services for this work order, the PO number is entered here.

Batch #
This field indicates the batch number for this transaction.

Amount
This field indicates the cost for the part selected.
**Warehouse Loc**
This field indicates the bin from which the part was drawn during issuing. It may or may not be the bin where the item is stored now, if the part was not used.

**Units**
This field indicates the number of units for this line item involved in the transaction.

**Invoice Date**
This field indicates the date on which the invoice for the work order was created.

**Batch Type**
This field indicates the batch type for the transaction.

**Account/Sub**
This field indicates the general ledger account and subaccount for this work order.

**Account Category**
This field indicates the account category for this transaction.

**Billable Status**
This display-only field indicates the billable status of the selected line item. The following table describes the abbreviations:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Billable Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>(blank)</td>
<td>Eligible for billing</td>
</tr>
<tr>
<td>N</td>
<td>Not billable</td>
</tr>
<tr>
<td>B</td>
<td>Has been loaded into PJINVDET table for invoicing</td>
</tr>
<tr>
<td>R</td>
<td>Created as a result of billing, usually for Billed to Date transactions</td>
</tr>
<tr>
<td>A</td>
<td>Created as a result of posting back to projects from Accounts Receivable</td>
</tr>
<tr>
<td>S</td>
<td>Summary PJTRAN record resulting from archiving</td>
</tr>
</tbody>
</table>

**Labor**
This field contains the labor class code that identifies default labor rates required to perform the operation that was referenced by any routing step associated with a selected line. Labor rates contribute to the labor budget costs. If the step was copied from bill of material routing specifications, the value assigned by those specifications is displayed here but may be edited.

**Line #**
This field indicates the number of the transaction line.

**Alloc**
This field indicates the allocation flag for the transaction.
View Batch (button)

If the current transaction has a particular system code (Sys), clicking this button launches the corresponding entry screen for that batch. The entry screens launched for each system code are:

<table>
<thead>
<tr>
<th>System Code</th>
<th>Entry Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA</td>
<td>Project Charge Entry (PA.CHG.00)</td>
</tr>
<tr>
<td>GL</td>
<td>Journal Transactions (01.010.00)</td>
</tr>
<tr>
<td>AR</td>
<td>Invoice and Memo Entry (08.010.00)</td>
</tr>
<tr>
<td>AP</td>
<td>Voucher Entry (03.010.00)</td>
</tr>
<tr>
<td>IN</td>
<td>Issues (10.020.00)</td>
</tr>
<tr>
<td>IT</td>
<td>Issues (10.020.00)</td>
</tr>
<tr>
<td>PR</td>
<td>Time and Dollar Entry (02.020.00)</td>
</tr>
</tbody>
</table>
Event History Inquiry (12.304.00)

Event History Inquiry (12.304.00) provides a comprehensive transaction-by-transaction history of all the financial and operational events that have occurred during the life of the selected work order. It also allows you to release batches related to a work order by accessing Work Order FTT (12.FTT.00). Any event that is triggered from within the Work Order module itself is recorded as an event that you can look up for reasons such as:

- You want to learn the history of a material issue from within the Work Order module.
- You want to identify who closed a work order.
- You want to identify who entered Initialize mode and moved a processing stage for a work order from Ops-Closed to Released.

You can access Event History Inquiry (12.304.00) from the Work Order menu or from the following screens: Work Order Entry (12.250.00), Material Transfers/Returns (12.401.00), Production Completion (12.402.00), and Work Order Closing (12.403.00). Fill in fields in the Selection Filters area to limit the inquiry to specific dates, events, and batch types; click Refresh to fill in the Detail area with information matching these criteria.

The transaction detail is broken down by work order ID, period, work order action (commitments, allocations, issues, processing stage changes, quantity to build changes, transfers, completions), transaction date, period, ledger ID, batch number, and the user ID of the person who processed the event. Transactions can be filtered based on work order ID, period, ledger ID, and/or work order action.

**Figure 46: Event History Inquiry (12.304.00)**

Following are the field descriptions for Event History Inquiry (12.304.00).

**Work Order ID**

The unique ID assigned to the work order. A possible values lookup is available.
Period to Post From-To
Us this field to limit the inquiry to a range of fiscal periods.

Work Order Event
This list enables you to filter by over 20 different event types, available by clicking the selection box and scrolling through the types.

Batch Type
This list enables you to filter by batch types, including the following: GL-WIP, IN-Issues, IN-Issues/Returns, IN Receipt, and PA-Charge Entry.

Show only unreleased batches
When this box is selected, only unreleased batches will be shown in the Detail grid. Unreleased batches have one of these four statuses: B-Balanced, I-Partially Voided, O-Open, S-Partially Released.

Refresh (button)
Fills in the Detail area based on criteria specified in the Selection Filters area.

Select
This check box selects batches to be processed when the WO Batch Release button is clicked.

Work Order ID (Detail)
This display-only field displays the work order ID for the current line item of the work order.

Work Order Event (Detail)
This display-only field displays the work order event for the current line item of the work order.

Batch Type (Detail)
This display-only field displays the batch types for the current line item of the work order.

Batch Number
This display-only field displays the number of the batch for the current line item of the work order.

Batch Status
This display-only field displays the status of the batch for the current line item of the work order. Options are:

- B — Balanced
- C — Completed
- H — Hold
- I — Partially voided
- O — Open
- P — Posted
- S — Partially Released
- U — Unposted
- V — Voided
Event Date
This display-only field displays the date on which the work order event for the current line item occurred.

Units
This display-only field displays the number of units issued to the current line item of work order.

Total
This display-only field displays the total cost of this selected line’s event.

Period to Post
This display-only field displays the fiscal period in which the work order event for the selected line occurred.

Reference/Comment
This display-only field displays the annotation made, if any, for the event in the work order.

User ID
This display-only field displays who was logged in when the event occurred.

WO Batch Release (button)
This button is enabled if at least one record has been selected (checked). When clicked, this button launches Work Order FTT (12.FTT.00) to release the batches that have been selected and for which a batch number exists.

View Batch (button)
If Batch Number contains a value, then this button is enabled. Clicking this button launches the data entry screen for this batch. Available batch types and corresponding data entry screens are:

<table>
<thead>
<tr>
<th>Batch Type</th>
<th>Entry Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>GL-WIP</td>
<td>Journal Transactions (01.010.00)</td>
</tr>
<tr>
<td>IN-Issues</td>
<td>Issues (10.020.00)</td>
</tr>
<tr>
<td>IN-Issue/Return</td>
<td>Issues (10.020.00)</td>
</tr>
<tr>
<td>IN-Receipt</td>
<td>Inventory Receipts (10.010.00)</td>
</tr>
<tr>
<td>PA-Charge</td>
<td>Project Charge Entry (PA.CHG.00)</td>
</tr>
</tbody>
</table>

Info (button)
This button enables you to access Work Order Information (12.290.00), which gives general summary information on the highlighted work order.
Process Screens

Material Issues (12.400.00)

*Material Issues* (12.400.00) provides a way for shop floor personnel to issue material without necessarily being granted the rights to create or cancel work orders and adjust scheduling. Production managers can use *Material Requirements/Issues* (12.250.01) to both create materials list and issue materials.

When material settings are entered in *Material Requirements/Issues* (12.250.01) by the production managers, those settings appear in *Material Issues* (12.400.00) as display-only values. Shop floor personnel can add requirements to *Material Issues* (12.400.00), and they can modify what they have added, but they cannot modify what was entered via *Material Requirements/Issues* (12.250.01).

![Figure 47: Material Issues (12.400.00)](image)

Following are the field descriptions for *Material Issues* (12.400.00).

**Work Order ID**

The unique ID for the work order. A possible values list is available showing only those work orders that belong to the current company.

**Note:** Because only work orders in the Released processing stage can have materials issued to them, only work orders in the Released stage are available for viewing on this screen.

**WO Type**

The work order type Manufacturing or Mfg-Rework. This field’s value is display-only and was set on the **Targets** tab of *Work Order Entry* (12.250.00) in the **Rework** check box.

**Processing Stage**

The processing stage of the work order, which for this screen will always be Released because only released work orders are available for materials issuing. The processing stage is set on *Work Order Entry* (12.250.00) and adjusted by certain processes.
**Issue To Build**
This field indicates the number of units you want to issue to the work order. The value defaults to the *Remaining Quantity To Issue* value.

**Grid Pop (button)**
This button calculates the *Issue Now* quantity on a line by line basis and fills in the *Issue Now* column so that you do not have to manually enter the value for each line.

By changing the *Issue To Build* quantity to a value less than the quantity in *Remaining*, you may easily control the issue of materials to correspond with partial build requirements.

**Example:** If you wish to issue only enough materials to build 3 of the 10 items you are building for this work order, specify 3 and click *Grid Pop*. The result will be to set the Issue Now quantities for each component to the quantity required to build 3 items. *Grid Pop* handles multiple quantities per parent item.

At any time, the *Issue Now* quantities are fully editable in the component list grid. This capability allows you to override the automatically calculated values from *Grid Pop*, or to set a simple issue of a manually entered list of components.

**Material Check (button)**
Click the *Material Check* button to access *Material Check (12.251.00)*, which allows you to review component inventory status before issuing materials. Various options allow you to constrain or widen the view for each item. See “*Material Check (12.251.00)*” on page 111 for more details.

**Period**
Used when issuing material to a released work order. The default value for this field was determined by the value set in *Work Order Setup (12.950.00)* for a posting period. The issue material process generates inventory receipts and general ledger WIP batches, and this period is used for these batches.

**Part To Build**
The inventory item that the work order is building. This field is display-only.

**Sequence #**
This field indicates the number of the selected line. Each line in the list has a unique number.

**Component ID**
The inventory ID for the component materials required to produce this work order. The item must be defined in Inventory as a stock item; that is, one for which inventory balances may be edited and for which inventory transactions are processed. Stock items must be one of the following material item types:

- Component
- Finished Goods
- Raw Materials
- Sub Assembly
- Other Type of Item

Possible values of all inventory items are available by double-clicking the right mouse button in this field.
Special non-material items may be set up and used to transfer non-material costs to the work order through the normal Material Issues (12.400.00) process. Non-material costs would include overhead costs or recycling charges (for example, something that is not a physical part of an item and does not need to be kept in stock, but adds to the cost of production). Such non-stock parts must be set up as one of the following item types:

- Labor
- Machine Overhead
- Other Direct Cost

You can change the component ID only if a row was added using Material Issues (12.400.00).

**Site ID**

Indicates the site ID from which stock components will be pulled when you issue materials to a work order. Non-stock parts, which do not come from a stock location, use the default site ID value in Site ID.

The default value of Site ID is determined by Site on the Targets tab of Work Order Entry (12.250.00). You can change the site ID only if the item is in a row added using Material Issues (12.400.00). You cannot change the site ID for any rows that were entered using Material Requirements/Issues (12.250.01) or that have already issued any quantity of the item.

**Whse Bin Location**

The warehouse location (or bin location) from which the components will be pulled when you issue materials to a work order.

**Issue Now**

The quantity to issue during this session. The value may be set by clicking Grid Pop or entering values manually. This quantity will be issued when you click the Issue Material button.

If this quantity is greater than the Remaining quantity, a warning is given. Overissues, where you deliberately issue more quantities of components than are necessary for building an assembly, are allowed.

Note You cannot issue material to a work order that is already allocated to a project. Use Availability (21.410.00) to examine the inventory allocated to projects.

**WO Qty. Required**

The standard quantity/of components per unit to build times the quantity to build, current for the work order. This field is calculated from Std Qty/Unit and the quantity to build. You can change this field directly; doing so prevents recalculation. If the value is zero, a warning will be displayed.

**Material In**

Material In displays the quantity of an item issued or transferred to the work order.

**Material Out**

Material Out displays the quantity of an item transferred out of the work order.

**Remaining**

The remaining quantity to issue for this component. The value in this field drives allocation of inventory and is display-only.

**Specific Cost ID**

Specific Cost ID displays a user-defined identification number that identifies the particular cost layer for the item. See the Inventory online help or user guide for more information.
Stock Usage

Stock Usage indicates whether the required quantity of a subassembly inventory item should be satisfied by using the stock quantity of the subassembly or by building more units of the subassembly from its components.

This field defaults (display-only) from the value entered in stock usage in Inventory Items (10.250.00) or from the bill of material. Options are:

- Normal — If sufficient quantity exists, use all the required units of this component subassembly from stock. If quantity is insufficient, use the subassembly units available, and rely upon a second, separate work order to build the remaining units from its components. Only the quantity on hand will be issued during this materials issue process, leaving a shortage condition for this component for this work order.

- Build Only — Regardless of whether any stock quantity exists, do not use any units of this component subassembly from stock. Instead, build all required units from its components via separate work orders designating this parent work order as the build-to target.

- Stock Only — Regardless of whether the stock quantity is sufficient, use all required units of this component subassembly from stock. When using Stock Only, be aware that negative inventory rules will be respected.

When non-stock materials are issued, there will not be any impact on inventory. For example, a special non-stock inventory item, such as a labor cost, is not a physical item kept in a bin. Adding such an item to a materials list does not affect inventory levels.

If the component item is entered individually, rather than based on a kit or bill of material, and it is a stock item, the stock usage is set to Build Only.

Note: Where the stock usage requires a build, the build is accomplished by manually creating another work order for the component, with this work order as the designated build-to target of that other work order.

Stocking UOM

The stocking unit of measure is used to control stock for the component. It is specified on Inventory Items (10.250.00) and is display-only.

Std Qty/Unit

The amount of the component needed per unit of the bill of material or kit. The value defaults from a kit or bill of material component list. You can change this field’s value only if an item is added using Material Issues (12.400.00).

Unit Cost

Unit Cost displays the per-unit cost of the item (the amount that the company paid for the item). Unit Cost is adjusted for Stocking UOM.

Date Required

The date when this component is required to be available to fulfill the work order. It defaults to the planned start date for the work order.

Note: It is important that this date be set as accurately as possible, as it ensures accurate and helpful Available fields on this screen.

Routing Step

Routing Step is an information-only field that Shop Floor Control will use to schedule materials. A possible values list is available to look at the work order’s routing.
Comment
This field displays the comment, taken from the kit or BOM description, for the item on this line in the materials list.

Component Added
Component Added displays the origin of this entry in the material requirements list. This field is display-only.

- WO Entry — This component was added to the materials list using Material Requirements/Issues (12.250.01). Components that have this designation may not be removed from the materials list using Material Issues (12.400.00). These are components that are maintained by the product manager.
- Matl Issue — This component was added to the materials list using Material Issues (12.400.00). Components that have this designation may be edited and deleted using either Material Requirements/Issues (12.250.01) or Material Issues (12.400.00). These are components that may be entered and edited on the shop floor.

Note: In either case, a component may not be deleted if issues have occurred.

Available at Site
The site ID indicated as a supply for this item, based on the quantity on hand plus any planned additions to inventory minus any planned withdrawals from inventory. This field is display-only.

Available-All Sites
The current available quantity for this component at all sites, based on the quantity on hand plus any planned additions to inventory minus any planned withdrawals from inventory. This field is display-only.

On Hand At Location
The site ID indicated as a supply for this item. This quantity is different from available quantity because it is only what is at the site ID and bin locations right now, without including any planned allocations or commitments. This field is display-only.

On Hand-All Sites
The current on-hand quantity for this component at all sites. This quantity is different from available quantity because it is only what is at the site ID and bin locations right now, without including any planned allocations or commitments. This field is display-only.

Estimate Cost
The cost estimate for this line of the materials list, which multiplies the quantity of the component by the unit cost.

Inv Inquiry (button)
Inv Inquiry opens Inventory Status Inquiry (10.220.00) for the currently selected material list item. This inquiry screen presents a detailed view at inventory status, including a detailed look (with multiple filters) at the inventory transactions for this item, as well as sources and uses for this part.

Qty Details (button)
Qty Details opens Quantity Details (12.400.02) for the currently selected material list item. This inquiry screen presents a detailed view of inventory quantities and lot/serial information for this part. For more information, see Quantity Details (12.400.02) on page 135.
Issue Material (button)

Issue Material begins the process of pulling components from inventory and transferring their associated costs to the WIP accounts for this work order.

The following steps are performed:

- Update Material Budget — If the work order is set up to update material account category budgets and the WO Qty. Required has changed, a prompt asks if you wish to update the material account category budget for the corresponding work order or project/task with the change.

- Inventory Issues Batch — Generate an inventory issues batch to credit inventory and debit work in process (WIP). The period to post is set to the period entered at the top of this screen. The batch is autoreleased.

- Update Issued Quantity — Update issued quantity for each component in the materials list for which there is an issue quantity.

- Decrement Allocated — At each component’s site, decrement the allocated quantity by the issued quantity.

- Update Allocated — For each component, if there have been changes to the work order quantity, increment or decrement the allocated quantity by the change quantity at each component’s site.

- Auto FTT — Financial Transaction Transfer (PA.TRN.00) is invoked, causing the issue of inventory to be immediately recorded in the appropriate project records.

- Update Quantity on Hand — Decrements the on-hand quantity at associated sites and warehouse bins from where the components were drawn.

Info (button)

Opens Work Order Information (12.290.00) for this work order. It provides high-level information about the work order selected. Available on most screens that reference work orders.
Quantity Details (12.400.02)

Use *Quantity Details* (12.400.02) to view work order transaction details, including issue, transfer, and production completion batches. *Quantity Details* (12.400.02) is accessed by clicking the *Qty Details* button in *Material Issues* (12.400.00). See *Material Issues* (12.400.00) on page 129.

![Quantity Details (12.400.02)](image)

**Figure 48: Quantity Details (12.400.02)**

**WO Quantity Required**

*WO Quantity Required* displays the quantity required from the materials list.

**Material In**

*Material In* displays the quantity of an item that has come into the work order.

**Material Out**

*Material Out* displays the quantity of an item transferred or scrapped from the work order.

**Quantity Remaining**

*Quantity Remaining* displays the result of *WO Quantity Required* minus *Material In* plus *Material Out*.

**Detail Options Frame**

**Issue Now**

*Issue Now* contains the quantity to be issued when issuing material to a work order.

**Issued**

*Issued* displays the quantity issued to date for this inventory item.
Auto-issued from child work orders
Auto-issued from child work orders displays the quantity issued to date based on production completion from child work orders.

Auto-issued from purchase orders
Auto-issued from purchase orders displays the quantity issued to date based on purchase receipts.
(Not currently implemented.)

Transferred in from work orders
Transferred in from work orders displays the quantity transferred into this work order using the Material Transfers/Returns (12.401.00) screen.

Scrapped and reallocated
Scrapped and reallocated displays the number of units scrapped and reallocated using the Material Transfers/Returns (12.401.00) screen.

Transferred out, reallocated
Transferred out, reallocated displays the number of units transferred out of the work order and reallocated using Material Transfers/Returns (12.401.00).

Scrapped and not reallocated
Scrapped and not reallocated displays the number of units sent directly to scrap using the Material Transfers/Returns (12.401.00) screen. Quantity in Scrapped and not reallocated is not used in the Material Out calculation.

Transferred out, not reallocated
Transferred out, not reallocated displays the number of units transferred out of the work order using the Material Transfers/Returns (12.401.00) screen. Quantity in Transferred out, not reallocated is not used in the Material Out calculation.

Issued Frame

Batch Number
Batch Number displays the batch number relating to the Quantity Details option button selected. For each option button, there can be multiple occurrences (multiple issues, transfers in, transfers out, etc.). This grid shows the detail batches that were created for each occurrence. Note that the frame caption of the batch grid changes depending on the Quantity Details option button selected.

Date
Date displays the date the batch was created.

User
User displays the name of the person who created the batch.

Quantity
Quantity displays the quantity of units for the batch.

Description
Description displays an explanation of the type of batch. For example, Issue Batch, Return to Stock, etc.
View Batch
Click View Batch to open the batch that is currently highlighted in Display mode.

Lot/Serial Assignment Frame

Lot/Serial Number
Lot/Serial Number displays the lot number or serial number assigned. If you have selected the Issue Now option in the Detail Options area then specify the lot number or serial number that you want to issue. Otherwise, if you have selection any of the other options in the Detail Options area, the lot/serial numbers displayed are those associated with the currently highlighted batch in the frame.

Quantity
Quantity displays the inventory item’s lot or serial quantity. If you have selected the Issue Now option in the Detail Options area then specify the quantity that you want to issue. Otherwise, if you have selection any of the other options in the Detail Options area, then the quantity displayed is associated with the currently highlighted batch in the frame. If the item is a serialized item, Quantity will always contain 1.

Batch Number
Batch Number displays the batch number associated with the lot/serial-numbered item.

Mfgr Lot/Serial Number
Mfgr Lot/Serial Number displays the manufacturer-assigned lot or serial number that is associated with an item’s lot or serial number.

Expiration Date
Expiration Date displays the expiration date related to the lot/serialized item if the item’s Issue Method is set to Expiration.

Container Code
Container Code is the shipment container code that the lot or serial number was in when received. This code can be entered in the Lot/Serials Used grid when you enter receipts for items that are lot numbered or serialized. You cannot change the shipment container code.

Quantity to Issue
Quantity to Issue displays the number of remaining serial numbers that need to be entered into the Lot/Serial Assignment area for a serialized item that is being issued. This field reflects the Issue Now quantity for the component in the Material Issues (12.400.00) screen minus what has been entered into the Lot/Serial Assignment area. This field will appear when the Issue Now option is selected in the Detail Options area.

OK (Button)
Clicking OK will accept any changes made and close the Quantity Details (12.400.02) screen and return you to the Material Issues (12.400.00) screen.

Create New Numbers (Button)
Clicking Create New Numbers will generate serial numbers for serialized component items that are being issued. This button will become available if the Issue Now option in the Detail Options area is selected and the serialized item is created with an assignment value of When Used from Inventory and a prefix of enterable.

Cancel
Clicking Cancel will remove any changes made to the Quantity Details (12.400.02) screen and return you to the Material Issues (12.400.00) screen.
**Material Transfers/Returns (12.401.00)**

This screen is used to transfer stock inventory components previously issued to a work order back to stock, to another work order, to a project/task, or to scrap.

The selection criteria in the Transfer From area may consist of a work order to which issues were made and an issued inventory ID or a masked inventory ID. Enter all transfer selection criteria and then click Refresh to fill in the Issued Costs area.

The Issued Costs area displays the details of all issues that have been made based on inventory IDs that satisfy the selection criteria. After all required transfer information has been entered, press Begin Processing to transfer the materials from the specified work order to the appropriate target.

When a work order ID has been entered as part of the issue selection criteria, you can use the Event History button to launch Event History Inquiry (12.304.00) and view an event history of all transfer batches related to the selected work order.

![Material Transfers/Returns (12.401.00)](image)

*Figure 49: Material Transfers/Returns (12.401.00)*

Following are the field descriptions for Material Transfers/Returns (12.401.00).

**Work Order ID**

A unique ID for the source work order. A possible values lookup is available for all work orders that belong to the current company and for which the processing stage is Released.

**Part to Build**

The Item from the Targets tab of Work Order Entry (12.250.00) for the entered work order. This field is display-only.

**Account Category**

The source account category. It is set to the material account category identified for the source work order on the Other Info tab of Work Order Entry (12.250.00). This field is display-only.
Period To Post
The posting period for transfer. It defaults to **Period to Post** on the **Defaults** tab of **Work Order Setup** (12,950.00), but may be changed if you do not want the default posting period used for this work order component transfer.

Part Issued
This field is a filter on the parts to display in **Transfer Issued Components To**. If this field is left blank, then all components issued for the work order(s) will be displayed. This enables you to avoid scrolling through a list of many parts or subassemblies needed to build the work order item.

Transfer Date
The date recorded for this transfer; it defaults to the current date.

Display Transfer/Return history transactions
If **Display Transfer/Return history transactions** is selected, the Issued Costs grid will show not only the originally issued transactions but also any previously transferred or returned item transactions. If the check box is not selected, only issued transactions will be displayed.

Refresh (button)
Clicking **Refresh** fills in the Issued Costs area with transactions that meet the selection criteria entered in the Transfer From area. Components that are on a Rework work order will be shown only if they are not the same as the work order’s part to build. You can then select from the transactions displayed in the grid to initiate a transaction. Choose a component to transfer by double-clicking it. The form view conveniently appears with that component’s information, ready for you to complete the transfer.

Part Issued (Issued Costs)
This is an inventory item issued to the work order. This field is display-only. To select a different part, press **F4** to display grid view and then double-click on a different part.

Site ID
The warehouse site from which the part was issued or transferred. This field is display-only.

Transaction Date
The transaction date on which the part was issued. This field is display-only.

Issued Quantity
The quantity of an item that was issued and is available for transfer. This field is display-only.

Issued Cost
The cost of issuing the part originally, expressed as the quantity you issued for this part multiplied by the unit cost for that part. This field is display-only.

Issued Unit Cost
The unit cost of this particular part issue. For example, if a bicycle crank was issued, this field would display the cost per assembled crank at the time it was issued to a work order. This field is display-only.
Transfer Type
The transfer type is used to specify where to transfer the item. Options are:

- To Stock — Used to transfer material back to a warehouse and bin location so that you can use the material for other work orders, to fulfill sales order demand, or to be issued by the Inventory module.
- To Manufacturing Work Order — Used to transfer material from its current work order to a manufacturing work order.
- To Project/Task — Used to transfer material to a project/task.
- To Scrap — Used to transfer irreparably damaged or defective component materials to a scrap account category.

Displays the lot or serial number assigned to the item.

Specific Cost ID
Specific Cost ID displays a user-defined identification number that identifies the particular cost layer for the item. See the Inventory online help or user guide for more information.

Re-allocate
Select this box if you are transferring material out of this work order but the work order still requires the materials and you need (and fully expect) to replace those materials at some point in the future. Leave the box unchecked if you are taking the materials from this work order with no need to replace them.

Transfer/Scrap to Date
The quantity of the part that has been transferred or scrapped to date.

Transfer Quantity
The quantity of this part to transfer out of the work order. The value defaults to zero in the grid; you are required to enter a quantity greater than zero before any transfer will occur.

You cannot transfer more than you have allocated. The issued quantity is the number of items issued. You can transfer that entire quantity, unless you already removed some in a prior transfer/scrap operation. For example, if the issued quantity was 10, and 5 units were transferred elsewhere in a previous operation, you can transfer or scrap no more than 5 units now.

Target Site ID
If the transfer type is To Stock, this field is enabled. Enter the site ID to which the inventory item is to be transferred. The value defaults to the site ID from which the original issue occurred. A possible values lookup is available for all site IDs.

If the transfer type is other than To Stock, this field is disabled.

Target Warehouse Bin Location
If you are transferring from a work order to stock, use this field to specify the stock location (bin) that receives the transferred goods. The default stock location is the same location from which the materials originated. However, you are allowed to override the default and transfer the materials to any stock location. A possible values list is available for all warehouse locations for the selected site ID.

If the transfer type is other than To Stock, this field is disabled.
Target Work Order
If you are transferring from a work order to another work order, use this field to specify the work order to which you are transferring items. A possible values list is available for all released work orders. Because you can issue materials only to released work orders, similarly you can only transfer materials to released work orders.

Target Project
If the transfer type is Project/Task, this field is enabled. Enter the project to which the item is to be transferred. A possible values list is available for all non-work order type projects.

Target Task
If the transfer type is:
- To Mfg Work Order — The task will be set to the defined manufacturing work order task and the field will be display-only. The target work order will be checked to be sure that the part issued is on that work order’s material list.
- To Proj/Task — Any valid task for the selected project may be entered (a possible values list is available).

Target Specific Cost ID
Target Specific Cost ID displays a user-defined identification number that identifies a particular target cost layer for an item. See the Inventory online help or user guide for details on the specific cost ID.

Receipt Number
By default, Receipt Number displays the value from Work Order ID. However, you can enter any value in this field and it will be recorded in the return issue batch. For example, you might want to reference an original purchase order receipt number by entering its value in Receipt Number.

Receipt Date
By default, Receipt Date displays the current date. However, you can enter any date in this field and it will be recorded in the return issue batch. For example, you might want to reference an original purchase order receipt number in Receipt Number and then enter the date of that original purchase order receipt in Receipt Date.

Begin Processing (button)
Clicking Begin Processing processes the entered transfers where the Transfer Quantity is non-zero. You can process only one transfer per item line.

Event History (button)
Clicking Event History launches Event History Inquiry (12.304.00), which provides a comprehensive transaction-by-transaction history of all the financial and operational events that have occurred during the life of the selected work order.

Lot/Serial (button)
This button calls Lot/Serial Number Assignment (12.402.04) and is enabled only when the current highlighted line is an item that is lot/serial tracked. By using the button here, you can transfer specific lot numbers or serialized items.

Info (button)
Info opens Work Order Information (12.290.00) for this work order. It provides high-level information about the selected work order.
Production Completion (12.402.00)

When you have completed production on some or all of the build-to items and want to have that quantity appear in the inventory, use Production Completion (12.402.00) to transform accumulated materials and labor into inventory items that can be placed in stock, issued to another work order, assigned to a sales order, or assigned to a project/task.

The following explanations of terminology are useful in understanding the production completion process:

- **Full completion** — You are recording production for all units in the work order. When all the units are built, accounting processes can start.

- **Partial completion** — You are only recording production of some but not all of the units in the work order. Because more production is yet to be done, you do not start closing out the accounting processes just yet.

- **Final completion** — You are recording the production of the remaining units in the work order. As in a full completion, now you are at the point where you have to begin the accounting processes.

Besides noting the quantity to complete now when recording completion of your items, you need to specify two additional types of information:

- **Multiple Targets** — When you initially create a work order, you specify a default production target (or, optionally, several different targets). Production Completion (12.402.00) allows you to keep that target or redirect your production to meet a more pressing need at the last minute.

- **Costing Information** — Depending on your business environment and rules, you may be manufacturing items at standard cost or actual cost. Work Order also provides the capability to set an artificial standard for the life of this work order, reporting partial completions as though the production item were actually valued at standard cost.
When reporting partial completions using actual cost, the *Production Completion* (12.402.00) process will make a best guess of the cost to apply to this completion, based on a proportion of the total costs on the work order.

When reporting partial completions using standard cost or work order standard cost, *Production Completion* (12.402.00) adjusts the cost to be applied to the partial completion, so that only the total standard cost or work order standard cost is removed from WIP.

If enabled in *Work Order Setup* (12.950.00), the cost determined by *Production Completion* (12.402.00) may be manipulated by pressing *Apply Completion Costs*, to allow for intervention in how much cost to apply to a given partial completion.

The unit cost used to make this completion is based on one of the three following work order cost methods:

- **Actual** — The current work in process costs. *Apply Completion Costs* (12.402.01) is used to evaluate and adjust the costs to complete.
- **Standard** — The inventory standard cost for the production part. Variances are created for the difference between the standard and the actual costs (current WIP).
- **Work Order Standard** — The work order standard cost for the production part. Variances are created for the difference between the work order standard and the actual costs (current WIP).

See “Cost Methods” on page 15 for more information.

Also note that when using a costing method that will book variances, the default timing of that variance entry occurs at the final completion. No variances are booked at partial completion operations. Two other timing options are available: 1) On the final completion, book all the remaining costs to this completion (absorb), and 2) Do not book the variance at the final completion, rather, leave it in WIP to be resolved at work order closing.

If errors occur during processing, *Pre-Completion Checking* (12.402.02) is displayed.

The following fields appear in the top area of *Production Completion* (12.402.00).

**Work Order ID**

The unique ID assigned to the work order. The work order ID is used to tie operations to a specific work order history. This is important because several work orders can exist simultaneously, all building the same quantity, of the same part, to the same target, and with the same description. The work order ID uniquely identifies each work order as a distinct and individual project for tracking purposes. Only released work orders that belong to the current company can be accessed.

**Processing Stage**

*Processing Stage* indicates the current processing stage for the work order. This field is display-only. The stages are:

- **Plan** — Used to configure the work order when it is first created.
- **Firm** — Used when the production part is committed and component material is allocated.
- **Released** — Used when manufacturing operations can begin.
- **Ops-Closed** — Closed to operations transactions.
- **Fin-Closed** — Closed to financial transactions.

Only work orders in the Released stage are available for completions. Refer to “Changing the Processing Stage of a Work Order” on page 48 for more information.

**Part to Build**

The part to build from *Work Order Entry* (12.250.00). This field is display-only.

**Description**

The description of the inventory item being built, copied from the item’s *Description* in *Inventory Items* (10.250.00). This field is display-only and is not labeled.
**Completion Date**
This date defaults to the business date, usually the current date. It will be the transaction date of the resulting inventory receipt and related transactions if you complete to production on this day.

**Period to Post**
The fiscal period used for batches created by the completion process. The period is defined on Work Order Setup (12.950.00), but may be changed. Usually the inventory period is used unless you have a specific reason for assigning a different period for a component.

**Total Cost**
The sum of the total costs reported to this work order. It is summed from the Total Cost column in Apply Completion Costs (12.402.01) and represents the total costs reported from the expense account categories to the work order since it was opened.

**Completed Cost**
The sum of the completed costs reported to this work order. It is summed from the Completed Cost column in Apply Completion Costs (12.402.01) and represents the total value of all previously completed production.

**Uncompleted Cost**
The sum of the uncompleted costs remaining on this work order. It is summed from the same column in Apply Completion Costs (12.402.01) and represents the total of all costs not applied to previously completed production (WIP). It is calculated as Total Cost less Completed Cost.

**Complete Now**
The quantity that will be completed for the planned target when you click Begin Processing. This quantity defaults to the quantity in Remaining, and the quantity in Complete Now must be equal to or less than the Remaining quantity.

**Complete Now-Unit Cost**
The Complete Now cost divided by the number of units being completed.

**WO Standard Cost**
The unit cost for the work order as established in the WO Standard Cost box in the Unit Cost column on the Costs tab of the Work Order Entry (12.250.00) screen.

**Apply Completion Costs (button)**
This button opens the Apply Completion Costs (12.402.01) subscreen.

**Begin Processing (button)**
Clicking this button initiates the following:
1. A check is performed for unprocessed costs that might affect the costing of the items being completed. If any are found, a screen is displayed to allow for resolution of the problems.
2. Items being completed are sent to their targets, at the designated unit cost.
3. WIP is relieved for the cost of the units being completed.
4. Inventory position is updated for the production item.
5. An event history record is recorded.

Should any costs not be prepared for processing, Pre-Completion Checking (12.402.02) is displayed, informing you of what may need to be done before production can be completed.
Event History (button)
This button opens the Event History Inquiry (12.304.00) for this work order, which displays all the related transactions recorded against this work order during its life.

Info (button)
This button opens Work Order Information (12.290.00), which displays general summary information on the current work order.
Production Completion, Targets Tab

The Targets tab of Production Completion (12.402.00) is used to enter production completion destinations and details. It applies the costs that have been reported to the work order and determines the completed production costs and quantities.

The only values that may be changed are the quantity to complete now, which is where you define how many units to complete, and the quantity on QC hold. The remaining values default from Work Order Entry (12.250.00). The total of all line item Complete Now quantity fields cannot exceed the Remaining quantity.

Figure 51: Production Completion (12.402.00), Targets tab

Following are the field descriptions for the Targets tab of Production Completion (12.402.00).

Build To

The four Build To types are:

- Stock — The end result of the work order will be placed into inventory. Stock work orders are used to build discrete items that are sent to stock and later sold to customers, or to build items that can be used as assemblies in a higher level manufacturing process.

- Sales Order — The item on the work order is being built to fulfill a sales order.

Note: A Build To Sales Order work order requires the Order Management module.

Note: You may not manually set this option to establish a Build To Sales Order type of work order. This value is automatically set to Sales Order when processing a work order request from Order Management. This functionality is accessed via the WO Requests From OM (x) button on the Targets tab on Work Order Entry (12.250.00).
• Mfg. Work Order — The part being built on the work order will be used to satisfy the requirement for a component part of another work order. Examples include, the manufacturing of subassemblies for another work order; separate costing for manufacturing rework; and separate costing for a non-stock assembly or subassembly, with the option to fold in all the costs to the material cost component of the parent work order.

• Project/Task — The work order’s production is to be sent directly to a Project Management and Accounting project/task.

Inventory ID
The part to build for this production item line (always the same as the work order part to build).

Target Detail
This display-only field indicates the completion target details according to the Build To type.

<table>
<thead>
<tr>
<th>Work order Build To type</th>
<th>Displayed values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock</td>
<td>Site, Warehouse Bin Location</td>
</tr>
<tr>
<td>Sales Order</td>
<td>Sales Order Number</td>
</tr>
<tr>
<td>Work Order</td>
<td>Work Order Number</td>
</tr>
<tr>
<td>Project/Task</td>
<td>Project, Task</td>
</tr>
</tbody>
</table>

Complete Now
The Complete Now quantity defaults to the available remaining quantity to complete for the selected production target line. You have three choices with this field: complete the production for the total amount of components remaining to complete, partially complete production for some of the components, or enter less than the total remaining quantity to complete so that you can redirect completion to a new target.

If the quantity that is displayed here is changed, ReDirect will become enabled to provide for the redirection of production.

R
If you have redirected any production from its original target to another target, an asterisk appears here. Otherwise, this field is blank.

Site ID
For Build To Stock work orders, the site ID to which completions are to be recorded.

Whse Location
If you are completing production to stock, this is where you specify the stock location (site ID and bin) that receives the completed goods. The default stock location was the warehouse bin location specified on Target Destination when you created the work order in the Targets tab of Work Order Entry (12.250.00). However, you are allowed to override the default and complete the materials to any stock location. A possible values list is available for all warehouse locations for the selected site ID.

Customer ID
The customer for which this production line on the work order is designated.

Sales Order
If the items being completed were designated for a specific sales order, that sales order number will be displayed in this display-only field.
SO Pick Date
For a Build To Sales Order work order, this display-only field indicates the earliest sales order pick date for all the schedules for the sales order line.

SO Schedules
For Build To Sales Order work orders only, this display-only field indicates the number of schedule lines for the associated sales order line.

SO Hold
For a Build To Sales Order work order, this display-only field indicates the existence of any holds on any schedule lines (A-admin, C-credit, S-schedule).

Redirect
The quantity of this production item that has already been redirected to another destination. This field is display-only.

Current
This display-only field indicates the current quantity to be built for this planned target. This value was entered in **Current Quantity** on the **Targets** tab of **Work Order Entry** (12.250.00) and can be edited there to match changing business conditions prior to completing production for this work order.

Comp (&Cst)
The quantity on this production item record that has previously been reported complete through **Production Completion** (12.402.00).

Completed
The quantity built but not yet completed to production. For example, if you build 6 of the 20 bikes scheduled for a work order, you can enter 6 here when those 6 bikes are physically built but before you complete those 6 to production. This will not actually transfer costs and complete to production those 6 bikes, but is an annotation field for your convenience if you want a notation that some product is physically built but has not yet been declared as complete to the Work Order module.

Remaining
**Remaining** contains the quantity that is yet to be completed to production targets for this work order, calculated as **Current Quantity** less **Comp (&Cst)**. This field is display-only and is automatically updated during **Production Completion** (12.402.00). For example, if you had a work order for 10 bicycles and had done a partial completion of 5 last week, this field’s value would be 5.

Scrap
This field indicates the quantity that has already been scrapped from this work order. This field is auto-incremented via operations recorded using **Material Transfers/Returns** (12.401.00).

QC Hold
Enter a quantity here if you want to withhold one or more items from completion, so that you could test the items for quality control purposes. For example, you might want to build 10 bicycles and test one of them before reporting it complete. If it passes the inspection, you can set **QC Hold** back to 0 and complete the bike to production.

Any quantity entered here will reduce the quantity available to complete for this production item record. That is, the quantity remaining to complete is left untouched, but **Production Completion** (12.402.00) cannot be reported on the units in **QC Hold**.
Out to Rework
When a quantity is transferred (completed) to Rework, the value displayed in this field is incremented. When the quantity on the rework work order is completed back to this work order, this field is decremented. Items that are damaged during production, but not ruined so as to count as Scrap, can be remanufactured or reworked by completing them to rework work orders.

to Work Order
When you are building to a manufacturing work order target, this display-only field indicates the target work order of the Build To Mfg. Work Order. Completion of the order is reported to this work order, with the part to build automatically issued to the requirement on the target work order’s material requirements list.

to Project
When the work order you are building has a target of a project/task, this display-only field displays the project ID to which you are completing production.

Task
When the work order you are building has a target of a project/task, this display-only field displays the task information to which you are completing production.

Description
This display-only field indicates the value you entered in Target Description for this line of the work order in the Targets tab of Work Order Entry (12.250.00).

Specific Cost ID
This display-only field displays the specific cost ID for this target. See the Inventory online help or user guide for more information.

Lot/Serial (button)
This button accesses Lot/Serial Assignment (12.402.04), which assigns lot or serial number for quantities to be completed. It is enabled when the production part is lot/serial tracked.

ReDirect (button)
Clicking ReDirect accesses Redirect Completion (12.40.03), allowing you to identify alternate destinations for completions.

Actual (button)
Reserved for future use.
Production Completion, Quantity Summary Tab

Use the **Quantity Summary** tab of **Production Completion** (12.402.00) to view the status of the quantities built on this work order. This is the same information that is displayed on the **Quantity Summary** tab of **Work Order Entry** (12.250.00). On that screen, it allows you to check the status of production to date while reviewing the work order. Here, it allows you to see the same summary information while recording production.

This tab is display-only to allow you to view the summary information. To record production completion, use the **Targets** tab of **Production Completion** (12.402.00).

![Production Completion, Quantity Summary Tab](image)

**Figure 52**: Production Completion (12.402.00), Quantity Summary tab

Following are the field descriptions for the **Quantity Summary** tab of **Production Completion** (12.402.00).

**To Build, Original**

The **To Build, Original** quantity reflects the original total as designated during the Plan stage, and represents the quantity as it was set the moment that the work order left the Plan stage and was upgraded to Firm (or Released, if it directly from Plan to Released).

**To Build, Current**

**To Build, Current** reflects the sum of the quantity for all production targets on this work order, including any changes made to the production targets after the work order was advanced beyond the Plan stage.
QC Hold
Enter a quantity here if you want to withhold one or more items from completion, so that you could test the items for quality control purposes. For example, you might want to build 10 bicycles and test one of them before reporting it complete. If it passes the inspection, you can set QC Hold back to 0 and complete the bike to production.

Any quantity entered here will reduce the quantity available to complete for this production target line. That is, the quantity remaining to complete is left untouched, but Production Completion (12.402.00) cannot be reported on the units in QC Hold.

Out to Rework
This field represents the quantity completed (transferred) to rework work order(s), that have not yet been returned. When items are transferred to a rework work order, they are earmarked for return to this work order upon final completion.

Scrap
Quantity of the work order completed to scrap to date.

Completed
The sum of completions previously recorded for the work order.

Remaining
Remaining contains the quantity that is yet to be completed to production targets for this work order. This field is display-only and is automatically updated during Production Completion (12.402.00).
Apply Completion Costs (12.402.01)

When the Work Order Standard is the actual cost method, use this screen to apply costs that have accumulated in Work In Process (WIP) to the current production completion transaction. Access it by clicking **Apply Completion Costs** on **Production Completion** (12.402.00).

![Apply Completion Costs (12.402.01)](image)

Figure 53: Apply Completion Costs (12.402.01)

Following are the field descriptions for **Apply Completion Costs** (12.402.01).

**Percent to Complete Now**

This value is based on the ratio of the quantity entered to complete now divided by the quantity remaining and is a percentage of the total costs you want to complete now. For example, if you had 25 items remaining to be completed, and you completed 10 of the 25, this percentage would report 40%.

**Grid Pop (button)**

Clicking **Grid Pop** will copy the value in **Percent to Complete Now** to **Complete Now**.

**Account Category**

The costing account category as set in the **Defaults** tab of **Work Order Setup** (12.950.00). This field is display-only. See “Account Categories” on page 12 for more detail.

**Complete Now**

Enter the dollar amount of the costs that are to be applied to the account category for the quantity being completed by the transaction. This value defaults to the **Uncompleted Cost**.

Costs may be smoothed for each account category. For example, if only 2 of 10 units are being reported complete, but 100% of material costs have been issued to the work order, this may be adjusted to 20% of the cost, thereby applying only 20% of the cost to 20% of the items produced.

**Total Cost**

The total cost accumulated for this account category. This field is display-only.

**Completed Cost**

The costs for the completion account category. This represents a total of all costs accumulated for this account category that were previously applied to production reported as complete. This field is display-only.

**Uncompleted Cost**

The difference between the **Total Cost** and **Completed Cost**. This field is display-only.
Mfg WIP Account

The WIP general ledger account for this account category, set in Manufacturing WIP Account in Account Category/GL Maintenance (12.280.00). This field is display-only. See “Account Categories” on page 12 for more detail.

Complete To Account Category

The complete-to account category for this account category, set in the Defaults tab of Work Order Setup (12.950.00). This special offset account category accumulates the total cost of all completions for its corresponding account category; for example, Materials Completed for Materials. This field is display-only. See “Account Categories” on page 12 for more detail.

OK (button)

This button returns the user to Production Completion (12.402.00).
Pre-completion Checking (12.402.02)

Pre-completion Checking (12.402.02) displays only if, during production completion, one of several error conditions occurs. (Note that this screen can also be viewed by putting the software in Initialize mode and clicking in the Info button in the lower-left corner of Production Completion (12.402.00). The problem that caused the screen to display will affect the accuracy of costs on the work order, and in most cases production completion cannot continue until the issues are resolved.

![Image of Pre-completion Checking (12.402.02)]

Figure 54: Pre-completion Checking (12.402.02)

Pre-completion Checking (12.402.02) has four areas:

Released, but not Transferred

This area displays transactions that were released by other modules but are not yet transferred to the work order (FTT has not been run). The following transactions are reviewed for the current and two prior periods:

- General Ledger journal transactions
- Accounts Payable voucher transactions
- Payroll transactions
- Project Controller project charge entry
- Project Controller timecard entry

This checking is only done if the Check for released but not transferred transactions check box is selected on Work Order Setup (12.950.00), Completion tab, or if this is a final completion.

If the Allow completions with unreleased, untransferred or unallocated transactions check box on Work Order Setup (12.950.00), Completion tab is not selected and there are transactions in this category, the Continue with Completion button is disabled and the completion cannot continue.

The Details box lists batches that are released but not transferred. Click a batch to select it.

Click the Details button to display the batch entry screen for the released but not transferred batch which was selected earlier.

Click the Run FTT button to run Financial Transaction Transfer (PA.TRN.00) to process released but not transferred batches.
Unallocated Transactions
This area displays transactions that Project Allocator has not yet processed. Transactions for the current and two prior periods are reviewed.

The Details box lists unallocated transaction batches (project charge or material issues). Click a batch to select it.

Click the Details button to display the batch entry screen for the unallocated transaction batch which was selected earlier.

Click the Run Allocator button to run Allocation Processor (PA.PRO.00) to process unallocated transaction batches.

If the Allow completions with unreleased, untransferred or unallocated transactions check box on Work Order Setup (12.950.00), Completion tab, is not selected and there are transactions in this category, the Continue with Completion button is disabled and the completion cannot continue.

UnReleased Transactions
This area displays transaction in other modules that have been entered, but the batches have not been released. The following transactions are reviewed for the current and two prior periods:

- General Ledger journal transactions
- Accounts Payable voucher transactions
- Payroll transactions
- Project Controller project charge entry
- Project Controller timecard entry.

The Details box lists unreleased transaction batches. Click a batch to select it.

Click the Details button to display the batch entry screen for the unreleased transaction batch which was selected earlier.

If the Allow completions with unreleased, untransferred or unallocated transactions check box on Work Order Setup (12.950.00), Completion tab, is not selected and there are transactions in this category, the Continue with Completion button is disabled and the completion cannot continue.

UnCompleted Child Work Orders
During final completion processing, this area displays a list of uncompleted (they still have a quantity remaining) work orders that have their target of production pointing to an item on the material list of the current work order. Completion can continue, even if these child work orders are listed.

The Details box lists uncompleted child work orders. Click a work order to select it.

Click the Details button to run Work Order Entry (12.250.00) to display information about the uncompleted child work order which was selected earlier.

Continue with Completion (button)
Click the Continue with Completion button after resolving any issues listed on this screen.

Cancel, and Review Costs (button)
Click the Cancel, and Review Costs button to end production completion.
Redirect Completion (12.402.03)

The intended destination for the result of the work order was defined using Work Order Entry (12.250.00) using the Build To type and by specifying individual build to target lines in the grid. Because business needs often change, the Work Order module provides Redirect Completion (12.402.03) for identifying alternate destinations for completions of work orders already in the system.

Figure 55: Redirect Completion (12.402.03)

A work order of a subassembly to a parent work order is created. But the parent work order is cancelled when the customer backs out of the deal. Instead, these subassemblies can be built to stock, where they can remain fully assembled, in inventory, until the next customer order comes in. At that time, the material can simply be pulled, already built, from stock. In this case, we are redirecting from a Build to Work Order to a Build to Stock.

Example: A work order is set up to build a commonly used subassembly for a certain parent work order. But another parent work order, building a different part (but requiring the same common subassembly) is a rush job. You do not have enough parts to build more of the common subassembly, so you redirect the production of the subassembly from its parent work order to a different work order.

Redirection is also used to complete damaged or defective items that cannot be repaired to scrap. Likewise, if an item is damaged or defective but can be repaired, you can redirect a damaged item to a rework work order.

Redirection is accomplished by first changing the Complete Now quantity on a selected production item line in Production Completion (12.402.00), and then clicking the ReDirect button (enabled after filling in Complete Now). The resulting screen, Redirect Completion (12.402.03), provides for the specification of alternate targets for the remaining production for the production item selected.

The original production item line always defaults to the destination information specified for the work order in Work Order Entry (12.250.00) and may not be changed. Zero completions for this destination may be accomplished by entering a quantity of zero.

Note: The capability to send material to stock as other than the original part to build can be used in situations where the produced part does not pass the specification requirements for the part to build but does pass the specifications for another part, such as a second.

Following are the field descriptions for Redirect Completion (12.402.03).
**Build To**
Enter the target for redirection here. The three valid Build To types are:

- **Stock** — Redirect to Build To Stock to place the item into on-hand inventory, at a specific site ID and warehouse bin location at production completion time. This quantity on hand may then be accessed as any other inventory item: issued from inventory, transferred to a different location, allocated to a sales order, etc.

- **Work Order** — Redirect to a work order to satisfy a component part requirement of another manufacturing work order. The part to build as identified on this screen must be on the material requirements list for the other work order designated here.

- **Project/Task** — Redirect to a project/task that has been set up using Project Management and Accounting. Projects can have one of more tasks as components of the project and the target of production within the project must be a specific, single task.

**Current**
Current reflects the sum of the quantity for all production targets on this work order, including any changes made to the production targets after the work order was advanced beyond the Plan stage. This field is display-only.

**Completed**
Completed is a user-entered memo entry only and is NOT updated by Production Completion (12.402.00). It allows you to enter a quantity physically completed, but not ready to report to the system (it may be waiting for additional costs) through Production Completion (12.402.00).

**Remaining**
Remaining contains the quantity that is yet to be completed to production targets for this work order, calculated as Current quantity less Complete (& Costed). This field is display-only and is automatically updated during Production Completion (12.402.00).

**Complete (& Costed)**
Completed (& Costed) is the quantity for this target line that has previously been reported complete by Production Completion (12.402.00).

**ReDirect**
The quantity of this production item that has previously been redirected to another destination. This field is display-only.

**Scrap**
Scrap indicates the quantity of items previously scrapped. This field is display-only and updated during Production Completion (12.402.00).

**QC Hold**
A quantity appears here if you withheld one or more items from completion, so that you could test the items for quality control purposes. This field is display-only and updated during Production Completion (12.402.00).

**Out-Rework**
When a quantity is transferred (completed) to rework, the value displayed in this field is incremented. When the quantity on the rework work order is completed back to this work order, this field is decremented. This field is display-only and updated during Production Completion (12.402.00).
Build To (ReDirect Completion)

In addition to the Build To types predefined in Work Order Entry (12.250.00), the following two additional types (implicitly not planned for in advance) are available when redirecting completion of production:

- Scrap — When scrapping the entire production item, this can be viewed as a completion of sorts. That is, the production item (and all its costs) are written off to the inventory asset account of the production scrap inventory item.
- Rework — Use this type when the desire is to transfer production temporarily to a rework work order.

Note: The valid alternate destination Build To types depend on the original Build To type. These restrictions are identified in the table below.

<table>
<thead>
<tr>
<th>Redirect to =&gt; Original</th>
<th>Stock</th>
<th>WO (stock)</th>
<th>WO (non-stock)</th>
<th>Sales Order</th>
<th>Scrap</th>
<th>Rework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock</td>
<td>☑</td>
<td>☑</td>
<td></td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>WO (stock)</td>
<td>☑</td>
<td>☑</td>
<td></td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>WO (non-stock)</td>
<td></td>
<td></td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>Sales Order</td>
<td></td>
<td></td>
<td></td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
</tbody>
</table>

WO = Manufacturing Work Order or Project/Task

Inventory ID

The single inventory ID part number to build from the header is duplicated on each production target line. The inventory ID must match the inventory ID of the entire work order, and may not be changed here.

Site ID

The value entered here determines the actual site that will receive the production of this work order as it is completed. This field is used only for Build To Stock, where your completed item is going into a warehouse. This field is disabled for the other Build To types.

Whse Bin Location

The value specified here designates the single bin location that will receive the redirected production. This field is used only for Build To Stock, where your completed item is going into a warehouse. This field is disabled for the other Build To types.

Complete Now

Enter the number of items you want to complete to a new target here.

Customer ID

For a Build To Sales Order work order, this field indicates the customer for whom you are redirecting this production.

Sales Order

If the Build To type is Sales Order, this field will be enabled. If Customer ID is not blank, Sales Order has a possible values lookup for all sales orders for the entered customer.

to Work Order

Completion of the order is reported to this work order, with the part to build automatically issued to the requirement on the target work order’s material requirements list. Used only for the Build To Mfg. Work Order type.
to Project
Used when the results of the work order will be issued directly to a project/task. Completion is reported to this parent project.
Used only for the Build To Project/Task type.

Task
Use this field when the results of the work order will be issued directly to a project’s task. Completion is then reported to this task. Used only for Build To Project/Task work orders.

Specific Cost ID
Specific Cost ID displays a user-defined identification number that identifies the particular cost layer for the item. See the Inventory online help or user guide for more information.

Build To Line Ref
This field indicates the line number of the component on its work order material list.

Lot/Serial (button)
This button accesses Lot/Serial Assignment (12.402.04), which assigns lot or serial number for quantities to be completed. Lot/Serial is enabled only when the part is an item that is lot/serial tracked and the Assignment on Lot/Serial Assignment (12.402.04) is When Received Into Inventory.
Lot/Serial Number Assignment (12.402.04)

This subscreen assigns lot/serial numbers and quantities for production completion. Numbers are either auto-assigned or manually entered. See the Inventory online help or user guide for more information on lot/serial number assignment.

The following are field descriptions of Lot/Serial Number Assignment (12.402.04)

**Lot/Serial Number**
The lot/serial number to assign to the production. These numbers are auto-assigned based on the next value as setup in Inventory Maintenance (10.250.00). These numbers may be changed and/or deleted according to your business needs.

**Quantity**
The quantity to complete. If a serialized item, then this value is always 1 and display-only. If a lot-tracked item, then this value can be changed (must be less than or equal to quantity to complete).

**Batch Number**
Not used.

**Mfgr Lot/Serial Number**
The manufacturer’s lot/serial number when received. This field is display-only.

**Expiration Date**
The expiration date from issue. This field is display-only.

**Container Code**
The shipping container code. This field is display-only.

**OK button**
Closes the subscreen.

**Create New Numbers (button)**
Opens Create New Numbers (12.LSN.CN).

**Cancel (button)**
When clicked, Cancel ignores any changes made in this subscreen.
Create New Numbers (12.LSN.CN)

This subscreen sets the prefix and numeric value and then auto-assigns them for lot or serial assignment based on these settings.

![Image of Create New Numbers (12.LSN.CN)]

Figure 57: Create New Numbers (12.LSN.CN)

The following are field descriptions of Create New Numbers (12.LSN.CN).

**Prefix Value**
Sets a prefix value to your lot or serial number as a basis for auto-assigning.

**Numeric Value**
Sets a numeric value to your lot or serial number as a basis for auto-assigning.

**Next Lot Number**
This field shows you a preview of how the assigned number format will appear.

**OK (button)**
Accepts the Prefix Value and Numeric Value and assigns numbers to the grid with this assignment. Also closes this subscreen.

**Cancel (button)**
Closes the subscreen without taking any action.
Work Order Closing (12.403.00)

Use Work Order Closing (12.403.00) to do the following:

- Review work orders in the Ops-Closed stage
- Perform various checking for:
  - Close Short
  - QC Hold quantity
  - Quantity Out to Rework
  - Close with Unissued Materials
  - Unapplied WIP

The processing performed during closing includes:

- If Closing Short, relieve commitment
- If Closing with Unissued Material, relieve allocations
- Dispose of Unapplied WIP
- Set Processing Stage to Fin-Closed

A work order in processing stage Ops-Closed indicates that there are to be no further material issues to the work order, and that the work order should be eligible for Work Order Closing (12.403.00). Using Work Order Closing (12.403.00) on a work order in Ops-Closed mode moves the processing stage to Fin-Closed, which means you can no longer assign external costs to the work order.

![Figure 58: Work Order Closing (12.403.00)](image)

Following are the field descriptions for Work Order Closing (12.403.00).

**Select**

If you select this check box, the work order is selected for closing. If you do not select this check box, the work order remains in its present stage and will continue to appear on this list until you close it.

**Work Order ID**

The unique identifier number of an Ops-Closed work order that you may select for closing.
After Close Status
The status that the work order will be assigned after the closing process is run. It may be set to either Hold or Purge. If set to Purge, the work order’s records will be deleted from the system (in accordance with the Purge setup parameters) when the integrity check is run with the Purge option selected.

Status
The data entry status that is currently assigned to the related project record. Options are:
- Active — No restrictions on processing of the work order, other than those imposed by Processing Stage.
- Hold — Prevents any further transactions from being entered against the work order. Held work orders do not appear in PV (Possible Values) lists, but you can still look them up in inquiry screens such as Work Order/Project Inquiry (12.300.00). You may want to place a hold on a work order for reasons such as:
  - You are waiting for a customer commitment to buy an order you are about to produce.
  - Your engineering team discovers a flaw in a design and they need to fix the product before fulfilling the next order for it.
  - You are waiting to receive a down payment or process a credit check prior to starting to build the items.

Work Order Type
Displays the work order’s type, which can be Manufacturing or Rework.

Quantity Remaining
Quantity Remaining is the To Build, Current value from the Quantity Summary tab of Work Order Entry (12.250.00) and indicates the quantity not yet completed to production. If this value is not zero, and Close Short in Work Order Setup (12.950.00) is not selected, you may not close this work order while there is quantity remaining to be completed. If you want to close short the work order, adjust Current Quantity in the Targets tab of Work Order Entry (12.250.00) so that the current quantity to build matches any quantity already built. This field is display-only.

Quantity QC Hold
The quantity of the build-to item that has been held from further action by quality control. If this value is not zero, the work order may not be closed. To close the work order, you must adjust the QC Hold value in the Targets tab of Work Order Entry (12.250.00) to 0. That will allow completion of the items held in QC Hold so you can close the work order, or you can choose to close short the work order. This field is display-only.

Quantity Out to Rework
This field represents the quantity completed (transferred) to rework work order(s) that have not yet been returned. When items are transferred to a rework work order, they are earmarked for return to this work order for final completion. If this value is not zero, the work order may not be closed. To close it, record the production as complete on the Rework work order, which will issue the parts to the parent work order. Once the parts come back from rework, the parent work order may be closed. This field is display-only.

Unissued Material
When selected, the material list for the related task is examined to see if there are any parts that were designated for issue that have not been issued. Either Yes or No will be displayed. If there are unissued materials, and Allow Close with Unissued Components in Work Order Setup (12.950.00) is not selected, the work order may not be closed. To close it, change the quantity required in Material Requirements/Issues (12.250.01) to match the quantity already issued in that same screen. Then close the work order.
Uncompleted Costs
This represents the costs still in work in process (costs applied to the work order, and not transferred out using Production Completion (12.402.00)). If this is not zero, and Automatically Write Off Uncompleted Costs to Unapplied WIP in Work Order Setup (12.950.00) is not selected, the work order may not be closed. Uncompleted costs, also known as unapplied WIP costs, are costs applied to the work order that were not applied during the production process. These costs can arrive from any number of circumstances, including:
- Transfer of costs from another work order after this work order was fully completed.
- Recording labor or other costs against the work order after the work order was fully completed.
- Manipulating the costs during the completion process to record an anticipated cost, and the related actual cost was different.

In any case, the costs must be removed from WIP, either automatically by the closing process (see the Closing tab on Work Order Setup (12.950.00) for this option), or manually through a General Ledger journal entry. See “Work Order Setup, Closing Tab” on page 180 for more information.

Unused MTO Inventory
The field value represents Unused ‘M’ake ‘T’o ‘O’rder Inventory. This value represents the value of inventory itemcost records associated with this Work Order, that were linked to a Sales Order, but the Shipper for that Sales Order never came through to consume the cost layer. When you link a Sales Order/Work Order, a special cost layer is put into the itemcost table which can only be used for the Sales Order/Shipper. If for some reason you complete the Work Order, but do not complete the Sales Order (i.e. cancel the order), then the cost layer still exists in Inventory.

Unapplied WIP GL Acct
Displays the general ledger account to use to report late charges during Work Order Closing (12.403.00). The subaccount is taken from the work order being closed.

Select OK (button)
Click Select OK to perform an automatic pre-validation examination of work orders to determine if they can be closed, based on the setup parameters. This button reviews each work order and marks the Select check box if it satisfies the following criterion:
- Not closing short, or closing short and Work Order setup allows (WOSetup.CloseShort = ‘Y’)
- No Quantity on QC hold (WOHeader.QtyQCHold = 0)
- No Quantity out to rework
- No unissued material, or unissued material and Work Order setup allows (WOSetup.CloseUnissued = ‘Y’)
- No incompleted costs, or incompleted costs and Work Order setup allows (WOSetup.CloseUnapplied = ‘Y’)
- No unused cost layers (this is a warning only, close can continue)

If any of the above conditions exists, then a dialog will appear listing the conditions that failed. Work orders that passed the conditions will be auto-selected. When selecting work orders individually, then the same checking is done.

Period
The period to post used for the General Ledger and Project Controller batches created by the closing process. The period defaults from Work Order Setup (12.950.00).
Begin Processing (button)
Clicking **Begin Processing** closes the work orders selected above. The processing finds any unissued materials and removes their allocations; for instance, if you allocated 100 cranks and only used 90, those 10 non-issued cranks will stay reserved in Ops-Closed, but will be released when the processing here changes the work order to Fin-Closed. It will also relieve commitments; for example, if it committed to build 100 cranks and 90 of them were built, the commitment to add 10 more cranks to inventory is relieved.

WO Inquiry (button)
Clicking **WO Inquiry** launches **Work Order/Project Inquiry (12.300.00)** for the currently highlighted line item. **Work Order/Project Inquiry (12.300.00)** shows high-level and drill-down information on a work order, its account categories, and tasks.

Event History (button)
**Event History** opens **Event History Inquiry (12.304.00)** for this work order. This inquiry screen shows all operational and accounting events during the life of the work order. Included are all the accounting batches that were generated by this work order, and drill-down inquiry is available.

IN Adjustment (button)
Clicking **IN Adjustment** runs **Inventory Adjustments (10.030.00)**. After a work order has completed its production and placed the finished goods into stock, the potential exists for shipping plans to change and leave quantities in special ItemCost layers. A preliminary check of this condition will take place as the work order is closed. If a sales order that was scheduled to ship specifically earmarked goods has been completed and there is remaining inventory, you are presented with the option to launch **Inventory Adjustments (10.030.00)** to adjust the layers. If the layers are not adjusted at this time, the **Inventory Valuation (10.620.00)** report will continue to report on their presence until fixed.

Info (button)
**Info** in the lower-left corner of the screen opens **Work Order Information (12.290.00)** for this work order. It provides high-level information about the work order selected. Available on most screens that reference work orders.
**Work Order FTT (12.FTT.00)**

There is no screen interface to this application. The Work Order module automatically launches a limited *Work Order FTT* (12.FTT.00) process whenever a process occurs that affects inventory balances; for example, issuing inventory to a work order. In this way, inventory visibility is kept as current as possible.

**Note:** Work Order’s *Work Order FTT* (12.FTT.00) only applies to a limited class of inventory transactions. It is very important that you run the standard process periodically using *Financial Transaction Transfer* (PA.TRN.00) to ensure that all transactions that affect work orders (such as Payroll, Accounts Payable, etc.) are brought into the work order.
Setup Screens

Account Category/GL Interface (12.280.00)

Use Account Category/GL Interface (12.280.00) to establish the account categories that will be used to accumulate work costs and map them to their associated general ledger accounts, as well as set up and maintain your WIP accounts and their corresponding account categories. The records established here determine which general ledger accounts are impacted by charges to work orders and by subsequent production completion. See “Account Categories” on page 12 and “Accounting Flow” on page 13 for more information. When you open this screen, the General Ledger account category associated with the Manufacturing WIP Account and Project Expense Account is compared to the values in Account Category (column 1 of the Detail grid) to validate that the account categories match. If the account categories do not match, an error message will appear.

![Figure 59: Account Category/GL Interface (12.280.00)](image)

Following are the field descriptions for Account Category/GL Interface (12.280.00).

Account Category

An expense account category (as created in the Project Controller’s Acct Category Maintenance (PA.ACC.00)) to capture Work Order module costs (for example, materials or labor). The default Material Account Category and Labor Account Category that are set in Work Order Setup (12.950.00) must be entered in Account Category/GL Interface (12.280.00). Each account category must also have been previously defined in Project Controller’s Acct Category Maintenance (PA.ACC.00).

Completion Account Category

The account category (as created in the Project Controller’s Acct Category Maintenance (PA.ACC.00)) that contains the total cost of production completed to date. This is a non-accounting type category for capturing work order completion costs in WIP without interfering with the labor and materials costs for the finished work order, when all units have been completed to production. Each account category must have its own unique Completion Account Category. A Completion Account Category can be used with only one expense account category.
Manufacturing WIP Account
The WIP general ledger account (generally an asset account, created in the General Ledger module) used to capture manufacturing work order WIP costs for the associated account category. The WIP account is debited for all costs collected and is the account credited during production completion. The General Ledger accounts that could be entered here (and are available in the PV) are any accounts that are associated with this expense account category (first column in the grid). Account categories are associated with accounts in General Ledger Chart of Accounts Maintenance (01.260.00). Each account category must have its own unique Manufacturing WIP Account. A Manufacturing WIP Account can be used with only one expense account category.

Project Expense Account
A general ledger account (generally an asset account, as created in the General Ledger module) used to capture WIP costs for project/tasks for the associated category. The General Ledger accounts that could be entered here (and are available in the PV) are any accounts that are associated with this expense account category (first column in the grid). Account categories are associated with accounts in General Ledger Chart of Accounts Maintenance (01.260.00).
Work Order Setup (12.950.00)

Use Work Order Setup (12.950.00) to configure the Work Order module to provide default values in ways that reflect your company's work processes. The closer your Work Order setup screens match how you most often work with the Work Order module, the more efficient your use of the Work Order module will be.

Work Order Setup, Codes/Control Tab

![Work Order Setup, Codes/Control Tab](image)

Figure 60: Work Order Setup (12.950.00), Codes/Control tab

Following are the field descriptions for the Codes/Control tab of Work Order Setup (12.950.00).

Manufacturing Task

Enter the task to which you want to report manufacturing activity for your work orders.

A work order is a special kind of project and all projects are assigned a project ID and at least one task. The work order ID serves as the project ID, but the work order also needs a task to uniquely identify it as a valid project. Manufacturing Task is where you enter a fixed task that you use to fill in Manufacturing Task of every work order you create. Once it is entered here, it is automatically applied to every work order that is subsequently created.

Production Scrap ID

A special non-stock inventory part used strictly for mapping purposes to find the general ledger account to charge when scrapping production. For example, if you had a work order to build five bicycles and a forklift ran over one of them, you would use Production Completion (12.402.00) to direct that one bicycle to scrap. The system would look up this one inventory part, find the inventory asset account that is assigned to it (which, when you set it up, would probably be something like Production Scrap Expense), credit WIP and debit Production Scrap Expense. When production is scrapped, the part entered here is used to identify the general ledger account to which the costs applied to the item(s) being scrapped are charged.
Component Scrap ID

Component Scrap ID is a special non-stock inventory part ID used strictly for mapping purposes to find the general ledger account to charge when components are scrapped. If Component Scrap ID is left blank, then when scrapping components, the scrap costs remain in WIP. If Component Scrap ID is filled in, the scrap costs are removed from the work order’s WIP account as the component is scrapped. For example, if you had a work order to build bicycles, and a forklift ran over one of the handle bars, you would use Material Transfers/Returns (12.401.00) to record the scrapping of the handle bar. The system would look up this one inventory part using the Component Scrap ID, find the inventory asset account that is assigned to it (for example, Component Scrap Expense), credit WIP, and debit Component Scrap Expense.

WO Allocation Method Code

WO Allocation Method Code is the Project Controller allocation method code that is assigned to each work order. The Work Order module does not require that Project Controller allocations be used, but if your company uses them, then the code you enter here will be used as the code for work orders. (An allocation method, which is a group of instructions or steps that detail the calculations of an allocation, may be associated with Project Management and Accounting projects, of which work orders are a special type. This optional entry specifies the method used when allocating the transactions of the project.)

If you enter a code not previously defined in Allocation Method Setup (PA.MET.00), the Work Order module adds that new code to Allocation Method Setup (PA.MET.00). See the Project Controller and Project Allocator online help or user guide for more details.

WO Rate Table ID

Enter the rate table ID used by the Allocation Processor (PA.PRO.00) for this project. The value entered here also serves as the default rate table in Project Charge Entry (PA.CHG.00). Possible values may be viewed and selected by pressing F3. This field is optional.

Months to Retain Work Orders

When the work order Purge process is run, work orders that meet the following criteria will be purged from the system:

- **Processing Stage** = Fin-Closed (Financially Closed)
- **Work Order Status** = Purge

Only work orders that meet the above criteria and have their actual end date after the number of months specified will be deleted.

Print GL batch reports

If Automatic Batch Reports is selected in the Options tab of GL Setup (01.950.00), this collection of check boxes becomes active to provide more granular control over which batch reports get generated from within the Work Order module. The options for batch reports include the following:

- **Issues** — Generates batch reports for all issues of materials in work orders.
- **Completions** — Generates batch reports for all completions of items in work orders.
- **Transfers** — Generates batch reports for all transfers of items in and out of work orders.
- **Closings** — Generates batch reports for all closings of work orders.
**Batch Release timing options**

This setting determines the timing of the release process for material issues within the Work Order module:

- **Release Immediately** — in both Work Order Entry (12.250.00) and Material Issues (12.400.00), immediately process the inventory issues batch.
- **Release Later** — in both Work Order Entry (12.250.00) and Material Issues (12.400.00), do not immediately process the inventory issues batch. The batch can then be issued later in the Inventory module’s Issues (10.020.00) or Release IN Batches (10.400.00) screen.

**Processing Stage to Allocate Quantity**

**Processing Stage to Allocate Quantity** allows you to define how work orders impact inventory quantity available. The field defaults to N (None). Effects of all the possible values for **Processing Stage to Allocate Quantity** are described below:

<table>
<thead>
<tr>
<th>Value</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>None — Quantity available in the Location and Lot/Serial master tables should not include work order demand.</td>
</tr>
<tr>
<td>F</td>
<td>Firm — Quantity available in the Location table should include work order demand if work orders are in the Firm or Released processing stage. The Firm processing stage does not allow allocation of lot/serial numbers.</td>
</tr>
<tr>
<td>R</td>
<td>Released — Quantity available in the Location and Lot/Serial master tables should include work order demand if work orders are in the Released processing stage.</td>
</tr>
</tbody>
</table>

**GL Entries for Zero Impact Transfers**

When creating various general ledger batches, entries are made to the WIP accounts. When this item is selected, if an inventory item’s COGS account has already been set to a WIP account, then these entries would be considered zero impact entries (debits and credits to the same account). Select this check box if you want the Work Order module to create these zero impact entries regardless.

**Make to Order Setup**

These options are used for Work Order’s make-to-order integration with the Order Management module.

**Pending Work Order**

This field’s value is the pending work order ID. When someone creates a sales order and requests that a work order be made for it, the value in **Pending Work Order** here is placed into **Project** on the sales order line, until an actual work order is created.

**Enable timer**

Select this check box if you want to be able to control the intervals at which Work Order Entry (12.250.00) checks for new work order requests from Order Management.

**Refresh interval (seconds)**

If you selected **Enable timer**, the value you select for **Refresh interval (seconds)** controls the frequency with which Work Order Entry (12.250.00) checks for new work order requests from Order Management.
Work Order Setup, Defaults Tab

Use the **Defaults** tab of *Work Order Setup (12.950.00)* to specify the values that you would most often want to appear as defaults when you are creating a new work order. Creating new work orders will be more efficient if your default values match your regular pattern of creating new work orders.

![Figure 61: Work Order Setup (12.950.00), Defaults tab](image)

Following are the field descriptions for the **Defaults** tab of *Work Order Setup (12.950.00)*.

**Material Account Category**

*Material Account Category* is the account category used to track material for this work order. The cost estimate (budget) for a work order is linked to its material account category and its labor account category. A possible values lookup is available for all account categories.

**Update Estimate (Material Account Category)**

Displays an option to update the *Material Account Category* estimate when the material list is changed while in Plan stage. Leave it unchecked if you do not want to update your material budgets from the material requirements screen on any work order. For example, if you have given a customer a quote based on an estimate for a work order, and you do not want any future changes to the work order to affect that estimate, then you would not select **Update Estimate**.

**Labor Account Category**

*Labor Account Category* is the account category used to track labor for this work order. The cost estimate (budget) for a work order is linked to its material account category and its labor account category. A possible values lookup is available for all account categories.

**Update Estimate (Labor Account Category)**

Display an option to update the *Labor Account Category* estimate when the routing is changed. Leave it clear if you never want to update your labor budgets from the material requirements screen on any work order. For example, if you have given a customer a quote based on an estimate for a work order that is in Plan stage, and you do not want any future changes to the work order to affect that estimate, then you would not select **Update Estimate**.
Work Order Subaccount
Because a project needs a subaccount, and a work order is a special kind of project in Project Management and Accounting, this is where you specify a default subaccount value that will appear in all subsequent work orders. You can change that default subaccount value on a work order by work order basis.

Note: It is more likely that a subaccount will change from work order to work order, rather than Material Account Category or Labor Account Category changing.

Work Order Subaccount is the default subaccount category used to track WIP and can be changed at the time each work order is created. A possible values lookup is available for all account categories.

Build To Type
This default value sets the default Build To type on Work Order Entry (12.250.00) for all subsequent work orders. Recognizing that plans sometimes need to change, the actual use of the part as produced by this order may be identified using Production Completion (12.402.00) when order completions are recorded.

This area defines the default Build To type when creating a new work order in Work Order Entry (12.250.00).

- Stock — The item is being built to stock inventory
- Mfg WO — The item is being built to supply an assembly to another work order
- Proj/Task — The item is being built to a project/task

Period to Post default
With Use Inventory Period selected, when materials are issued to the work order, the posting period is set by looking at whatever the setup is in Inventory for the posting period for inventory. Alternatively, someone could uncheck this and then manually change this period.

Use Inventory Period
The default period will be the current period of the Inventory module. When selected, the work order period is disabled.

WO period
Deselect Use Inventory Period if you want to set a separate and distinct posting period for the work order. If you choose not to select Inventory Period for a work order, you will have to manually move that period to the next period. The period specified here serves as a default in the Material Requirements/Issues (12.250.01) process, so anything initiated from within Work Order gets its posting period from this value.

Production Target Options
These options allow for flexibility in creating work orders with different inventory items as targets of production.

Allow unlike items
When Allow unlike items is selected, you may enter different inventory items as build-to targets in Work Order Entry (12.250.00). This can be used for product disassembly (one component on the material list being disassembled into multiple targets). However, the targets of production must use the standard cost valuation method.

Allow unlike items can also be used when the multiple build-to targets are nearly identical in terms of cost and manufacturing processes. In this case, standard or actual costing can be used, and with actual costing, all items will be produced at the same actual unit cost.
Add new Targets – Proc Stage Limit

Add new Targets – Proc Stage Limit determines the processing stage(s) in which items can continue to be added as build-to targets. This setting is irrespective of Allow unlike items. Options are:

- **Plan** — Work orders in the Plan stage can have additional targets of production added. Additional build-to targets may not be added for any processing stage beyond Plan.

- **Firm** — Work orders in the Plan or Firm stage can have additional targets of production added. Additional build-to targets may not be added for any processing stage beyond Firm.

- **Released** — Work orders in the Plan, Firm, or Released stage can have additional targets of production added.
Work Order Setup, Completion Tab

The fields on this tab assign default values that you use when reporting completion of production of your manufacturing operations in Production Completion (12.402.00) for a work order.

Following are the field descriptions for the Completion tab of Work Order Setup (12.950.00).

Completion Mapping Method
When a production scenario involves multi-level relationships, such as a work order making a subassembly for another work order, or for a project/task, the costs are transferred from the source work order to the target in one of two ways:

- Fold-in costs method. The costs from all account categories on the source work order are lumped together and posted to the materials account category on the target (as identified on the target work order's Other Info tab on Work Order Entry (12.250.00) or the Defaults tab of Work Order Setup (12.950.00) in the case of a project/task).

- Roll-Up costs method. The costs on the source work order are not lumped, but are transferred to the target on an account category by account category basis; that is, from source to target, Materials to Materials, Labor to Labor, Overhead to Overhead, and so on.

Roll up Variance Account Category
Used when reporting completions from one work order to another and the item you are building is valued at standard cost. If the item you are making has a standard cost of $5.00 and the actual cost was $6.00, when you report your completion to the parent work order, you want the net impact on it to be $5.00 (because if it was a standard costed item, its cost should be as if it were pulled right out of inventory). But you want to keep track of those lower level costs like the difference between $5.00 and $6.00, so it passes the cost up to the work order at actual cost, and books a variance into Roll up Variance Account Category and reports it on the target work order.

The roll-up variance account is associated with that, so again, that is where the General Ledger impact is recorded as a result.
Roll up Variance Account

Enter the general ledger account to use to report standard cost variances (for inventory items valued at standard cost) during Work Order Closing (12.403.00). A possible values lookup is available for the account. The subaccount is taken from the work order being closed.

Receipt Reason Code

When you complete production of an item to stock, an inventory receipt batch is created in the system. This process makes the associated ledger entries for these transactions, debiting the inventory asset general ledger account for the production item and crediting the accounts payable clearing account by default. Work Order also generates a general ledger entry to debit the clearing account and credit the appropriate WIP general ledger accounts.

By using Receipt Reason Code, you can designate a different clearing account, thereby segregating the Work Order completion transaction from accounts payable clearing transactions.

For sub-assembly completion, transfer allocation flag to higher assembly

When selected, this option transfers overhead costs up the chain of cost accumulation toward higher assembly so that overhead cost is not applied twice. Leave this unselected if you want to track overhead costs at each level of your process.

Check for released but not transferred transactions

Prior to reporting production completion, if this option is selected, the Work Order module looks for any transactions pending in the system regarding a specific work order and makes sure that all costs that could be applied to the work order are applied.

Allow changes to Apply Completion Cost Grid

Unchecking this option lets you view Apply Completion Cost (12.402.01) in display-only mode. Selecting this option lets you edit the values in Apply Completion Cost (12.402.01).

Allow completions at zero cost

If unchecked, the system will not allow you to complete production at zero cost. If selected, you will be warned that you are about to complete at zero cost.

Allow completions with unreleased, untransferred, or unallocated transactions

If unchecked, the system will not allow you to complete production with unreleased, untransferred, or unallocated transactions. If selected, you will be warned when you are about to complete production with unreleased, untransferred, or unallocated transactions that affect labor hours.

Relieve allocations (unissued material) when moving to Ops-Closed

With this box selected, during final production completion, the system will ask you whether you want to relieve allocations for unissued material when moving the processing stage to Ops-Closed. If this box is not selected, you will still be informed that there is unissued material, but the allocation will not be relieved.
Default Cost Method
Sets the default work order standard cost on the Cost tab of Work Order Entry (12.250.00). Ideally in a manufacturing environment, you could produce items and apply their true (actual) costs to your cost reporting mechanism real time. However, reality often introduces complexities that prevent real time actual costing from occurring simultaneously with manufacturing. Manufacturing often occurs before cost reporting occurs.

The two basic options you can set are:

- **Actual** — This cost method sets the work order standard as the Actual cost (WIP). If an item is valued at standard cost, then the actual costs are compared to standard cost and a variance is booked. This method does not work well if you do partial completions of work orders.

- **WO Standard** — This cost method lets you specify an artificial standard cost for work orders. This temporary standard cost will be used when reporting completions, with any variance of the actual cost collected from that standard being disposed of according to the timing selected in Unapplied WIP Disposal Timing.

Disable Cost Method at Work Order Entry
Select this box if you do not want users to change the work order cost method standard from its default for each work order. All work orders created will use the default cost method standard you choose on this tab.

When Using WO Standard
Default costs include the following:

- **Last** — This cost method uses the production part’s last cost as the basis for setting the work order standard cost.

- **Average** — This cost method uses the production part’s average cost as the basis for setting the work order standard cost.

- **Standard** — This cost method uses the production part’s standard cost as the basis for setting the work order standard cost.

- **Estimate** — This cost method uses the production part’s estimated cost as the basis for setting the work order standard cost.

Unapplied WIP Disposal Timing
This value determines, at final production completion time, how a work order using the work order standard cost method disposes of unapplied WIP:

- **Book at final completion** — This option books the difference of the WO Standard cost and the remaining WIP to an Unapplied WIP Account.

- **Absorb at final completion** — This option does not book the difference of the WO Standard cost method and the remaining WIP. It simply applies the remaining WIP to the final completion costs.

- **Absorb at closing** — Apply costs using the WO Standard cost method just like when doing partial completions, then at work order closing time, dispose of any remaining WIP costs.
Use the Closing tab of Work Order Setup (12.950.00) to enter general ledger accounts that will be used when creating general ledger batches. The fields on this tab display the default values that are used in Work Order Closing (12.403.00). Set these values and options to most closely match what you anticipate you will need during the closing of work orders in your company.

Figure 63: Work Order Setup (12.950.00), Closing tab

Following are the field descriptions for the Closing tab of Work Order Setup (12.950.00).

Unapplied WIP Account Category
A non-accounting type account category for accumulating the charges that were not applied to production completion, but which are associated with the work order, nevertheless. Some examples include:
- Additional costs were applied to the work order after final completion.
- Not all costs were applied to production when it was performed (perhaps costs were manipulated in anticipation of later adjustments).

Unapplied WIP Account
When closing the work order, all costs must be removed from WIP that pertain to this work order. Unapplied WIP Account is the account that will receive the offset of the removal of those costs. Normally, the WIP accounts will be credited and this account will be debited for the total of those costs. Enter the general ledger account to report late charges during Work Order Closing (12.403.00). A possible values lookup is available for the account. The subaccount is taken from the work order being closed. If the work order is for an inventory item that uses the standard cost valuation method, the Standard Cost Variance account in IN Setup (10.950.00) will be used instead.

Allow Override At Close
This option defines whether or not the person who runs the closing program can change the account in Unapplied WIP Account.
Allow to Close Short
When selected, this option allows you to close a work order on which production was completed short of the quantity planned and for which the processing stage was then manually set to Ops-Closed.
If this option is not selected, the work order will not be included in the closing.

Allow Close with Unissued Components
When selected, this option allows you to close a work order with unissued components remaining. Any remaining allocations will be relieved.
If this option is not selected, adjust **WO Qty Required** in Material Requirements/Issues (12.250.01) so the quantity is 0, then close the work order.

Automatically Write Off Uncompleted Costs to Unapplied WIP
If not selected, and there are costs remaining on the work order (not applied to complete production), you need to book an adjustment before the work order can be closed.
If selected and there are costs remaining on the work order (not applied to complete production), a warning will be issued and you are given the option to continue with the closing of the work order, moving the unapplied costs to a general ledger account defined in **Unapplied WIP Account** in the Closing tab of Work Order Setup (12.950.00).
Work Order Setup, Work Order Numbering Tab

Because a work order is a special kind of Project Management and Accounting project, Work Order uses the same process for auto-numbering work orders that Project Controller uses for auto-numbering projects. This process is accessed from Work Order Setup (12.950.00), Work Order Numbering tab.

If Project Controller is not licensed, the Simple auto-numbering controls on this tab are enabled. You will also have access to the Advanced group of Project Controller screens.

If Project Controller is licensed, Simple auto-numbering controls on this tab are disabled and auto-numbering is controlled by normal Project Controller processes, available in the Advanced area of this tab.

Following are the field descriptions for the Work Order Numbering tab of Work Order Setup (12.950.00).

Caption

Caption is the same as the caption defined during the setup of account categories and projects in Project Controller.

Length

This field's value controls the number of characters allowed in work order numbers. A system set up at a large operation may require very large numbers such as WO-##### and a smaller operation may require only WO-### or something similar.

Flex Key Maintenance (for Caption and Length)

This button activates Flexible Key Maintenance (PA.FKM.00) from the Project Controller module, where Caption and Length are defined for the Work Order module. See “Flexible Key Maintenance (PA.FKM.00)” in the Project Controller online help or user guide for more information.
**Auto Work Order numbering**

If Project Controller is licensed, you will have already assigned numbering schemes to your projects and work orders through the setup process in Project Controller and this option is disabled. However, if Project Controller is not licensed, **Auto Work Order numbering** will be enabled. Select it to enable auto-numbering in your implementation of the Work Order module so that, whenever you click the auto-numbering button on Work Order Entry (12.250.00), the correctly incremented number for a new work order will appear.

**Simple**

You can select one of two choices for simple auto-numbering of work orders, available when you select **Auto Work Order numbering**.

- **System-wide** auto-numbering increments each project from a previous project’s number, whether that project was a work order or another kind of project. For **Counter (Last Number)**, enter the starting number from which future projects or work should start numbering.

- **Based on Segment** increments each type of project from a different starting number. For example, in an environment that features both standard projects and work orders, work order numbering would proceed 1,2,3 and project numbering would proceed 1,2,3, with no intermingling of sequence between the two project types. Each project type has its own numbering sequence. In addition, you can define label structures for projects based on segments using **Flexible Key Maintenance** (PA.FKM.00), and each segment can have its own numbering sequence. **Segment** allows you to define a different starting number for different segments. See “Flexible Key Maintenance (PA.FKM.00)” in the Project Controller online help or user guide for more information.

**Advanced**

Advanced auto-numbering makes use of more features of Project Controller. Choices are:

- **Flex Key Maintenance** (for numeric segment) — Activates **Flexible Key Maintenance** (PA.FKM.00) from the Project Controller module. Access to this screen is provided here as a convenience to you in setting up the Work Order module. See “Flexible Key Maintenance (PA.FKM.00)” in the Project Controller online help or user guide for more information.

- **Project Controller Setup** — Activates **Project Controller Setup** (PA.SET.00) from the Project Controller module. Access to this screen is provided here as a convenience to you in setting up the Work Order module. See the Project Controller online help or user guide for a complete description of this screen.

- **Code Type Maintenance** — Activates **Code Type Maintenance** (PA.COT.00) from the Project Controller module. Access to this screen is provided here as a convenience to you in setting up the Work Order module. See the Project Controller online help or user guide for a complete description of this screen.

- **Code File Maintenance** — Activates **Code File Maintenance** (PA.CKM.00) from the Project Controller module. Access to this screen is provided here as a convenience to you in setting up the Work Order module. See the Project Controller online help or user guide for a complete description of this screen.
WO Integrity Check (12.980.00)

Use WO Integrity Check (12.980.00) to delete purged work orders and to rebuild inventory supply and demand information.

Following are the field descriptions for WO Integrity Check (12.980.00).

**Delete Work Orders closed on or before mm/dd/yyyy**

Use this option to delete work orders that have a work order status of Purge (the work orders must have a processing stage of Fin-Closed). The date shown on the screen is a calculated date based on the **Months to Retain Work Orders** setting in Work Order Setup (12.950.00) and the business date. Work orders are deleted if they have an actual end date that is less than the calculated date. The formula is:

\[
\text{Business date} - \text{Months to Retain Work Orders}
\]

**Rebuild Inventory Plan**

Rebuild Inventory Plan rebuilds the SO Plan table, which contains all inventory supply and demand information.

**Begin Processing (button)**

This button processes the selected integrity checks.
Related Screens

Inventory
Inventory screens are documented in the Inventory online help and user guide. The following list identifies the screens you might frequently use:

- Inventory Status Inquiry (10.220.00)
- Inventory Items (10.250.00)
- IN Setup (10.950.00)
- Availability (21.410.00)

Project Controller
Project Controller screens are documented in the Project Controller and Project Allocator online help and user guide. The following list identifies the screens you might frequently use:

- Acct Category Maintenance (PA.ACC.00)
- Allocation Processor (PA.PRO.00)
- Financial Transaction Transfer (PA.TRN.00)
- Flexible Key Entry (PA.FEN.00)
- Flexible Key Maintenance (PA.FKM.00)
Reports

The Work Order module provides you with a suite of operational and financial reports. Below, you will find a brief description of the primary operational reports you encounter during day-to-day work order processing. Note that all of these reports are run through the standard Report Options Interface (ROI) and can therefore be the subject of sort/select criteria, customizations in Crystal Report Writer, and so on, just like any other report.

Reprint WO Batch Control Report (12.010.00)

If Automatic Batch Control Reports is selected in GL Setup (01.950.00), and Completions and Closings are selected under “Print GL batch report” on the Work Order Setup (12.950.00), Codes/Control tab, a batch control report is generated. Use this option if you must reprint the report.

Figure 66: Reprint WO Batch Control Report (12.010.00)
Work Order Staging (12.600.00)

The Work Order Staging (12.600.00) report lists the key information of work orders currently in the system. This report groups work orders by processing stage status (Plan, Released, etc.). Key information includes work order ID and type, summary description of the part to build, related sales order ID, and planned and actual start/end dates. If desired, the report can also include information about closed work orders.

![Figure 67: Work Order Staging (12.600.00) report]
Work Order Status (12.610.00)

The Work Order Status (12.610.00) report lists work order unit quantity status information: current unit quantity to build, unit quantity remaining to build, number of units scrapped, and the number of units currently being reworked.

---

**Figure 68: Work Order Status - Manufacturing WO Detail (12.610.00) report**

**Report Format**

Specifies the type of report to print. The options are:

- **Manufacturing WO Summary** — The summary report includes a high-level description of the part to build, customer name, related sales order ID, and work order processing stage and status. The summary report can also include information about closed work orders.

- **Manufacturing WO Detail** — The detail report includes unit quantity information for each component on the work order as well as information about closed work orders.
Work Order Component Shortage (12.620.00)

The *Work Order Component Shortage* (12.620.00) report lists orders with component shortages. For these work orders, on-hand or available quantity for one or more components as specified by the materials list is insufficient for the work order’s remaining quantity to build. The report includes work order ID, component site ID, a summary description of the part to build, customer name, related sales order ID, quantity remaining to build, and type of component shortage (shortage alert). The report can also include information about closed work orders.

Under **Shortage Alert**, On Hand indicates that there is a shortage in the on-hand quantity, and Avail indicates that there is sufficient quantity on hand, but it has already been allocated and therefore a shortage of available material exists. If Avail, On Hand appears, a shortage exists where there is no available material (material is already allocated and there is no inbound supply anticipated) as well as insufficient quantity currently on hand.

![Figure 69: Work Order Component Shortage - Manufacturing WO Detail (12.620.00) report](image)

**Report Format**

Specifies the type of report to print. The options are:

- **Manufacturing WO Summary** — The summary report includes work order ID, component site ID, a summary description of the part to build, customer name, related sales order ID, quantity remaining to build, and type of component shortage (shortage alert). The report can also include information about closed work orders.

- **Manufacturing WO Detail** — The detail report includes an itemized listing of the components with shortage conditions. The report can also include information about closed work orders.
Planned Inventory Position (12.630.00)

The *Planned Inventory Position* (12.630.00) report lists items on-hand and available to fulfill work order component requirements as of a certain date. Reported item availability is based on the date you enter relative to the inventory item information on outstanding sales orders, purchase orders, and work orders (both supply and consumption orders) as of that date. The report includes inventory ID and description, item site ID and name, on-hand quantity, any stock additions or withdrawals, and the planned inventory position (quantity available) as of the date you specify.

The *Planned Inventory Position* (12.630.00) report is most accurate and useful when you carefully manage work order date information: planned and actual start and end dates, date promised, date required, etc. For example, if you select the option to include planned work orders on the report and some of the work orders do not have a planned end date, their actions will be included in the inventory position calculation.

**Note:** Among the sort/select criteria to enter for this report, be sure to enter the desired Inv. Position Date.

---

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**Planned Inventory Position - Detail (12.630.00)** report

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</tr>
</tbody>
</table>

**Options tab – Planned Inventory Position**

There are specific options that can be selected during the printing process, those options are:

- **Include ‘Plan WO and unprinted SO/PO’** — This option includes planned work orders, as well as sales orders and purchase orders. If it is not selected, they are not included in calculations.

- **Include 0 on hand and no activity items** — This will list all inventory items, even if they have a zero balance and have had no activity.

- **Show item shortages only** — This option will only print inventory items that will show shortages on the report.

- **Use working table** — When this report is run, the W012630_Wrk worktable is updated. If you select this option, the software will not rebuild the work table. Instead, it will use the existing work table information from the last time this report was run without this option checked. If this check
box is not selected, each time the report is run, the W012630_Wrk worktable is rebuilt. For the most accurate reporting, you should not select this option.

**Report Format**

Specifies the type of report to print. The options are:

- **Manufacturing WO Summary** — The summary report includes work order ID, component site ID, a summary description of the part to build, customer name, related sales order ID, quantity remaining to build, and type of component shortage (shortage alert). The report can also include information about closed work orders.

- **Manufacturing WO Detail** — The detail report includes work order ID, component site ID, a summary description of the part to build, customer name, related sales order ID, quantity remaining to build, and type of component shortage (shortage alert) as well as an itemized listing of the components with shortage conditions. The report can also include information about closed work orders.
Work Order Pick List (12.640.00)

The *Work Order Pick List* (12.640.00) report lists the key information of individual components required for each work order, such as inventory ID and description, site ID, warehouse bin location, stocking unit, item quantity remaining in inventory, and date required. This report can also serve as a picking document. It includes blank, form-like spaces that provide the person picking items from stock a place to record the number of items picked, the ID of the person who picked them, and any pertinent item notes for each work order component.

For each work order, the report includes work center ID, ID and summary information about the part to build, related sales order ID, and planned and actual start/end production dates. The report can also include components with zero quantity remaining to issue, as well as work orders in the Plan and Firm processing stages.

![Work Order Pick List (12.640.00) report](image.png)

*Figure 71: Work Order Pick List (12.640.00) report*
Shop Packet - Traveler (12.650.00)

The purpose of the Shop Packet - Traveler (12.650.00) report is to produce the documentation necessary for shop-floor personnel to know what to do, and what to use, to fulfill the requirements of any given work order. This report can be run either from the Work Order menu or by clicking Quick Print Traveler in Work Order Entry (12.250.00). This report offers options to include Plan and Firm stage work orders and/or to include components with a zero quantity remaining to issue.

Report Format

Specifies the type of report to print. The options are:

- **Cover Sheet** — General work order information (part to build, quantity to build, customer, sales order, required date, etc.).
- **Materials Pick List** — A list of all the components, quantities, required dates, pick site(s), pick locations, and so forth needed to fulfill the work order as specified in the work order’s material requirements list. This pick list is the same as you would get in the Work Order Pick List Report (12.640.00).
- **Routing List** — A list of all the operational steps that must be completed in order to transform the work order’s components into the part to build, as specified in the work order’s routing list.
Work Center Loading (12.660.00)

The Work Center Loading (12.660.00) report lists the projected consumption of work center production capacity (work center loading), expressed in hours-per-day, for a specific time period. The time period is specified by defining a planning horizon that consists of a starting date and a set number of days from the starting date, during which the consumption of work center production capacity should be projected and analyzed. The report can also include work orders in the Plan and Firm processing stages in work center loading analysis. The analysis expressed in the Work Center Loading (12.660.00) report is based on the routing information defined for each work order in Routing/Operations (12.250.02).

![Figure 75: Work Center Loading - Detail (12.660.00) report](image)

Report Format

Specifies the type of report to print. The options are:

- **Summary** — The summary format includes the planned start date (the first date on the planning horizon), work center ID and description, capacity, step, load hours, and remaining capacity hours. The Work Center Loading - Summary report is a date-sensitive production capabilities forecast that is most accurate and useful when you carefully manage work order date information: planned and actual start and end dates, date promised, date required, etc.

- **Detail** — The detail format includes a by-work order breakdown of production operations, labor classes, and step, load, and remaining capacity hours. The report includes the planned start date (the first date on the planning horizon), work center ID and description, capacity, step, load hours, and remaining capacity hours. It also includes work orders in the Plan and Firm processing stages in work center loading analysis. The Work Center Loading - Detail report is a date-sensitive production capabilities forecast that is most accurate and useful when you carefully manage work order date information: planned and actual start and end dates, date promised, date required, etc.
WIP / GL Reconciliation (12.700.00)

The WIP / GL Reconciliation (12.700.00) report lists general ledger work-in-process (WIP) account balances by WIP account and breaks down the balance of each account by work order. The report shows cross-reference relationships between general ledger WIP accounts and account categories defined in Project Management and Accounting.

For each WIP account defined in the Project Management and Accounting account category cross reference grid, the software calculates WIP by subtracting costs reported as complete from total costs collected. This amount is reported, by work order, on the WIP / GL Reconciliation (12.700.00) report. Cross-referencing general ledger WIP account balances with the work orders comprising these balances ensures all Project Management and Accounting allocations and other transactions have been processed properly.

The WIP / GL Reconciliation (12.700.00) report includes general ledger WIP account number and description, WIP account totals for total cost, completed cost, and WIP, and the total cost, completed cost, and WIP amounts for each work order associated with the general ledger WIP account.

Figure 76: WIP / GL Reconciliation (12.700.00) report
Event History (12.710.00)

The Event History (12.710.00) report lists, by work order, the series of actions (allocations, issues, commitments, etc.), that have occurred during the life of the work orders to affect work order unit quantities. These actions are driven by the Work Order module. The Event History (12.710.00) report includes action date, ID of the user performing the action, a brief description of the work order action, resulting impact on work order unit total, and related batch information.

<table>
<thead>
<tr>
<th>Work Order</th>
<th>Current Stage</th>
<th>Date</th>
<th>User ID</th>
<th>WOAction</th>
<th>Description</th>
<th>Units</th>
<th>Pre-Purd</th>
<th>Batch Type</th>
<th>Del Var</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001</td>
<td>Released</td>
<td>8/30/2022</td>
<td>STGADM</td>
<td>Allocate</td>
<td>Cost Code - Change</td>
<td>10</td>
<td>15</td>
<td>030040</td>
<td>9</td>
</tr>
<tr>
<td>1002</td>
<td>Released</td>
<td>8/30/2022</td>
<td>STGADM</td>
<td>Allocate</td>
<td>Cost Code - Change</td>
<td>10</td>
<td>15</td>
<td>030040</td>
<td>9</td>
</tr>
<tr>
<td>1003</td>
<td>Released</td>
<td>8/30/2022</td>
<td>STGADM</td>
<td>Allocate</td>
<td>Cost Code - Change</td>
<td>10</td>
<td>15</td>
<td>030040</td>
<td>9</td>
</tr>
</tbody>
</table>

Figure 77: Event History (12.710.00) report
Work Order Profitability (12.720.00)

The Work Order Profitability (12.720.00) report lists profitability information for work orders linked to sales orders or with related revenue from the Accounts Receivable module. The report groups profitability information by work order, customer, or part to build. Information includes work order ID and processing stage, a summary description of the part to build, customer and name, processing stage, as well as work order revenue, expense, and profit. The report may also include information about open work orders, if specified on the Options tab of Work Order Profitability (12.720.00) report.

Figure 78: Work Order Profitability - Summary by Work Order (12.720.00) report

Report Format

Specifies the type of report to print. The options are:

- **Summary by Work Order** — This format provides summary profitability information sorted by Work Order.
- **Summary by Customer** — This format provides summary profitability information sorted by Customer.
- **Summary by Part to Build** — This format provides summary profitability information sorted by Part to Build.
- **Detail by Work Order** — This format provides detailed profitability information sorted by Work Order.
Work Order Transactions (12.730.00)

The Work Order Transactions (12.730.00) report lists general transaction-level events that have occurred during the life of work orders. The report is useful for analyzing current work order progress and position. The Work Order Transactions (12.730.00) report includes work order information (ID, description, type, etc.), account category and comments, and a by-transaction summary of key transaction information (date, amount, inventory ID, etc.). The report may also include information about closed work orders, if specified on the Options tab of Work Order Transactions (12.730.00) report.

Figure 79: Work Order Transactions (12.730.00) report
Work Order Variance (12.740.00)

The Work Order Variance (12.740.00) report lists, by work order, the cost variance between actual and standard work order unit costs. The report includes work order ID and type, a summary description of the part to build, actual per-cost and total actual costs for units built, standard per-unit cost and total standard cost for units built, per-unit variance between actual and standard costs, and total variance for the work order. The report may also include information about closed work orders, if specified on the Options tab of Work Order Variance (12.740.00) report.

![Figure 80: Work Order Variance (12.740.00) report](image-url)
Component Material Variance (12.750.00)

The Component Material Variance report lists, by work order, the material variance between actual component quantities used and component quantities required as defined on the bill of material for the production item. The report includes work order information (ID, description, and type), processing stage, and a summary of each work order component (component description, quantity issued, quantity required on the associated bill of material, unit variance, quantity scrapped, and quantity transferred). The report may also include information about released work orders, if specified on the Options tab of Component Material Variance (12.750.00) report.

![Component Material Variance report](image)

**Figure 81: Component Material Variance - Mfg. WO- Variance from Standard (12.750.00) report**

**Report Format**

Specifies the type of report to print. The options are:

- **Mfg. WO – Variance from Standard** — This format of the report includes the standard quantity as defined on the bill of material or kit that you bring into work order to build.

  Example: If your standard quantity is 1, and you pull the kit into Work Order to be built, and you actually use 2 of an item for whatever reason, you would show a variance of -1.

- **Mfg. WO – Variance from QtyReq** — This format of the report does not take the standard quantity into account. It looks at the quantity required in Work Order for each component and then compares it with what is actually used to determine if there is a variance or not.
Work Order List (12.800.00)

The Work Order List (12.800.00) report lists the general information of work orders currently in the system. Work order information includes work order ID and type, processing stage, summary description of part to build, current quantity to build, quantity remaining to build, and planned and actual start/end production dates. The report may also include information about closed work orders, if specified on the Options tab of Work Order List (12.800.00) report.

![Work Order List (12.800.00) report](image)

Figure 82: Work Order List (12.800.00) report
Account Category/GL Interface (12.810.00)

The Account Category/GL Interface (12.810.00) report lists account categories currently defined and in use by the Project Management and Accounting. For each account category listed, this report also lists the information about the category’s associated general ledger account and completion account category.

<table>
<thead>
<tr>
<th>Account Category</th>
<th>Completion Account Category</th>
<th>GL/PP Account</th>
<th>Project Classification</th>
<th>Project Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATERIALS</td>
<td>MANUF</td>
<td>1234</td>
<td>Project Mfg. Labor</td>
<td>123-0</td>
<td>Project Mfg. Labor</td>
</tr>
<tr>
<td>COGS</td>
<td>EXPENSES</td>
<td>1235</td>
<td>Project Mfg. Intangible</td>
<td>123-1</td>
<td>Project Mfg. Intangible</td>
</tr>
<tr>
<td>OVERHEAD</td>
<td>COGS</td>
<td>1236</td>
<td>Project Mfg. Other Costs</td>
<td>123-2</td>
<td>Project Mfg. Other Costs</td>
</tr>
</tbody>
</table>

Figure 83: Account Category/GL Interface (12.810.00) report
Glossary of Terms

Access Rights
A set of permissions that define the parts of the system an authorized user may access as well as the user’s rights to alter any information.

Account Categories
Account categories are established using Acct Category Maintenance (PA.ACC.00). That screen allows the definition of categories for revenue, expense, assets, and liabilities that summarize the chart of accounts in the financial system and categorizes them into friendly groupings for use in project accounting.

Active User
A user who is currently signed on to the software.

Allocation
A reservation of inventory by a work order that is in the Firm processing stage. Allocation does not mean that the work order places a demand upon the inventory for an item. That demand happens only when the work order is moved to the Released processing stage. But allocation does indicate which inventory items are going to be demanded once the work order is released to the shop floor.

Application
One of the accounting modules, such as Accounts Payable or Accounts Receivable.

Batch
A grouping of documents. The batch fields on a screen apply to all listed documents.

Bill of Material (BOM)
A bill of material is a list of materials required to build a component, subassembly, or finished good. Bills of material often have associated routings, which are lists of the labor steps necessary to make an item.

Build To Manufacturing Work Order work order
A work order that builds a subassembly to be used by another work order. The work order that needs the subassembly is known as the parent work order and the work order created to build the subassembly for the parent work order is known as a child work order.

Build To Project/Task work order
A work order that builds an item to be used in a project or task, rather than placed into stock inventory or fulfilling a sales order or completing a subassembly to be used by a parent work order.

Build To Sales Order work order
A work order that builds an item to fulfill a sales order from a customer.

Build To Stock work order
A work order that builds an item to be placed into inventory upon completion.

Coding Scheme
A system of arranging letters and/or numbers into meaningful data record identifiers (IDs and numbers) that distinguish each record from all other records in the database.

Data Item
A single value in a single field.
**Document**
An individual record in a batch. You can display document fields on a screen in either grid or form view.

**Firmed Work Order**
A work order that has progressed from the Plan processing stage to the Firm processing stage. A Firm work order allocates materials, which means the parts on the materials list appear as allocated within the system. However, the parts are not actually demanded from inventory until the work order enters the Released processing stage. Firm work orders allow you to see what is going to enter production once the Firm work orders are set to the Released processing stage.

**Fixed Allocation**
Demand that is tied to a specific supply. For sales orders, this is the quantity to be filled by a specific work order or sales order.

**Form View**
A format for viewing a screen showing all the fields for one line in a work order. The form view is useful when you need to see all the fields for one line on the same screen without having to scroll horizontally through grid view on that line. Toggle between form view and grid view using F4.

**General Ledger Accounts**
Used to debit or credit customer accounts based on transactions in the system.

**Grid View**
A format for viewing a screen showing all the data items for all lines in rows and columns. The grid view is useful when comparing values in detail records. Toggle between grid view and form view by pressing F4.

**Hard Allocation**
Demand that has been released for picking or manufacture. For sales orders, this is the quantity on shippers. For work orders, this is the quantity for components on released work orders. Hard allocations are not eligible for replanning as supply changes or competing demand for the same inventory item entering the system.

**Inventory Kit**
An inventory kit is a list of ingredients for an assembly, which is available to you even if you have not licensed the Bill of Material module (see the Inventory online help or user guide for details on creating kits). Inventory kits do not have associated routings, which are lists of labor steps needed to complete an item.

**Labor Costs**
The expenses associated with people building an item on the shop floor. You can include labor costs on your work orders in two ways. The first is to license a module, such as Payroll, and the second is to create special categories of inventory items that represent labor costs you can add to each work order’s material list. Because these labor costs defined as special inventory items are not physical things, they are called non-stock inventory items.

**Procedure Manual**
Before installing Work Order in your system, you need to develop a procedure manual that codifies how your company performs manufacturing, including all job descriptions, who is responsible for each task, and when each task should be completed, as well as any unique work order functions within your company’s accounting department.

**Released Work Order**
A work order that has been released to the manufacturing floor for picking and subsequent production of the item. Demand for inventory occurs when the work order is released and the allocated materials appear in the inventory system as demand. At this point, parts may be issued in Material
Requirements/Issues (12.250.01) or Material Issues (12.400.00) and, when issued, stock is automatically removed from the Inventory module through an inventory issues batch.

**Reports**

The Work Order module provides a menu of reports that allow you to view history of work orders, both from inventory and accounting standpoints.

**Routing**

A routing is a list of steps for the labor that needs to be performed to build an item.

**Soft Allocation**

Date targeted demand that is not yet released for picking or manufacture. For sales orders, this is the quantity on sales orders that has not been released for picking/packing. For work orders, this is demand for components on firmed work orders. Soft allocations are eligible for replanning as supply changes or competing demand for the same items are encountered.

**Target**

The intended destination of an item on a work order: to stock inventory, to a sales order, to a parent work order, or to a project/task.

**Work in Process (WIP)**

Work in Process (WIP) is the name for the various crediting and debiting of expenses that occur in real time during a work order’s life, including materials and labor costs.

**Work Order**

When capitalized, refers to the Work Order module in Microsoft Dynamics SL.

**work order**

When lowercase, refers to a work order that is created and maintained in the Work Order module in Microsoft Dynamics SL. A work order is a record that defines a list of required materials (the material requirements list) and a list of processing steps (the routing) that must be completed to produce an inventory item such as components, subassemblies, or finished goods.
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