Affordable, Adaptable ERP Software

Manufacturing Execution Training Guide

Version 5.40

Fitrix™

Manufacturing Execution ♦ Training Guide

Version 5.40 – Revised May 2013

Fitrix Manufacturing Execution Course Workbook

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Chapter 1 – Production Order Processing

Learning Objectives

To learn the type of information and tasks that are maintained and completed in Production Order Processing.

To learn the relationships of Production Order Processing to other modules in the Fitrix Accounting and Distribution System.

To learn the steps involved in setting up the module.

To learn the steps necessary to process a Production Order

To learn about transaction processing

To understand inquiries and reports in the module

Overview of Production Order Processing

What type of information is maintained in Production Order Processing?

Production Order processing stores the system information for processing orders to produce and consume inventory, including:
Reference codes for filling orders including
Order types and hold codes
Orders for items to be produced
Component materials to be consumed in the production process
End items being produced from orders
Due dates and quantities to be produced and consumed

What tasks or activities are performed in Production Order Processing?

Setting up the production order processing module
Entering and maintaining production orders
Issuing component materials to orders
Receiving items produced from orders
Checking status of orders via inquiries and reports
Closing orders and optionally archiving them to history

What relation does order entry have to other Fitrix Modules?

Production Order Processing is one of three manufacturing execution applications and is tightly integrated with four other Fitrix modules: General Ledger, Order Entry, Inventory Control and Purchasing.

Ledger information posts to the **General Ledger** activity table to update ledger account balances components issued and items produced.

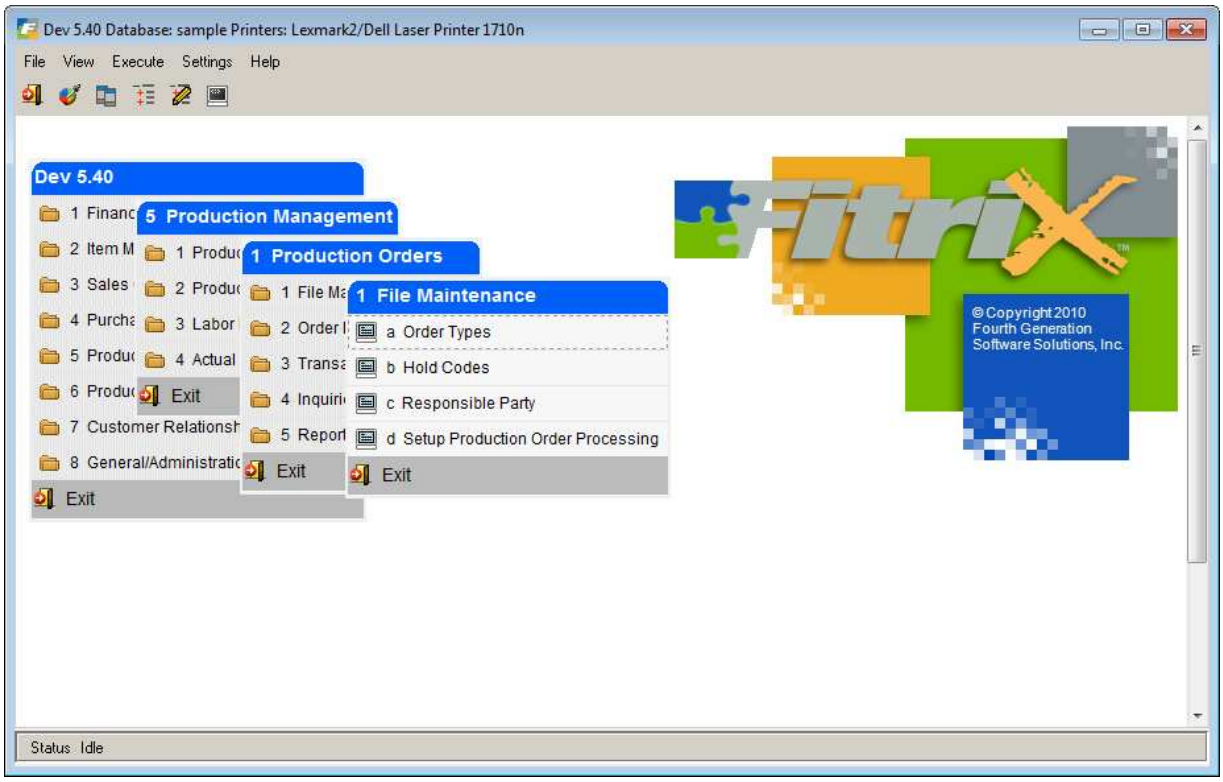
Order Entry has the ability to directly create production orders for orders with line type of MTO (make-to-order). Item quantity availability is expressed as the net of any commitments from Production Orders OR sales orders.

Inventory Control feeds the Production Order Processing system information about item availability.

Purchasing reports show components requirements from Production Orders for items received on Purchase Orders.

File Maintenance Menu

Options on the File Maintenance menu allow you to set up a number of reference files for production orders. To view this menu from the main menu select **Production Management > Production Orders > File Maintenance (option 1).**



The following options are available on this menu.

Order Types – Used to enter one or more types that control how the order is to be processed after it has been entered into the system.

Hold Codes – Used to define one or more hold codes that are used whenever a production order is placed on hold. It allows you to define multiple business reasons for holding an order (for example, material shortage, quality, scrap disposition, etc.).

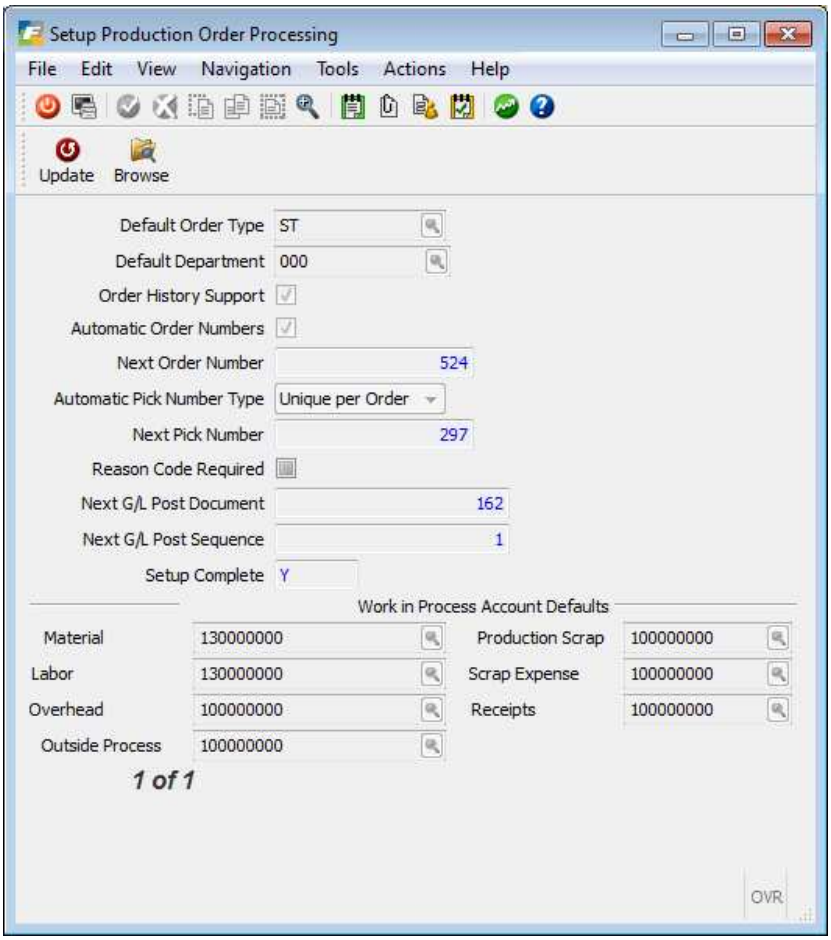
Responsible Party - Used to define persons responsible for work orders.

Setup Production Order Processing – Used to enter the initial setup options for the module, as well as indicating that the module is ready for use.

Setup Production Order Processing

Use this option to set up the default values used by other programs in the module.

Select Setup Production Order Processing, from the File Maintenance menu **(option d).** The following window displays:



Select 'Update' to enter or change the defaults.

The following fields can be maintained:

Field	Description
Default Order Type	Each production order must be assigned an order type. This type is validated against the Order Types reference table. The order type can be automatically filled in with the value entered here. The user can still change it to another valid order type.
Default Department	Each order has a department code used to send transactions to Fitrix General Ledger. The value entered here will automatically fill in during Order Entry.

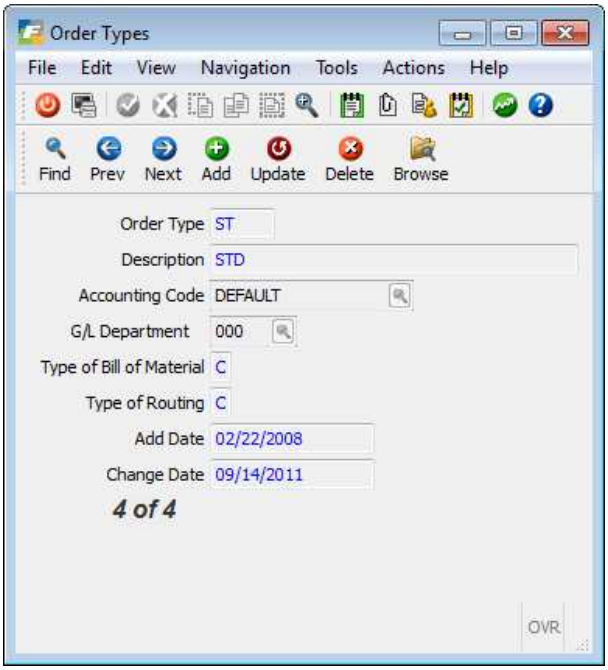
Field	Description
Order History Support	When production orders are closed, they can be archived to history files for later review via inquiries and reports. Check this box if you want orders to be archived when they are purged in the Order Closeout menu. If this box is unchecked, closed orders are removed when they are purged, and not copied to history.
Automatic Order Number	Check this box if you want to automatically assign production order numbers during Order Entry. You can still override the generated number if you wish.
Next Order Number	The next order number to be assigned, if you use Automatic Order Numbers
Automatic Pick Number Type	This option has two choices: • Unique per Order – The first pick list for a new order will be assigned number '1'. Reprints will increment from 1, to indicate the number of times a pick list has been printed for an order. • Sequential – Each pick list will be assigned a unique number, assigned from the entry in this setup screen
Next Pick Number	The next pick number to be assigned, when the Sequential option is selected for Automatic Pick Number Type
Reason Code Required	Check this box to require the entry of a reason code when an item is scrapped vi a the Production Scrap transaction
Next GL Post Document	The next document number to be assigned to transactions posted to Fitrix General Ledger
Next GL Post Sequence	The next posting sequence number to be assigned to transactions posted to Fitrix General Ledger
Setup Complete	Set this value to Y when you are ready to begin using production order processing.
WIP Default Account – Material	If accounting codes are not used for a Production Order, enter the account number to be debited when an item is issued to a production order with the Component Issue transaction
WIP Default Account – Labor	If accounting codes are not used for a Production Order, enter the account number to be debited when a labor transaction is posted to production order with the Labor Reporting transaction
WIP Default Account – Overhead	If accounting codes are not used for a Production Order, enter the account number to be debited when overhead for a labor transactions is posted to a production order with the Labor Reporting transaction
WIP Default Account – Outside Process	If accounting codes are not used for a Production Order, enter the account number to be debited when a transaction is posted to a production order for an Outside Process routing step, with the Labor Reporting transaction
WIP Default Account – Production Scrap	If accounting codes are not used for a Production Order, enter the account number to be credited when an end item is scrapped on a production order with the Production Scrap transaction.
WIP Default Account – Scrap Expense	If accounting codes are not used for a Production Order, enter the account number to be debited when an end item is scrapped on a production order with the Production Scrap transaction

Field	Description
WIP Default Account – Receipts	If accounting codes are not used for a Production Order, enter the account number to be credited when an end item is received to inventory on a production order with the Production Receipt transaction

Order Types

Order types must be entered before you can use them on a production order. In addition, at least one order type must be entered here before it can be selected as the default order type in the 'Setup Production Order Processing' menu option.

Select Order Types **(option a)**. The following window displays:



Below is a description of the fields which can be entered in the Order Types window

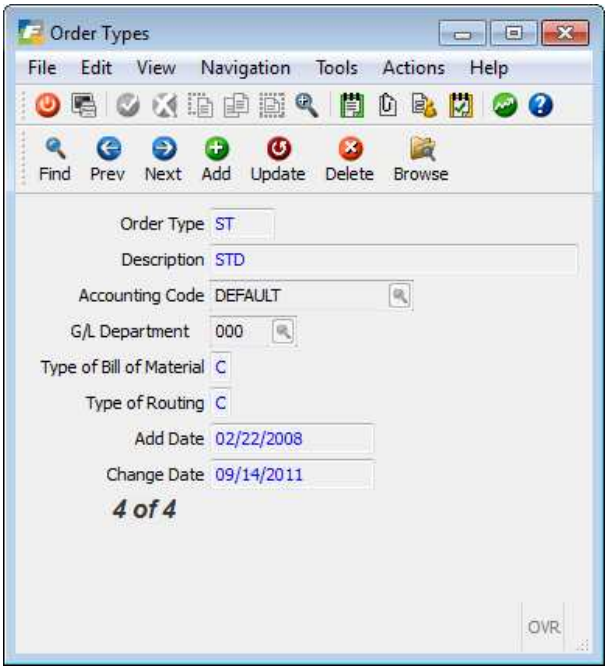
Field	Description
Order Type	Enter a unique 3-character identifier.
Description	Enter a description of the order type
Accounting Code	Enter a valid accounting code. This code will automatically fill in during Order Entry, when you select this order type.
G/L Department	Enter a valid Fitrix General Ledger Department. This code will automatically fill in during Order Entry, when you select this order type.

Field	Description
Type of Bill of Material	This value controls how a parent item's bill of material is processed during Production Order Entry. Select one of the following values: • S – Use the standard bill of material for the parent item entered, and DO NOT automatically display the components window • C - Use the standard bill of material for the parent item entered, and automatically display the components window before the order is saved • M – Do not use the standard bill of material for the parent item entered, but automatically display the components window before the order is saved
Type of Routing	This value controls how a parent item's standard routing is processed during Production Order Entry. Select one of the following values: • S – Use the standard routing for the parent item entered, and DO NOT automatically display the routing window • C - Use the standard routing for the parent item entered, and automatically display the routing window before the order is saved • M – Do not use the standard routing for the parent item entered, but automatically display the routing window before the order is saved
Next Order Number	The next order number to be assigned, if you use Automatic Order Numbers
Automatic Pick Number Type	This option has two choices: • Unique per Order – The first pick list for a new order will be assigned number '1'. Reprints will increment from 1, to indicate the number of times a pick list has been printed for an order. • Sequential – Each pick list will be assigned a unique number, assigned from the entry in this setup screen

Hold Codes

When you change the status of an active production order to 'H' (for hold), and hold code must also be entered to indicate a reason for the hold. This hold code is then used to control which types of transactions may or may not be processed while the order is held.

To view this screen, select Hold Codes **(option b)**. The following window displays:



Below is a description of the fields which can be entered in the Hold Codes window

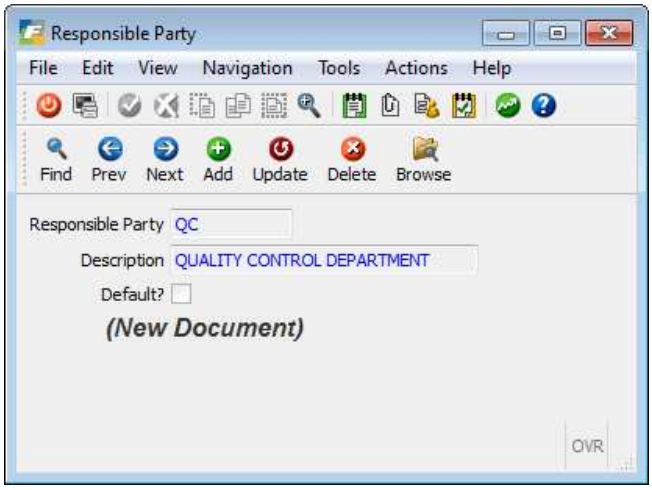
Field	Description
Hold Code	Enter a unique 3-character identifier.
Description	Enter a description of the hold code
Component Allocations	Select one of the following options: • Not allowed – the user will not be allowed to use this menu option for the held order • Allowed with warning – the user will be allowed to use this menu option, but a warning window will display reminding the user of the held status • Allowed – the user is allowed to use this menu option
Component Issue	Select one of the following options: • Not allowed – the user will not be allowed to use this menu option for the held order • Allowed with warning – the user will be allowed to use this menu option, but a warning window will display reminding the user of the held status • Allowed – the user is allowed to use this menu option

Field	Description
Production Packet Print	Select one of the following options: • Not allowed – the user will not be allowed to use this menu option for the held order • Allowed with warning – the user will be allowed to use this menu option, but a warning window will display reminding the user of the held status • Allowed – the user is allowed to use this menu option
Production Receipts	Select one of the following options: • Not allowed – the user will not be allowed to use this menu option for the held order • Allowed with warning – the user will be allowed to use this menu option, but a warning window will display reminding the user of the held status • Allowed – the user is allowed to use this menu option
Production Scrap	Select one of the following options: • Not allowed – the user will not be allowed to use this menu option for the held order • Allowed with warning – the user will be allowed to use this menu option, but a warning window will display reminding the user of the held status • Allowed – the user is allowed to use this menu option
Order Closeout	Select one of the following options: • Not allowed – the user will not be allowed to use this menu option for the held order • Allowed with warning – the user will be allowed to use this menu option, but a warning window will display reminding the user of the held status • Allowed – the user is allowed to use this menu option

Responsible Party

Use this option to enter one or more persons responsible for the work orders.

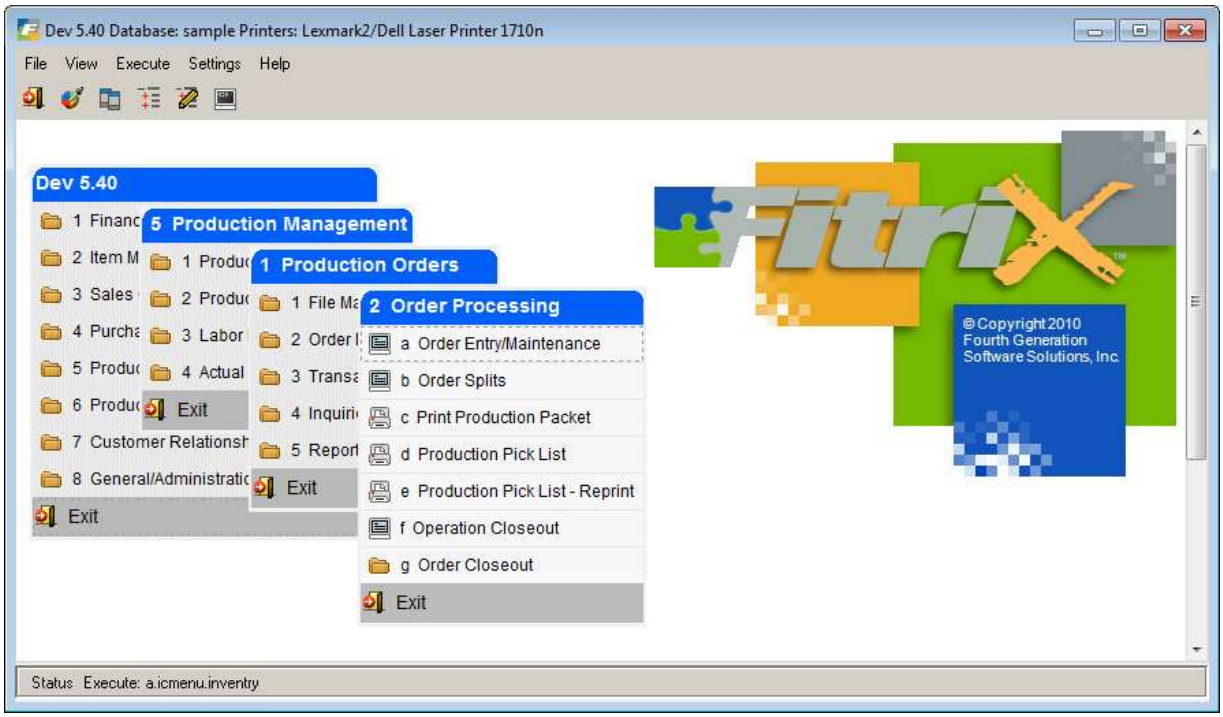
To view this screen, select Reason Codes **(option c)**. The following window displays:



Field	Description
Responsible Party	Enter a unique 10-character identifier.
Description	Enter a description of the reason code
Default	Check if this code should be the default code used on production work orders

Order Processing Menu

Options on the Order Processing menu allow you to create and maintain production orders, print documents for the orders, and closeout the orders. To view this menu from the main menu select **Production Management > Production Orders > Order Processing (option 2).**



The following options are available on this menu.

Order Entry/Maintenance – Used to create or change production orders.

Order Splits – Used to split a base order into multiple releases.

Print Production Packet – Used to print a packet for the order, intended to be kept with the items being produced.

Production Pick List – Used to print a list of components to be picked from inventory for the production order.

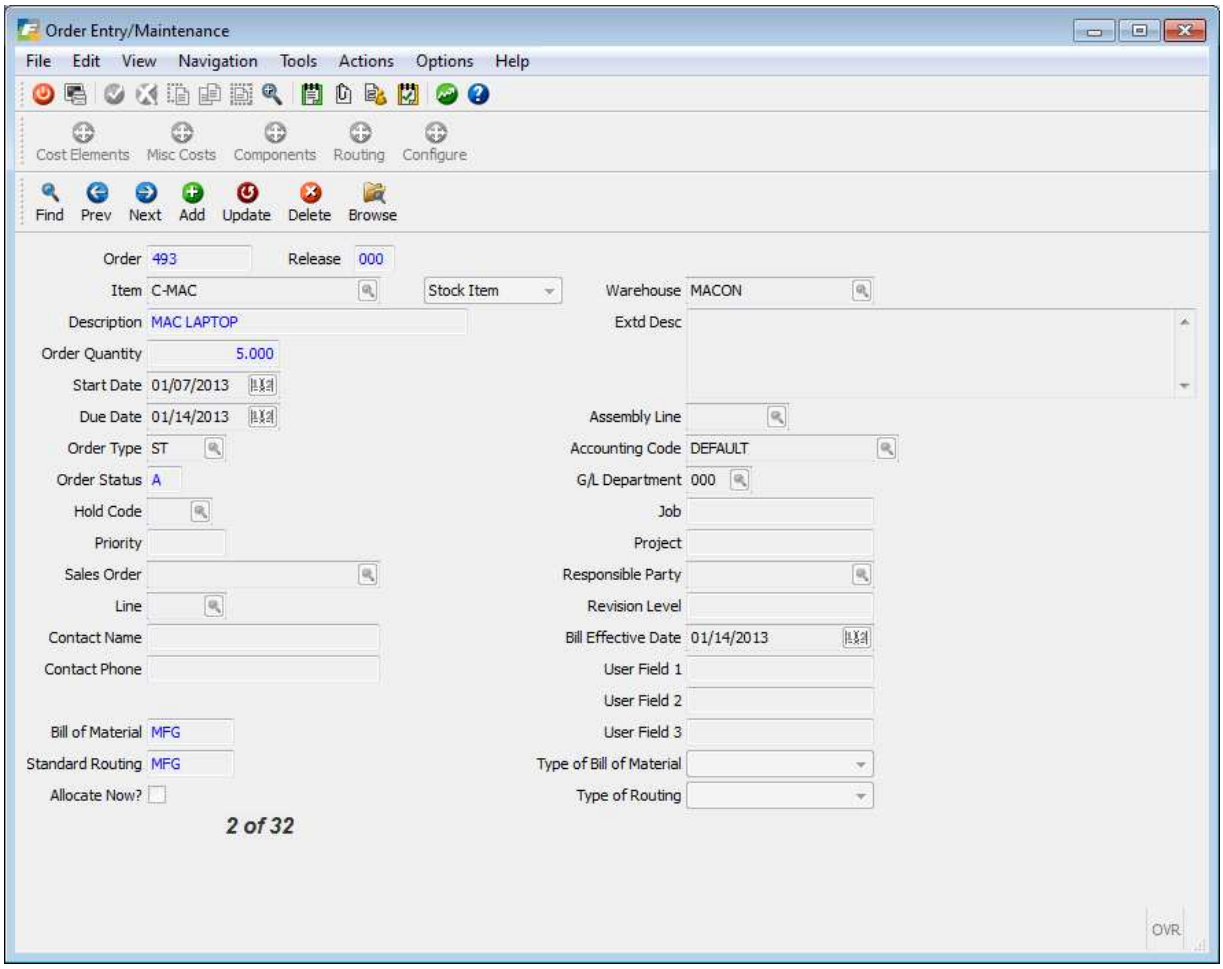
Production Pick List - Reprint – Used to re-print a list of components to be picked from inventory for the production order.

Operation Closeout – Used to select routing step operations for closeout.

Order Closeout - Use this option to access submenu and close out a specific production order, close out a range of orders based on date, run a closed orders report, re-open a closed order, or purge closed orders from the system.

Order Entry/Maintenance

This menu option (a) is used to enter or change Production Orders. The following screen displays:



The following fields can be entered:

Field	Description
Order	The unique number assigned to this production order.
Release	The number of the release for this production order. This column is used when splitting orders. The value defaults to '000' for new orders. Values other than 000 indicate a split order (described later).
Warehouse	The identifier for the warehouse in which the item will be produced. Zoom for a list of valid warehouses. *The item and warehouse entered must already exist in the Update Inventory Information option in Inventory Control.*
Order Quantity	The number of units of the item being produced.
Start Date	The date this order is to be started. If the date is not a valid working day, a warning message will display. Zoom to display a calendar.

Field	Description
Due Date	The date the order is scheduled to be complete. If the date is not a valid working day, a warning message will display. Zoom to display a calendar.
Order Type	Enter a valid order type. The default is automatically assigned from the Setup window, but you can change it.
Order Status	This column can have one of the following values: • A – Active. This is the default value for a new order • H – Held. This indicates that the order is to be held from further processing
Hold Code	Enter a valid hold code. A hold code should only be entered if the status is changed to 'H'. Zoom for a list of valid hold codes.
Priority	Enter a user-defined priority, up to 4 characters, A-Z or 1-9.
Sales Order/Line	Enter an optional sales order and line item for the associated demand for this production order.
Assembly Line	This field is reserved for future use
Accounting Code	This field will be assigned automatically from the order type. You may change this to a different accounting code, if needed. Zoom to display a list of valid codes.
G/L Department	This field will be assigned automatically from the order type. You may change this to a different department, if needed. Zoom to display a list of valid departments.
Job	Enter an optional job identifier
Project	Enter an optional project identifier
Revision Level	Enter an optional engineering revision level for the item
Bill of Material Effectivity Date	Enter an optional date to determine which components are to be used on this order. Components can have an effective start and end date in a bill of material. The date entered here is used to exclude components which have effective dates before or after the entered date. If no date is entered, component effective dates will be compared to the order start date, to determine if they should be used.
User Field 1	Enter optional additional information
User Field 2	Enter optional additional information
User Field 3	Enter optional additional information
Bill of Material	The item's default bill of material code (from Update Inventory Information) will be assigned automatically. You may change this code to another valid bill of material for the produced item. Zoom to display a list of valid bill of material codes for the item being produced.
Standard Routing	The item's default routing code (from Update Inventory Information) will be assigned automatically. You may change this code to another valid routing for the produced item. Zoom to display a list of valid standard routing codes for the item being produced.

Field	Description
Type of Bill of Material	This field will be assigned automatically from the order type. It controls how an item's component list is to be processed when a new production order is entered. The allowed values are: • S – The manufactured item's standard bill of material is to be copied into the order's list of components, when the order is saved • C - The manufactured item's standard bill of material is to be copied into the order's list of components, and the components will be displayed, to allow for changes, before the order is saved. • M – No standard bill of material will be copied into the order's list of components, but the component list screen will be displayed
Type of Routing	This field will be assigned automatically from the order type. It controls how an item's routing list is to be processed when a new production order is entered. The allowed values are: • S – The manufactured item's standard routing is to be copied into the order's routing list, when the order is saved • C - The manufactured item's standard routing is to be copied into the order's routing list, and the list will be displayed, to allow for changes, before the order is saved. • M – No standard routing will be copied into the order's routing list, but the routing list screen will be displayed, to allow the user to enter a custom routing list, before the order is saved.

Component List screen

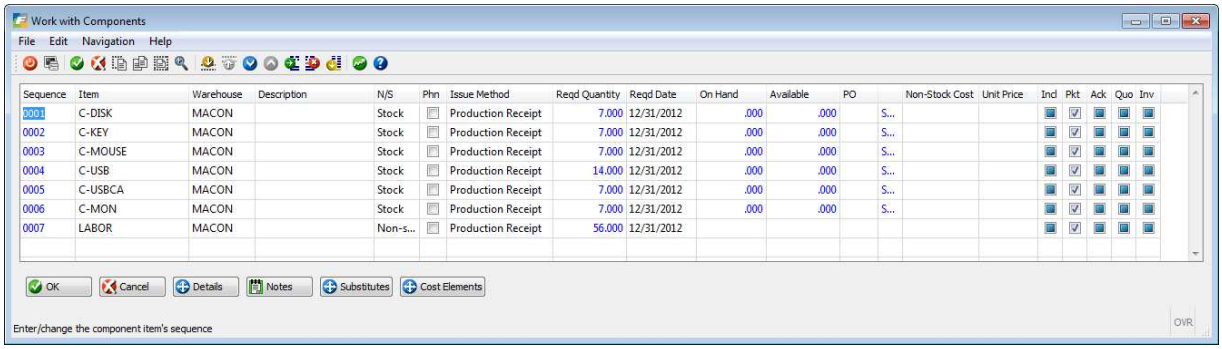
This screen displays when you take one of the following actions:

- If a value of C or M is entered in the Type of Bill of Material
- If the

icon is clicked on the summary screen

The component list displays the standard components from the produced item's bill of material (if Bill of Material Type C or S was selected), or an empty list (if Bill of Material Type M was selected).

The following screen displays:

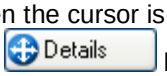


Review the list of components displayed. You may change the list by adding new components, changing existing components, or deleting components. The following fields can be entered for each component:

Field	Description
Seq	Enter a sequential identifier for the component. Components are sorted for display and print based on this sequence.
Item	Enter a valid item code for the component to be used. The combination of the 'Seq' and 'Item' must be unique for the line. Zoom to display a list of valid items.
Warehouse	Enter a valid warehouse from which this component will be used. Zoom to display a list of valid warehouses.. **NOTE:** The item and warehouse entered must already exist in the Update Inventory Information option in Inventory Control.
Description	The description for the component item displays automatically. It cannot be changed.
Phn (Phantom)	This field is assigned automatically from the item's master information. The possible values are: • 1 (Yes) – this item is a phantom. It is NOT used from inventory, but it's components ARE used from inventory. The phantom code is a convenient way to configure multiple items under a common item code. Then, wherever this common item code is referenced, the phantom value of 1 indicates that the components for the common item code should be used, NOT the common item itself. • 0 (No) – this item is NOT a phantom. It will be used from inventory directly.
Reqd Quantity (Required Quantity	The total units of the component item required to produce the number of units of the produced item. This value is typically computed from the quantity per unit in the standard bill of material, extended by the number of units of the produced item.
Reqd Date (Required Date)	The date when this component item is expected to be issued from inventory.

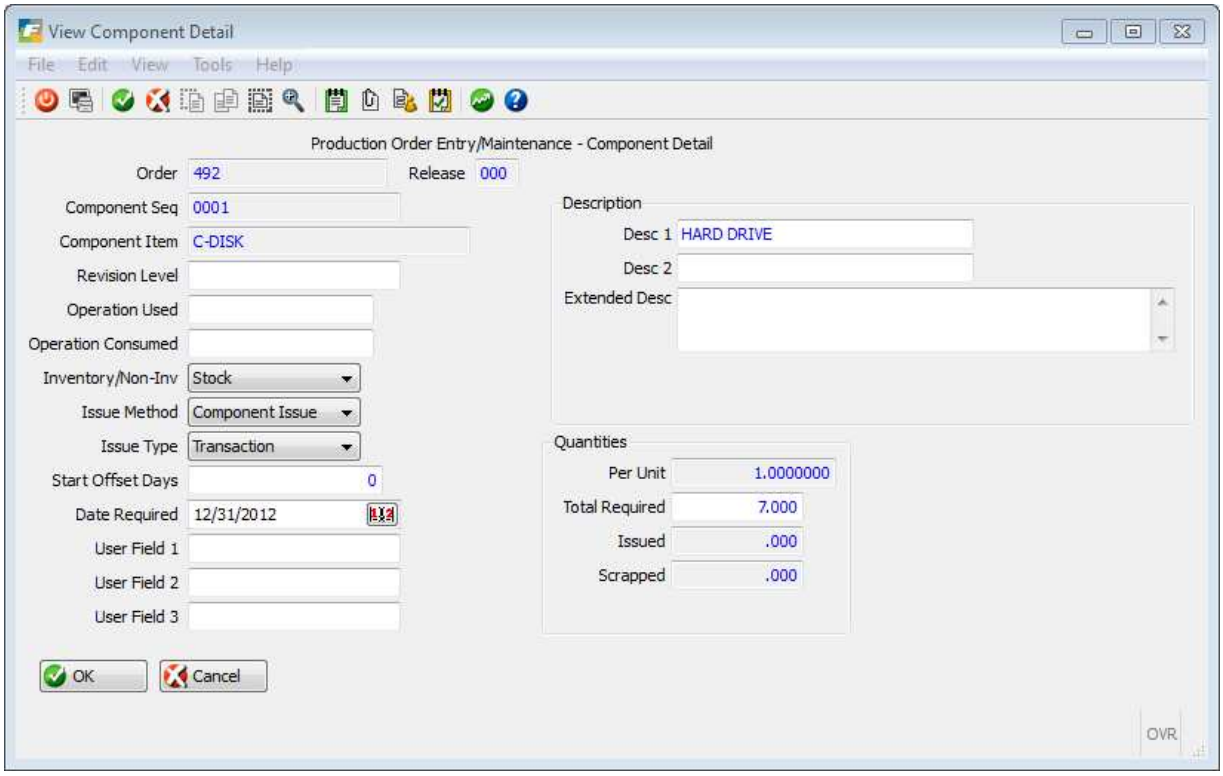
Field	Description
On Hand	The current on hand balance in inventory for the item. This is displayed as a reference to allow the user to determine if a sufficient quantity exists to be used on this order
Available	The current on hand balance, minus allocations to sales orders or other production orders. This is displayed as a reference to allow the user to determine if a sufficient quantity exists to be used on this order. *While the quantity on hand may indicate a sufficient balance exists to be used, the available quantity gives more information about additional requirements from other orders for this same component.*
PO	The purchase order created for this component requirement if there was a shortage of availability.
Non stock Cost	enter the cost for non-stock items.
Unit Price	For job shop orders enter the price the customer should be charged. See the chapter on Job Shop in this user guide for more information.
Check Boxes	Check which documents you want the components to print on. Choices are: o Pkt – production packet o Ack- customer order acknowledgement o Quo – customer quotation o Inv – customer invoice

Component Details screen

This screen displays when the cursor is positioned on a specific component on the Component List screen, and you click the 

button. It lets you review and/or enter additional detail for the selected component. Most of the values are loaded automatically from either the bill of material components table, or the Item Inventory Information table.

The following screen displays:



Field	Description
Revision Level	The current revision level of the item from the Item Inventory Information
Operation Used	The first step in the routing where this component item is used from inventory.
Operation Consumed	This field is reserved for future use.
Inventory/Non-Inventory	The possible values are: • S (stock) – this component is to be issued from stock • N (non-stock) – this component will not be issued from stock.

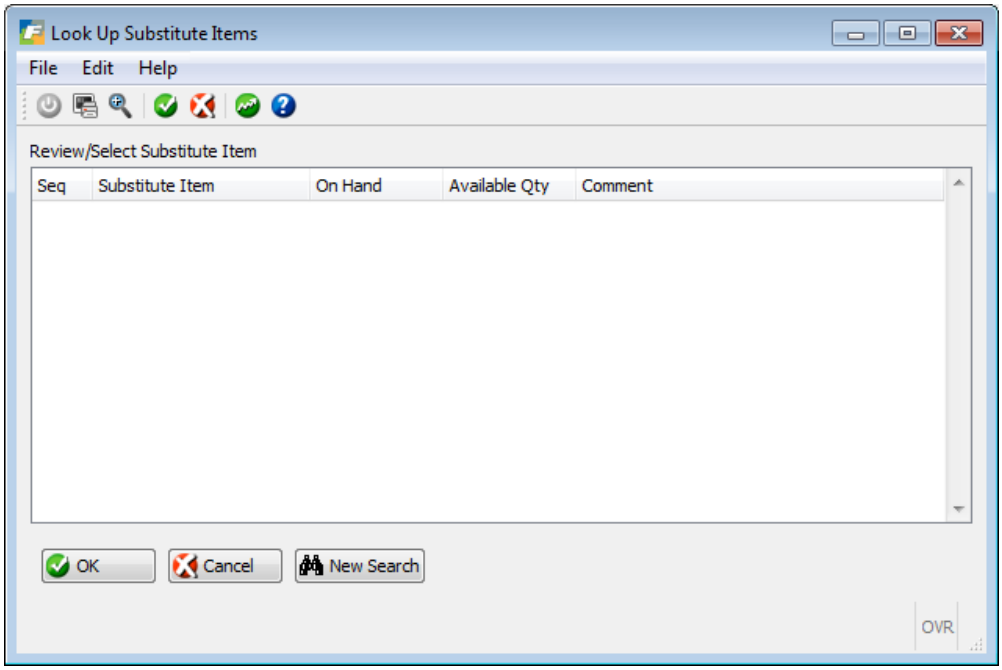
Field	Description
Issue Method	The possible values are: • C – the component will be issued from stock with the Component Issue transaction. This is typical when the production process involves a relatively long lead time (such as a week or more). • R – the component will be issued when the end item is received into inventory via the Production Receipt transaction. This is typical when the production process involves a short lead time (such as less than one week). • – the component will be issued from stock with the Issue by Operation transaction. Each component which has an 'Operation Used' equal to the Operation being issued will be issued from inventory. • N – the component will not be issued. This is typical of items which are sent to work in process in bulk, or for items which are needed in the production process, but are not stocked items (engineering drawings, tooling, etc).
Issue Type	The possible values are: • T – component is issued from inventory, and it's associated cost per unit is used with the quantity to create a transaction for G/L. • C – component is not issued from inventory, but it's cost per unit is used with the quantity to create a transaction for G/L.
Start Offset Days	The number of days after the order starts when this component needed. This offset if used to component the actual required date for the component.
Date Required	The date when this component is to be issued from inventory. The default value is the order date. If the component has a 'Start Offset Days' defined, this will be added to the order start date to computer a required date.
User Field 1	Enter optional additional information
User Field 2	Enter optional additional information
User Field 3	Enter optional additional information
Quantities – Per Unit	The number of units of the component to produce one unit of the end item.
Quantities – Total Required	The total number of units of the component needed to produce the total quantity of the end item.
Quantities – Issued	The total number of units already issued for the component
Quantities – Scrapped	The total number of units of this component already consumed by Production Scrap transactions

Substitutions screen

This screen displays when the cursor is positioned on a specific component on the Component List screen, and you click the

button. It allows you to review and/or select a substitute item for the current component. This function is typically used when the component has an insufficient quantity of inventory for the order.

The following screen displays:



The following fields are displayed:

Field	Description
Seq	The sequential order for the component. Typically, the substitutes with lower sequence values are preferred over higher sequence values
Substitute Item	the item code for the substituting item
Available Qty	the on-hand balance, minus existing allocations, for the substitute.
Comment	a user-defined comment for how the substitute should be used.

To select a substitute, move the cursor the desired item, then click OK. The substitute item will be returned to the Components List window, and will replace the component.

Routing List screen

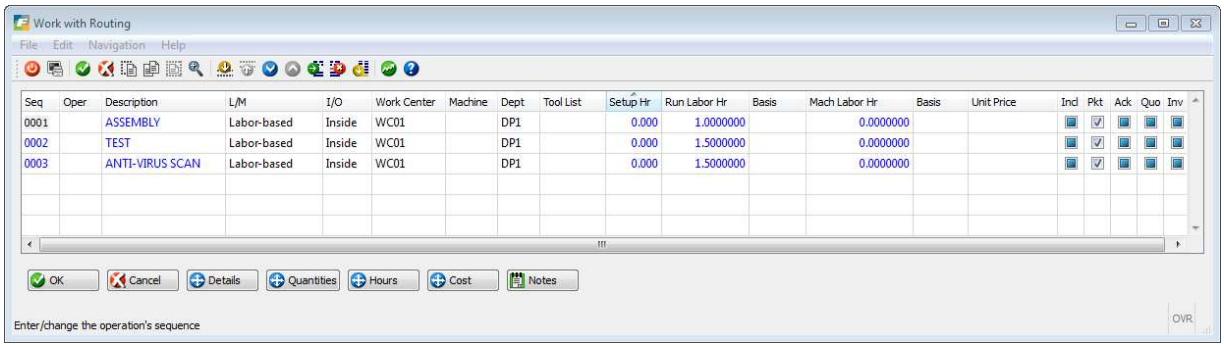
This screen will display when the user takes one of the following actions:

- If a value of C or M is entered in the Type of Routing
- If the

icon is clicked on the summary screen

The routing list displays the routing from the produced item's standard routing (if Routing Type C or S was selected), or an empty list (if Routing Type M was selected).

The following screen is displayed:



One or more routing steps may be entered for the production order. For each routing step, the following fields can be entered:

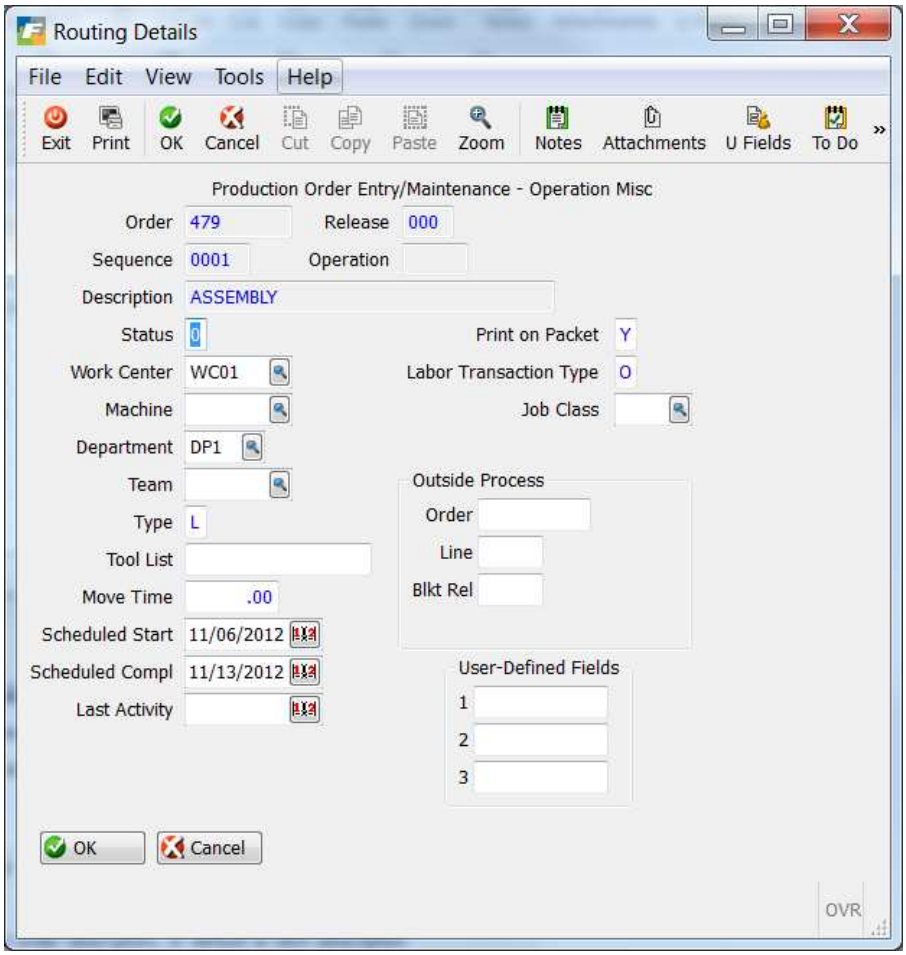
Field	Description
Seq	Enter a sequential identifier for the routing step. Steps are sorted for display and print based on this sequence.
Oper (Operation)	Enter an optional standard operation. Standard Operations can be defined in the Standard Routing module. Selecting an operation here can automatically fill in many of the remaining columns for the step (ie Work Center, Machine, Department, Tool List, Setup Hrs, Labor Hrs)
Description	a free-form description of the routing step
L/M – (Labor/Machine Constrained)	Indicate whether this routing step should be scheduled based on labor hours or machine hours
I/O (Inside/Outside Process)	Indicate if this step is performed within the company's production facilities, or if it is performed by an outside entity (such as a service provider).
Work Center	Enter a required work center at which this step will be performed. If a Work Center is selected, it's labor and overhead hourly rates are used to compute labor and overhead costs for the order
Mach (Machine)	Enter an optional machine at which this step will be performed
Dept (Department)	Enter an optional department at which this step will be performed.

Field	Description
Tool List	Enter an optional tooling identifier or list of tools required to be used at this step
Setup Hrs (Setup Hours)	Enter the number of hours required to prepare this step for the production process. If there is no setup time needed, enter 0.
Run Labor Hrs (Run Labor Hours)	Enter the number of hours associated with completing this step for the produced item. This field is used together with the basis code below. *If the labor time is less than 1 hour, the time must be entered as the decimal equivalent of an hour. For example, a run time of 5 minutes per piece must be entered as 0.0833333, or 5/60 of an hour.*
Basis	Enter one of the following values: H (Hours per piece) – the run labor hours above are expressed as the 'hours required to produce one unit of the end item' P (Pieces per hour) – the run labor hours above are expressed as the 'pieces completed within one hour'
Mach Labor Hours	Enter the number of machine hours required to complete this step.
Basis	Enter one of the following values: H (Hours per piece) – the run labor hours above are expressed as the 'hours required to produce one unit of the end item' P (Pieces per hour) – the run labor hours above are expressed as the 'pieces completed within one hour'
Unit price	For job shop orders enter the price the customer should be charged. See the Job Shop chapter in this Guide for more information.
Check Boxes	Check which documents you want the routing steps to print on. Choices are: o **Pkt** – production packet o **Ack**- customer order acknowledgement o **Quo** – customer quotation o **Inv** – customer invoice

Routing Detail screen

This screen displays when the cursor is positioned on a specific routing step on the Routing List screen, and you click the Details button.

The following screen displays:

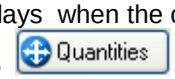


The following fields can be entered:

Field	Description
Status	Possible values are: • 0 – the packet has not yet been printed • 1 – no activity on this operation, and no activity on previous operation • 2 – no activity on this operation, and the previous operation has started • 3 – no activity on this operation, and the previous operation has been completed • 4 – some activity has been reported for this operation • 5 – this operation is completed • 7 – this operation is closed
Work Center	The required work center at which this operation is being performed. Zoom for a list of valid work centers
Machine	The optional machine at which this operation is being performed. Zoom for a list of valid machines.
Department	The optional production department in which this operation is being performed.
Team	The optional team performing the work at this operation
Type	Possible values are: • L – this operation is to be scheduled based on labor hours remaining • M – this operation is to be scheduled base on machine hours remaining
Tool List	The optional tooling list identifier for one more special tools required for this operation
Move Time	The optional move time in days after this operation is completed. The default value is zero.
Scheduled Start Date	The date this operation is scheduled to be started
Scheduled Compl (Schedule Completion Date)	The date this operation is scheduled to be completed.
Last Activity	The last date any labor activity was reported for this operation
Print on Packet	Y for yes, N for no

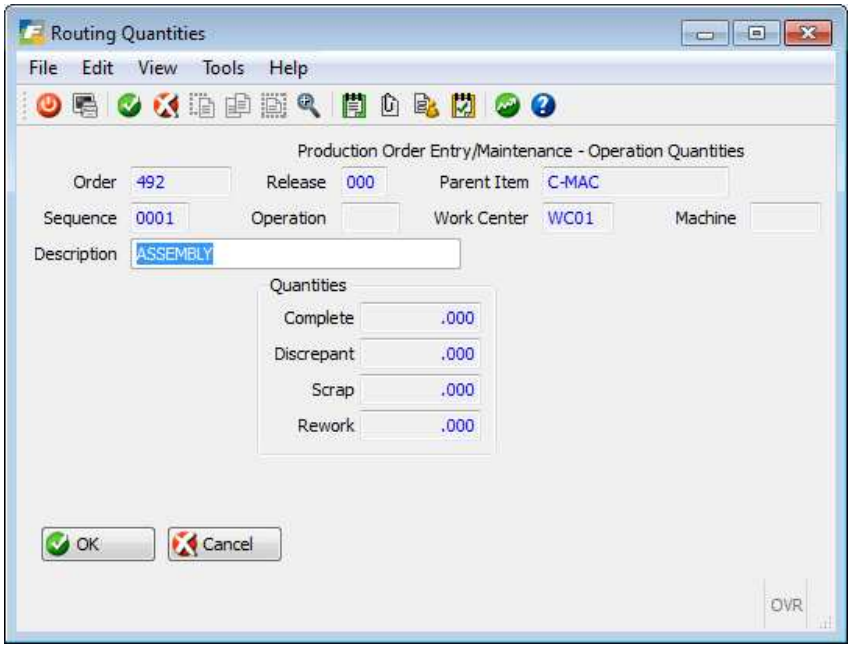
Field	Description
Labor Transaction Type	This field is reserved for future use
Job Class	The optional default Job Class for this operation. Job classes can be used to set standard labor rates per hour which may override the Work Center standard labor rate.
Outside Process – Order	The purchase order number associated with this operation, if the Inside/Outside Process type is O.
Outside Process – Line	The purchase order line item
Outside Process – Blkt Rel (Blanket Release)	Field is reserved for future use.
User-Defined Field 1	Enter additional user-defined information
User-Defined Field 2	Enter additional user-defined information
User-Defined Field 2	Enter additional user-defined information

Routing Quantities screen

This screen displays when the cursor is positioned on a specific routing step on the Routing List screen, and you click the 

button.

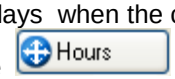
The following screen displays:



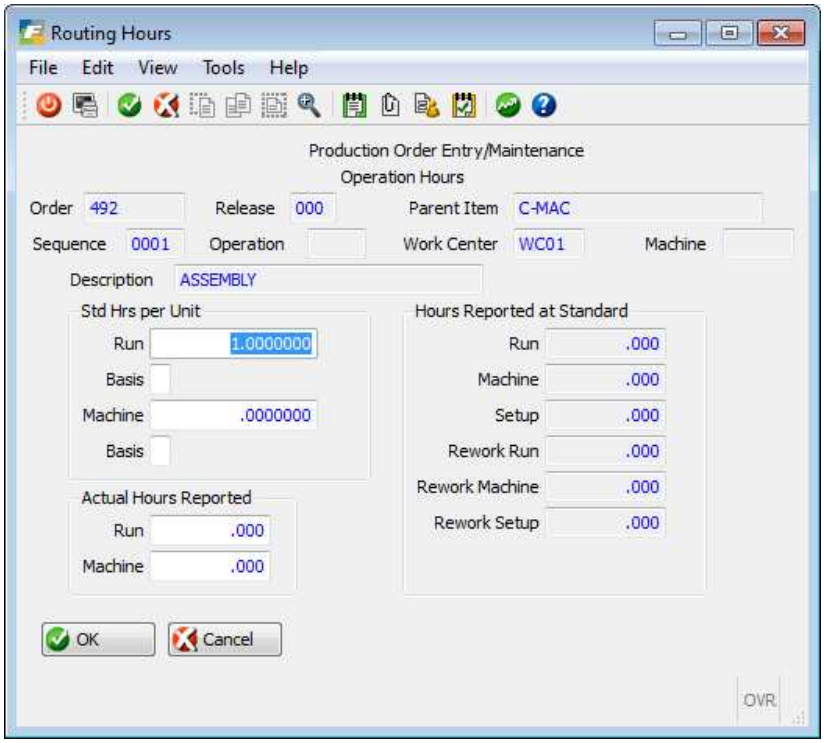
The following fields are displayed:

Field	Description
Quantities – Complete	The number of units completed through this operation
Quantity – Discrepant	This field is reserved for future use
Quantity – Scrap	The number of pieces reported scrapped at this operation
Quantity – Rework	This field is reserved for future use

Routing Hours screen

This screen displays when the cursor is positioned on a specific routing step on the Routing List screen, and you click the 

button.

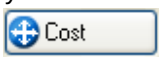


The following fields are displayed:

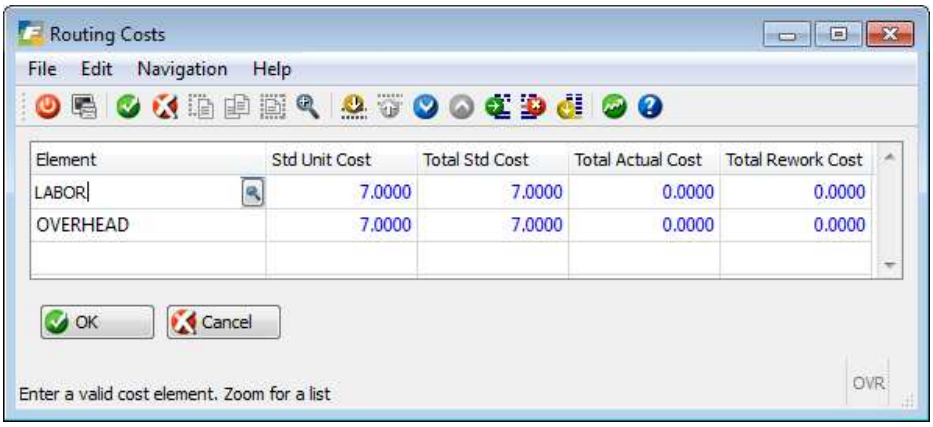
Field	Description
Std Hrs per Unit – Run	The number of labor hours required to complete the end item.
Std Hrs per Unit – Basis	Possible values are: H – Run hours are entered as 'Hours required to produce one unit' P – Run hours are entered as 'Number of units completed in one clock hour
Std Hrs per Unit – Machine	The number of machine hours required to complete the end item.
Std Hrs per Unit – Basis	Possible values are: H – Machine hours are entered as 'Hours required to produce one unit' P – Machine hours are entered as 'Number of units completed in one clock hour

Field	Description
Actual Hours Reported – Run	The number of labor hours reported to date for this operation
Actual Hours Reported – Machine	The number of machine hours reported to-date for this operation.
Hours Reported at Standard – Run	The number of units completed at this operated, times the Run Labor hours per unit
Hours Reported at Standard – Machine	The number of units completed at this operated, times the Machine Labor hours per unit
Hours Reported at Standard – Setup	If the operation has started the standard setup hours for this operation displays. If the operation has not started, zero will display here.
Hours Report at Standard – Rework Run	Field is reserved for future use.
Hours Reported at Standard – Rework Machine	Field is reserved for future use.
Hours Reported at Standard – Rework Setup	Field is reserved for future use.

Routing Cost screen

This screen displays when the cursor is positioned on a specific routing step on the Routing List screen, and you click the 

button.

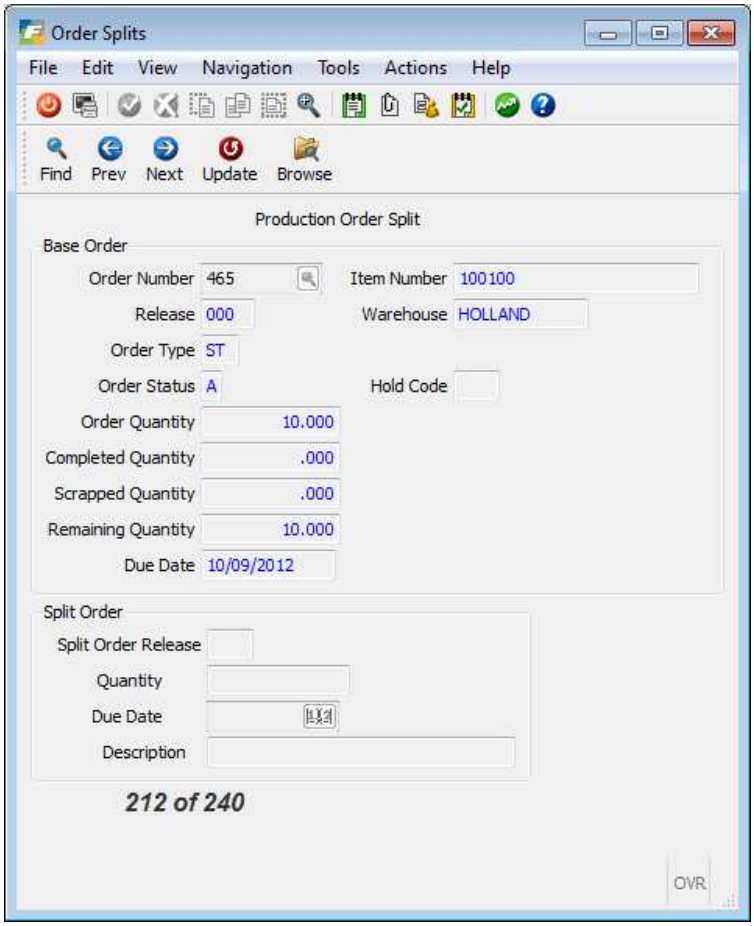


Field	Description
Element	Predefined cost elements associated with this order
Std Unit Cost	The standard unit cost for the element associated with this order.
Total Std Cost	The total standard cost of the element associated with this order
Total Actual Cost	The total actual cost of the element associated with this order.
Total Rework Cost	The total rework cost of the element associated with this order.

Order Splits

This menu option is used to separate a base production order into multiple releases. This is useful when material or resource shortages exist on a base order, but enough material or resources exist to produce a smaller quantity. The production quantity can be 'split' from the base order into a new order that refers to the base order, but has its own release number.

Select the Order Splits option (b) from the Order Processing menu. The following window displays:



You must first click the Find button, then enter the Order Number and Release for the base order you wish to split, and click OK. After verifying the base order information, click the Update button to create a split order.

Field	Description
Split Order Release	Enter a new release number for the split order. The split order will retain the Order Number, but must have a unique release number
Quantity	Enter the quantity to be split into the new release
Due Date	Enter the due date for the new release

Field	Description
Description	Enter text describing the reason for the split.

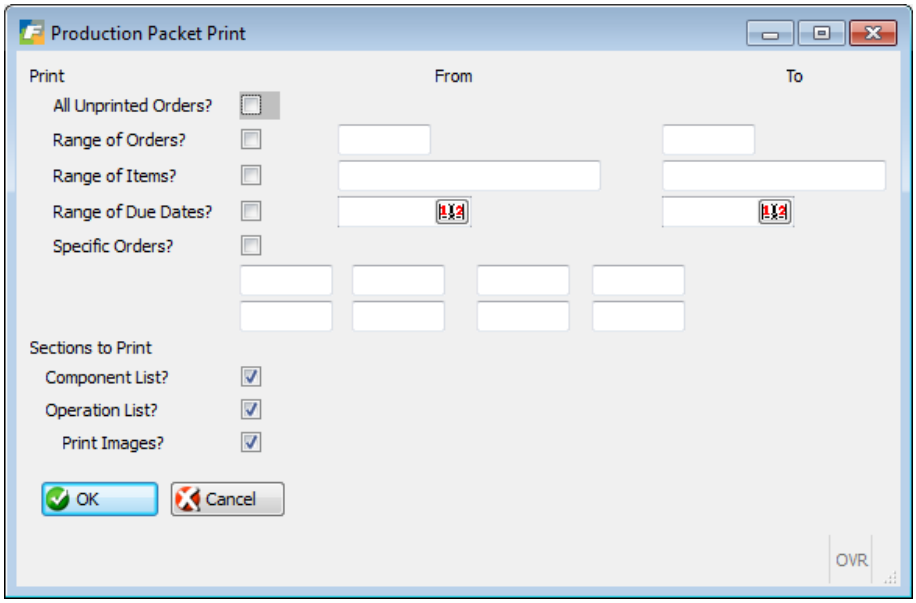
After entering the split order information, click OK to create the split order. The base order will remain as an active order, with the same due date, and a quantity which is the difference between the base order quantity and the split order quantity.

Print Production Packet

This menu option (c) is used to print or reprint production packets for orders entered through the Order Entry/Maintenance option. The Production Packet prints summary information about the order, such as item produced and warehouse, quantity and due date, and reference information and notes. In addition:

- Component List – the component items and descriptions, along with their required quantities and dates
- Routing List – the routing steps required to product the end item. Each step prints with description, setup and labor hour, and department, work center, machine and teams used to produce.

When you select this menu option, you must first indicate the destination of the report on the 'Select Printer' window (see Chapter 1). The following window then displays:



Enter the following fields to indicate which specific packets should print:

Field	Description
All Unprinted Orders?	If you select Y, all production orders which have not yet printed a Packet, will print.
Range of Orders?	If you select Y, you must also enter a range of order numbers
Range of Items?	If you select Y, you must also enter a range of item numbers
Range of Due Dates?	If you select Y, you must also enter a range of order due dates.
Specific Orders?	If you select Y, you must also enter individual order numbers (up to eight orders).
Print Component List	If you want the component list to print on the packet, select Y
Print Routing List	If you want the routing list to print on the packet, select Y

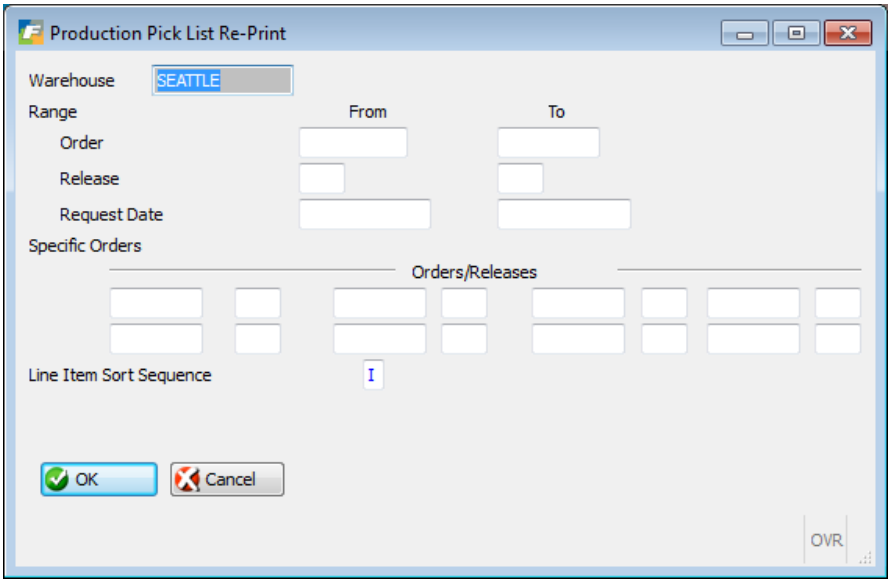
NOTE: You can only select Y for one of the 5 five choices in the 'Print' section above.

After entering the selection information, click OK to process the report.

Production Pick List / Production Pick List – Reprint

These menu options (d and e) are used to print or reprint component material pick lists for orders entered through the Order Entry/Maintenance option. The Production Pick List prints the inventoried components which are to be picked to begin the production process. For each component, the item and description are printed, along with the quantity required and required date. In addition, if the component(s) are either serialized or lot controlled (see the *Inventory Control User Guide)*, the serial or lot information is printed below the description.

When you select this menu option, you must first indicate the destination of the report on the 'Select Printer' window (see the *Getting Started with Fitrix* manual). The following window then displays:



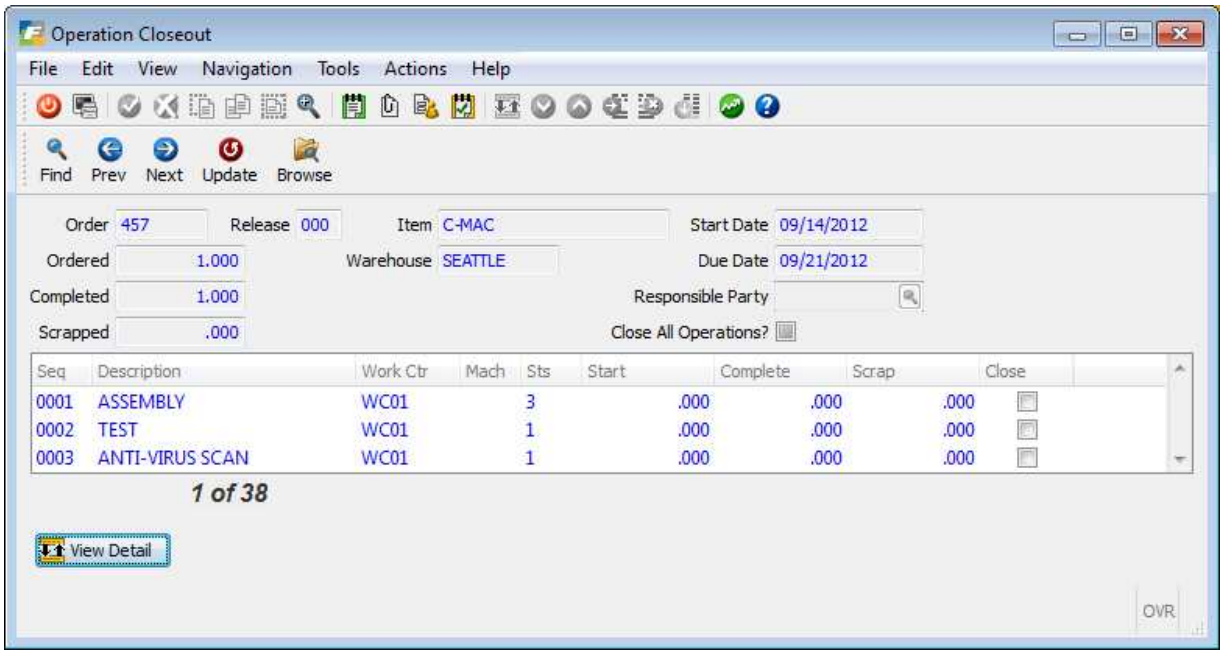
Enter the following fields to indicate which specific pick lists should print:

Field	Description
Warehouse	Enter the warehouse for the order(s) to be printed. If a production order requires components from multiple warehouses, a separate pick list must be printed from each warehouse.
All Unprinted Orders?	If you select Y, all production orders which have not yet printed a Pick List, will print. NOTE: if you select Y here, you cannot also select a Range, or Specific items
Range?	If you select Y, you must also enter a range of order numbers
Specific Orders?	If you select Y, you must also enter individual order numbers (up to eight orders). NOTE: you may enter a range, AND specific order numbers.
Line Item Sort Sequence	possible values are: • I – Sort by item number • L – sort by component sequence number • D – sort by default stock location

After entering the selection information, click OK to process the report.

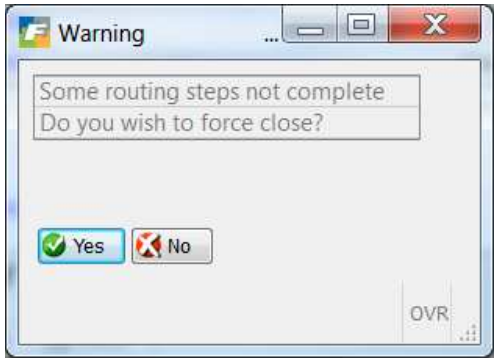
Operation Closeout

Use this menu option (2-f) to set the status of open operations on a production order to completed. Closing open operations removes them from the order scheduling functions in the *Production Scheduling* module.



Field	Description
Responsible Party	If necessary (optional)
Close All Operations?	Check this box to close all operations

When you press tab, you may see the following popup window:



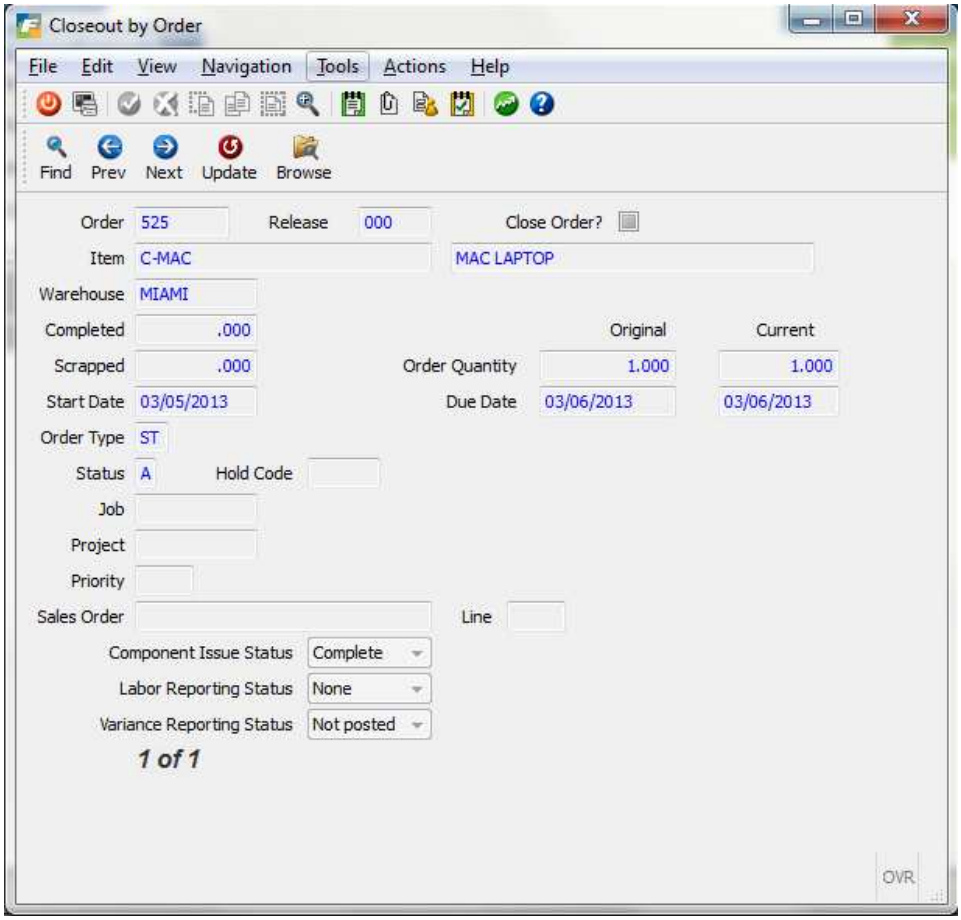
Click Yes to continue (all operations will display as checked), or No to return to the screen. If you select Yes, the cursor will move to the checkbox for the first operation.

Order Closeout

Use these menu options (2-g) to move completed production orders to the history inquiry tables, re-open as needed, and also purge from the database.

Closeout by Order

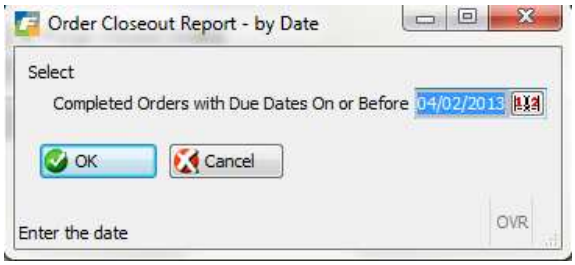
Use this option to close a specific Production Order. The following window displays:



Use the Find option to enter the order to be closed. Then select Update, and the 'Close Order' checkbox will automatically be checked. Click OK with the checkbox checked, and the order status will be changed to Closed.

Order Closeout by Date

Use this option to close orders based on their due dates. The following selection window displays:



An order is eligible to be closed, if its due date is on or before the selected due, and:

- All components have been completely issued
- All labor has been reported in the Labor Processing module
- All variances have been posted from the Actual Costing module.

The selected Active orders will have their status changed to Closed. A report lists the Production Orders which were Closed.

Closed Orders Report

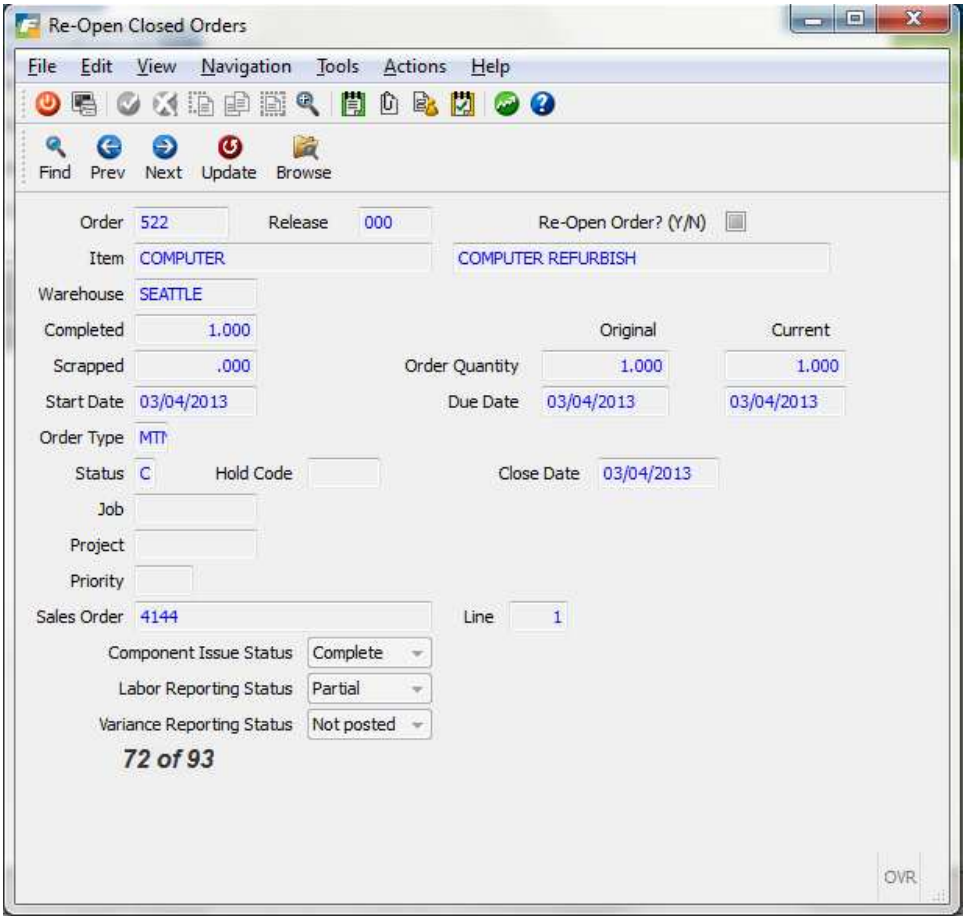
Use this option to print a list of Production Orders that are closed. No selection window is displayed. The report lists one line per closed order, with due date, closed date and quantities.

Re-Open Closed Orders

Use this option to re-open previously closed orders. It is common to re-open closed orders when:

- Additional, or previously missed, component materials are to be issued
- Additional labor is t be issued.

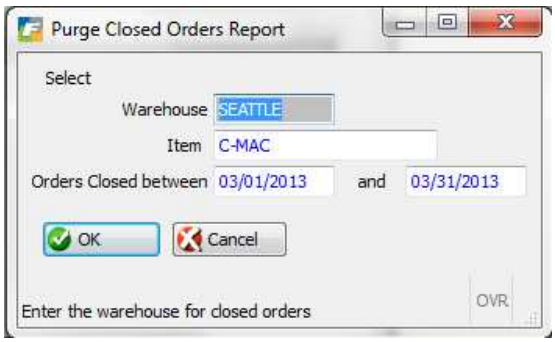
The following windows displays:



Use the Find option to enter the order to be re-opened. Then click Update, and the 'Re-Open Order' checkbox will be automatically checked. Click OK to re-open.

Purge Closed Orders

Use this option to remove closed orders from the Production Order tables, and optionally archive them in the Production Order History tables. The following window displays:



Warehouse – enter the warehouse for orders to be purged. If you do not enter a warehouse, orders for all warehouses will be considered.

Item – enter the end item for orders to be purged. If you do not enter an item, orders for all items will be considered.

Orders Closed between MM/DD/YYYY and MM/DD/YYYY – Enter a range of closed dates. If you do not enter a range, order with all close dates will be considered.

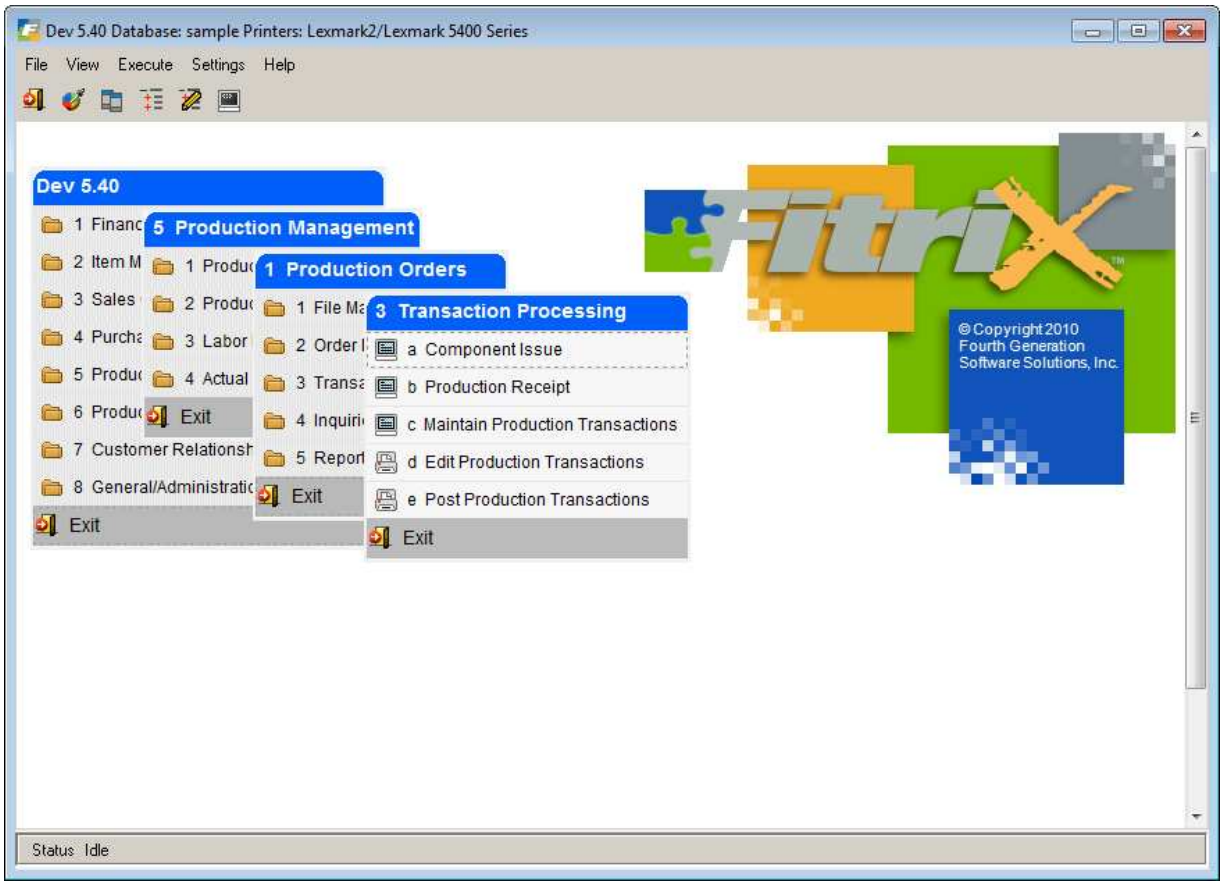
NOTE 1: If you do not enter ANY selection criteria, ALL closed orders will be removed and optionally archived to Production Order History.

NOTE 2: If you want purged orders to be archived, you must select 'Yes' to the 'Order History Support' option in Setup Production Order Processing.

A report will list the orders removed.

Transaction Processing Menu

Options on the Transaction Processing menu allow you to enter and process inventory and cost transactions related to production orders. To view this menu from the main menu select **Production Management > Production Orders > Transaction Processing (option 3).**



The following options are available on this menu.

Component Issue - Use this option to move component items from inventory to work in process via production orders

Production Receipts - Use this option to move component items from inventory to work in process, and to move completed items from work in process to finished inventory.

Maintain Production Transactions - Use this option to process inventory movement transactions in the General Ledger module, if they were not updated immediately during entry.

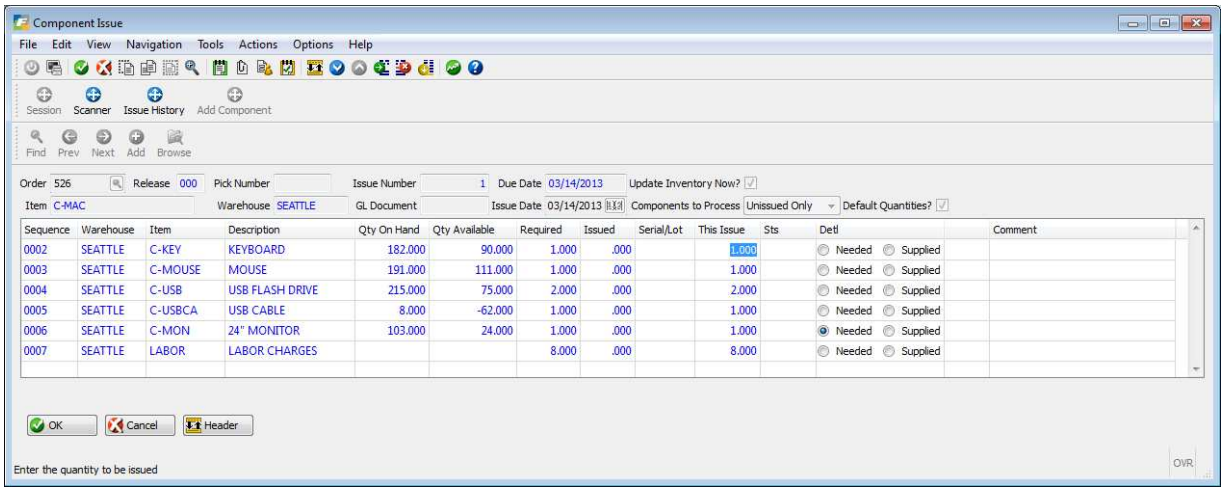
Edit Production Transactions - Use this option to print a validation report for transactions to be posted to General Ledger.

Post Production Transactions - Use this option to print a posting report for transactions being posted to General Ledger.

Component Issue

This menu option (a) is used to issue component inventory from stock, and add it to a production order's component material usage. This option is useful when a production order has a lead time that is long enough to require tracking of the value of work in process on a periodic basis. For example, of a production order requires a 2-week lead-time to complete, and if the material is needed at the start of the order, it is possible that the order might still be in progress at the end of an accounting period. If accounting practices specify that the value of any work-in-process be quantifiable at month-end, Component Issue supports this requirement.

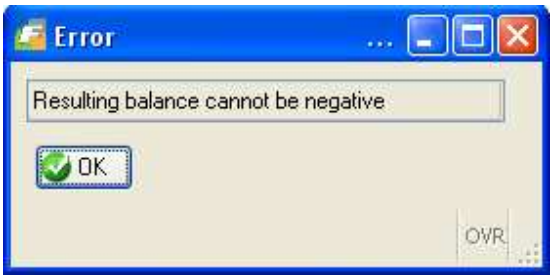
When you select the menu option, the Component Issue window displays. To enter an issue transaction, click the Add button. The first time you select Add, the Session Default screen displays (see below). After you review/change the session defaults, enter the transaction information into the following screen:



The following fields can be entered:

Field	Description
Order	Enter the production order number for this transaction. Zoom for a list of valid production orders
Release	Enter the production order release number for this transaction. *When you press tab after entering the Release, other fields related to the order are automatically displayed*
Pick Number	If you want to issue from a specific pick list number, enter it here. If you leave this field blank, all components which are eligible to be issued will be included.
Issue Date	Enter the date to be recorded with the issue. The default is the Session Default Transaction Date.

Field	Description
Update Inventory Now?	Check if you wish to update the inventory immediately, or uncheck if to update later, via the Post Production Transactions menu option.
Default Quantities?	Check to automatically fill in the issue quantities with the expected issue quantities (you can still make changes if needed). Uncheck to fill in the quantities manually. *When you press tab after selecting the Default Quantities choice, the list of components which can be issued display automatically.* *Only components with an Issue Method of 'C' will be displayed.* *If one or more components has insufficient inventory for the issue, a warning window will display:*

Field	Description
This Issue	Enter or verify the quantity issued for each component. *If you press tab while the cursor is in the 'This Issue' column, AND the 'Detail' column is highlighted as 'Needed', the Serial and Lot Selection screen will display automatically (See 'Detail' description below)* *If you press tab while the cursor is in the 'This Issue' column, and the on-hand balance is less than the issue quantity, the following error displays:*  *You must correct the inventory balance before you can issue the component.*
Sts (Status)	Possible choices are: Close – Change the issue status of this component to Closed. No further issues can be entered. Leave Open – The issue status will remain Open. Further issues can be entered later. Re-Open – For a component which was previously closed, change the issue status back to open. *The Status will be automatically set to Close, if the total quantity issued is equal to or greater than the quantity required, OR to Leave Open, if the total quantity issued is less than the quantity required*

Field	Description
Detail	The possible values are: Needed - If the component is serialized OR lot-controlled, this button will be turned on. This indicates that an additional window will display for you to selec t the serial numbers or lots to be selected. Supplied – If the component is serialized OR lot-controlled, and the serial or lots have been successfully selected, this button will be turned on. NONE – If the component is NOT serialized and NOT lot controlled, neither button will be turned on, and the serial or lot selection window will not display.
'Short'	This label will display automatically for any component with an on-hand balance less than the required quantity.
Comment	Enter an optional comment for the component being issued

Session Defaults Window

This screen displays:

1. The first time you click the Add button
2. When you click the

button

You typically review or change these session defaults one time, then begin entering transactions.

The following screen displays:

The following fields can be entered:

Field	Description
Reference	Enter a user-defined general reference to be saved with the transactions
User	Enter the user associated with this transaction
Transaction Date	Enter the date the transactions physically took place.

Click OK when finished

Serial and Lot Selection Screen

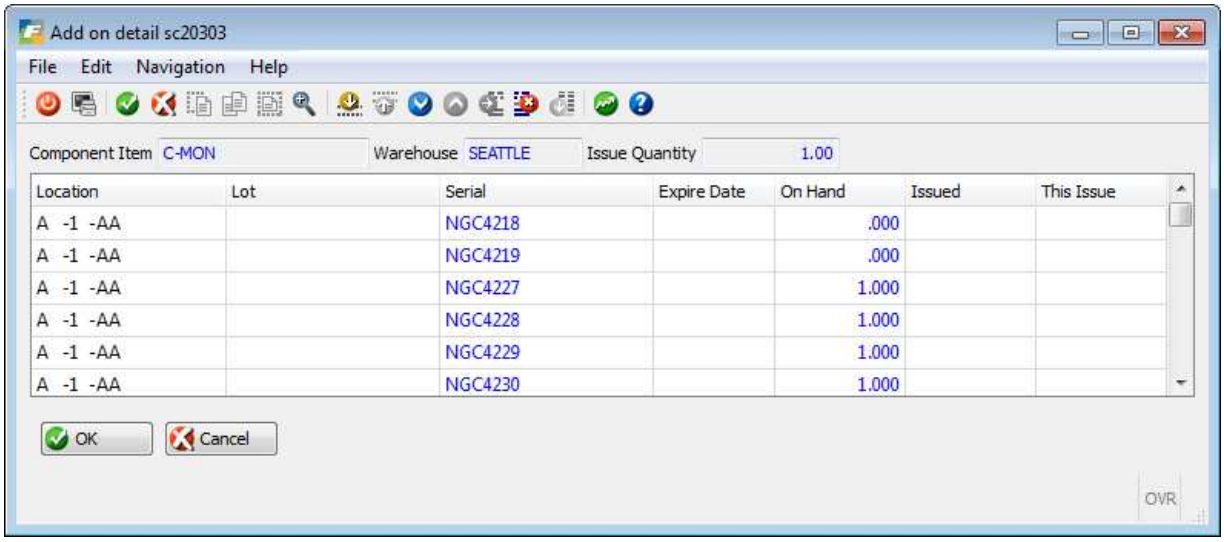
This screen displays when:

- You tab past 'This Issue', for a component where the Detail column was highlighted as 'Needed'.
- You click the

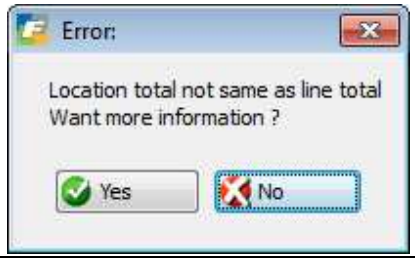
button when the cursor is positioned on a component where the 'Detail' column is highlighted as 'Needed' or 'Supplied'

You must select serial numbers or lots with a total quantity that matches the issue quantity.

The following screen displays:



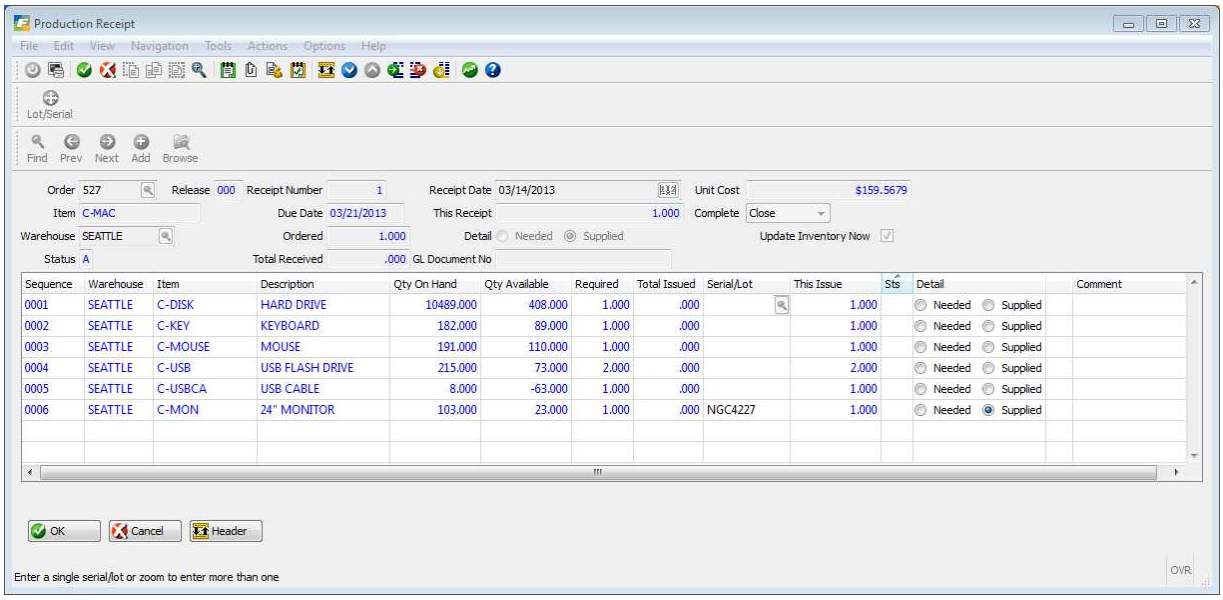
The following fields can be entered:

Field	Description
This Issue	Enter a quantity of the serial number or lot issued *The issue quantity for each selected serial or lot is summed and compared to the issue quantity for the component. If the sum does not match, an error is displayed:* 

Production Receipt

This menu option (b) is used to complete the production order cycle. The end item defined on a production order is received into finished inventory. Optionally, for components defined with a Component Issue Method of 'P', quantities are issued from inventory and added to the usage quantities. It is useful to define components with this issue method when there is a relatively short lead time. In these cases, this function can save keystrokes, and offer a higher level of accuracy, as both component issue and production receipt happen simultaneously.

When you select the menu option, the Production Receipt window displays. To enter a receipt transaction, click the Add button. The first time you select Add, the Session Default window displays (see below). After you review/change the session defaults, enter the transaction information into the following screen:



The following fields can be entered:

Field	Description
Order	Enter the production order number for this transaction. Zoom for a list of valid production orders
Release	Enter the production order release number for this transaction. *When you press tab after entering the Release, other fields related to the order are automatically displayed*
Receipt Number	This number is automatically generated, to indicate the number of receipt transactions entered for the current production order.
Receipt Date	Enter the date to be recorded with the receipt. The default is the Session Default Transaction Date.

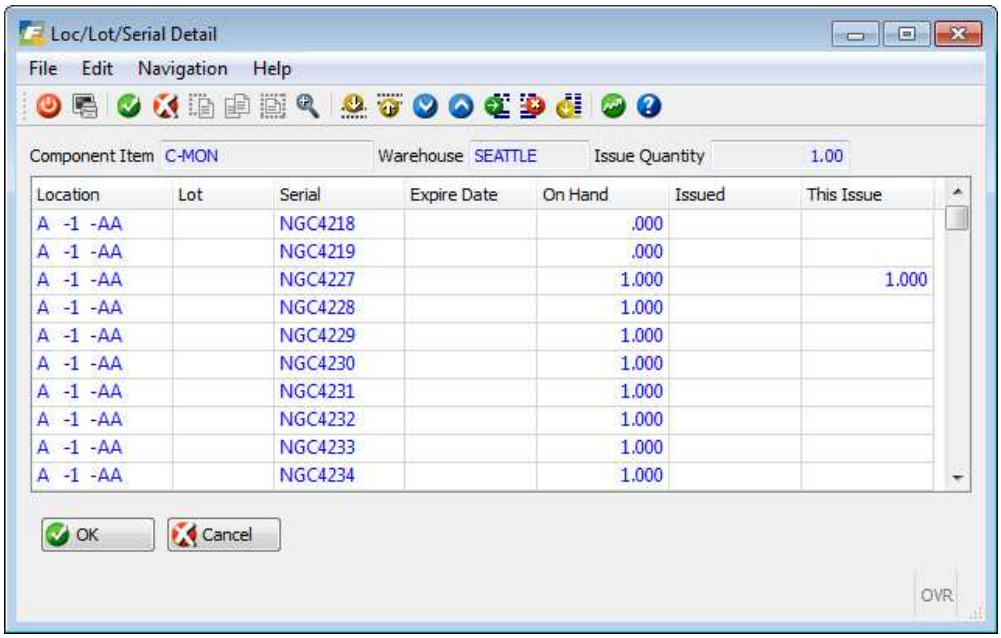
Field	Description
Receipt Quantity	enter the quantity to receive. *If the end item is either serial or lot controlled, the Enter Serial/Lot Numbers screen will display when you click tab from the Receipt Quantity (see below)* *When you click tab, if any associated components have an on-hand balance which is less than the required quantity, the following window displays:* *When you click tab after entering the receipt quantity, the list of components which can be issued displays automatically. Only components with a Component Issue Method of 'P' will display.*
Unit Cost	The unit cost for the end item will be automatically calculated, from the costs associated with the components issued. You can change this value. *WARNING: If you change the calculated unit cost, you may cause the work in process balance for this order to be incorrect.*
Complete	The possible values are: Leave Open – Do not set the order status to Closed Close – Set the order status to close. Further receipts wil not be allowed. This value will be automatically computed based on the Receipt Quantity entered. If the total received quantity equals or exceeds the order quantity, it will be set to Close. If less, it will be set to 'Leave Open'.
Update Inventory Now?	Check if you wish to update the inventory immediately, or uncheck if to update later, via the Post Production Transactions menu option. *When you click tab after selecting the Update Inventory Now choice, the cursor will move to the first component. If no components display, click OK to complete the receipt.*

Field	Description
This Issue	Enter or verify the quantity issued for each component. *If you press tab while the cursor is in the 'This Issue' column, AND the 'Detail' column is highlighted as 'Needed', the Serial and Lot Selection screen will display automatically (See 'Detail' description below)* *If you press tab while the cursor is in the 'This Issue' column, and the on-hand balance is less than the issue quantity, the following error displays:*
Status	Possible choices are: Close – Change the issue status of this component to Closed. No further issues can be entered. Leave Open – The issue status will remain Open. Further issues can be entered later. Re-Open – For a component which was previously closed, change the issue status back to open. *The Status will be automatically set to Close, if the total quantity issued is equal to or greater than the quantity required, OR to Leave Open, if the total quantity issued is less than the quantity required*
Detail	Possible values are: Needed - If the component is serialized OR lot-controlled, this button will be turned on. This indicates that an additional window will display for you to selec t the serial numbers or lots to be selected. Supplied – If the component is serialized OR lot-controlled, and the serial or lots have been successfully selected, this button will be turned on. NONE – If the component is NOT serialized and NOT lot controlled, neither button will be turned on, and the serial or lot selection window will not display.
'Short'	This label will display automatically for any component with an on-hand balance less than the required quantity.
Comment	Enter an optional comment for the component being issued

Enter Serial/Lot Numbers screen

This screen displays when the end item is either serialized or lot controlled (See the *Inventory Control User Guide)*. You must enter the required information to receive the item into inventory.

The following screen is displayed:



Field	Description
Lot Number	Can only enter into this field if the item is Lot Controlled (the serialized value for the item must be L or B)
Quantity	Enter the total quantity to be received

Serial/Lot Number Verification screen

This screen displays:

- After you finish entering the required information on the 'Enter Serial/Lot Numbers' screen.
- You click the

button, when the cursor is located on the Header portion of the screen.

The following screen displays:

Session Defaults screen

This screen displays:

- The first time you click the Add button
- When you click the button

You typically review or change these session defaults one time, then begin entering transactions.

The following screen displays:

The following fields can be entered:

Field	Description
Reference	Enter a user-defined general reference to be saved with the transactions
User	Enter the user associated with this transaction

Field	Description
Transaction Date	Enter the date the transactions physically took place.

Click OK when finished

Serial and Lot Selection screen

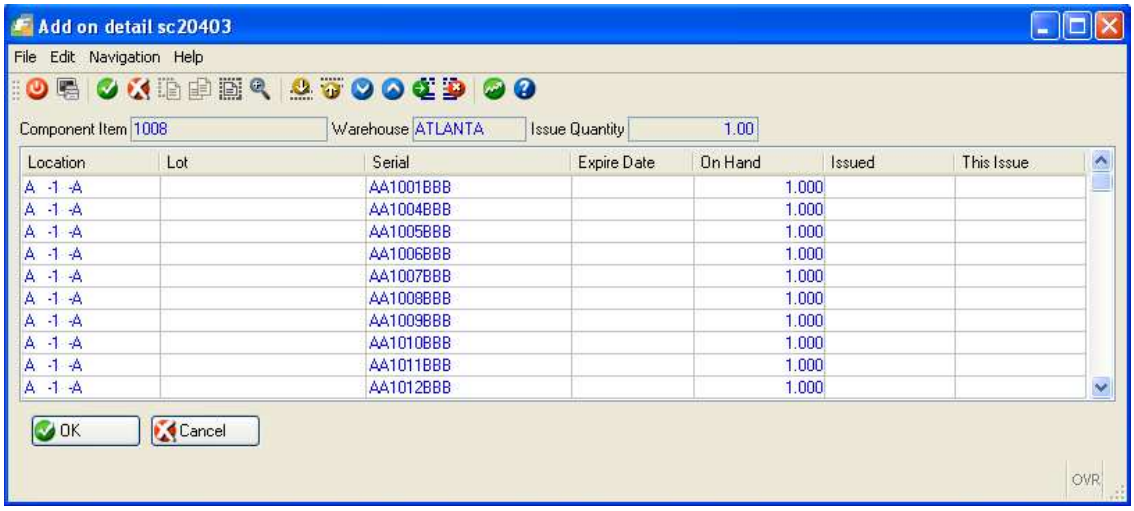
This screen displays when:

- You tab past 'This Issue', for a component where the Detail column was highlighted as 'Needed'.
- You click the

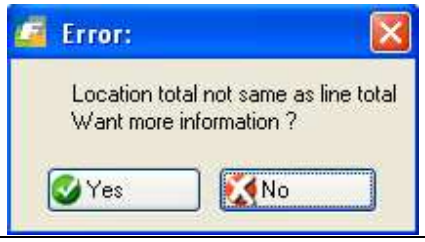
button when the cursor is positioned on a component where the 'Detail' column is highlighted as 'Needed' or 'Supplied'

You must select serial numbers or lots with a total quantity that matches the issue quantity.

The following window displays:



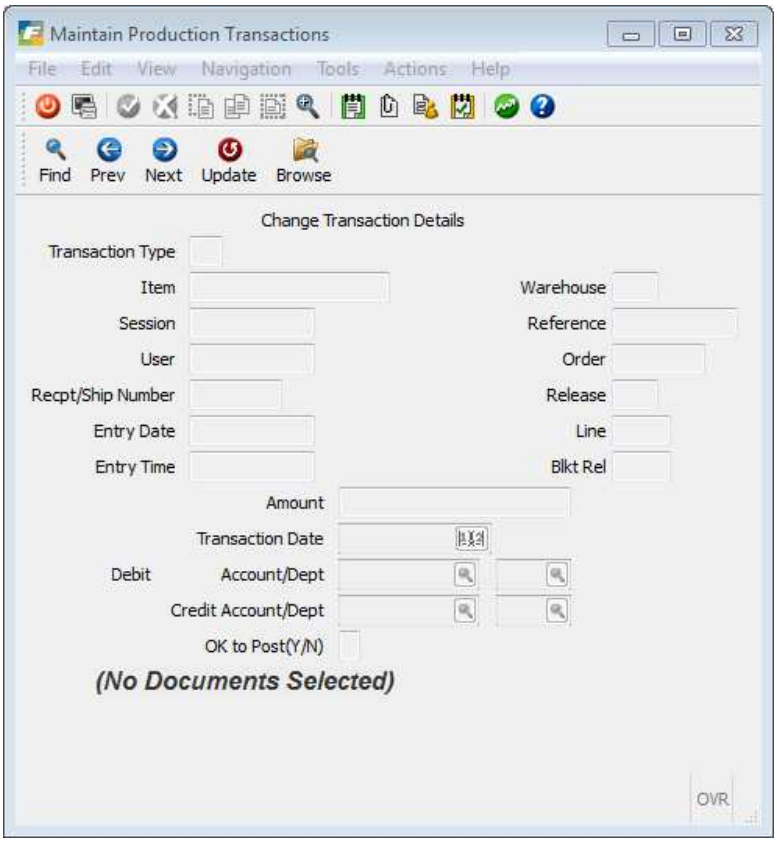
The following fields can be entered:

Field	Description
This Issue	Enter a quantity of the serial number or lot issued *The issue quantity for each selected serial or lot is summed and compared to the issue quantity for the component. If the sum does not match, an error is displayed:* 

Maintain Production Transactions

This menu option (c) is used to work with production inventory transactions which were NOT processed with the 'Update Inventory Now' choice. You can make changes to the Transaction Date, and Account Numbers/Departments, before posting them to Inventory Control and General Ledger.

The following window displays:



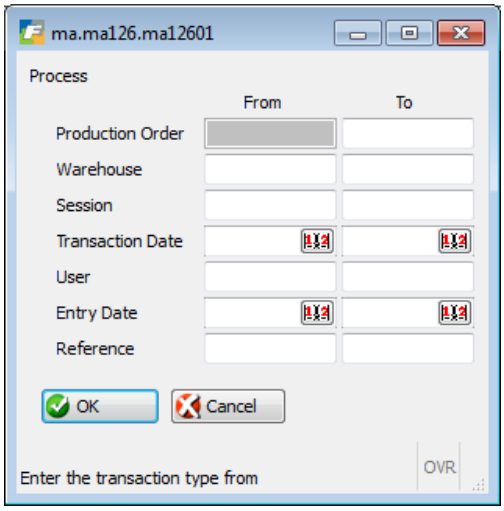
Enter into the following fields:

Field	Description
Transaction Date	The date to be recorded in the General Ledger
Debit Account/Dept	Enter the user associated with this transaction
Credit Account/Dept	Enter the date of the transactions
OK to Post (Y/N)	Enter Y to allow posting to Inventory Control and General Ledger or N to prevent posting.

Edit Production Transactions

Use this menu option (d) to print an edit listing of production inventory transactions which were NOT processed with the 'Update Inventory Now' choice.

When you select this menu option, you must first indicate the destination of the report on the 'Select Printer' window (see the *Getting Started with Fitrix* manual). The following window will then display:

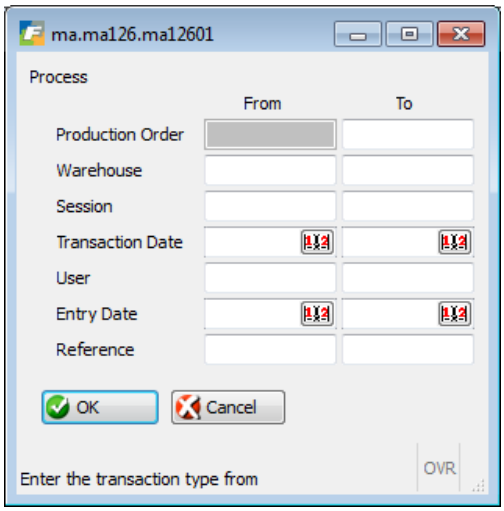


Enter From- and To- ranges for any of the available fields, then Click OK to process the edit listing.

Post Production Transactions

Use this menu option (e) to print a posting list of production inventory transactions which were NOT processed with the 'Update Inventory Now' choice. The posting updates inventory on hand balances, and posts accounting entries to the General Ledger transaction tables.

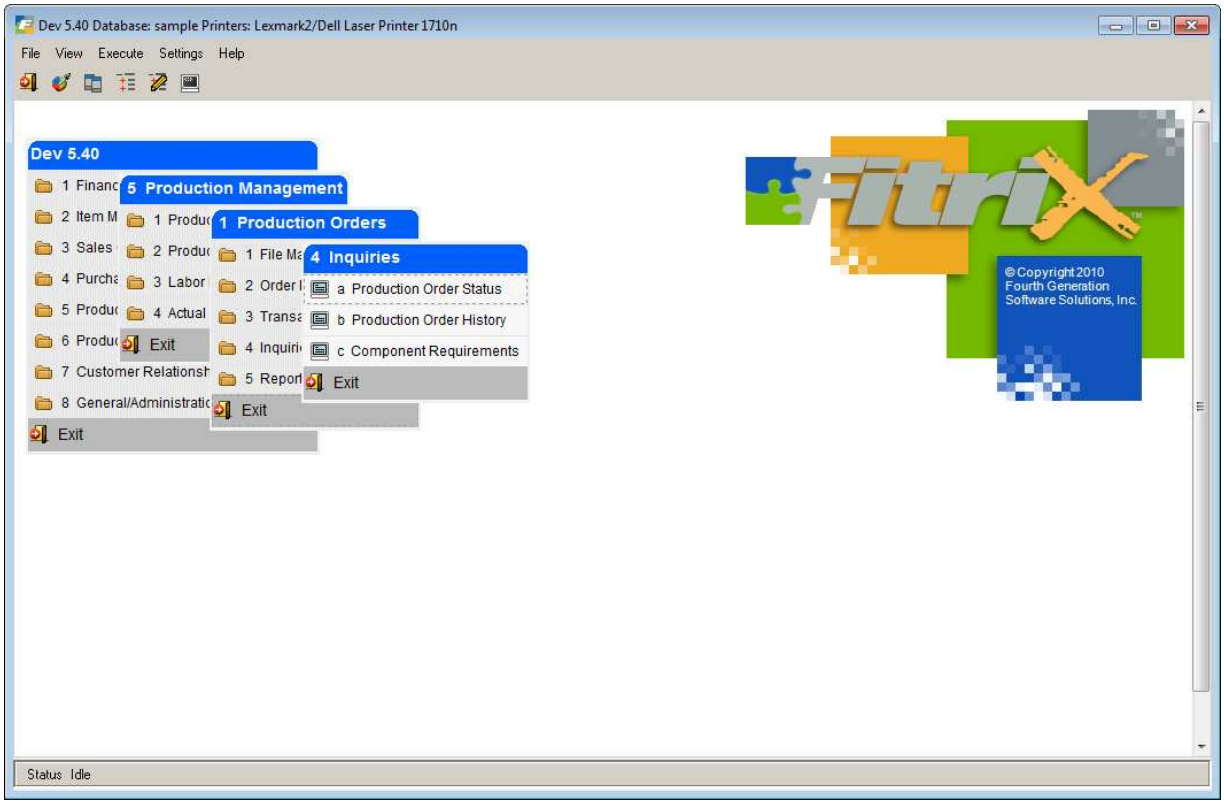
When you select this menu option, you must first indicate the destination of the report on the 'Select Printer' window (see the *Getting Started with Fitrix* manual). The following window will then display:



Enter From- and To- ranges for any of the available fields, then Click OK to process the posting list.

Inquiries

The options on the Inquires submenu allow you to view information about the production work orders.

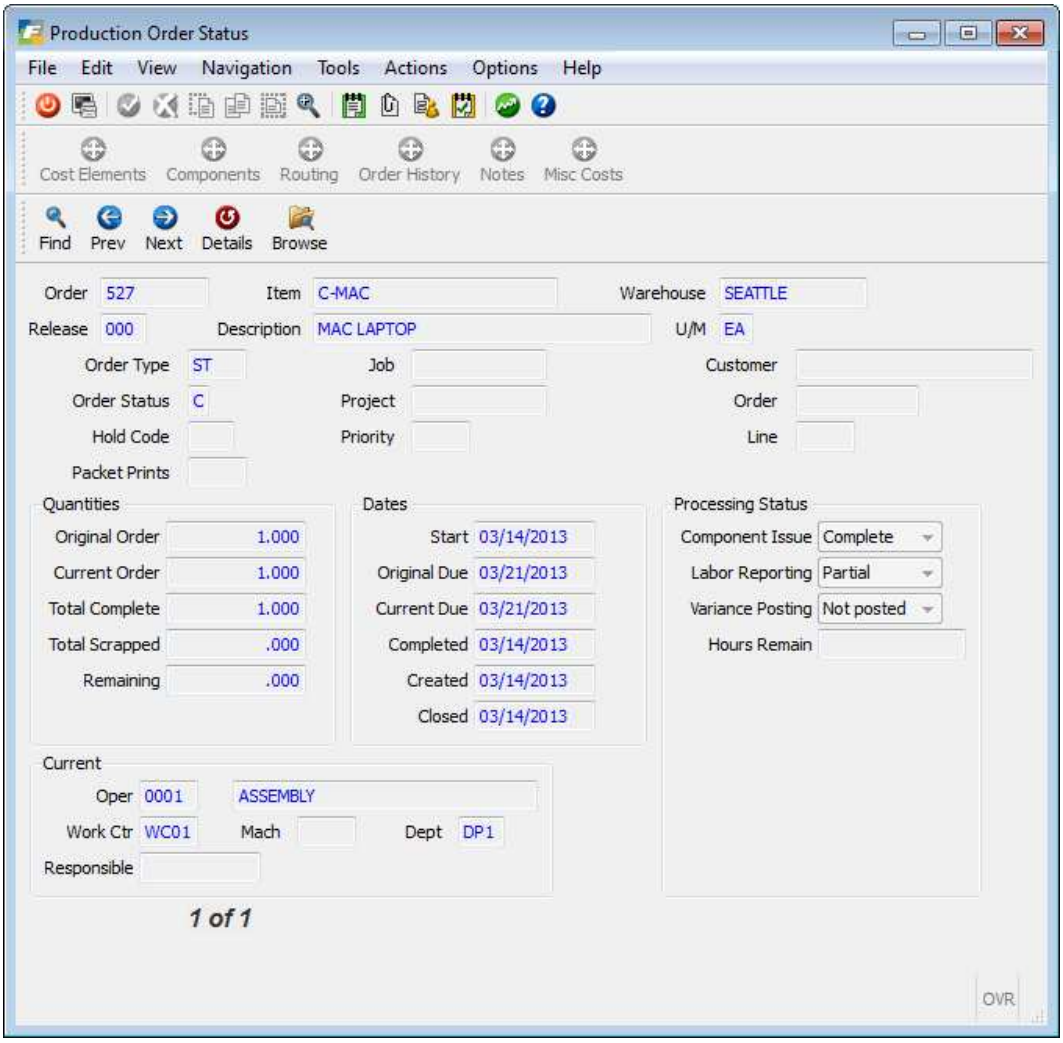


Production Order Status

Use this menu option (option 4-a) to display the current status of an open production order. Information is presented as an at-a-glance summary, showing status relative to quantities produced, due dates, and current operation statistics. You can also review component and routing step details.

Production Order Status screen

When you select the menu option, the following screen displays:

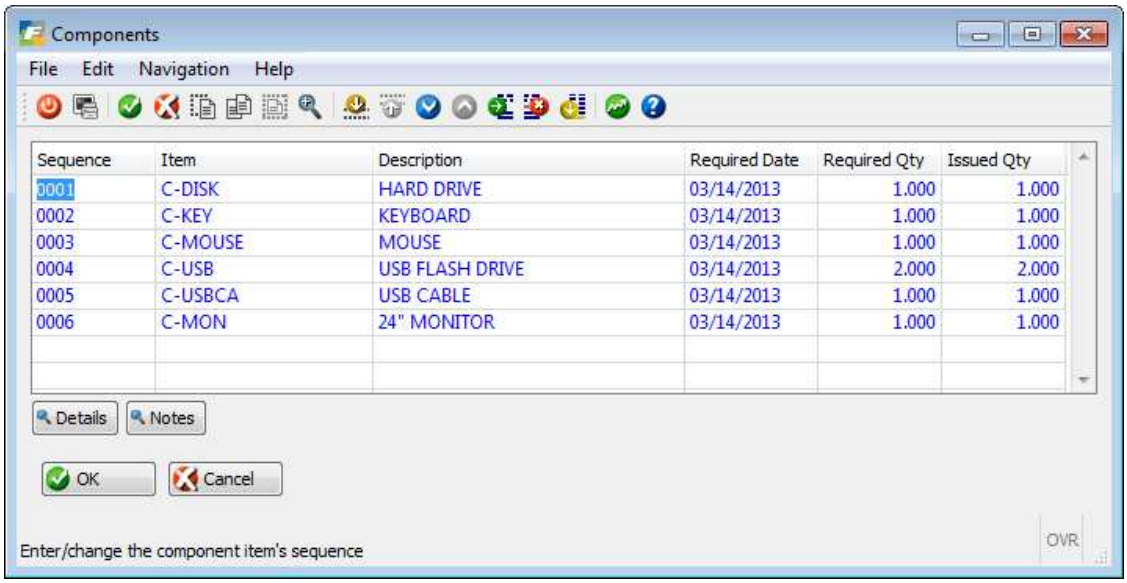


Click the Find button to search for the order. You can then click the Details button to access more options

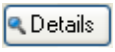
Component List screen

This screen displays when you click the

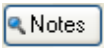
button from the Status screen:



The following additional information is available, by clicking the appropriate button:



View additional details for the current component

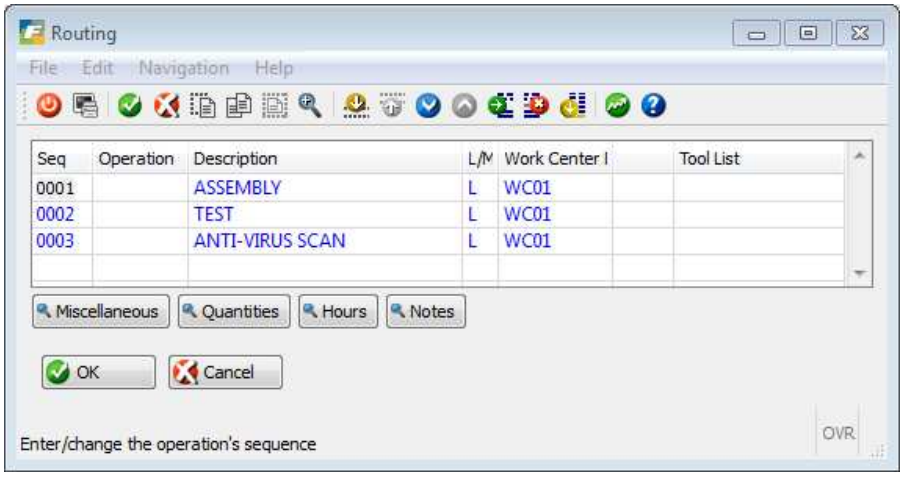


View user-defined notes for the current component

Routing List screen

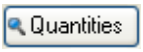
This screen displays when you click the

button from the Status screen:

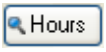


The following additional information is available, by clicking the appropriate button:

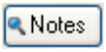
View additional descriptive information for the current routing step



View quantity-related information for the current routing step



View hours-related information for the current routing step

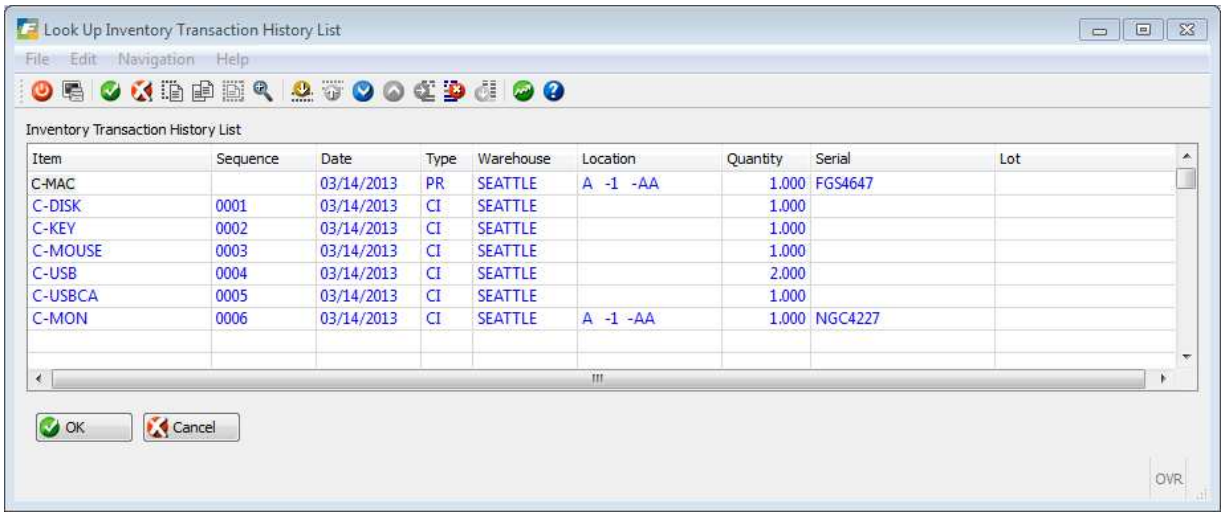


View user-defined notes entered for the current routing step

Order History screen

This screen displays when you click the

button from the Status screen. It displays the Production Receipts which have been processed for the current order.

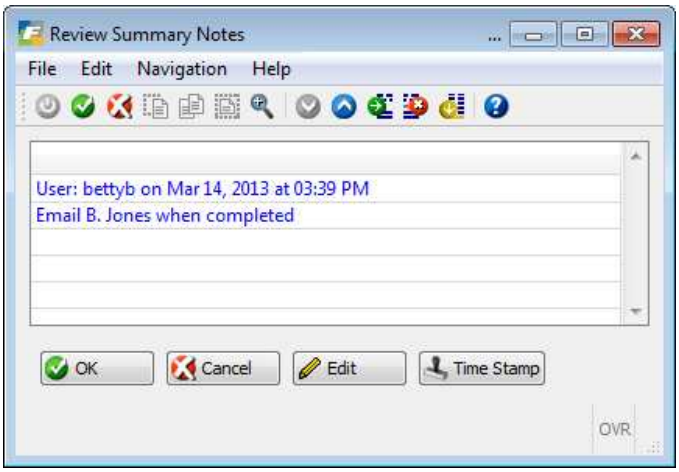


Item	Sequence	Date	Type	Warehouse	Location	Quantity	Serial	Lot
C-MAC		03/14/2013	PR	SEATTLE	A -1 -AA	1.000	FGS4647	
C-DISK	0001	03/14/2013	CI	SEATTLE		1.000		
C-KEY	0002	03/14/2013	CI	SEATTLE		1.000		
C-MOUSE	0003	03/14/2013	CI	SEATTLE		1.000		
C-USB	0004	03/14/2013	CI	SEATTLE		2.000		
C-USBCA	0005	03/14/2013	CI	SEATTLE		1.000		
C-MON	0006	03/14/2013	CI	SEATTLE	A -1 -AA	1.000	NGC4227	

Order Notes screen

This screen displays when you click the

button from the Status screen. It displays any user-defined notes entered for the current order.

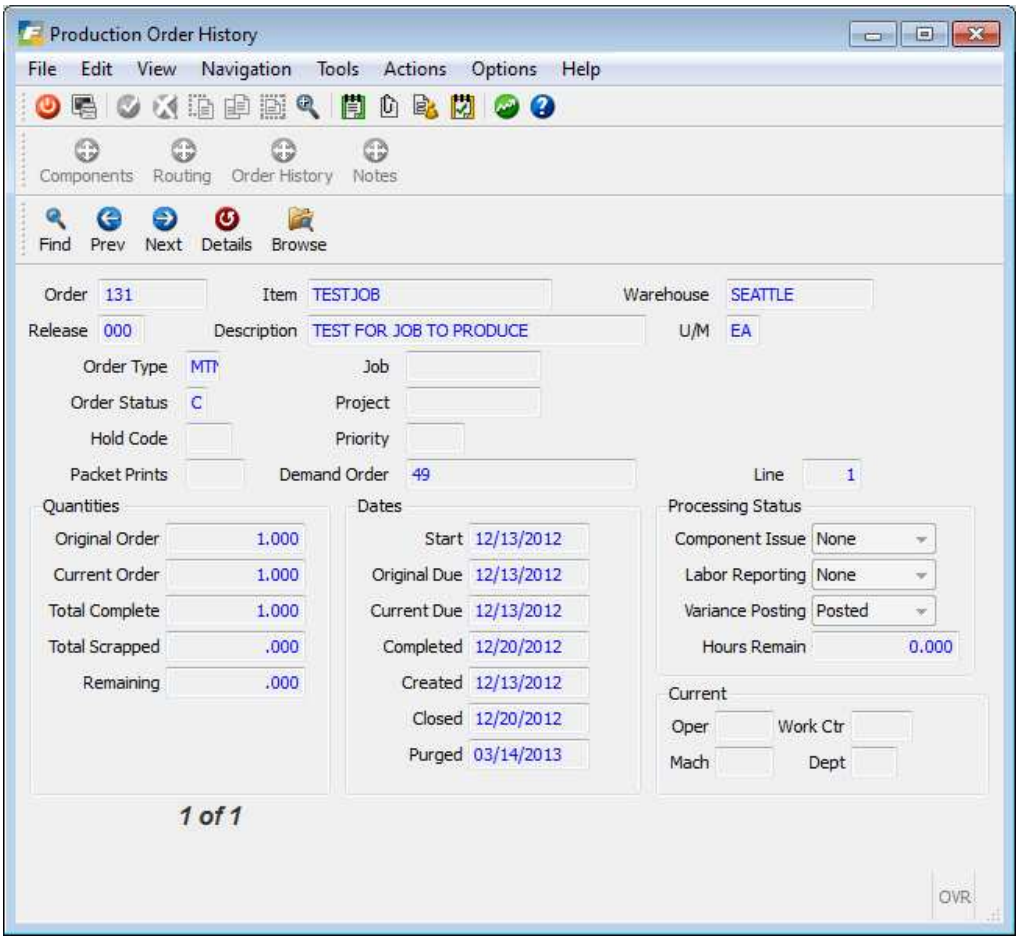


Production Order History

Use this menu option (option 4-b) to display the summary and details for orders which have been purged to history using the purge program on the Order Processing submenu. Information is presented as an at-a-glance summary, showing status relative to quantities produced, due dates, and last operation statistics. You can also review component and routing step details.

Production Order History screen

When you select the menu option, the following screen displays:

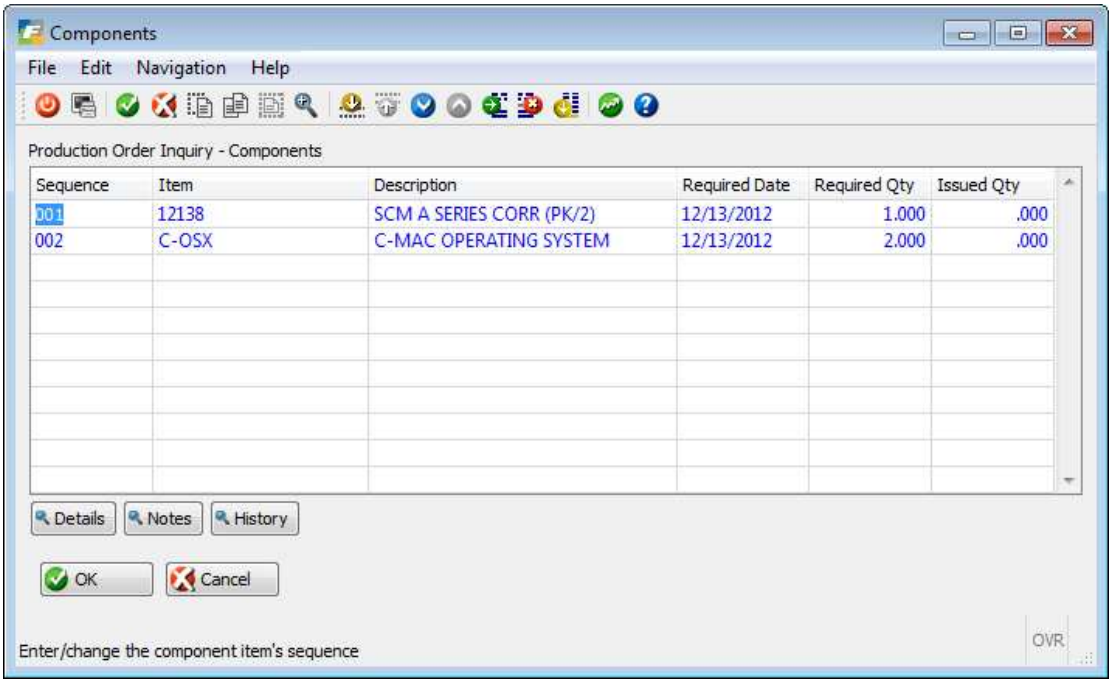


Click the Find button to search for the order. You can then click the Details button to access more options

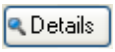
Component List screen

This screen displays when you click the

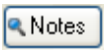
button from the Status screen:



The following additional information is available, by clicking the appropriate button:



View additional details for the current component



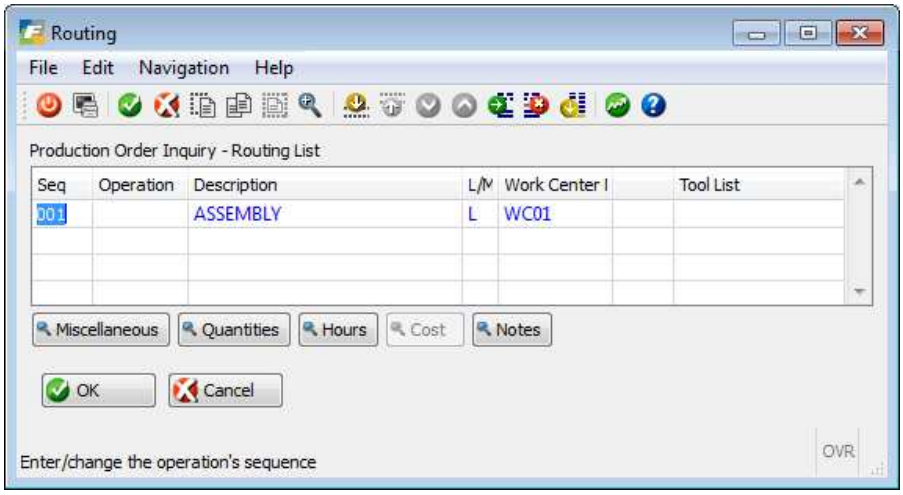
View user-defined notes for the current component

Reserved for future use

Routing List screen

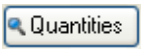
This screen displays when you click the

button from the Status screen:

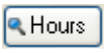


The following additional information is available, by clicking the appropriate button:

View additional descriptive information for the current routing step

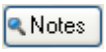


View quantity-related information for the current routing step



View hours-related information for the current routing step

View cost-related information for the current routing step

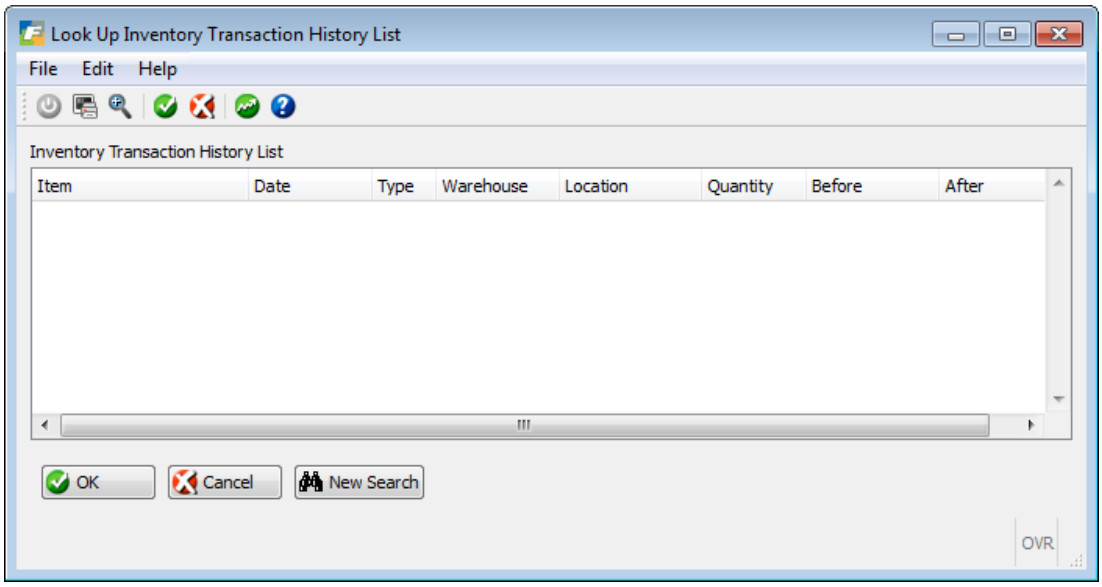


View user-defined notes entered for the current routing step

Order History screen

This screen displays when you click the

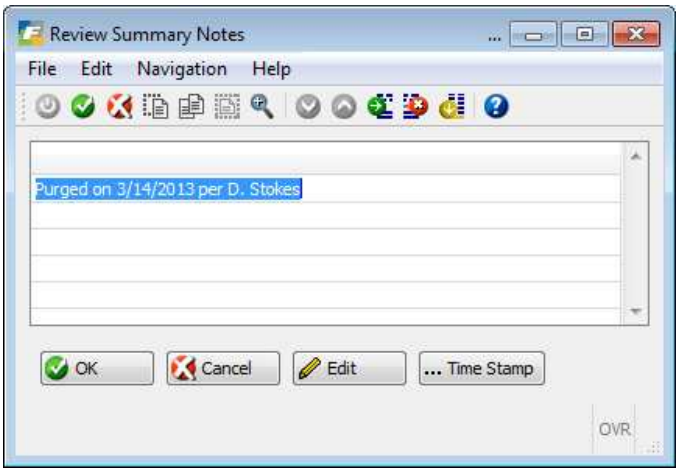
button from the Status screen. It displays the Production Receipts which have been processed for the current order.



Order Notes screen

This screen displays when you click the

button from the Status screen. It displays any user-defined notes entered for the current order.

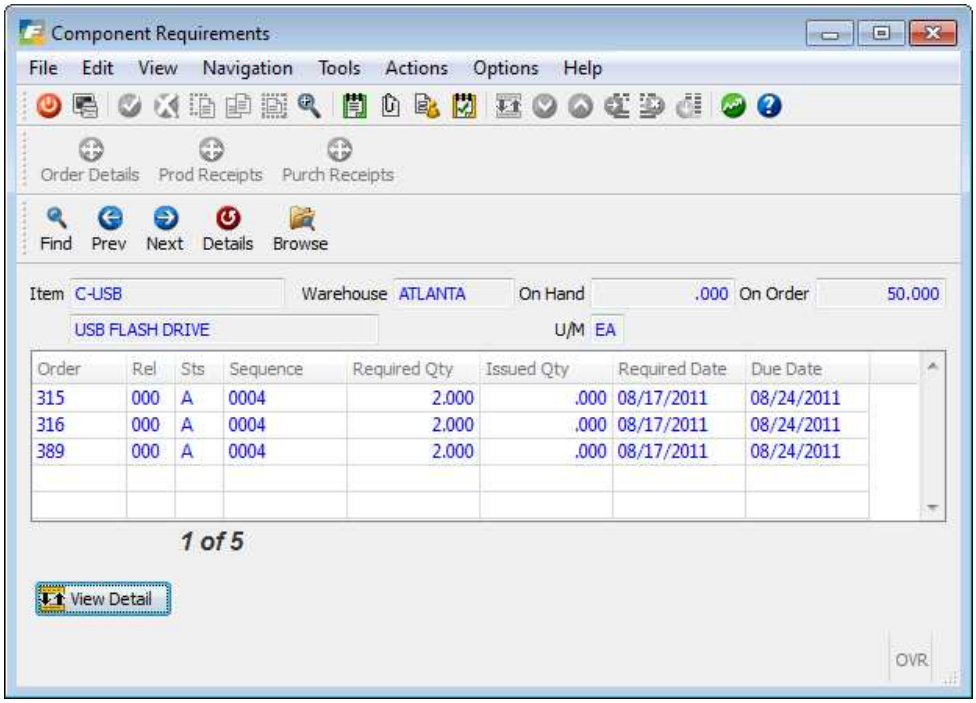


Component Requirements

Use this menu option (option 4-c) to display the production orders which require a common component. This is useful in determining where a component item might be needed when it is in stock, or when arriving on a purchase order.

Component Requirements screen

When you select the menu option, the following screen displays:

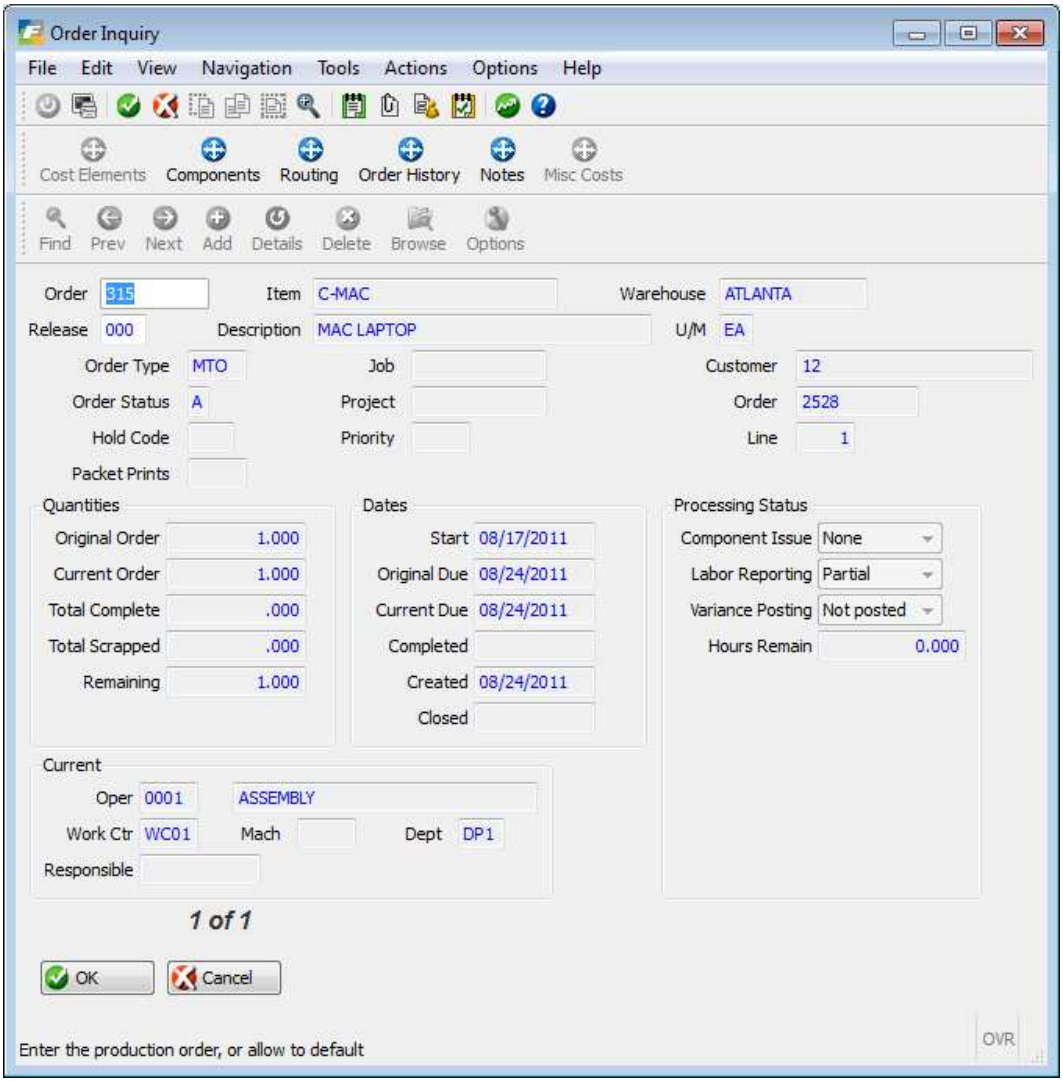


First click the Find button, and enter the component item and warehouse to be reviewed. After the item and its requirements are displayed, click the Detail button to access more options.

Order Details screen

This screen displays when you click the

button from the Status screen:

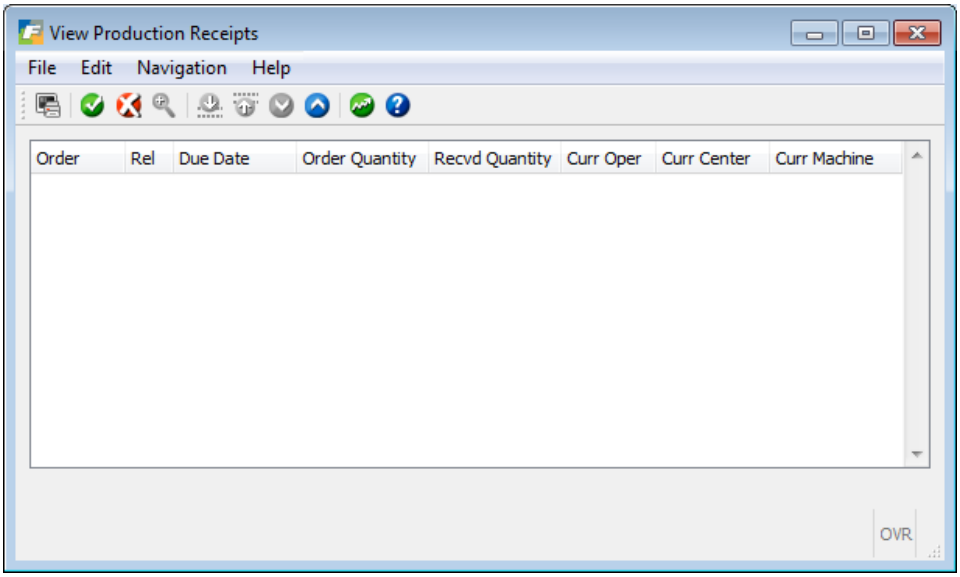


From this screen, you can access the same additional data as in the Production Order Status Inquiry (menu option 4-a).

Production Receipts screen

This screen displays when you click the

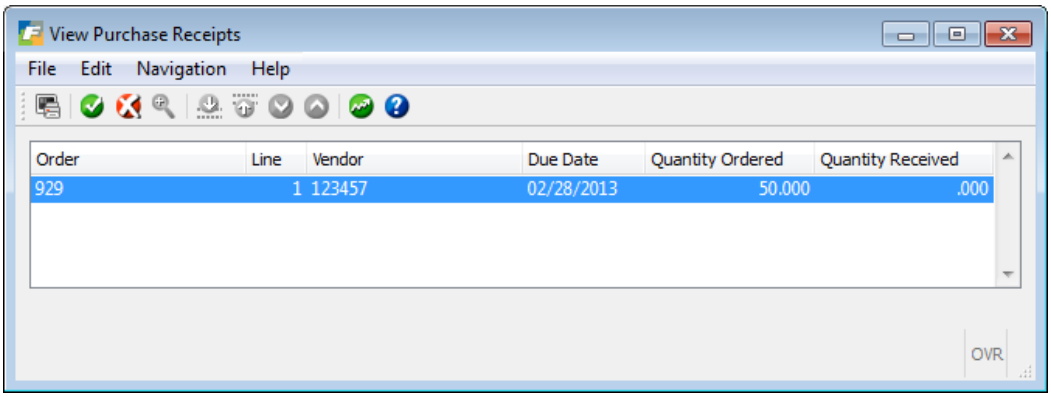
button from the Status screen. It shows scheduled receipts from open production orders. If the component item is a manufactured item, this screen would show any pending production for the item.



Purchase Receipts screen

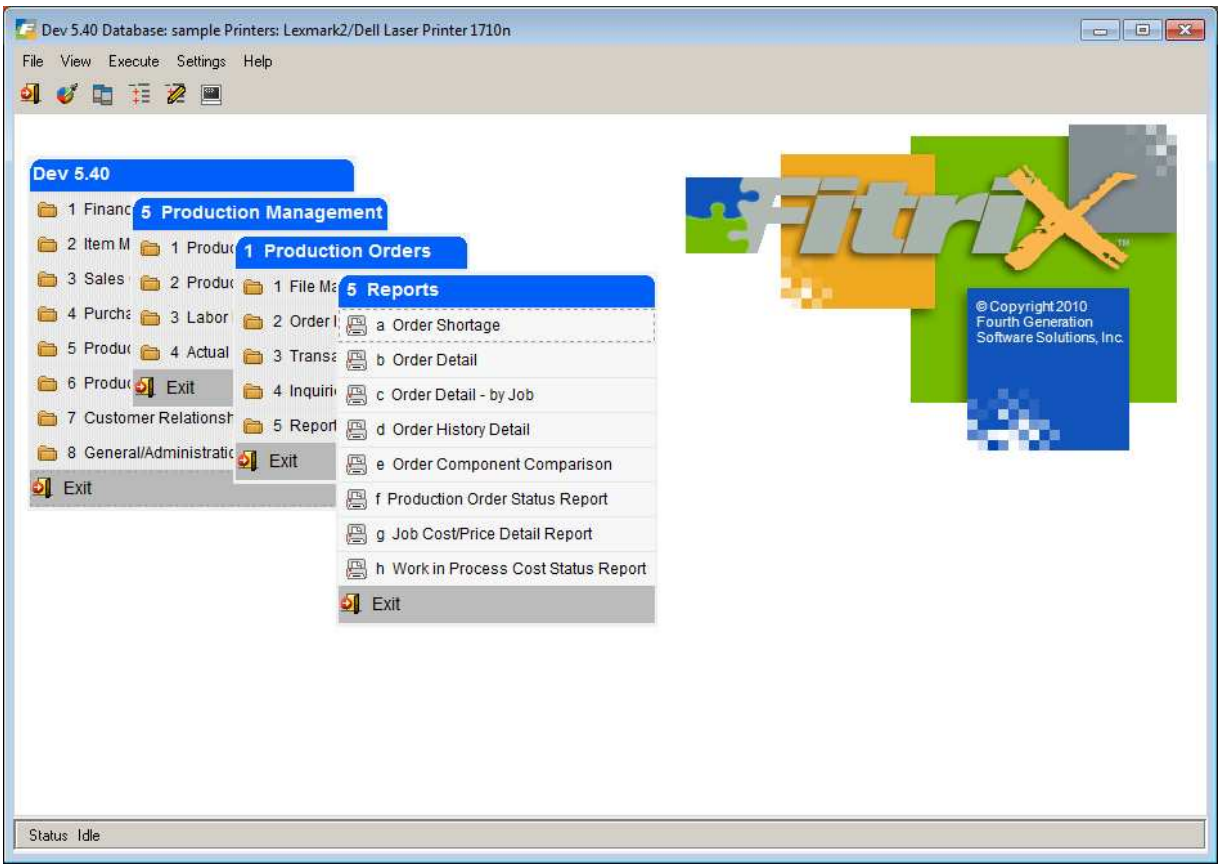
This screen displays when you click the

button from the Status screen. It shows scheduled receipts from open purchase orders. If the component item is a purchased item, this screen would show any pending purchase receipts for the item.



Reports

Use the options on this menu to review on screens the status of open and closed production orders . Samples of the reports can be found in the Production Order Processing User Guide.



Section Summary

Production Order Processing maintains information about production orders, and supports inventory transactions related to those orders.

Setting up Production Order Processing includes:

Defining Order Types, Hold Codes and Reason Codes
Completing the Production Order Processing Setup option and setting the Setup Complete flag to "Y".

The main tasks which are performed in Production Order Processing include:

Entering and maintaining Production Orders
Entering inventory-related transactions for production orders:
Component Issue
Production Receipt
Optionally posting transactions to General Ledger
Closing orders and moving them to the Order History archive

Lab Exercise a: Set Up Production Order Processing

In this lab you will be setting up production order processing defaults and reference files and adding to the Database.

1. Set up new Order Types (option a on File Maintenance menu)

Order Type	Description	Accounting Code	GL Department	Type of Bill	Type of Routing
MTO	Make To Order	DEFAULT	000	C	S
STD	Standard to Stock	DEFAULT	000	S	S

2. Set Up Hold Codes (option b on File Maintenance menu):

Decide if you want to use hold codes. If so, add as many as you will need to support the types of production order hold situations you will encounter (for example Material Short, QC Problems, machine down, etc)

3. Set Up Reason Codes (option c on File Maintenance menu):

This task will be deferred, as the Production Scrap transaction is not yet available.

4. Set Up Production Order Processing (option d on File Maintenance menu):

Decide which of the Order Types already set up should be the default

Decide if you want Order History Support

Decide it you want automatically generated order numbers

Decide what type of pick number you want to use

Decide on default work in process account numbers

Lab Exercise b: Production Order Entry/Maintenance

Order Entry/Maintenance (option a on the Order Processing menu):

1. Add a new order

Use the item WINASSY defined in the Bill of Material exercises

Warehouse should be the primary stocking warehouse

Use order type STD, as we want to build WINASSY, and put it into stock before selling it.

Enter a quantity and due date

Verify that the Bill of Material and Routings are both 'MFG'

Verify that the type of Bill of Material is S, and type of Routing is S

You will be prompted to create purchase orders for any short components. Select NO.

Print Production Pick List (option d on the Order Processing menu)

2. Select the specific order you just entered

Verify that the content is consistent with the components and their quantities per unit.

Lab Exercise c: Transaction Processing

Enter Production Receipt Transaction

Run the Inventory Valuation report for the main stocking warehouse

Select Add option to enter a new transaction

Select OK on the Session Defaults screen

Enter the Production Order number from Lab Exercise B.

Skip pick number

Enter quantity produced; components should then display with quantities filled in.

Check the box for ‘Update now’

Select OK to process the receipt

Verify that inventory balances were updated in Inventory Information Maintenance

Run the Inventory Valuation report and compare to the earlier run of the report.

Chapter 2 – Labor Processing

Learning Objectives

To learn the type of information and tasks that are maintained and completed in Labor Processing

To learn the relationship between the Labor Processing module and other modules in the Fitrix Accounting and Distribution System

To learn the steps involved in setting up the module

To learn the steps necessary to process Labor Processing Transactions

To understand inquiries and reports in the module

Overview of Labor Processing

What type of information is maintained in Lab Processing?

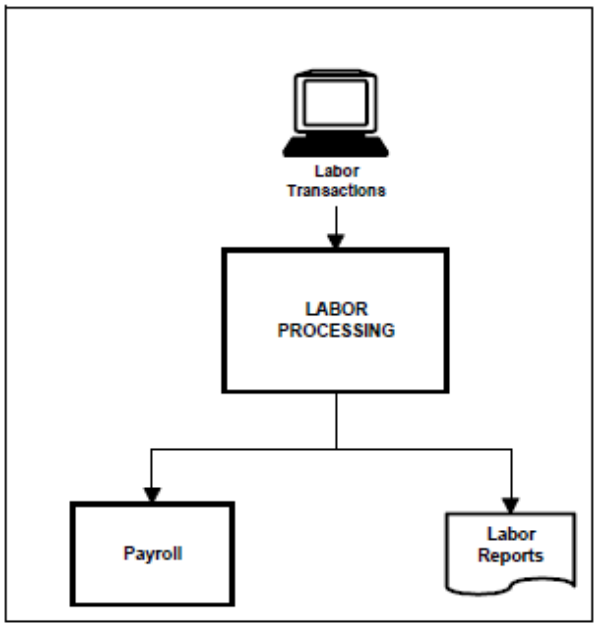
Fitrix Labor Processing is an application in the Production Management family. It facilitates the processing of labor transactions against production orders. Actual labor time, actual labor costs, and overhead costs for production orders are reported and calculated in this application. Together with Fitrix Production Order Processing, this application provides a complete picture of the activities that occur in completing a production order.

An effective labor reporting system allows easy and accurate reporting of time spent on a job. Costs and hours are accurately calculated based on a variety of cost elements and time-keeping rules. It supports the flow of hours and costs to the general ledger, payroll, and costing modules.
To achieve these objectives, the Fitrix Labor Processing application includes the following features:

- User defined labor types for setup, run, direct or indirect labor.
- Single transaction entry for a group of employees.
- Multiple shift codes for the same physical shift
- Employee job classifications for alternate labor costing.
- Standard Costing Integration
- Actual Costing Integration
- Production Processing Integration

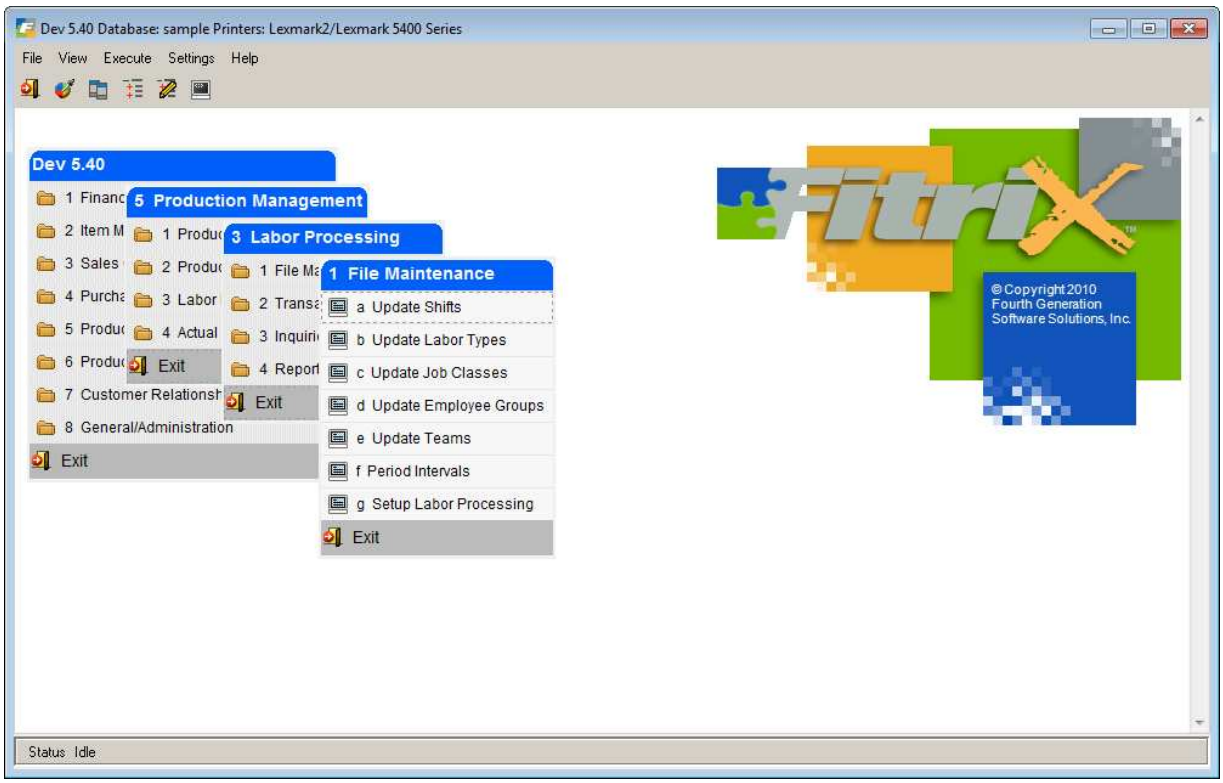
What relation does order entry have to other Fitrix Modules?

Fitrix Labor Processing works with an integrated database where information entered is immediately available to all other Fitrix applications. The figure below identifies the primary tables used by Fitrix Labor Processing and the functions which interact with them.



File Maintenance Menu

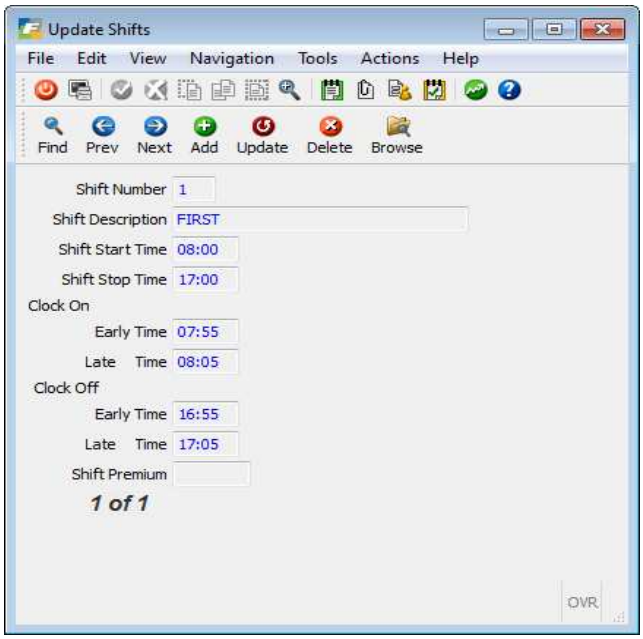
Options on the File Maintenance menu allow you to set up a number of reference files for use in other functions within Labor Processing. To view this menu from the main menu select **Production Management > Labor Processing > File Maintenance (option 1).**



Update Shifts

Use the Update Shift menu option (a) to add, update or delete shift information.

This table defines the parameters for the time calculation in labor transaction processing. Lunch, break start and finish times are some of the parameters in this table. At least one shift must be defined.

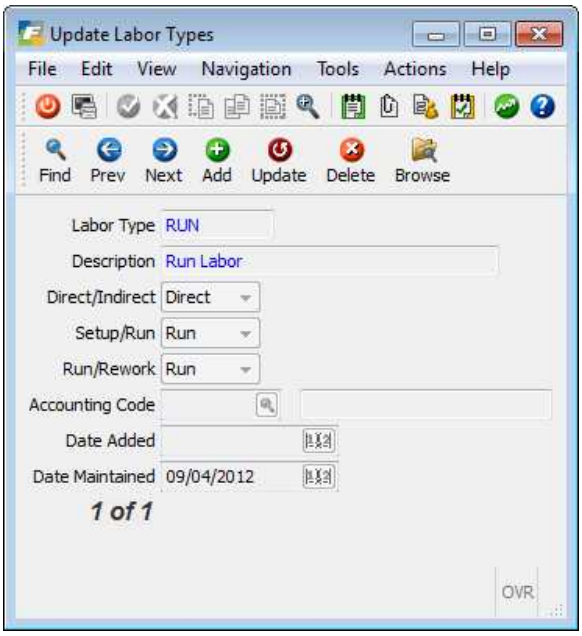


Below is a description of the fields which can be entered in the Planning Parameters window

Field	Description
Shift Number	The identifier for the shift being defined. The identifier of the shift being defined.The identifier for the shift being defined.
Shift Description	Description of shift
Shift Start Time	Time of day shift begins
Shift Stop Time	Time of day the shift ends
Clock On	The early time is the earliest time of day a transaction can take place. The latest time is latest time of day a person can clock in and not be considered late.
Clock Off	The earliest time of day that a person can clock out and not be considered leaving early. The earliest time of day a person can clock out and the latest time of day a person can clock out and not have their time considered as overtimeThe earliest time of day that a person can clock out and not be considered leaving early.
Shift premium	Monetary amount for premium pay (i.e.- graveyard shift)

Update Labor Types

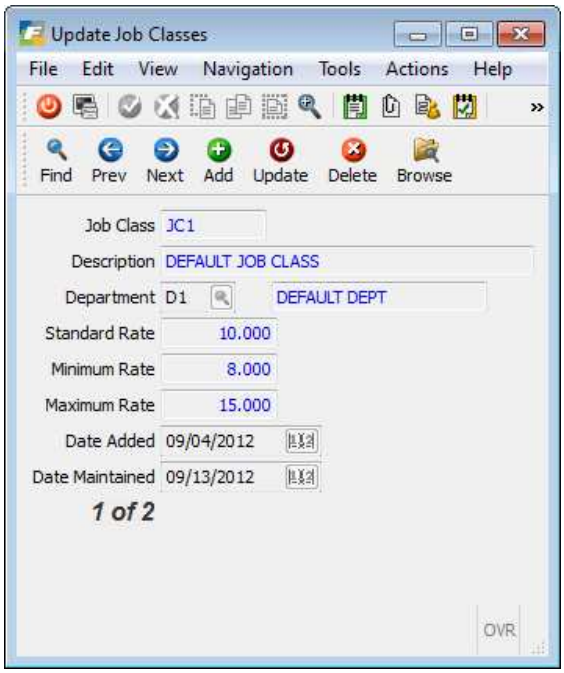
Labor type codes define whether the labor in the transaction is direct or indirect. Accounting information is assigned to the labor type so that the general ledger transactions are assigned to the correct general ledger accounts numbers. At least one labor type must be defined.



Field	Description
Labor Type	The identifier for the labor type being defined
Description	Description for the labor type
Direct/Indirect	Whether this labor type is direct (charged to a specific work order) or indirect (not charged to a specific work order)
Setup/Run	Setup or run labor time
Run/Rework	Run or rework labor time
Accounting Code	The identifier for the general ledger accounting codes that should be used with this transaction. These accounting codes are set up using the Accounting Codes program on the Bill of Material File Maintenance submenu.
Date Added/Maintained	These dates are maintained by the program

Job Classes

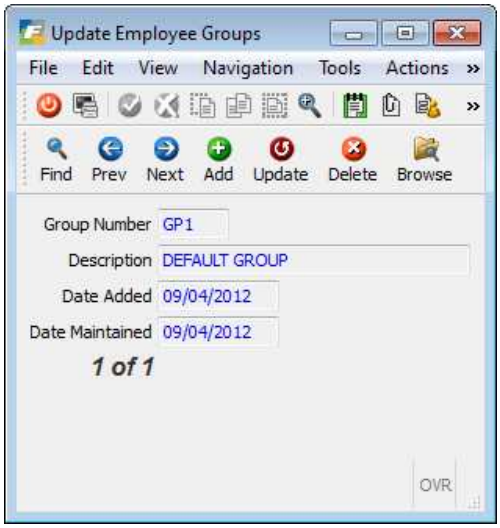
Job class codes are used in the costing process to assign labor costs. If the employee entering the labor time has a job class code in their employee master record, and the Setup Labor Processing program is set up to use job class as the default labor rate type, the standard rate found here will be used rather than the employee's rate will be used. Use of job classes is optional.



Field	Description
Job Class	The identifier for the class being defined
Description	A description for the job class.
Department	The identifier for the department that this job class is assigned. To view a list of departments press [CTRL]-[z] or click on the magnifying glass.
Standard Rate	The standard rate of pay for employees assigned to this job class.
Minimum Rate	The minimum rate of pay for employees assigned to this job class.
Maximum Rate	The maximum rate of pay for employees assigned to this job class.
Date Added/Maintained	These dates are maintained by the program

Employee Groups

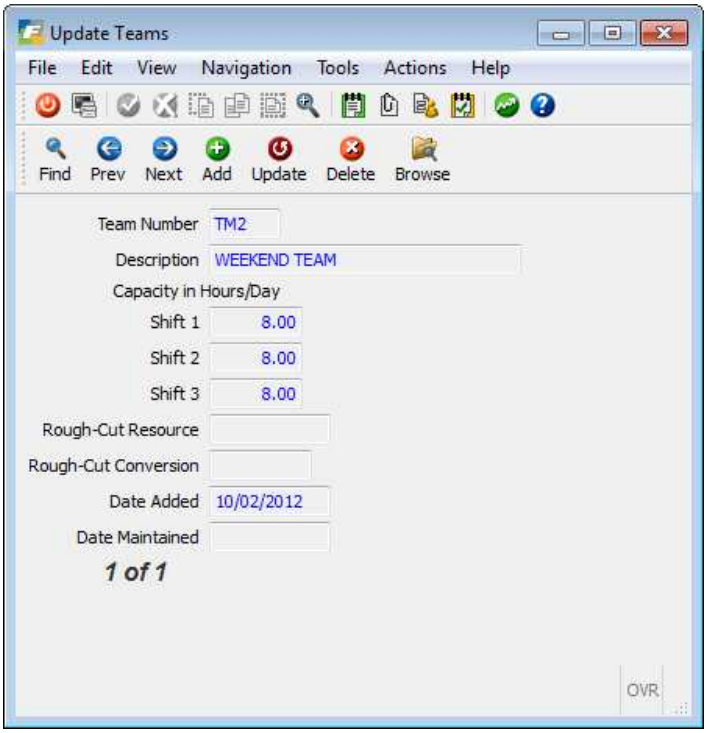
This table defines the group that can be used in reporting labor transactions. By assigning employees to a group, only one person needs to report labor transactions for the group. Each employee assigned to the group will have the correct labor information added to his employee number. The table contains the group ID and description. This table is optional.



Field	Description
Group Number	The identifier for the group being defined.
Description	A description for the group.
Date Added/Maintained	These dates are maintained by the program

Update Teams

This table defines the teams that can be used in scheduling work. The table contains the description for the team, the team capacity by shift and the resource information needed for the planning applications. This table is optional.



Field	Description
Team Number	An identifier for the employee team that you want to define.
Description	A description of the team.
Capacity in Hours	Hours per shift the team is capable of performing
Rough Cut Resource	Reserved for future use with the Master Scheduling module.
Rough Cut Conversion	Reserved for future use with the Master Scheduling module.
Date Add/Maintained	These dates are maintained by the program

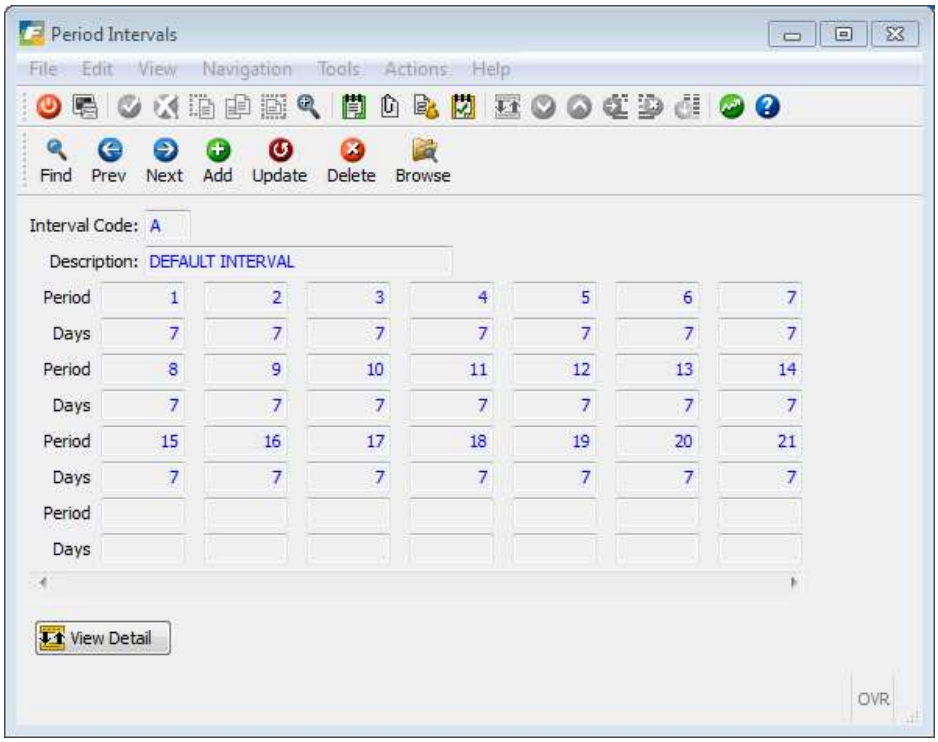
Period Intervals

Fitrix Manufacturing has many inquiries and reports where past or future activity is presented in a table format, with the columns representing time periods, such as days, weeks, months, etc., and the rows representing summarized business data, such as labor hours reported (past), or expected sales (future), or planned production (future).
These inquiries/reports use Fitrix Period Intervals, to define the lengths of the above time periods. Some period intervals are pre-defined and shipped with Fitrix, such as:

- 26 weekly time periods
- 12 monthly periods

These pre-defined intervals are used when running various Fitrix inquiries/reports. If necessary, new Period Intervals can be created with other defined lengths of time periods. For example, the Material

Planning application may be set up to display future inventory movement in weekly periods for the next 8 weeks, then monthly for the next 10 months after the initial 8 weeks.
Use the Period Intervals menu option (f) Period Intervals to set up interval codes that define the number of periods and the number of days in each period. When defining a Period Interval, a 1 to 3 digit value is used to define each specific period (1 or more) and is associated with the selected number of calendar days (such as 1-daily, 7-weekly, 30-monthly, etc).



When running an inquiry or report, one part of the selection criteria is a 'Start Date'. This date is used as the beginning date for the first interval (the first column in the table). The next column beginning date is the first column, PLUS the period interval in calendar days, and so on.
When running an inquiry/report that looks at future activity (such as Material Planning or Production Scheduling), using a start date of 'today' is appropriate, because the data being reviewed is future-oriented.
When running an inquiry/report that is looking at past activity (such as Labor Efficiency), it is more important to review data in the past, so the start dated entered should be 30 days BEFORE today, in order for the last 30 days of activity to be displayed by period interval. If period intervals are set to 7 days, then the activity for the past 30 days would be summarized and displayed in 4 columns.
The menu options in Fitrix that use Period Intervals:

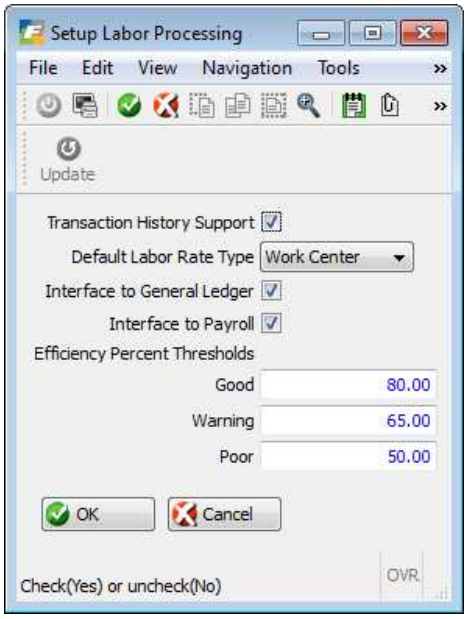
Labor Processing/Inquiries/Labor Efficiency – multiple (includes past labor activity)

Material Planning/Reports/Material Planning – multiple (includes future inventory activity)

Material Planning/Reports/Material Planning Recommendations – multiple (includes future inventory activity)
Production Scheduling/Inquiries/Order Status by Warehouse – includes future labor activity
Production Scheduling/Inquiries/Capacity vs Load – multiple (includes future labor activity)

Set up Labor Processing

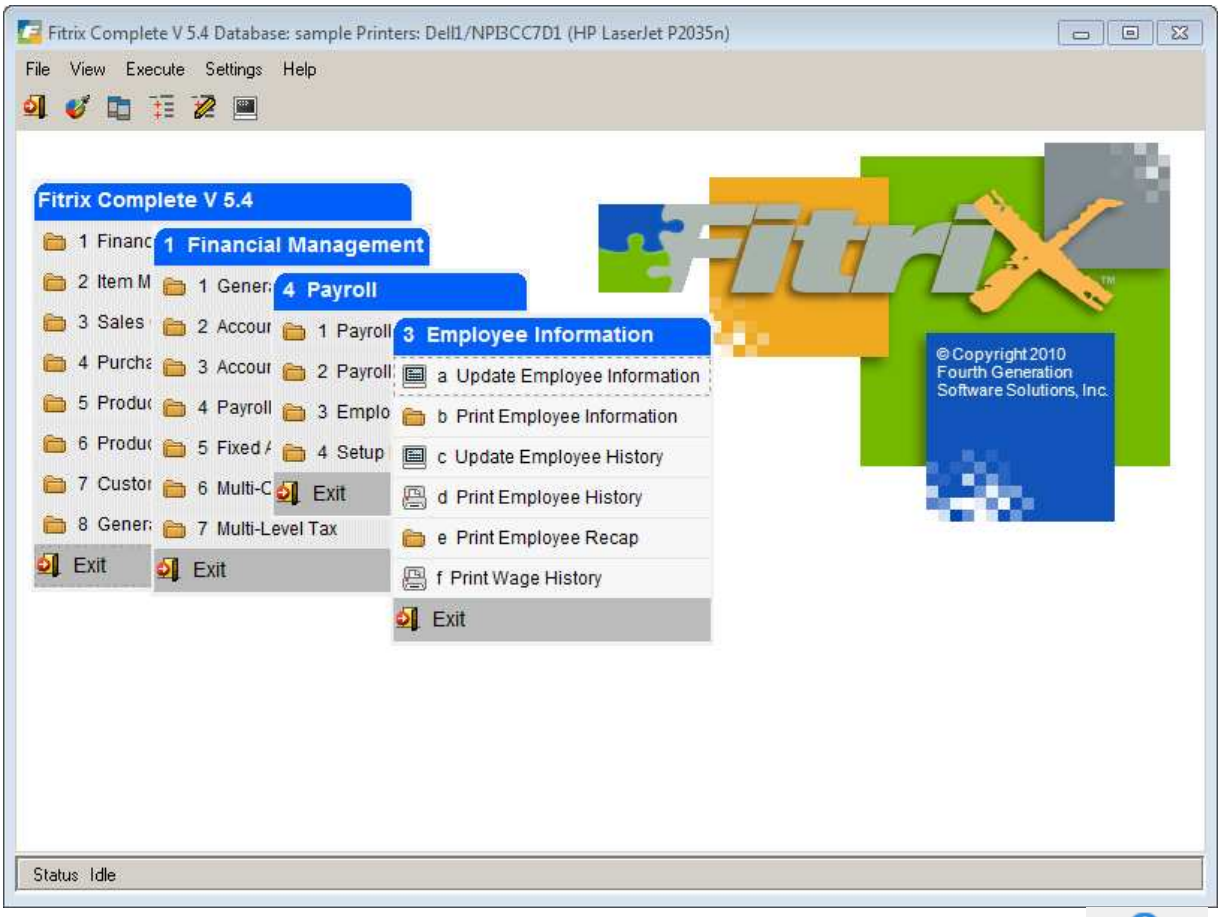
This table establishes the controls for processing labor transactions. Default values are defined and this table is required

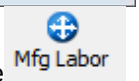


Field	Description
Transaction History	Y indicates labor transaction will be written to the history table when posted. They can be viewed online after posting. Many reports use this history table. N indicates labor transactions will not be written to history.
Default Labor Type	Rates can come from either the work center, job class, or employee table
Interface Check Boxes	Check these if you want GL transactions and payroll timecards created when the labor processing transactions are posted.
Efficiency % Threshold	These values are used by the Labor Efficiency Inquiry programs discussed in Chapter 4. For example, if the actual labor hours worked is 80% or more of the standard hours this is rated as good performance.

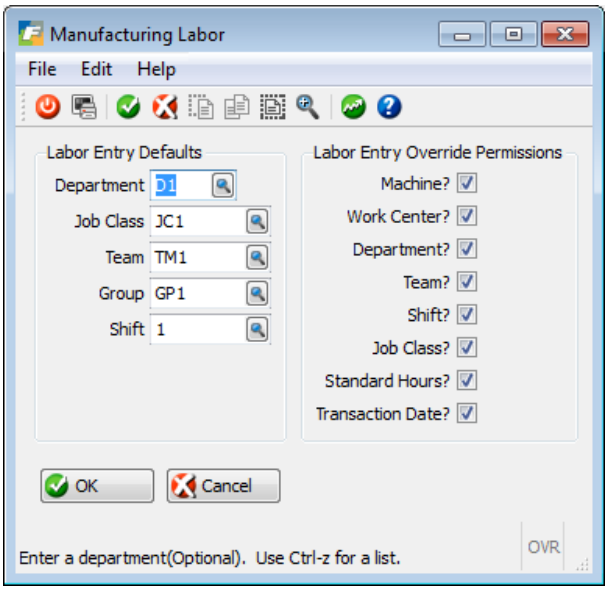
Employee Master

Use the Update Employee Information menu option to add, update or delete employee information.



Once in this program, select Find to display the employee. Select Update and then click on the 

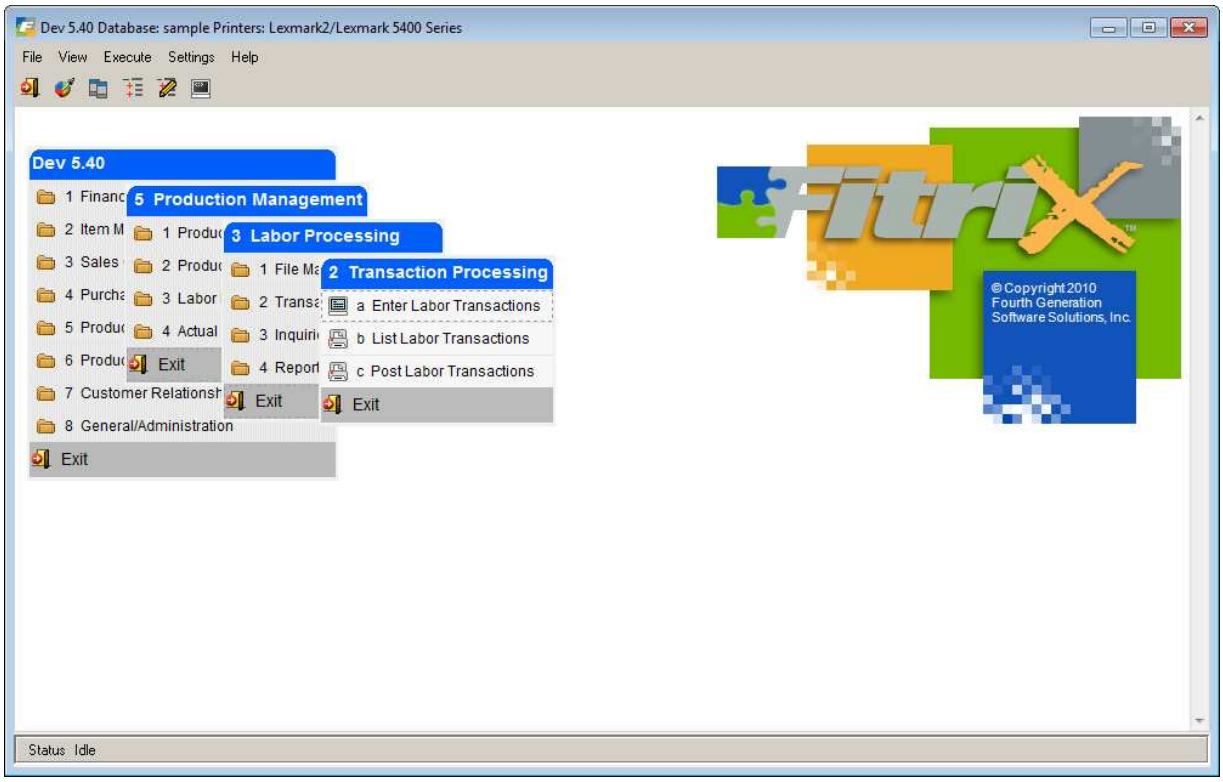
icon on the toolbar to launch the Manufacturing Labor program.



Field	Description
Department	The department the employee works in (not to be confused with the department codes used when recoding accounting transactions). These departments are set up using the Department program located on the Standard Routing File Maintenance menu. To view a list of departments press [CTRL]-[z] or click on magnifying glass.
Job Class	The job class to which this employee is assigned. To view a list of job classes press [CTRL]-[z] or click on magnifying glass
Team	The team to which this employee is assigned. A team is a resource that is used for planning and scheduling activities. To view a list of teams press [CTRL]-[z] or click on magnifying glass.
Group	The group to which this employee is assigned. Employees may be assigned to a group so that a transaction for the group will be propagated to each employee in the group. This reduces the number of transactions required. A group is different from a team in that a group is used only in this application for transaction processing. A team is a resource that is used for planning and scheduling activities. To view a list of groups press [CTRL]-[z] or click on the magnifying glass.
Shift	The shift this employee usually works. To view a list of shifts press [CTRL]-[z] or click on the magnifying glass.
Labor Entry Override Permissions	Checking these check boxes means the value can be changed (i.e. change the sift an employee is assigned to0 when entering labor transactions

Transaction Processing

When work on a production order is reported, the time information is entered into a labor transaction. The labor transaction updates the production order status at the time the transaction is entered. The costing information is calculated and updated on the production order when the Post Labor Transactions option is executed. GL transactions and payroll time card entries are also created at this time.



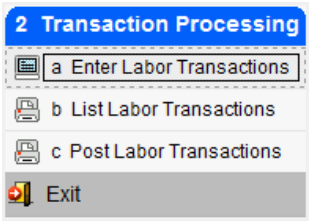
Enter Labor Transactions

The steps to assign labor costs to items being manufactured are as follows:

- Enter a production work order
- Print a production packet
- Print a production pick ticket
- Pull components
- Run component issue to commit components and record work in process
- Assemble/build the item(s)

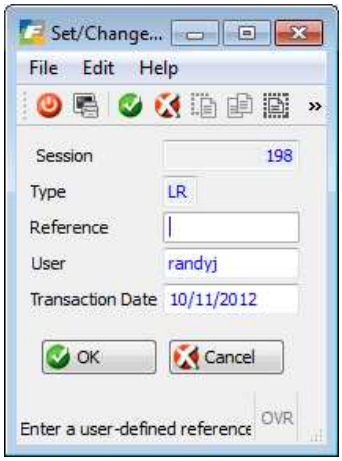
  Enter, edit, and post labor transactions to add labor cost to the finished products and create timecard entries for labor hours worked.
  Post production receipt to remove components from inventory, place finished goods in inventory, increase inventory GL balance, and reduce work in process GL balance.

Use menu option (a) Enter Labor Transactions to report labor transactions against production orders.



Labor transactions can be manually entered into this application. The date, shift, and employee number are required to record labor transactions. Each labor transaction will require a labor type, the production order number, the step in routing, and the time worked and the quantity produced. Transaction data is validated against the production order as it is entered. Then run menu option (b) List Labor Transactions to verify accuracy of information and correct any errors. Then run menu option (c) Post Labor transactions to post transactions.

When you go into Add mode this screen will display:



Session Number
A unique sequential number assigned by the program.

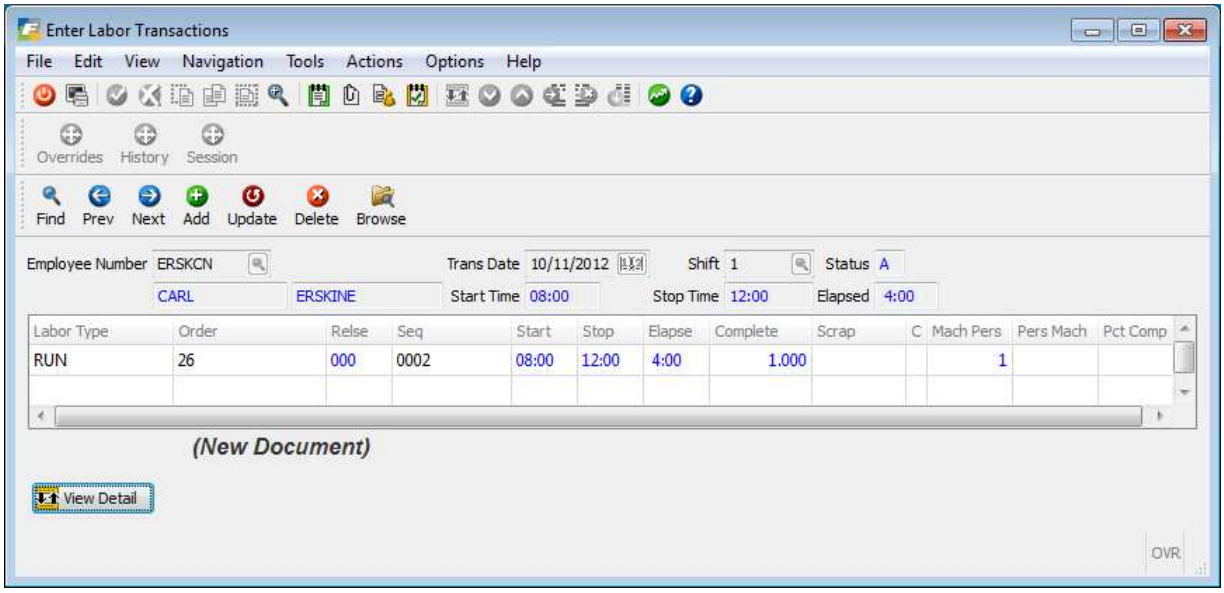
Type
Defaults to LR for labor reporting. This is a source code stored with the GL activity transactions created by the labor posting program and used as reference to indicate that this transaction was created by the Labor Processing module.

Reference
Optional freeform field.

User ID
Defaults to the User login ID

Transaction Date
The date the transaction occurred. This is also the date used by the posting routine.

Once you press Enter or click OK this screen displays:



Header Screen

Employee Number
The employee code for the employee whose time is being reported. The employee name will be displayed after the code. To view a list of Employees press [CTRL]-[z] or click on the magnifying glass.

Trans Date
Defaults to the value entered on the Set/Change Sessions Defaults screen. This will be the date used for the GL activity transactions created by the posting program.

Shift
Defaults to the employee's shift code but can be changed. Ctrl Z or click on magnifying glass to find a different shift.

Status
Display only field maintained by the system. Valid values are A for Active and P for Posted.

Start and Stop Time
Time employee started working on the production order and the time when the employee stopped working on the production order.

Elapsed - time
Calculated value based on start and stop times. You can also leave start and stop times blank and enter the elapsed time instead.

Detail Screen

Labor Type
The type of labor being reported. Defaults to Run. To view a list of labor types press [CTRL]-[z] or click on magnifying glass.

Order
The production order being reported against. To view a list of orders press [CTRL]-[z] or click on the magnifying glass.

Rel (Release)
The release level of this order. To view a list of releases press [CTRL]-[z] or click on the magnifying glass.

Seq (Sequence)
The routing step that is being reported against. To view a list of routing steps press [CTRL]-[z] or click on the magnifying glass.

Time

The following columns define how much time is spent on this operation. If start time is entered then the stop time must be entered. The elapsed time is calculated automatically. If the start and stop times are left blank, then the elapsed time must be entered.

Start
The time work began on this operation.

Stop
The time work ended on this operation.

Elapsed
The amount of time spent on this operation. This is calculated automatically if the start and stop times were entered.

Quantity Complete
The number of units that are completed on this operation.

Quantity Scrapped
The number of units that are rejected on this operation.

C (Complete)

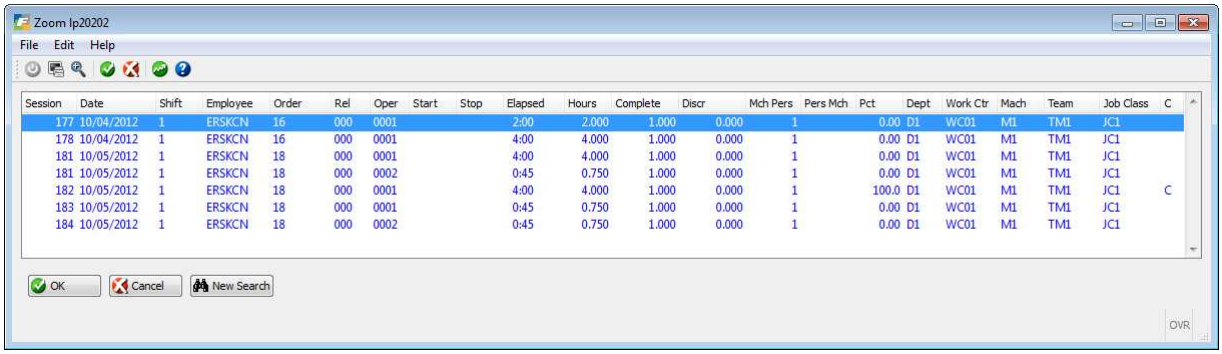
Blank	indicates that this operation is not complete.
C	indicates that this operation is complete. A completed operation is still open and can have additional transactions posted to it. It is closed in the operation closed transaction in production order processing.

Mach/Pers (Machine/ Persons)
The number of machines per person assigned to this transaction. The default value is 1. This means that one hour of labor time also creates one hour of time to be costed at the work center's overhead rate. If a direct labor employee works on multiple machines during a shift, this number should be the number of machines worked at. If Mach/Pers is 2, then each hour of labor time creates 2 hours of overhead rate time. If Mach/Pers is entered, then Pers/Mach is skipped.

Pers/Mach (Persons/Machine)
The number of persons per machine assigned to this transaction. The default value is 1 (if Mach/ Pers is not used). This means that one hour of labor time also creates one hour of time to be costed at the work center's overhead rate. If multiple direct labor employees work on a single machine during a shift, this number should be the number of persons working at the machine. If Pers/Mach is 2, then each hour of labor time creates 1/2 hour of overhead rate time.

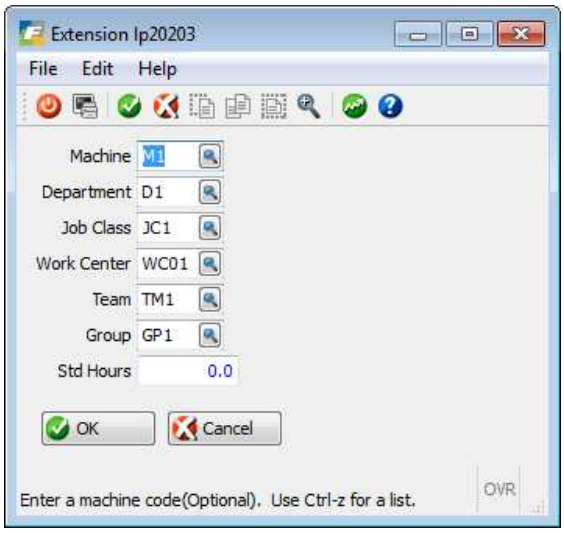
% Comp
The estimated percent of the operation that is complete.

History Screen
While in either the header or detail section of the Labor Entry screen and in either Add or Update mode click on History icon to see past labor transactions associated with the employee code.



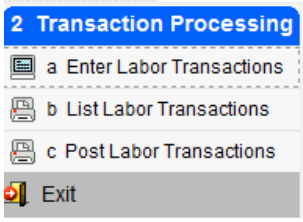
Session	Date	Shift	Employee	Order	Rel	Oper	Start	Stop	Elapsed	Hours	Complete	Discr	Mch Pers	Pers Mch	Pct	Dept	Work Ctr	Mach	Team	Job Class	C
177	10/04/2012	1	ERSKCN	16	000	0001			2:00	2.000	1.000	0.000	1		0.00	D1	WC01	M1	TM1	JC1	
178	10/04/2012	1	ERSKCN	16	000	0001			4:00	4.000	1.000	0.000	1		0.00	D1	WC01	M1	TM1	JC1	
181	10/05/2012	1	ERSKCN	18	000	0001			4:00	4.000	1.000	0.000	1		0.00	D1	WC01	M1	TM1	JC1	
181	10/05/2012	1	ERSKCN	18	000	0002			0:45	0.750	1.000	0.000	1		0.00	D1	WC01	M1	TM1	JC1	
182	10/05/2012	1	ERSKCN	18	000	0001			4:00	4.000	1.000	0.000	1		100.0	D1	WC01	M1	TM1	JC1	C
183	10/05/2012	1	ERSKCN	18	000	0001			0:45	0.750	1.000	0.000	1		0.00	D1	WC01	M1	TM1	JC1	
184	10/05/2012	1	ERSKCN	18	000	0002			0:45	0.750	1.000	0.000	1		0.00	D1	WC01	M1	TM1	JC1	

Overrides Screen
While in either the header or detail section of the Labor Entry screen and in either Add or Update mode click on Overrides icon to view and modify any of the default settings associated with this employee code.

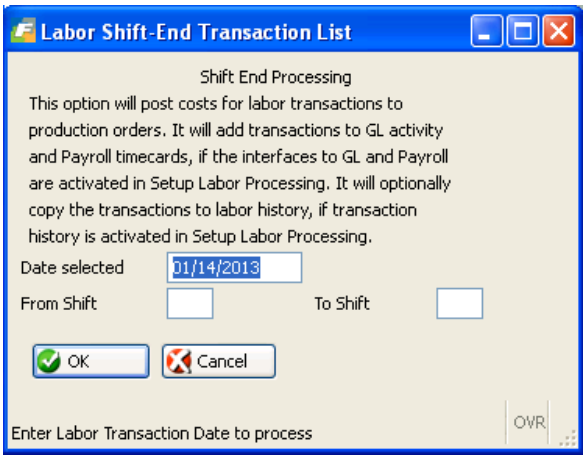


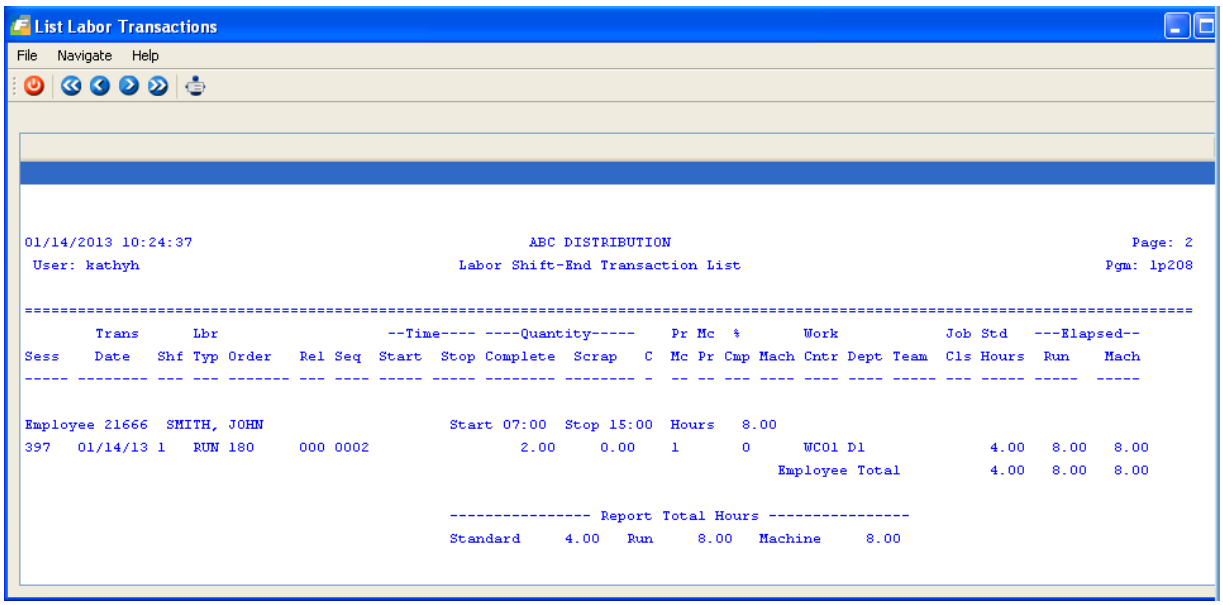
List Labor Transactions

Use menu option (b) List Labor Transactions entered.



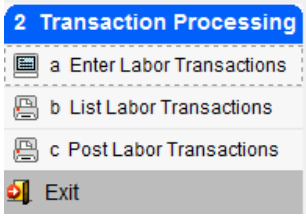
This edit listing must be run prior to posting the labor transactions.



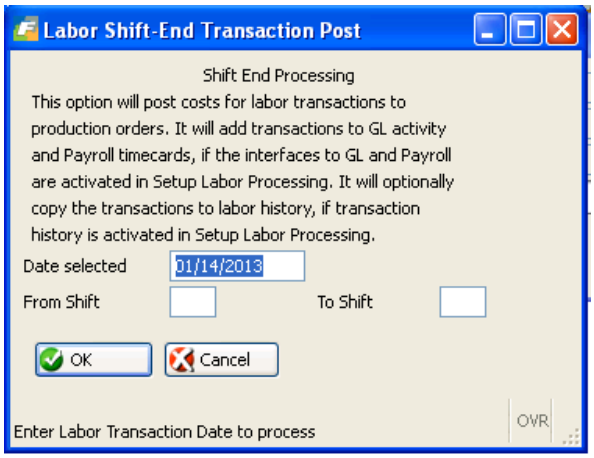


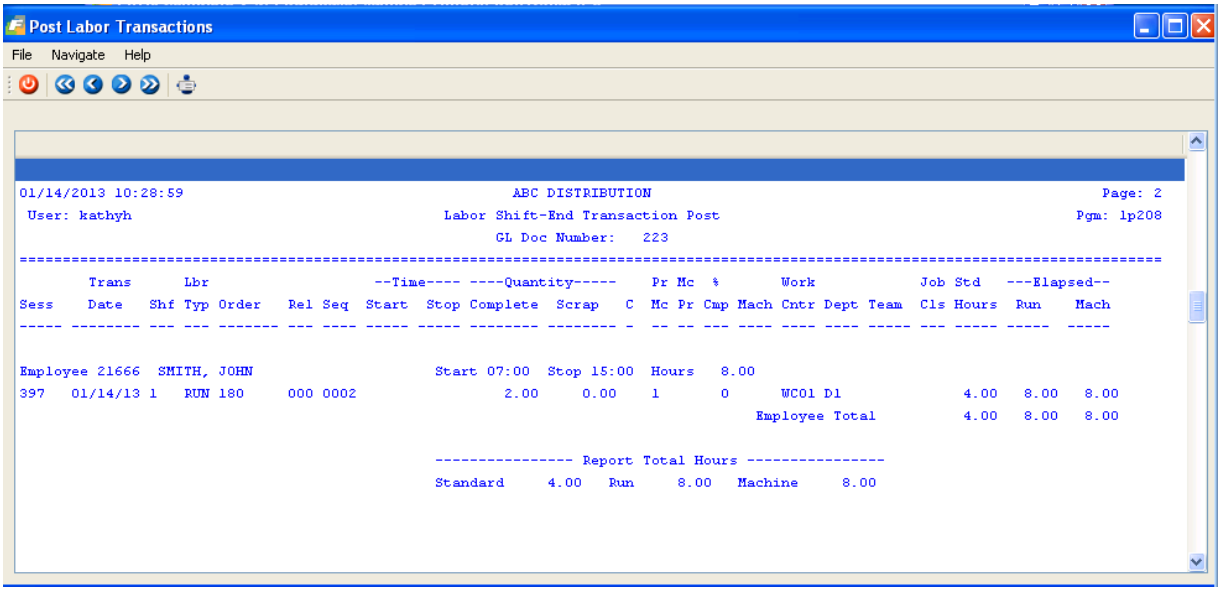
Post Labor Transactions

Use menu option (c) Post Labor Transactions after reviewing the edit listing.



This program will create the timecard entry for employees that have labor transactions and also creates GL transactions in the activity table.





The standard entries are as follows:

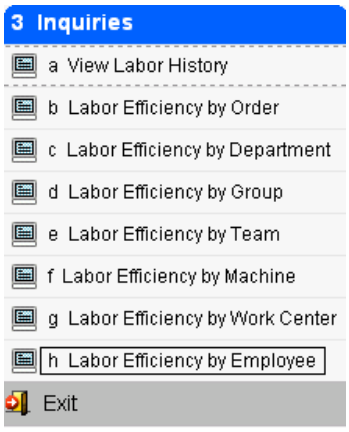
Program	**Cost Type**	**Debit**	**Credit**	**Work Center (labor type W)**	**Job Class (labor type J)**	**Employee Rate (labor type E)**	**Standard Costing instead of average costing**
Labor Posting (LP)	Labor	WIP-Labor	Mfg Control -Labor	Hrs worked x WC labor rate	Hrs worked x JC rate	Hrs worked x Employee rate	Pieces complete x WC Labor Rate x Std hrs per piece
	Overhead	WIP – Ovhd	Mfg Control-Ovhd	Hours worked x WC Ovhd Rate	Hours worked x WC Ovhd Rate	Hours worked x Work Center Ovhd Rate	Pieces complete x WC Ovhd Rate x Std hrs per piece
	Setup	WIP-Labor	Mfg Control-Labor	Hours worked x WC Labor Rate	Hours worked x JC Rate	Hours Worked x Employee Rate	WC Labor Rate x Setup hours
Payroll Posting		Mfg Control-Labor	Payroll payable or cash	Hours worked x Employee Rate	Hours worked x Employee Rate	Hours worked x Employee Rate	Hours worked x Employee Rate

Production Order Cost Variance Posting (AC)	Labor Rate Variance	Mfg Control - Labor	Labor Rate Variance Expense	Hours worked x WC Rate - Empl Rate	Hours worked x JC Rate - Empl Rate	N/A	WC Labor Rate x ((Pieces complete x Std hrs per piece) - Hours Worked)
	Labor Usage Variance	Mfg Control- Labor	Labor Rate Variance Expense	N/A	N/A	N/A	WC Labor Rate x ((Pieces complete x Std hrs per piece) - Hours Worked)
	Overhead Rate Variance	Mfg Control - Ovhd	Ovhd Rate Variance Expense	N/A	N/A	N/A	N/A
	Overhead Usage Variance	Closeout Variance - Expense	WIP Close Var- WIP Subaccount	Total WIP Additions - Prod Receipts	Total WIP Additions - Prod Receipts	Total WIP Additions - Prod Receipts	Total WIP Additions - Prod Receipts

Assumes a positive variance. If variance is negative, debits and credits will be reversed.

Assumes the accumulated value in WIP is more than the Production Receipt value.

Inquiries

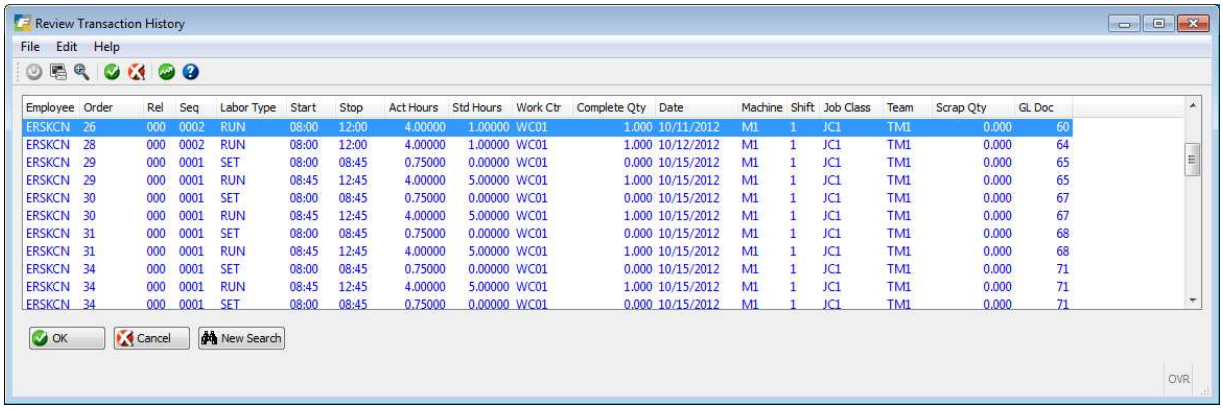


The inquiry functions included are:

- View Labor History
- Labor Efficiency
    - By Order
    - By Department
    - By Group
    - By Team
    - By Item
    - By Machine
    - By Work Center
    - By Employee

View Labor History

Use menu option (a) View Labor History to see posted labor entries.



Employee	Order	Rel	Seq	Labor Type	Start	Stop	Act Hours	Std Hours	Work Ctr	Complete Qty	Date	Machine	Shift	Job Class	Team	Scrap Qty	GL Doc
ERSKCN	26	000	0002	RUN	08:00	12:00	4.00000	1.00000	WC01	1.000	10/11/2012	M1	1	JC1	TM1	0.000	60
ERSKCN	28	000	0002	RUN	08:00	12:00	4.00000	1.00000	WC01	1.000	10/12/2012	M1	1	JC1	TM1	0.000	64
ERSKCN	29	000	0001	SET	08:00	08:45	0.75000	0.00000	WC01	0.000	10/15/2012	M1	1	JC1	TM1	0.000	65
ERSKCN	29	000	0001	RUN	08:45	12:45	4.00000	5.00000	WC01	1.000	10/15/2012	M1	1	JC1	TM1	0.000	65
ERSKCN	30	000	0001	SET	08:00	08:45	0.75000	0.00000	WC01	0.000	10/15/2012	M1	1	JC1	TM1	0.000	67
ERSKCN	30	000	0001	RUN	08:45	12:45	4.00000	5.00000	WC01	1.000	10/15/2012	M1	1	JC1	TM1	0.000	67
ERSKCN	31	000	0001	SET	08:00	08:45	0.75000	0.00000	WC01	0.000	10/15/2012	M1	1	JC1	TM1	0.000	68
ERSKCN	31	000	0001	RUN	08:45	12:45	4.00000	5.00000	WC01	1.000	10/15/2012	M1	1	JC1	TM1	0.000	68
ERSKCN	34	000	0001	SET	08:00	08:45	0.75000	0.00000	WC01	0.000	10/15/2012	M1	1	JC1	TM1	0.000	71
ERSKCN	34	000	0001	RUN	08:45	12:45	4.00000	5.00000	WC01	1.000	10/15/2012	M1	1	JC1	TM1	0.000	71
ERSKCN	34	000	0001	SET	08:00	08:45	0.75000	0.00000	WC01	0.000	10/15/2012	M1	1	JC1	TM1	0.000	71

Employee
The identifier for the employee that performed the work in this transaction

Order
The production order number for which work is being reported

Rel (Release)
The identifier for the split of the production order that is being reported

Seq (Sequence)
The identifier for the step in the routing for which the work is being reported

Lab Typ (Labor Type)
The identifier for the type of work being reported. Labor types are user defined in labor type maintenance.

Start
The time of day that the activity being reported was started

Stop
The time of day that the activity being reported was stopped

Act Hours
Total of actual hours reported

Std Hours
Total standard hours per routing steps

Work Center
The identifier for the work center in which this routing step is being worked

Complete Qty
Quantity produced

Mach (Machine)
The identifier for the work center in which this routing step is being worked

Shift
The identifier for the shift on which the work being reported in this transaction occurred

Job Class
The identifier for the job class that is assigned to the employee reporting time in this transaction

Team
The identifier for the team assigned to this routing step

Scrap Qty
Quantity scrapped

GL Doc
Posting document number

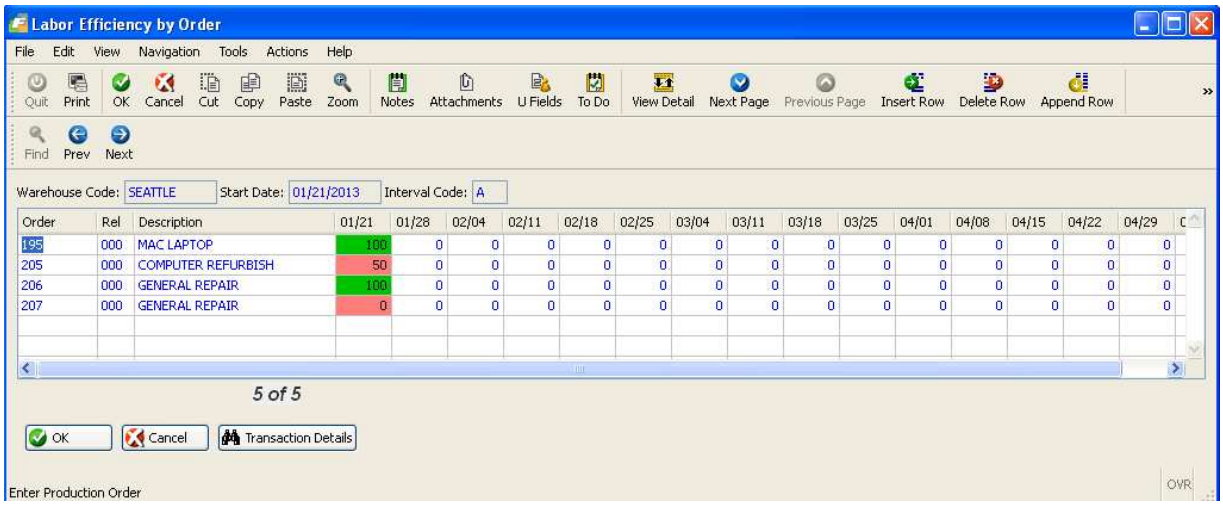
Labor Efficiency Screen Programs

Use options b through h to display labor efficiency by production work order, department, group, team, machine, work center, and employee. The screen below is Labor Efficiency by Order.
Select Find, enter warehouse, start date, and interval code. Press enter or click OK to find records that match the search criteria.

Warehouse code
Warehouse in which work order is being produced

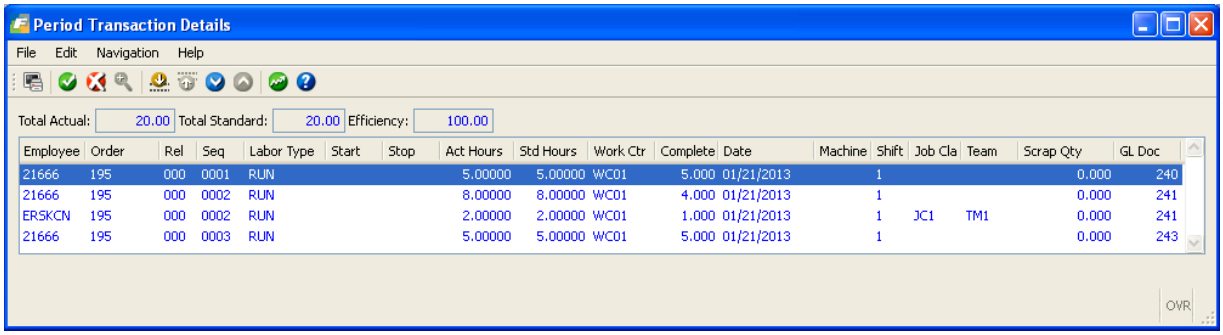
Start Date
Start date to use in displaying labor transactions

Interval Code
Pre-defined interval codes are setup in Period Interval File Maintenance. They represent a specific number of periods and the number of days per period.



To view transaction details, place the cursor on the selected detail period and click on the

button. The detailed labor records for the selected time period will display.



Employee
The identifier for the employee that performed the work in this transaction

Order
The production order number for which work is being reported

Rel (Release)
The identifier for the split of the production order that is being reported

Seq (Sequence)
The identifier for the step in the routing for which the work is being reported

Lab Typ (Labor Type)
The identifier for the type of work being reported. Labor types are user defined in labor type maintenance.

Start
The time of day that the activity being reported was started

Stop
The time of day that the activity being reported was stopped

Act Hours
Total of actual hours reported

Std Hours
Total standard hours per routing steps

Work Ctr
The identifier for the work center in which this routing step is being worked

Complete Qty
Quantity produced

Date
The date this labor transaction is reported

Mach (Machine)
The identifier for the work center in which this routing step is being worked

Shift
The identifier for the shift on which the work being reported in this transaction occurred

Job Class
The identifier for the job class that is assigned to the employee reporting time in this transaction

Team
The identifier for the team assigned to this routing step

Scrap Qty
Quantity scrapped

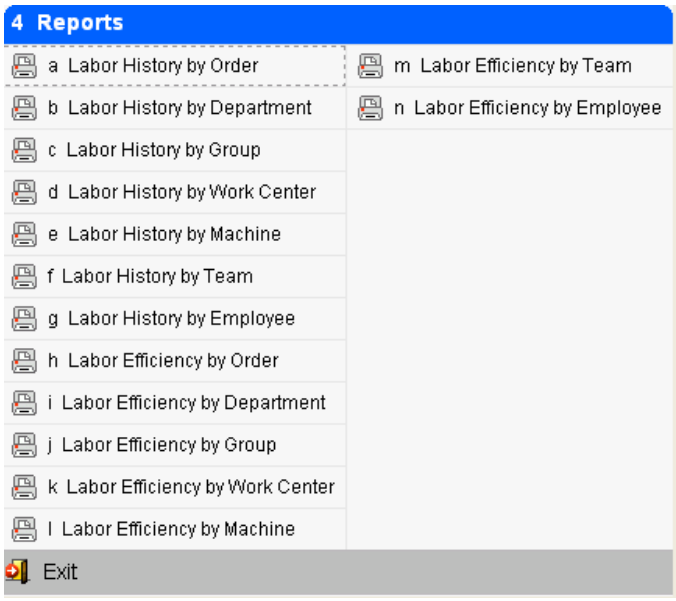
GL Doc
Posting document number

Reports

The reports included in FITRIX Labor Processing are:

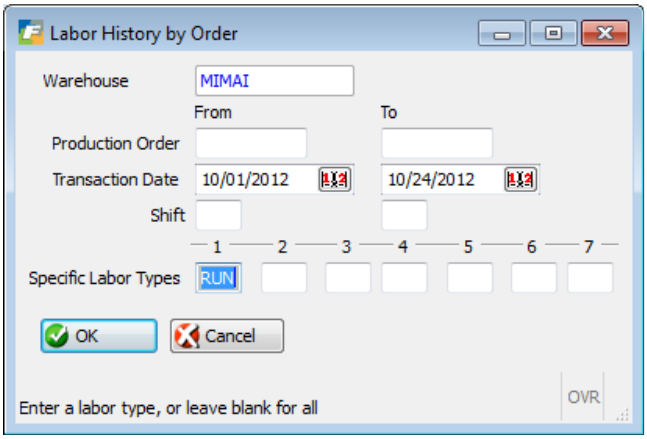
Labor History by Order, Department, Group, Work Center, Machine, Team, Employee

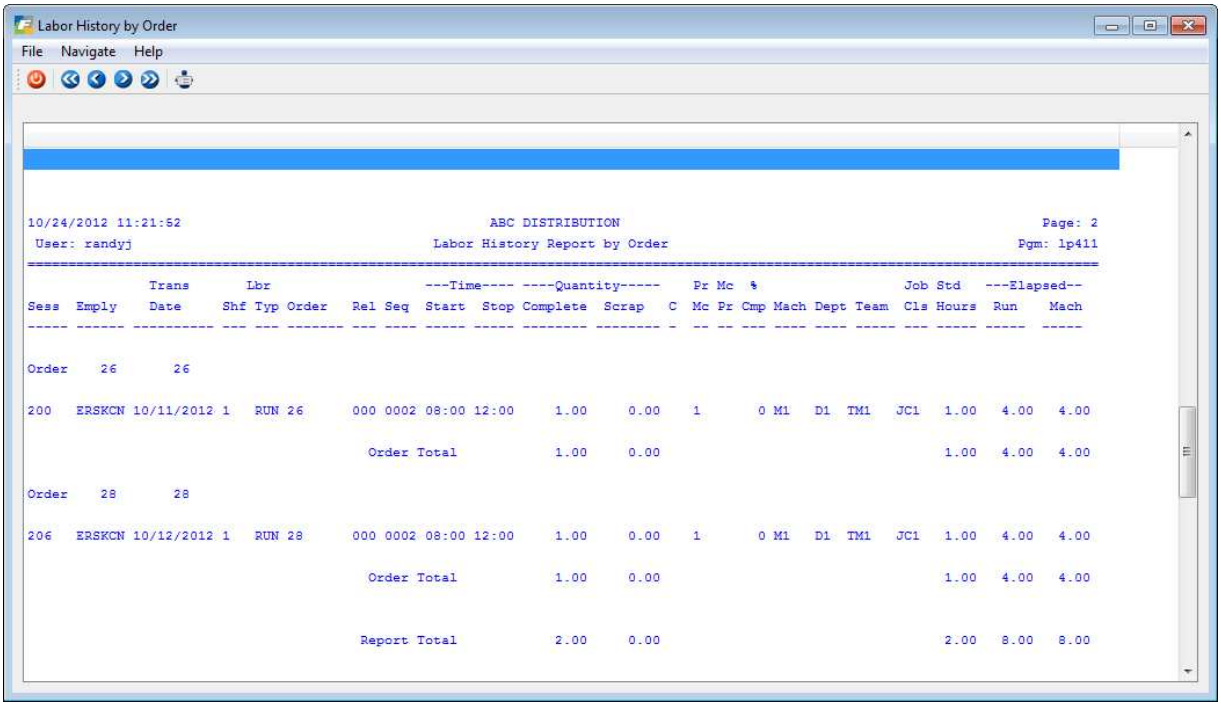
Labor Efficiency by Order, Department, Group, Work Center, Machine, Team, Employee



Labor History Reports

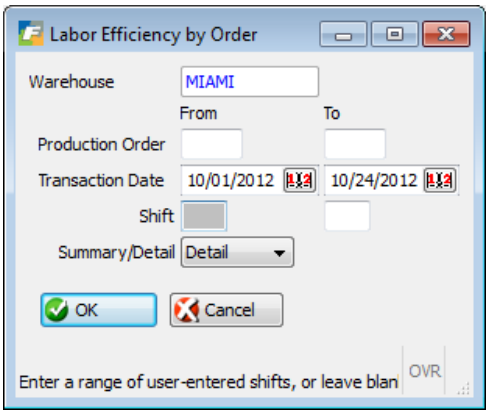
Historical labor reports can be run by order, department, group, work center, machine, team, or employee. The example here is Labor History by Order.

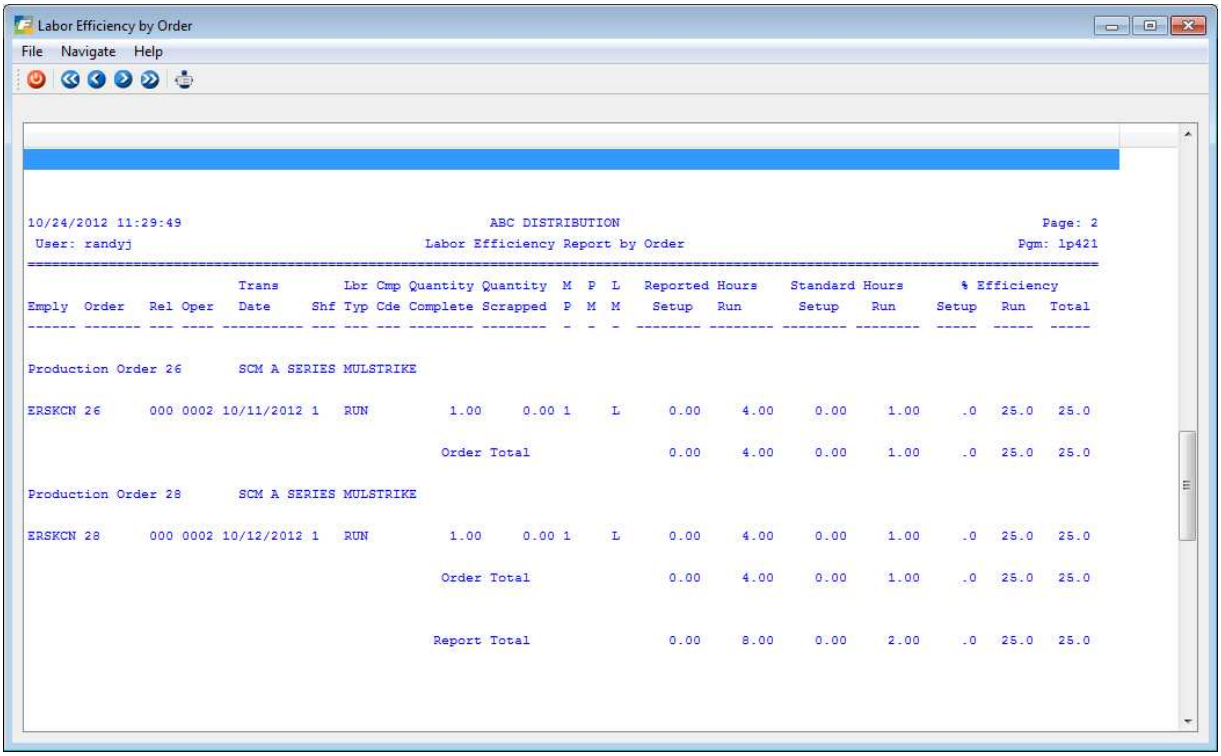




Labor Efficiency Reports

You can run efficiency reports by order, department, group, work center, machine, team, or employee. The example here is Labor Efficiency by Order.





Labor Efficiency by Order

File Navigate Help

```
10/24/2012 11:29:49                                ABC DISTRIBUTION                                                    Page: 2
 User: randyj                                 Labor Efficiency Report by Order                                        Pgm: lp421
==================================================================================================================================
                          Trans        Lbr Cmp Quantity Quantity  M  P  L   Reported Hours    Standard Hours       % Efficiency
Emply  Order   Rel Oper   Date     Shf Typ Cde Complete Scrapped  P  M  M    Setup   Run       Setup    Run     Setup   Run   Total
------ -------- --- ---- ---------- --- --- --- -------- --------  -  -  -  -------- -------- -------- -------- -----  -----  -----

Production Order 26       SCM A SERIES MULSTRIKE

ERSKCN 26      000 0002 10/11/2012 1   RUN          1.00     0.00 1     L      0.00     4.00     0.00     1.00     .0   25.0   25.0

                                                  Order Total                0.00     4.00     0.00     1.00     .0   25.0   25.0

Production Order 28       SCM A SERIES MULSTRIKE

ERSKCN 28      000 0002 10/12/2012 1   RUN          1.00     0.00 1     L      0.00     4.00     0.00     1.00     .0   25.0   25.0

                                                  Order Total                0.00     4.00     0.00     1.00     .0   25.0   25.0


                                                 Report Total                0.00     8.00     0.00     2.00     .0   25.0   25.0
```

Exercise a: Set Up Labor Processing

In this lab you will be setting up labor processing defaults and reference files and adding to the Database.

Lab Exercise b: Labor Processing Transactions

Lab Exercise c: Inquiries and Reports

Chapter 3 – Job Shop

Learning Objectives

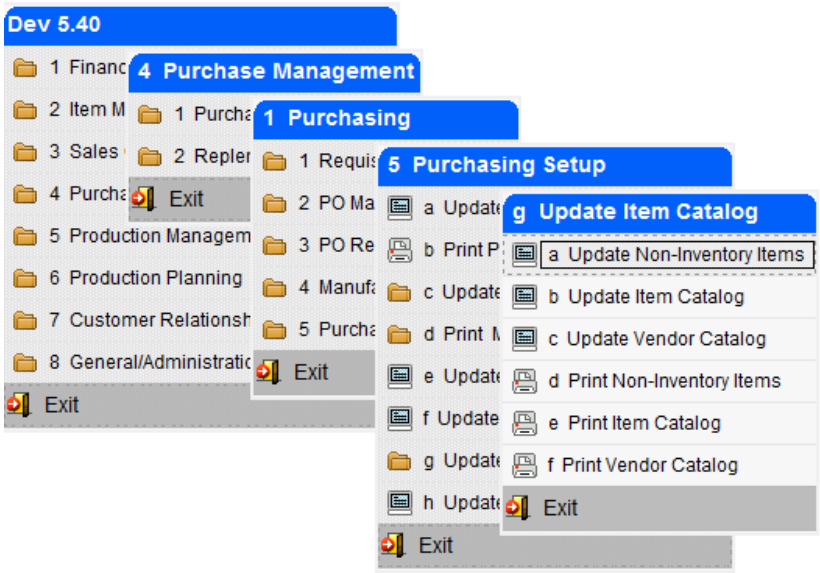
Job Shop is a type of production process that handles custom and/or makes to order products. Jobs are an accumulation of stock and non-stock items, labor, overhead, miscellaneous charges, and outside process steps, each of which may have associated internal costs and charges to be billed to the customer. These elements are then consolidated in the job, for both the cost and price. Reporting is available that compares price to both actual and estimated costs and calculates the gross margin achieved.

In this chapter we will cover the options, screens, and reports used to process and analyze jobs. As a prerequisite for job shop processing you should have already become familiar with the following Fitrix modules:

- Sales Order Entry
- Production Work Order Processing
- Standard Routing
- Labor Processing
- Accounts Payable

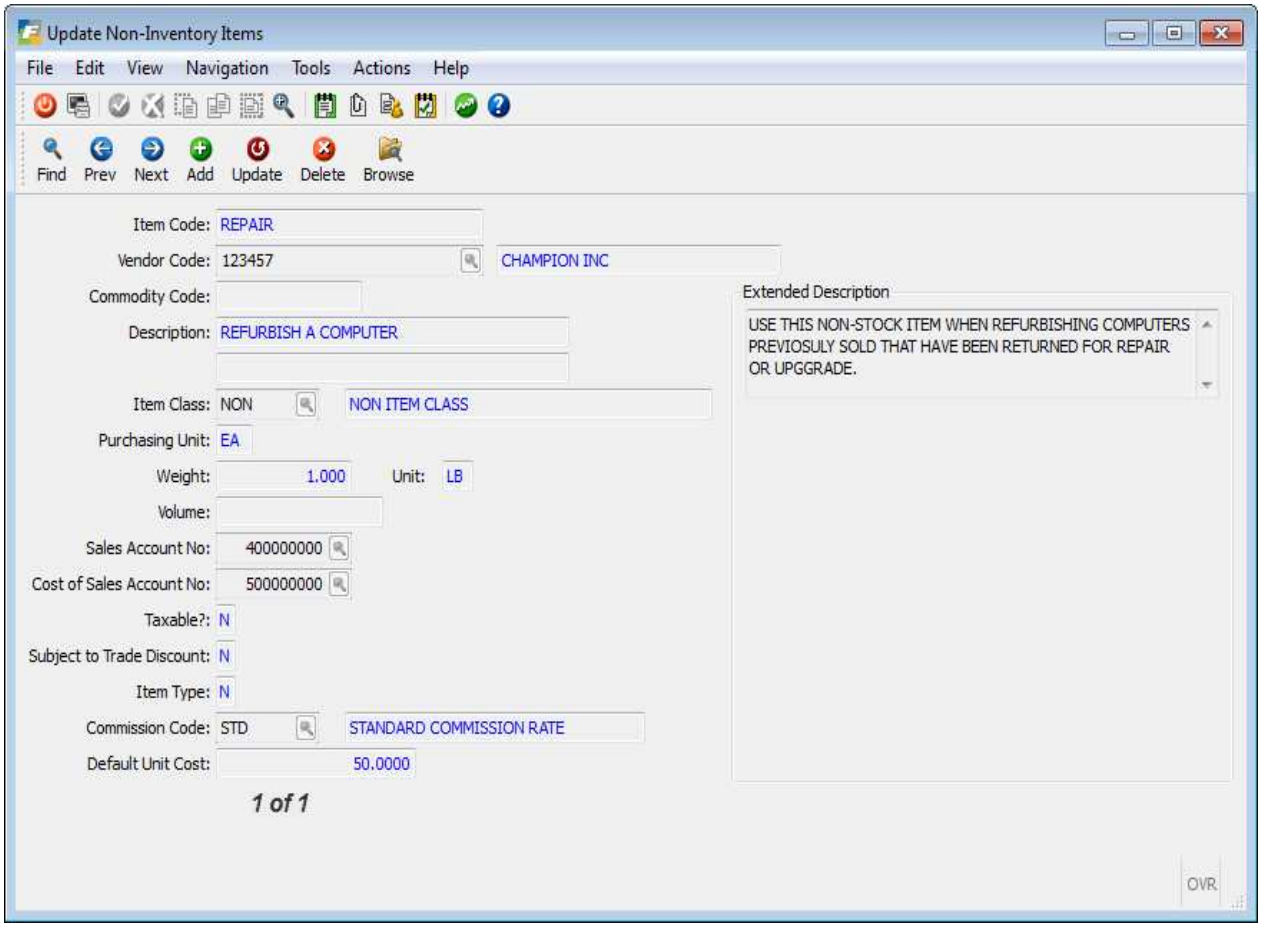
Setting up Non-Stock Items to Be Used in Sales Order Entry

The end item being produced by a job can be either a make to stock item (an item you typically stock) or a non-stock item. For make to stock items that exist in the item master table you simply use the line type MTO when entering the sales order and a production work will be created when the sales order is saved. For non-stock items you must first create the item using the Update Non Stock Items program found on this Purchasing submenu. You then use the line type MTN (make to order for non-stock) on the sales order.



A good example of a non-stock item used in a job would be an item for REPAIR as shown here.

The job for this item could then consist of stock and non-stock items needed to refurbish an item previously purchased plus labor and miscellaneous costs like the packaging needed to ship the repaired item to your customer.



Item Code

This code uniquely identifies each approved non-inventory item to the system.

- Up to 20 characters

Vendor Code

This field holds the vendor code from which this item is usually purchased.

- Up to 20 characters

Commodity Code

This field holds the unique commodity code for this item. Certain industries use standard commodity codes to identify items they buy and sell. Entry in this field is optional.

Description

There are two description lines available for each item entered.

Extended Description

Enter up to 256 characters of extended description.

Purchasing Unit

This two character field is required and specifies the default unit of purchase for this item.

Weight

The weight of each unit can optionally be entered in this field.

Unit

This field contains the unit of measure for the weight entered in the previous field.

Volume

This field contains the volume of the item.

Sales Account Number

Enter the sales account number that should be credited when this item is sold. Initially defaults to the sales account number in the Update Order Entry Defaults program but can be changed.

Cost of Sales Account No

Enter the cost of sales account number that should be debited when the production work order is posted. Initially defaults to the Non-stock Account number set up in the Update Purchasing Defaults program but can be changed.

Taxable

Enter Y if taxed should be charged on this item when it is sold to a customer that you collect sales tax from.

Subject to Trade Discount

Enter Y if this item should be included in trade discounts offered to your customers.

Item Type

This is a non-entry field. It will contain an N for a non-stock item.

Commission Code:

Enter a commission code if commission is paid on this item when it is sold.

Default Unit Cost:

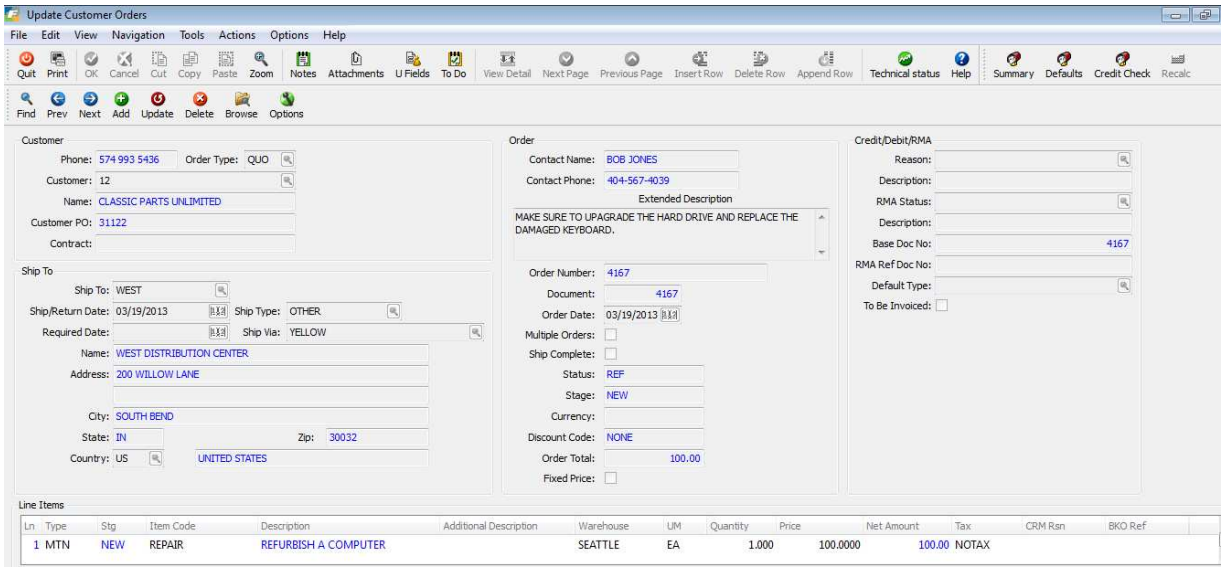
Cost used when non stock item is included in a bill of material. For job shop items this cost is not used. The cost will be the accumulation of all components, labor, and miscellaneous costs on the work order.

Entering a Sales Order for a Job

You should already be very familiar with how to process a sales order using the Fitrix Order Entry module. If you are not, you should read the Fitrix Order Entry User Guide What will be discussed in this section are items that need to be made or reworked in some way via a production work order.

Quotation for a Job

The sales order entry screen:



If the order type entered is QUO for quotation any components added to the production work order after the sales order is saved will not be committed because the Allocate Now flag on the production work order created is unchecked as shown here.

Order	532	Release	000
Item	REPAIR		Non-Stock Item
Description	REFURBISH A COMPUTER		
Order Quantity	1.000		
Start Date	03/19/2013		
Due Date	03/19/2013		
Order Type	MTN		
Order Status	A		
Hold Code			
Priority			
Sales Order	4167		
Line	1		
Contact Name	BOB JONES		
Contact Phone	404-567-4039		
Bill of Material			
Standard Routing			
Allocate Now?	☐		

If you need to send a quotation to your customer for approval, click on the

button on the toolbar and select Quotation from the drop down list that displays. You can also print the quotation using the Print Quotes/Order Acknowledgements option on the Order Maintenance Menu (option b).

ABC DISTRIBUTION
1110 Sample Street
Seattle, WA 98133
(800) 555-1212

QUOTATION

PAGE
1

Sell To: CLASSIC PARTS UNLIMITED
22501 72ND
CLEARING POINT BUSINESS CENTER
SOUTH BEND IN 46601
US

Ship To: WEST DISTRIBUTION CENTER
200 WILLOW LANE

SOUTH BEND IN 30032
US

Ship Terms: PREPAID SHIP POINT

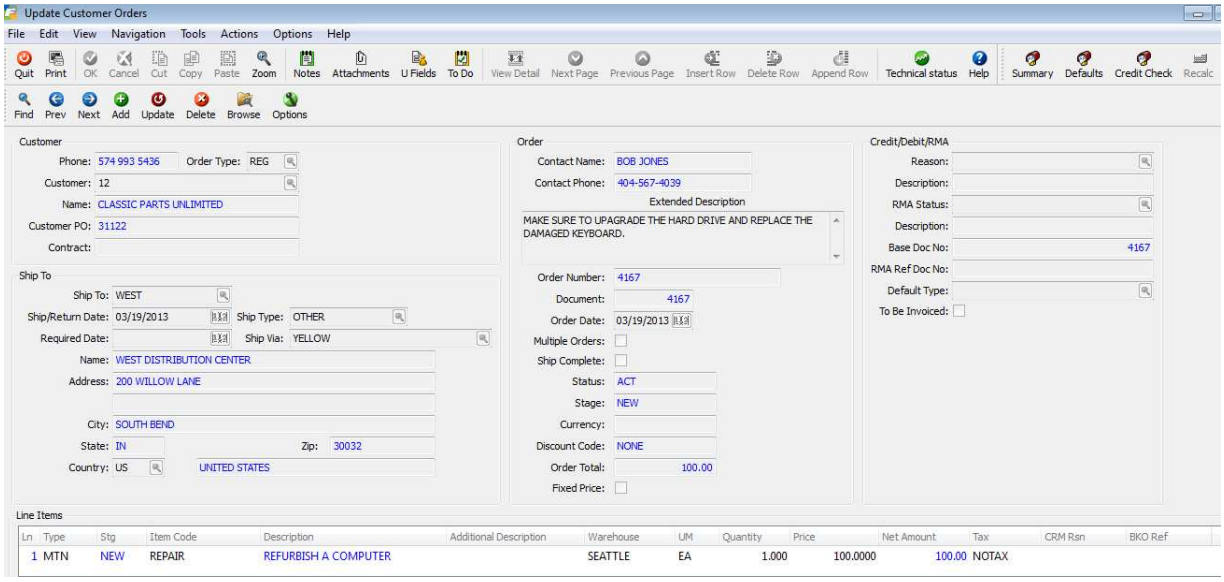
QUOTE NO	QUOTE DATE	CUSTOMER	SALESPERSON	PURCHASE ORDER	SHIP VIA	TERMS
4167	03/19/13	12	BAB	31122	YELLOW	NET30

QUOTED	UM	ITEM	DESCRIPTION	UNIT PRICE	EXTENDED PRICE
1.000	EA	REPAIR		100.0000	100.00
			REFURBISH A COMPUTER		

If the quote is not accepted and the sale order is cancelled, this in turn will cancel the production work order linked to it.

Sales Order for a Job

You can enter a regular order (order type REG) or if a quotation was entered you can change the order type from QUO to REG. This will commit the component inventory on the production work order and change the Order Status from REF for reference to ACT for active on the sales order.



If you need to send an Acknowledgement to your customer for approval, click on the

button on the toolbar and select Acknowledgement from the drop down list that displays. You can also print the acknowledgement using the Print Quotes/Order Acknowledgements option on the Order Maintenance Menu (option b).

ABC DISTRIBUTION

1110 Sample Street
Seattle, WA 98133
(800) 555-1212

ACKNOWLEDGEMENT

PAGE 1

Sell To: CLASSIC PARTS UNLIMITED
22501 72ND
CLEARING POINT BUSINESS CENTER
SOUTH BEND IN 46601
US

Ship To: WEST DISTRIBUTION CENTER
200 WILLOW LANE

SOUTH BEND IN 30032
US

Ship Terms: PREPAID SHIP POINT

ORDER NO	ORDER DATE	CUSTOMER	SALESPERSON	PURCHASE ORDER	SHIP VIA	TERMS
4167	03/19/13	12	BAB	31122	YELLOW	NET30

ORDERED	UM	ITEM	DESCRIPTION	UNIT PRICE	EXTENDED PRICE
1.000	EA	REPAIR	REFURBISH A COMPUTER	100.0000	100.00

Below is a list of differences between processing a sales order for a stock item versus an MTO or MTN item that will be made or reworked in some way.

Sales Order Header Screen:

Contact Name

Enter a contact name if there is a specific contact for this sales order. This contact name will transfer to the production work order that is created when the sales order is saved and it will also display on the Labor Entry screen.

Contact Phone

Enter a telephone number for the contact entered. This contact phone will transfer to the production work order that is created when the sales order is saved and it will also display on the Labor Entry screen.

Description

Use this field to enter an optional description about the order. The description can be up to 256 characters long. This description will transfer to the production work order that is created when the sales order is saved.

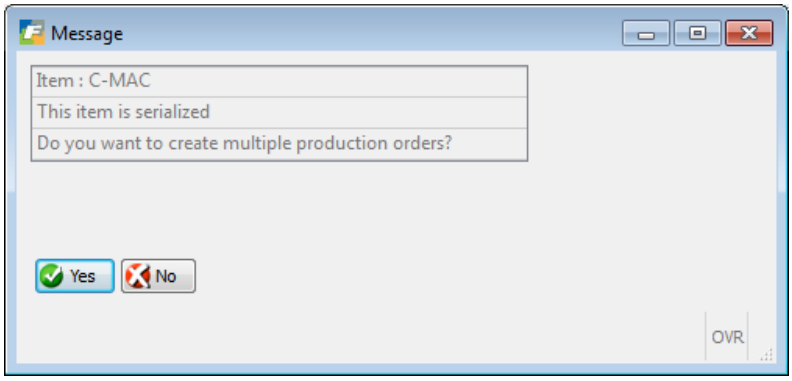
Fixed Price

Check this box if you do not want to update the unit price based on a roll up of prices calculated and/or entered on the work order.

Sales Order Detail Screen

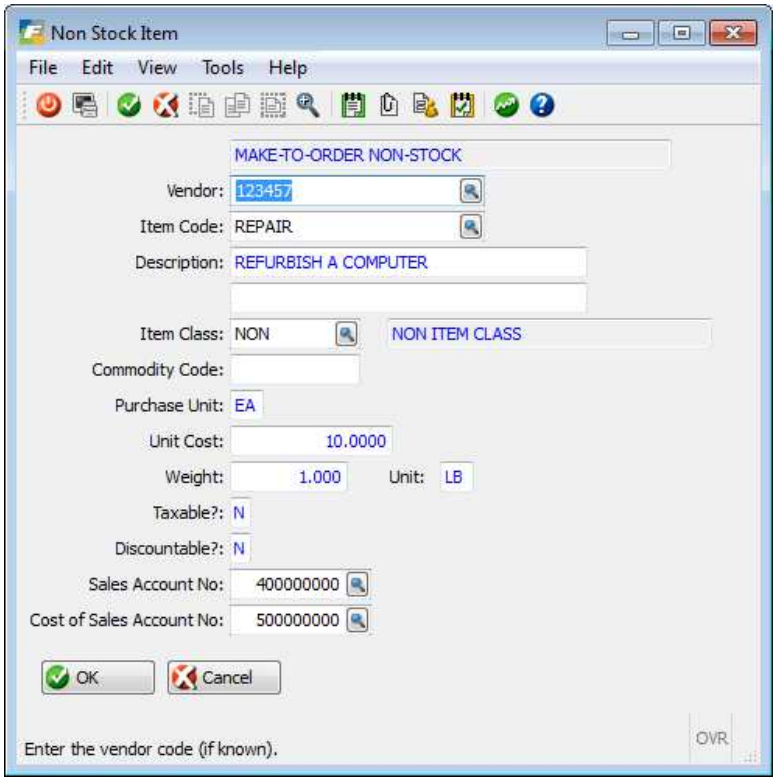
Line Type – there are two line types that create production work orders.

- **MTO** – make to order. Using this line type will create a production work order. The line stage will initially be set to NEW and when the item is made and the production order is processed, the line stage will be reset to ORD so that the item can be picked and shipped. If the order quantity is greater than 1 you will receive this prompt:



Answer yes if you want to create multiple production work orders or no if you want to create one production work order for the total quantity ordered.

- **MTN** – make to order non stock item. Using this line type will create a production work order. The line stage will initially be set to NEW and when the item is made and production order is processed, the line stage will be reset to ORD so that the item can be shipped. When you enter a MTN item the standard Non-stock item screen shown here will display.

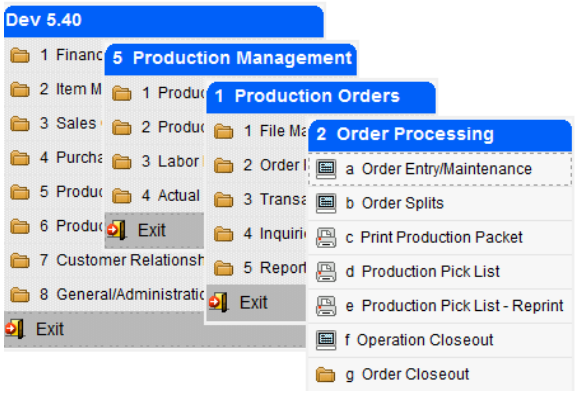


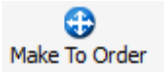
The cost that displays on this screen will not be used as the cost of the MTN item. The cost instead will be the accumulated cost of all components, labor, and miscellaneous costs on the corresponding production work order.

Price – you have the option of updating the price entered on the sales order by rolling it up based on the pricing of components, labor , and costs on the production work order unless you have checked the Fixed Price check box in the order header. See the section on Production Work Orders for more information on price roll up.

Production Order Maintenance

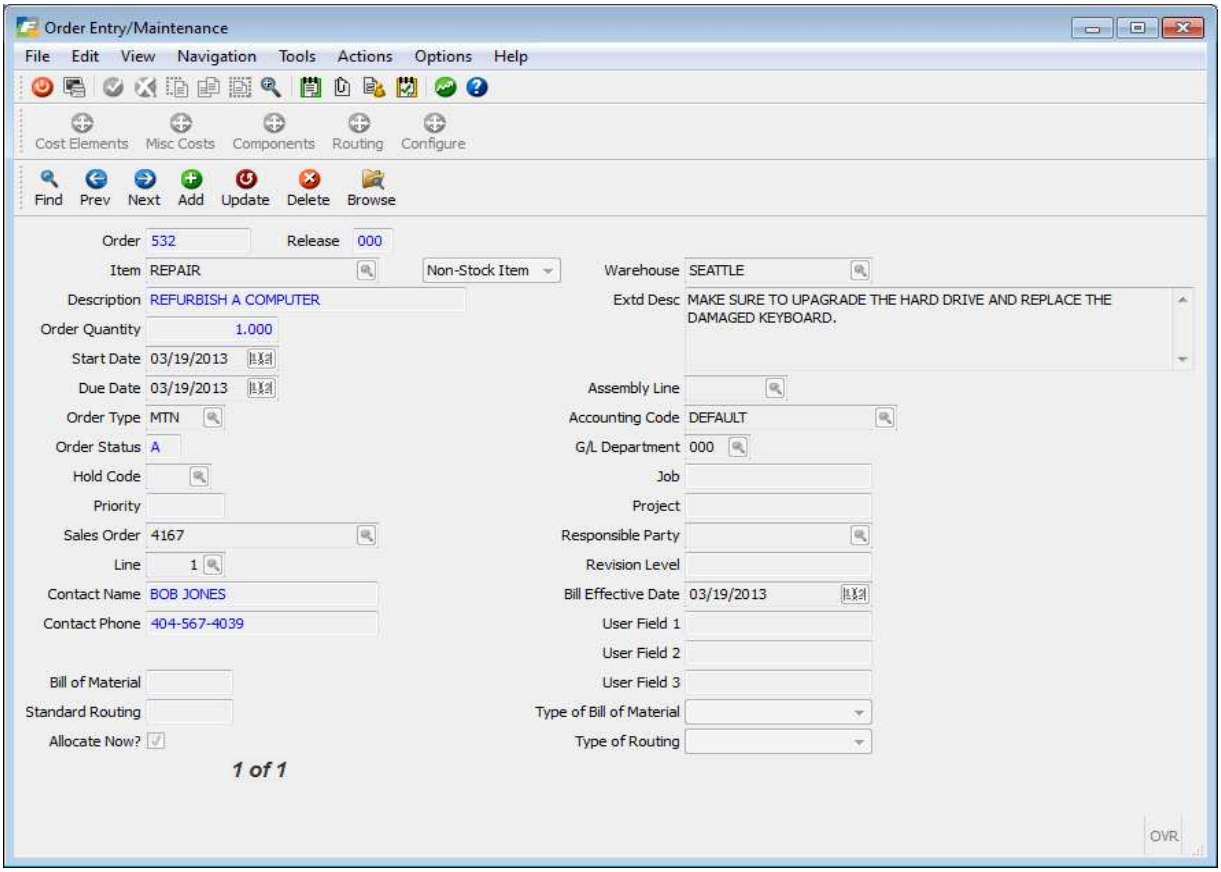
When the sales order for an MTO or MTN item is saved the production work order is automatically created. This production work can be accessed by going to Order Entry/Maintenance option (a) on the Order Processing submenu shown here:



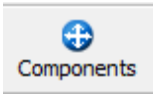
It can also be accessed from within Sales Order Entry by clicking on the 

button on the toolbar while on the line item in the detail section of the Sales Order Entry screen.

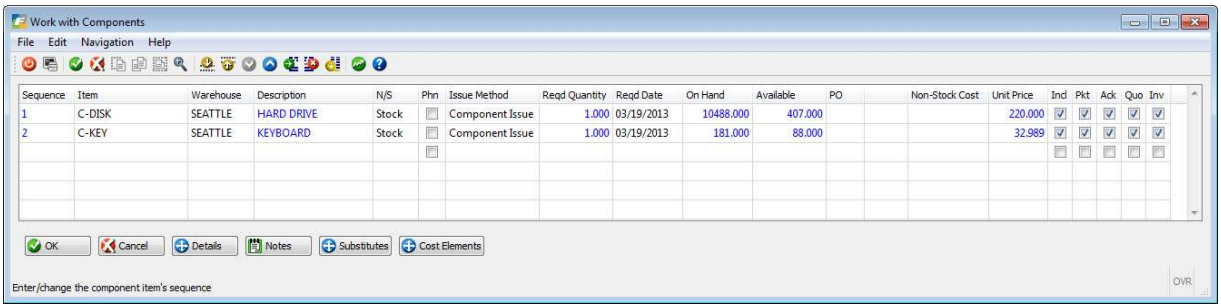
Sales order # 4167 (screen shot on previous page) created this production work order when it was saved.


Order Entry/Maintenance
File Edit View Navigation Tools Actions Options Help
Cost Elements Misc Costs Components Routing Configure
Find Prev Next Add Update Delete Browse
Order 532
Release 000
Item REPAIR
Non-Stock Item
Warehouse SEATTLE
Description REFURBISH A COMPUTER
Extd Desc MAKE SURE TO UPAGRADE THE HARD DRIVE AND REPLACE THE DAMAGED KEYBOARD.
Order Quantity 1.000
Start Date 03/19/2013
Due Date 03/19/2013
Assembly Line
Order Type MTN
Accounting Code DEFAULT
Order Status A
G/L Department 000
Hold Code
Job
Priority
Project
Sales Order 4167
Responsible Party
Line 1
Revision Level
Contact Name BOB JONES
Bill Effective Date 03/19/2013
Contact Phone 404-567-4039
User Field 1
User Field 2
Bill of Material
User Field 3
Standard Routing
Type of Bill of Material
Allocate Now?
Type of Routing
1 of 1
OVR

Adding Components

To add components to the work order, go into update mode and then click on the 

button on the toolbar. This screen displays:



Enter the component items needed for the job. The price will default to the list price or whatever pricing structure is set up for the customer (i.e.- cost plus 30%) in the Special Pricing Defaults defined in the Order Entry module (see Chapter 2 of the Order Entry User Guide, Update Special Price Defaults, for more information on customer pricing).

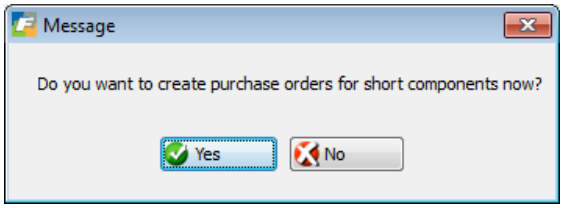
If any component is a non stock item you must also enter the cost for the item.

If the price of the component should be included in the price roll up , check the Incl check box. Also check which documents you want the component detail to print on. The choices include:

- Production Packet
- Order Acknowledgement
- Customer Quotation
- Customer Invoice

Short Components

If you are short components you will receive this prompt when you save the work order:

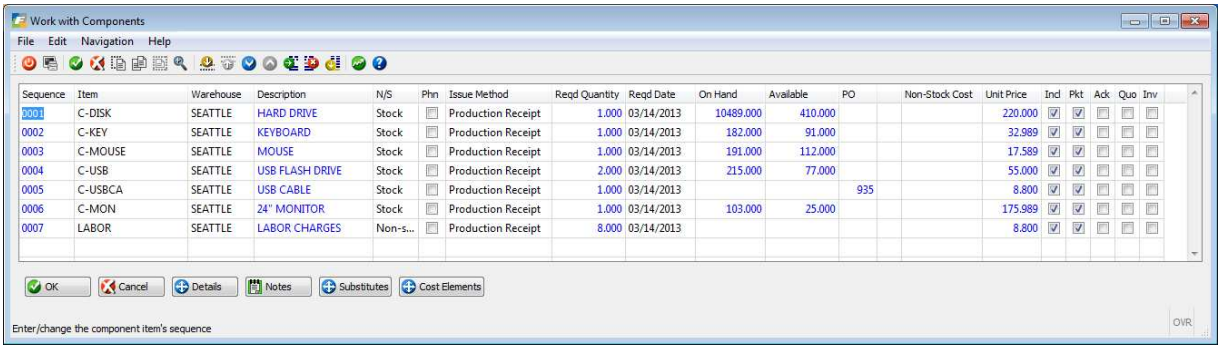


If you answer yes this screen displays and you can select which items you want to create purchase orders for, the type of PO, select the vendor the PO should be issued to, and the cost that should be used.

Click on the Create Orders button at the bottom of the screen to create the purchase orders and the order # created will now display as shown here:

The PO number created will then display on the Component Screen. The available and on hand are null to show that the component quantity will be supplied by the purchase order.

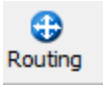
If after creating purchase orders you add additional components that you are also short on you can zoom fron the Order field when the screen above displays to add these components to POs already created. If you instead want to issue yet another PO, leave the order field blank.



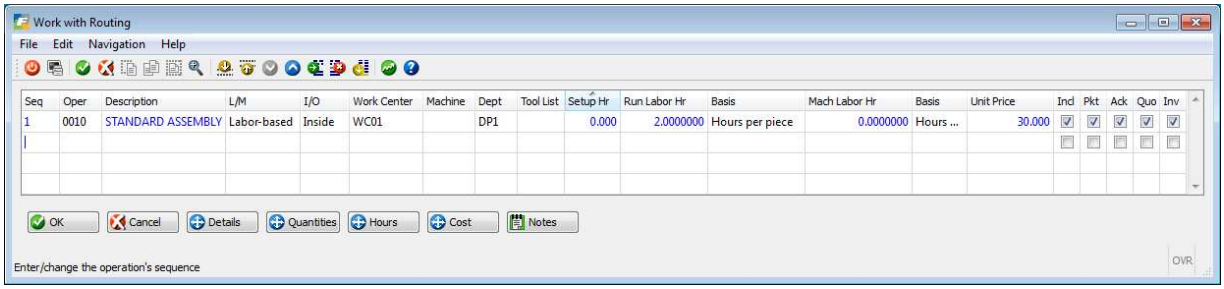
Sequence	Item	Warehouse	Description	N/S	Phn	Issue Method	Reqd Quantity	Reqd Date	On Hand	Available	PO		Non-Stock Cost	Unit Price	Incl	Pkt	Ack	Quo	Inv
0001	C-DISK	SEATTLE	HARD DRIVE	Stock		Production Receipt	1.000	03/14/2013	10489.000	410.000				220.000	✓	✓			
0002	C-KEY	SEATTLE	KEYBOARD	Stock		Production Receipt	1.000	03/14/2013	182.000	91.000				32.989	✓	✓			
0003	C-MOUSE	SEATTLE	MOUSE	Stock		Production Receipt	1.000	03/14/2013	191.000	112.000				17.589	✓	✓			
0004	C-USB	SEATTLE	USB FLASH DRIVE	Stock		Production Receipt	2.000	03/14/2013	215.000	77.000				55.000	✓	✓			
0005	C-USBCA	SEATTLE	USB CABLE	Stock		Production Receipt	1.000	03/14/2013			935			8.800	✓	✓			
0006	C-MON	SEATTLE	24" MONITOR	Stock		Production Receipt	1.000	03/14/2013	103.000	25.000				175.989	✓	✓			
0007	LABOR	SEATTLE	LABOR CHARGES	Non-s...		Production Receipt	8.000	03/14/2013						8.800	✓	✓			

The purchase order is created with an order type of DTP which stands for Direct to Production. When the purchase order is received the production orders the parts should be allocated to will print on the receipt posting report.

Adding Routing

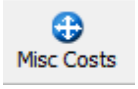
To add routing steps to the job click on the 

button on the toolbar and this screen displays:

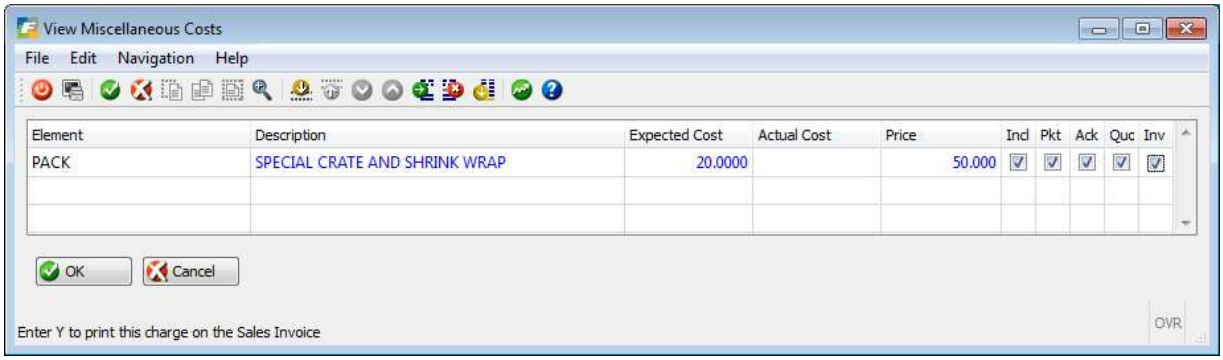


Just like with the components, enter the price to be charged to the customer and select which documents the routing steps should print on.

Adding Miscellaneous Costs

To add miscellaneous costs to the job click on the 

button and this screen will display:



Element – must have been previously set up using the Cost Elements program (option (b) on the Standard Routing File Maintenance submenu).

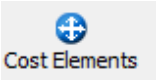
Expected Cost- enter what the expected cost is and this cost will be included in the total expected cost calculation on the Job Cost/Price Detail report discussed later in this chapter.

Actual Cost – this cost will come from the AP invoice received from your vendor. See the section below “AP Invoices for Miscellaneous Costs”.

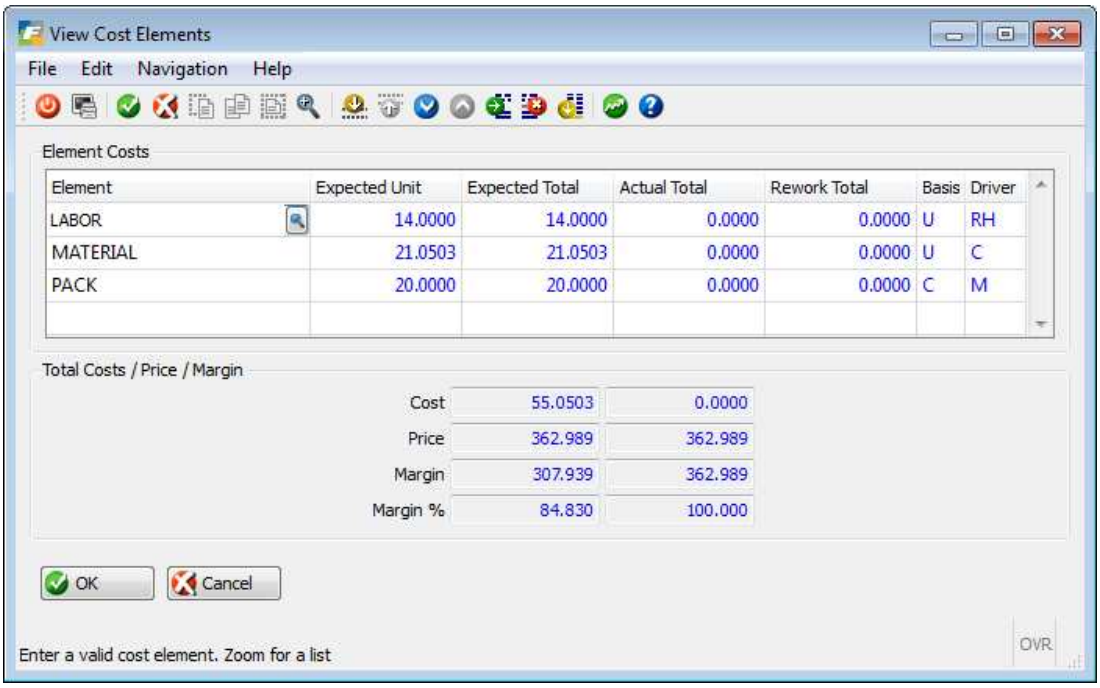
Price – enter the price the customer should be charged for this cost element.

Just like with the components and routing steps select which documents the routing steps should print on by checking the appropriate check boxes.

Cost Elements Screen

To view all of the cost elements that make up the job, click on the 

button



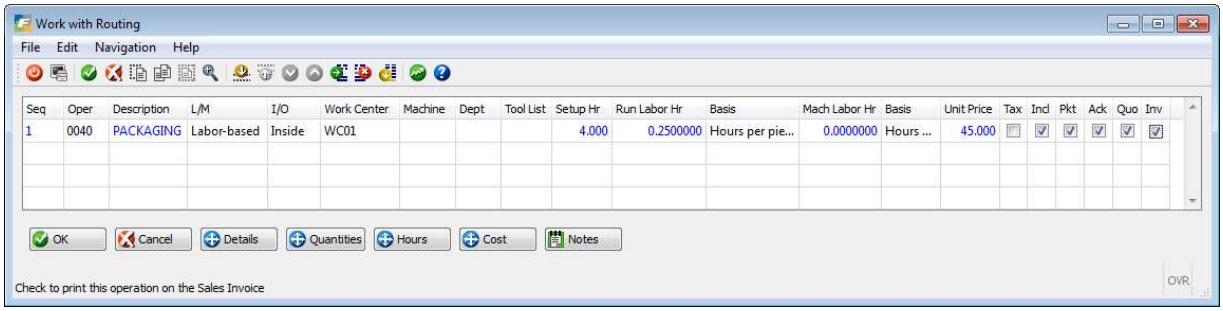
The actual costs will not display until components have been issued, labor processed and posted, and miscellaneous cost are posted through AP. All of these steps are discussed later in this chapter.

Charging Sales Tax on Jobs

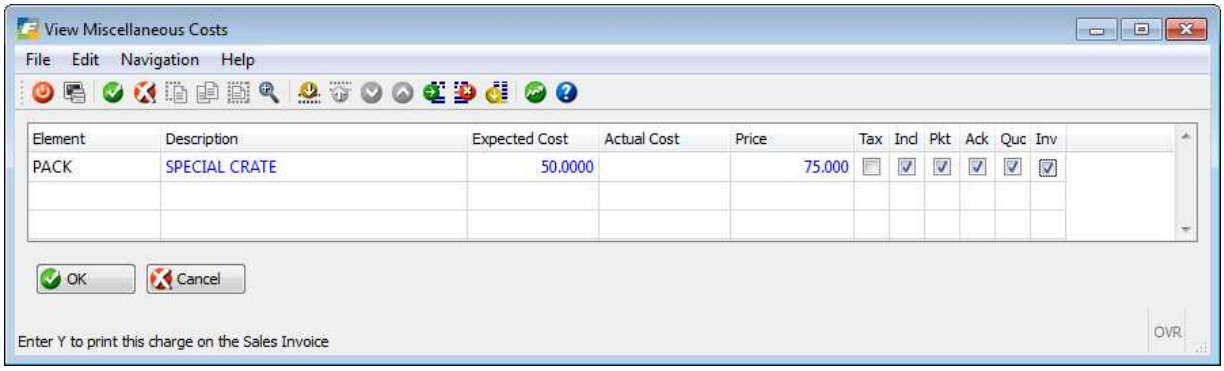
On the Component screen. Routing screen, and Miscellaneous Costs screen there is a box labeled Tax. If you want to charge sales tax, check this box. The default values are as follows:

Stock and Nonstock items – will default to taxable if taxable flag at item level is Yes.

Routing steps - defaults to not taxable.



Miscellaneous Costs – defaults to not taxable.



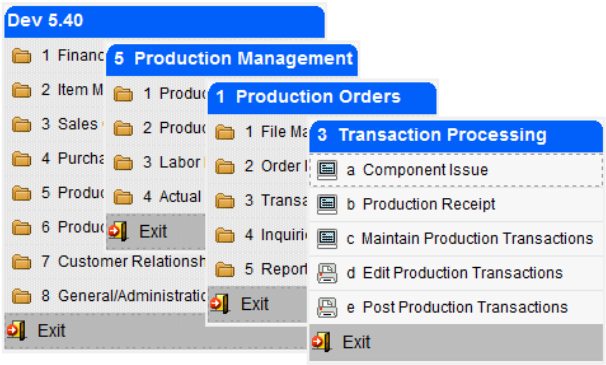
Price Rollup

Unless you have checked the Fixed Price box on the Sales Order header screen, every time you are in update mode and the save the production work order this prompt will display:

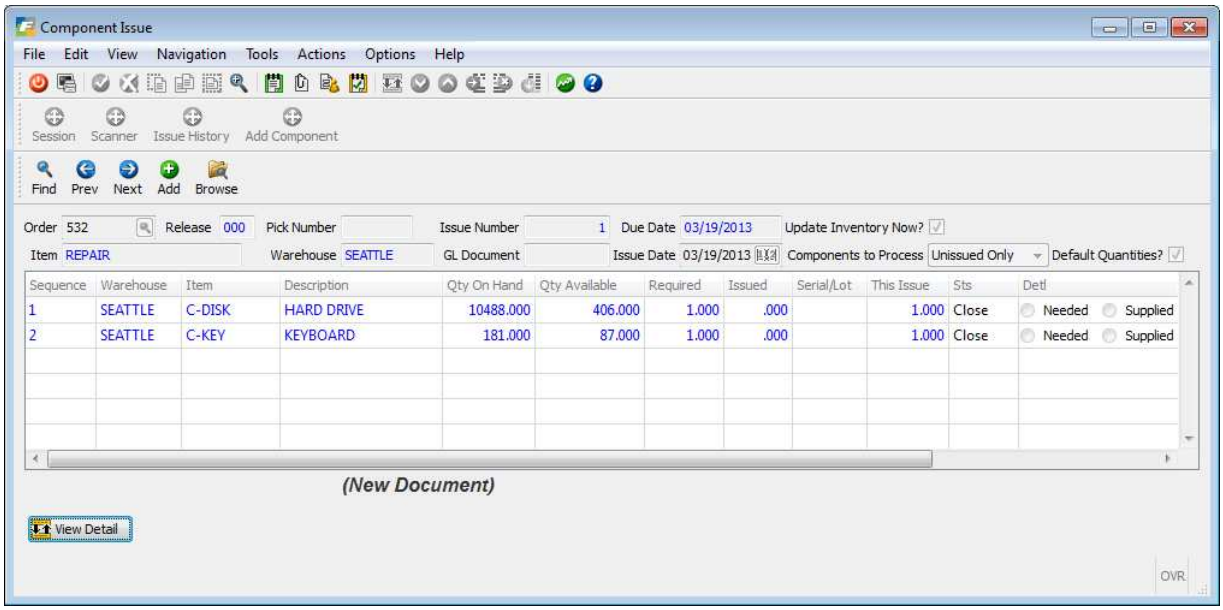
Select yes if the unit price on the sales order should be a cumulative total of pricing on all components, routing steps, and miscellaneous costs.

Component Issue

To remove components from inventory run the Component Issue program (option (a) on this submenu):



The Component Issue screen:

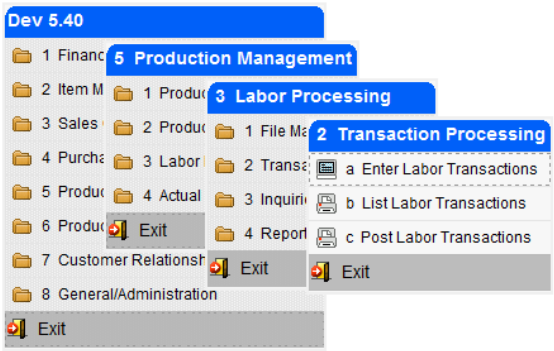


Processing a component issue will book the work in process to your General Ledger. To view what makes up the Work in Process total run the Work in Process Cost Status Report on the Production Management Reports submenu.

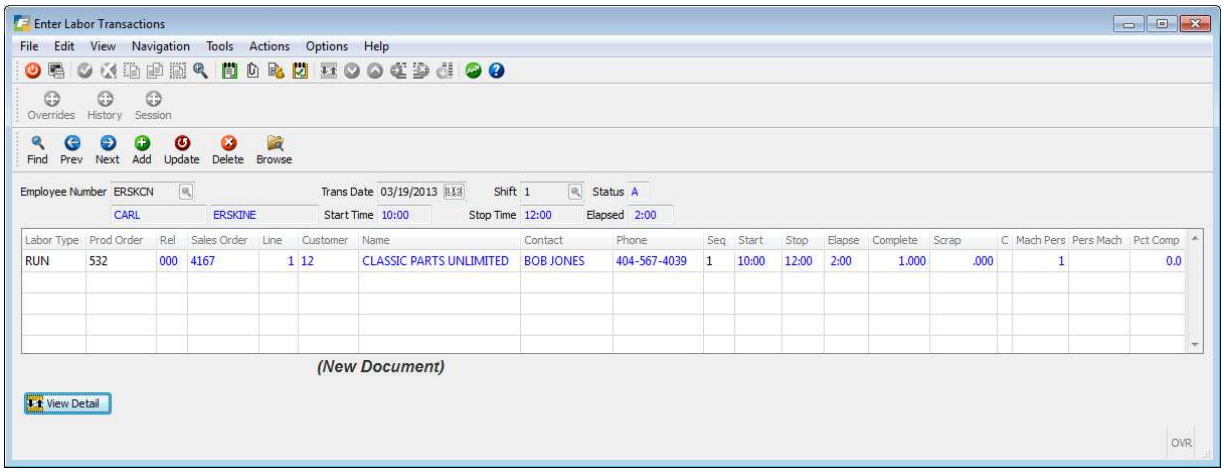
```
03/19/2013 17:11:34                                    ABC DISTRIBUTION                                                                                    Page: 1
 User: bettyb                                   Work in Process Cost Status Report                                                                    Pgm: cm410
                                                      Detail by Item/Order
==========================================================================================================================================================
Item REPAIR                REFURBISH A COMPUTER          Warehouse SEATTLE
                                                   ------------------------------------------ Costs ------------------------------------------------------
 Order    Rel  Type Sts  Quantity  Due Date   Material      Setup       Labor      Overhead     Outside   Misc Charge    Total In      Recvd       Scrap       Balance
532      000  MTN  A        1.000 03/19/13
 Components
 Seq          Item              Element
 1          C-DISK              MATERIAL         11.00                                                                    11.00
 2          C-KEY               MATERIAL         10.05                                                                    10.05

                        Order Totals            21.05        0.00        0.00       0.00         0.00        0.00        21.05        0.00        0.00        21.05

                         Item Totals            21.05        0.00        0.00       0.00         0.00        0.00        21.05        0.00        0.00        21.05

                       Report Totals            21.05        0.00        0.00       0.00         0.00        0.00        21.05        0.00        0.00        21.05
```

Post Labor Costs to the Job

To post labor costs to the job, run the three programs found on this submenu.



The Enter Labor Transactions screen:

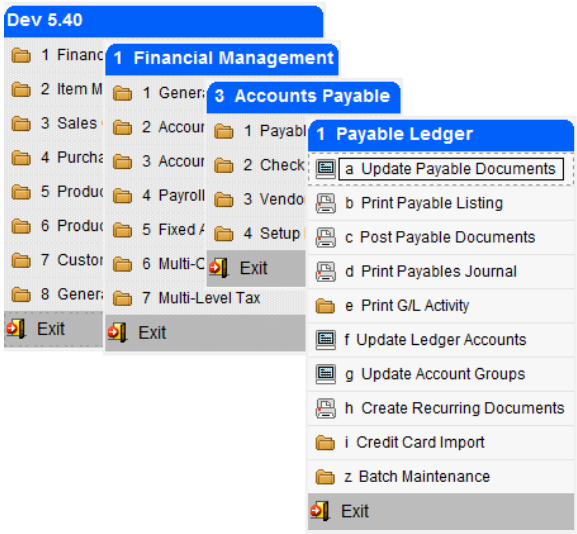


For more information on this screen program please refer to the Labor Processing User Guide.

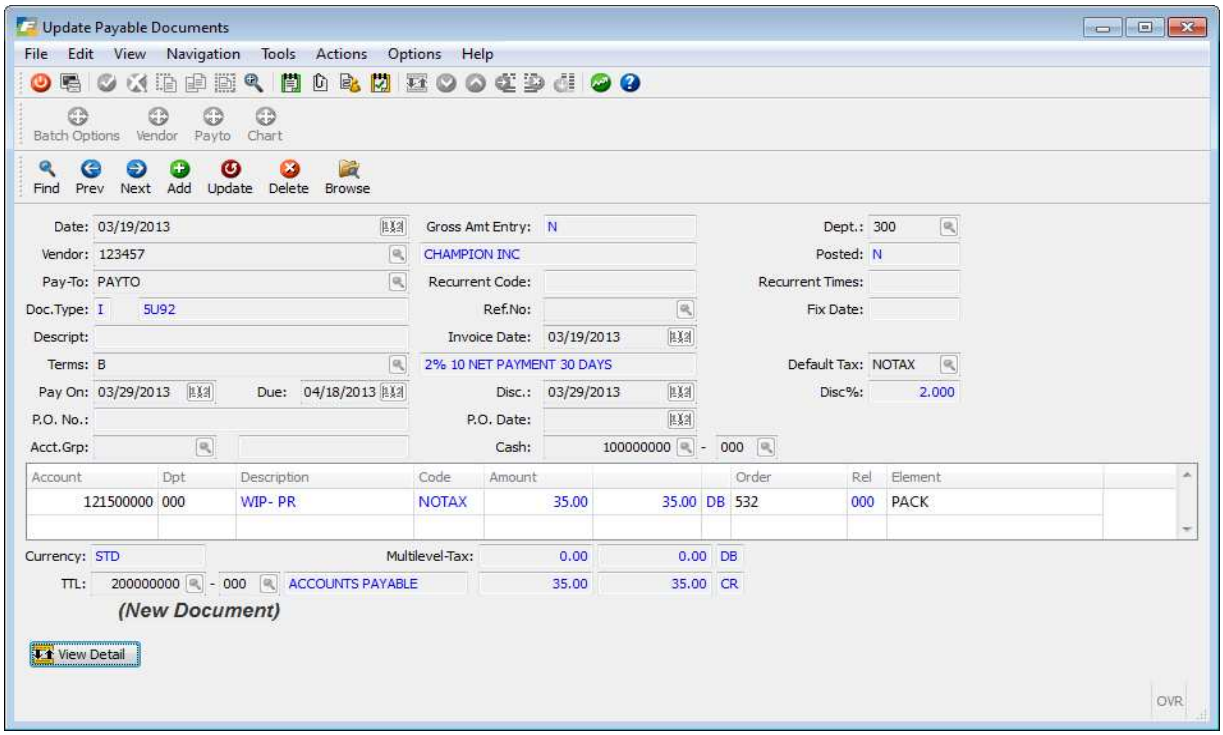
Once the labor has been entered run the edit and post program to update both the actual labor costs associated with the job and the general ledger balances.

Post Miscellaneous Costs to the Job

These costs are processed through Accounts Payable. Use the Update Payable Documents program found on this submenu.



When entering the detail lines for the invoice simply enter the work order that the cost should be added to. Zoom is available to find the work order number, release number, and cost element.

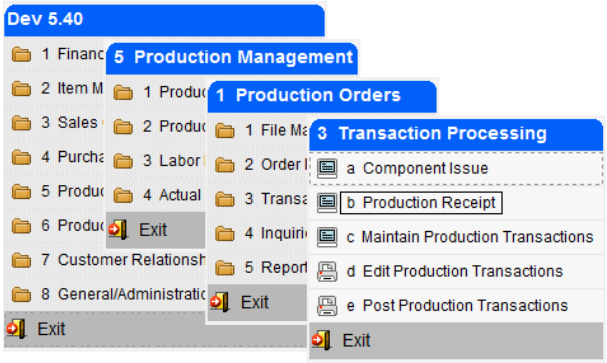


The GL account number that should be used should be the same GL account number that is debited when the production receipt is posted. See the section in this chapter “GL Accounting for Jobs”.

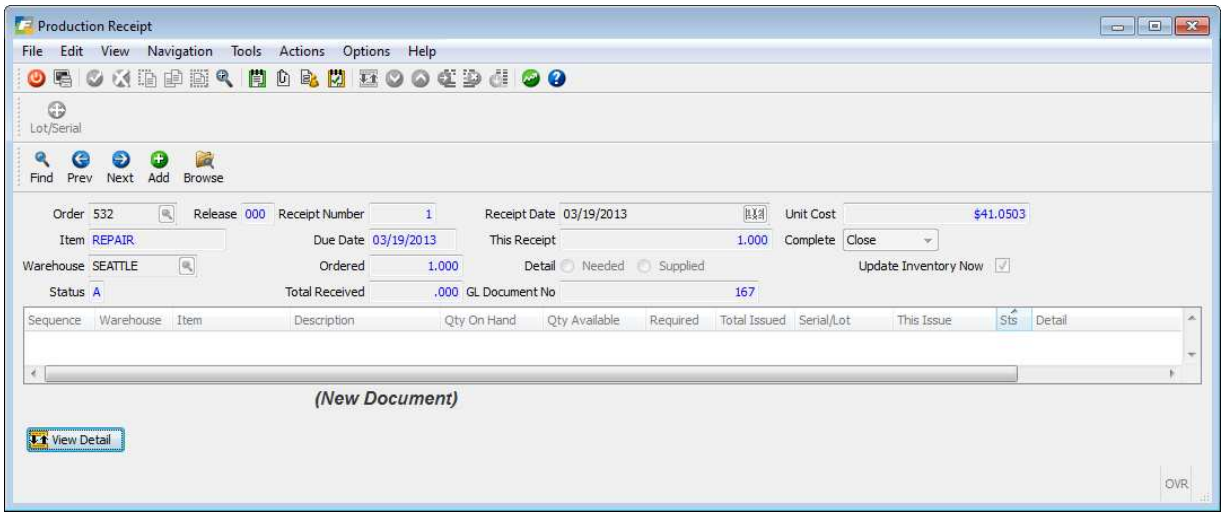
Once the AP invoice has been entered, run the edit and post to post the item to the vendor’s account to be paid and to update the GL balances.

Production Receipt

The Production Receipt program is found on this submenu:



This program will change the line stage on the sales order from NEW to ORD so that it can be processed and shipped and also posts entries to the General Ledger. See the section in this chapter “GL Accounting for Jobs”.



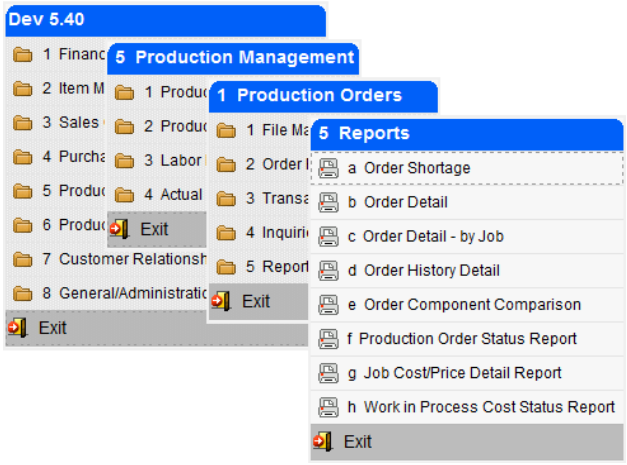
Invoicing the Customer

Once the Production receipt program is run here are the steps needed to invoice the customer:

Program	Menu Option	
Print Picking Ticket	3-2-1-c	
Update Invoices/Memos	3-2-1-i-b	
Print Invoices and Memos	3-2-1-i-f	
Print Order Entry Edit List	3-2-1-k	(end of day process for all invoices)
Post Order Entry Documents	3-2-1-l	(end of day process for all invoices)

Job Profitability Reporting

To determine the profitability of the job run the Job Cost/Price Detail Report found on this submenu:

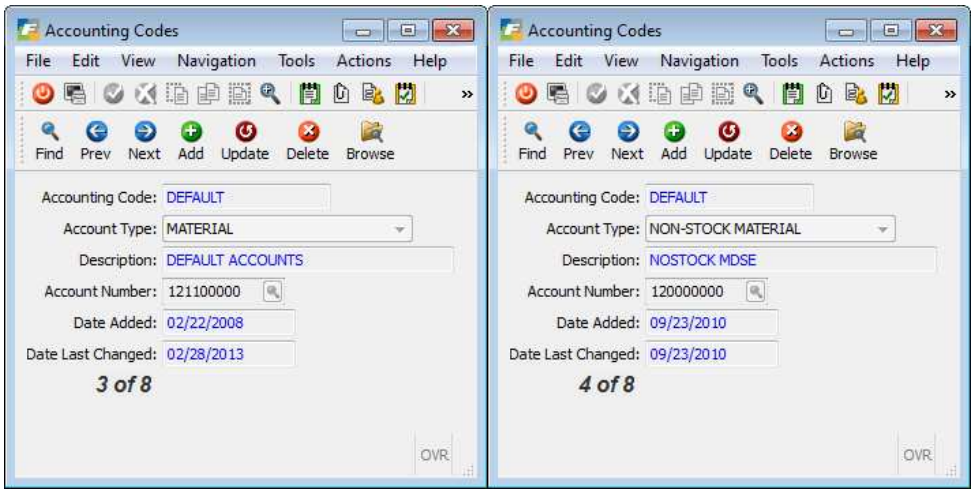



```
03/19/2013 18:20:17                                ABC DISTRIBUTION                                                          Page: 2
 User: bettyb                                   Job Cost/Price Detail Report                                               Pgm: sc430
=================================================================================================================================
    Item: REPAIR              REFURBISH A COMPUTER
---------------------------------------------------------------------------------------------------------------------------------
  Order 532         Sales Order 4167                      ----- Dates ------  ---- Quantities -----  ------- Price/Cost ---------
    Rel 000                Line 1                        Started 03/19/2013    Ordered       1.000            Price        362.99
   Whse SEATTLE        Customer 12                           Due 03/19/2013  Completed       1.000    Expected Cost         55.05
   Type MTN                     CLASSIC PARTS UNLIMITED     Closed 03/19/2013         U/M EA            Expected Margin       84.83%
 Status C                                                                                                  Actual Cost         41.05
   Desc REFURBISH A COMPUTER                                                                              Actual Margin       88.69%

          ---------------------------------------------- C O M P O N E N T S ----------------------------------------------
                                                        ------ Quantity ------- --------- Cost ----------
          Seq        Component / Description       S/N    Required     Issued     Expected      Actual        Price
          ---------- ------------------------------ ---  ---------- ---------- ------------ ------------ ------------
          1          C-DISK                        S          1.000      1.000        11.00        11.00       220.00
                      HARD DRIVE

          2          C-KEY                         S          1.000      1.000        10.05        10.05        32.99
                      KEYBOARD


          ------------------------------------------------- R O U T I N G -------------------------------------------------
                                                 Work  ------ Hours ------- --------- Cost ----------
          Seq  I/O        Description             Ctr    Expected   Actual     Expected      Actual        Price
          ---- --- ------------------------------ ---- ---------- ---------- ------------ ------------ ------------
          1    I  STANDARD ASSEMBLY              WC01       2.00       2.00        14.00        20.00        60.00

          ------------------------------------------------- C H A R G E S -------------------------------------------------
                                                                                --------- Cost ----------
                Element                 Description                                Expected      Actual        Price
          ------------------- ---------------------------------------------------- ------------ ------------ ------------
          PACK                SPECIAL CRATE AND SHRINK WRAP                              20.00         0.00        50.00

---------------------------------------------------------------------------------------------------------------------------------
                                                  Price      Expected Cost   Expected Margin%  Actual Cost   Actual Margin%
                                                ----------   -------------   ----------------  ------------  --------------
          Item Sub-Totals                          362.99           55.05          84.83%            41.05        88.69%
```

GL Accounting for Jobs

Component Issue

***Debit** – the work in process account that is debited is the account number for material and non-stock* material as defined for the accounting code used on the production work order (See Accounting Codes on the Bill of Material File Maintenance menu). For example, if the accounting code DEFAULT was used on the production work order these two accounts will be debited:

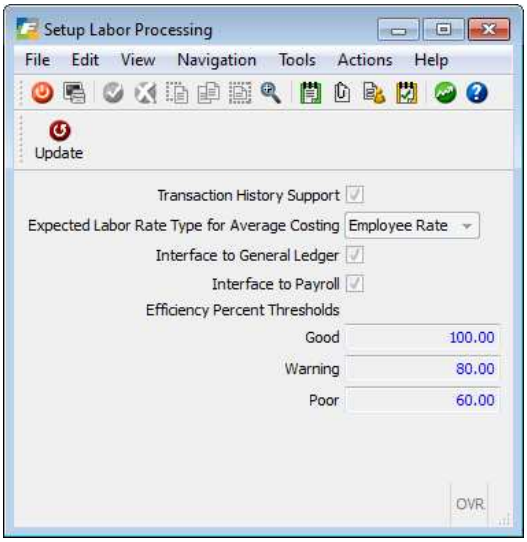


Credit –for stock items the item's inventory account number as defined in the item master. For non-stock items the item's cost of goods account number as defined in the Update Non Inventory Items catalog program (and this cogs account is debited twice further downstream so that a net cost is booked for non-stock).

Labor Posting

Debit – the work in process account that is debited is the account number for labor as defined for the accounting code used on the production work order (See Accounting Codes on the Bill of Material File Maintenance menu). For example, if the accounting code DEFAULT was used on the production work order this account will debited:

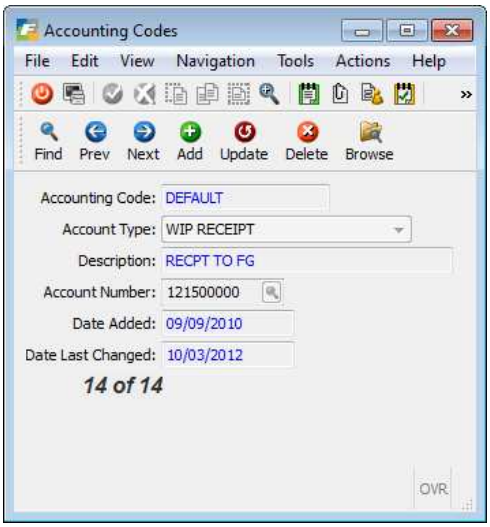
The amount of the transaction is the number of hours worked multiplied by the employee rate in the employee payroll table if the Labor control program uses Employee Rate for costing as shown here (versus using a work center or job class rate). See Setup Labor Processing program on the Labor Processing File Maintenance submenu.



Credit – the work in process account that is credited the account number for labor control as defined for the accounting code used on the production work order (See Accounting Codes on the Bill of Material File Maintenance menu). For example, if the accounting code DEFAULT was used on the production work order this account will credited:

Miscellaneous Charges Posted via AP

Debit - the account debited is whatever account is used when entering the vendor invoice. It is recommended that you use the WIP- Production Receipts account since this is what will be credited when the production receipt is posted. See Accounting Codes on the Bill of Material File Maintenance menu. For example, if the accounting code DEFAULT was used on the production work order this account will credited when the receipt is posted:

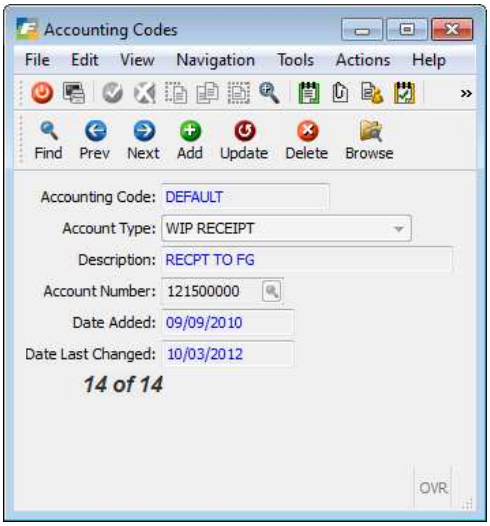


Credit – Accounts payable liability account as defined in the Vendor Master record.

Production Receipt

Debit- for stock items the item's inventory account number as defined in the item master. For non-stock items the item's cost of goods account number as defined in the Update Non Inventory Items catalog program.

Credit – Production Receipts WIP account as defined for the Accounting code assigned to the work order.



Order Entry Invoice Posting Stock or MTO Items

Debit – Accounts Receivable

Debit- Cost of sales as defined in the item master

Credit – Inventory as defined in the item master

Credit – Sales as defined in the item master

Order Entry Invoice Posting Non-stock or MTN Items

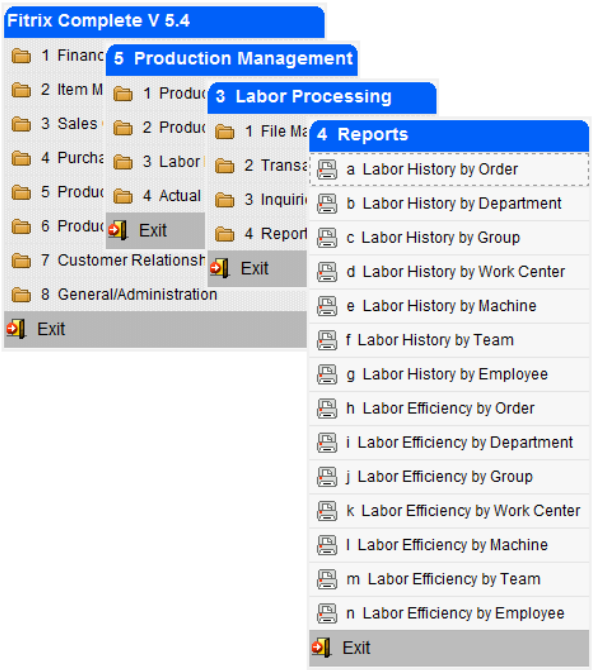
Debit – Accounts Receivable

Credit – Sales as defined in the Non Invetory Items catalog

The cost of goods is debited when the production recepit was posted. See above.

Month End Journal Entries

1. All the work in process (WIP accounts) will net each other out but if you use different WIP account numbers for material, laor, overhead, you will need to do a journal entry to offset the various balances to 0.
2. There will be a balance in the Labor Control account that was credited when the Labor was posted. Run the Labor History by Empolyee report for the month to see how many hours were recorded for labor. Then do a journal entry to debit the labor contol account and credit salary expense.


Fitrix Complete V 5.4
1 Financ
2 Item M
3 Sales
4 Purcha
5 Produc
6 Produc
7 Customer Relationsh
8 General/Administration
Exit
5 Production Management
1 Produc
2 Produc
3 Labor
4 Actual
Exit
3 Labor Processing
1 File Ma
2 Transa
3 Inquiri
4 Report
Exit
4 Reports
a Labor History by Order
b Labor History by Department
c Labor History by Group
d Labor History by Work Center
e Labor History by Machine
f Labor History by Team
g Labor History by Employee
h Labor Efficiency by Order
i Labor Efficiency by Department
j Labor Efficiency by Group
k Labor Efficiency by Work Center
l Labor Efficiency by Machine
m Labor Efficiency by Team
n Labor Efficiency by Employee
Exit

Exercise a: Set Up Job Shop