



Material Planning & Production Management

For Sage 100 2015

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Material Planning & Production Management 1

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Installation Instructions and Cautions

PLEASE NOTE: SAGE 100 must already be installed on your system before installing any IIG enhancement. If not already done, perform your SAGE 100 installation and setup now; then allow any updating to be accomplished automatically. Once SAGE 100 installation and file updating is complete, you may install your IIG enhancement product by following the procedure below.

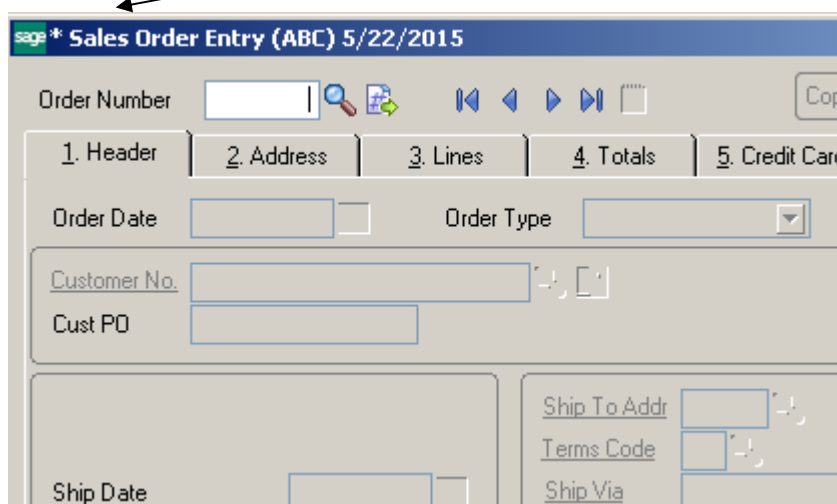
Wait! Before You Install – Do You Use CUSTOM OFFICE?

THIS IS AN IMPORTANT CAUTION: If you have Custom Office installed, **and** if you have modified any SAGE 100 screens, you must run **Customizer Update** after you do an enhancement installation.

But wait! BEFORE you run **Customizer Update**, it is very **important** that you **print all of your tab lists**. Running **Customizer Update** will clear all Tab settings; your printed tab list will help you to reset your Tabs in Customizer Update. **Custom Office** is installed on your system if there is an asterisk in the title bar of some of the screens. The asterisk indicates that the screen has been changed.

An **asterisk** in a window's title bar indicates that the screen has been modified. This means that **Custom Office** is installed.

Follow all the instructions on this page before you run **Customizer Update!**



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Registering IIG products

IIG Enhancement should be registered to be able to use it. If registration is not performed, the enhancement will work in a demo mode for a limited time period. The registration can be still done during the demo period.

Select the **IIG Product Registration** program under the **Library Master Setup** menu of the SAGE 100.

If this option is not listed under the Library Master Setup menu, go to the main menu, and select **Run** from the **File** menu. Type in SVIIGR and click **OK**.

Enhancement	Level	Release Date	Serial Number	Unlocking Key
IIG Enhancement	5.20		AAAAAAAAAAAAAAAA	BBBBB

Enter **Serial Number** and **Unlocking Key** provided by IIG, and click **OK**.

If multiple IIG Enhancements are installed, Serial Numbers and Unlocking Keys should be entered for each enhancement.

Use the Print Registration Form button to print IIG Registration Form.

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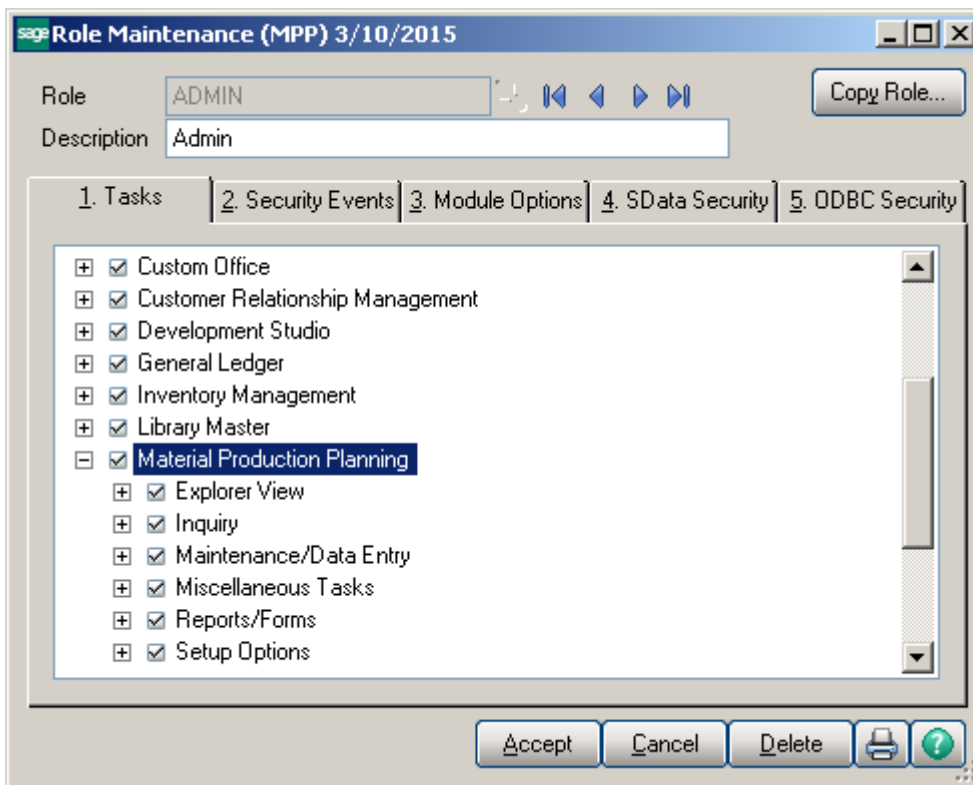
ODBC Security

After installing an **IIG Enhancement**; it is **very important to verify** whether or not the **Enable ODBC Security within Role Maintenance** check box is selected in the **System Configuration** window of your system. If it is selected you must assign ODBC security permissions and allow access to custom data tables/fields for the Roles defined in your system.



Role Maintenance

After installing an **IIG Enhancement**, permissions must be configured for newly created Tasks and Security Events.



Introduction

Note: It is not recommended to have both the Material Production Planning and W/O Modules activated in the same company in order to avoid problems with I/M quantities committed.

The **Material Planning & Production Management** enhancement helps you to coordinate production to deliver what customers want accurately, efficiently and on a timely basis. Process takes into account BUF MAX values for items (stocking levels); and items that are produced to meet demand for existing sales orders

It also gives you full visibility into the process, with the ability to quickly adjust production as requirements change.

This enhancement provides the user with the following options:

- Calculation of requirements for finished goods, WIP and purchased products based on:
 - Material requirements to fulfill sales orders for an entered ship date
 - Material requirements based on stocking levels entered (min/max)
 - Showing the raw material requirements for all BOM levels
 - Taking into account existing SO, PO and WO transactions
- Ability to manage production and purchasing functions by:
 - Ability to analyze calculated demand by drilling down to:
 - Item Inquiry
 - Bill of Material Inquiry
 - Where Used Inquiry
 - Vendor / Purchasing Activity
 - Ability to maintain the calculated quantity requirements for each item
 - Auto creation of work orders to manufacture products from:
 - Material Requirements Planning dashboard
 - Sales Order Entry program for MTO items
 - Scheduling Board based on MRP run's calculated requirements
- Auto creation of purchase orders for products based on:
 - Demand based on existing transactions and inventory positions for purchased products
 - Demand calculated for components (all BOM component levels)
- Auto scheduling of work orders based on item's priority code and machine/mold preference entered
- Creation of production Work Orders (Work Order) based on routings linked to items
- Material requirement check based on work orders scheduled for the next x days

Setup Activity

Material Planning and Production Setup

Main tab

Enable Schedule Board – Select this checkbox to be able to run the **Scheduling Board**.

Material Planning and Production Setup (MPP) 11/25/2015

1. Main | 2. Entry | 3. Line Entry

Enable Schedule Board

Automatically Increment Steps By: 010

Integrate with Payroll

Include History in Payroll Batch:

Payroll Overtime Calculation: 8 hours a day

Auto Load

Machine/Tech. from W.O. to Dispatches and Labors:

Dispatch Starting Date/Time from Scheduled: First

First Labor Hours from Dispatch Dates/Times:

Allow Use of Overtime Calculation for Labor:

Apply Dispatch Date/Time to Labor Lines: None

WO Due Date from SO line Promise Date:

Dispatch Ending Date from SO line Promise Date:

Generated Document Line Hours Rounding

Spent Hours Rounding: None

Spent Hours Precision in Minutes: 15

Minimum Billed Time: 15

Job Cost Posting

Default Account: 111-00-00

J/C Cost Code Segment for Technician Postings: Seg2

Other Receivables

Manual | Accept | Cancel | Print

Generated Document Line Hours Rounding – this group provides settings for rounding of dispatch labor lines' hours during the Labor Charge line entry.

Generated Document Line Hours Rounding

Spent Hours Rounding: None

Spent Hours Precision in Minutes: 15

Minimum Billed Time: 15

Spent Hours Rounding- the available options are: Up, Down, Closest, None.

Spent Hours Precision in Minutes- allows for setting the precision in Minutes to be used while rounding the hours.

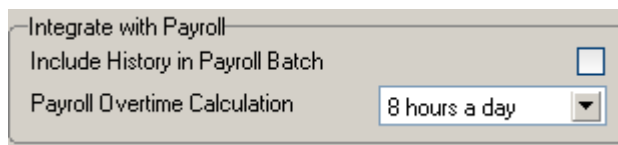
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Minimum Billed Time- dropdown menu is also intended for setting time in minutes. You may select the minimum time to be always billed even if the actual spent time rounded is less than this setting.

Automatically Increment Steps By- this option is used as increment step for Routing. Available values are 10; 20; 30; 40; 50... 100.

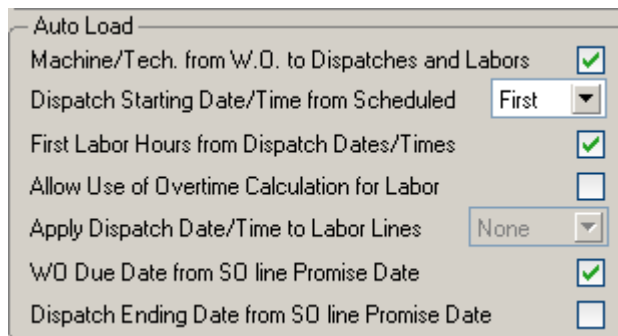
Integrate with Payroll:

Include History in Payroll Batch – check this box to have the program search for labor records during the given period in the history as well. This setting is the default setting for all Payroll Batch Entries, and can be changed on each separate Payroll Batch Entry.



Payroll Overtime Calculation- available options are: 8 hours a day or 40 hours a week. This determines how the hours over time are calculated: on the daily or weekly basis.

Auto Load:



Machine/Tech. from W.O. to Dispatches and Labors- check this box to automatically load the Work Order's machine and technician (if any) into the generated dispatches header as well as to the Labor lines.

Dispatch Starting Date/Time from Scheduled- allows loading the Scheduled Date/Time from the WO into the generated dispatches. The following options are available: None, First, All.

None- the Work Order's Scheduled Date/Time will not be loaded into any of the generated dispatches. In this case the Dispatch Date and dispatch Starting/Ending Dates are defaulted to S/M module current Accounting Date.

First- the Work Order's Scheduled Date/Time will be loaded only into the first dispatch generated.

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All- the Work Order's Scheduled Date/Time will be loaded into all dispatches being generated.

System- the Dispatch Starting Date/Time will be populated with current system date/time.

First Labor Hours from Dispatch Dates/Times- allows automatically calculating the Hours Spent based on the dispatch Starting and Ending Date/Time and loading it to the first labor line entered in the dispatch.

Allow Use of Overtime Calculation for Labor - enables special calculation of Labor with Overtime Factor, based on the working hours and Coverage Code. (Refer to Labor Charge Data Entry for more details)

Apply Dispatch Date/Time to Labor Lines- enables automatically applying the Dispatch Date/Time to the Labor lines being entered. Three options are available:

None- the Dispatch Date/Time will not be applied to any of the Labor lines.

First- the Dispatch Date/Time will be applied only to the first Labor line entered.

All- the Dispatch Date/Time will be applied to all Labor lines being entered.
The Manual button allows for viewing MPP enhancement document in a PDF format.

Entry tab

1. Main | 2. Entry | 3. Line Entry

Time entry drop box in Dispatch Data Entry: 15

Next Automatic Work Order Number: 0000240
Next Automatic Contract Number: 000000003
Next Automatic Template Contract Number: 00000001

Default Values:
Work Order Type: M Manufacturing
Dispatch Status (Quick Entry): O Open
Close Dispatches into the: Sales Order
Dispatch Status (Released to Prod.): R Released to Pr

Don't prompt if machine is busy during the scheduled time:

Present Sales Kit as a Set of Regular Items:
Item Contract Instead Of Order Contract:
Retain Work Order History:
Allow Quote Hours in Work Order:
PM Work Order Generate Based On W.O. Close Date:
Commit Quantity During MFG Dispatch Generation:
Default W.O. Customer: 01-SHEPARD

Lot/Serial Distribution in Dispatch Data Entry:
Enable Lot/Serial Distribution:
Require Lines to be Fully Distributed:

Manual | Accept | Cancel | [Printer Icon]

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Time entry drop box in Dispatch Data Entry- select a value (in minutes) from the drop down to be used for populating drop-down lists of the starting and ending time selection in the Dispatch Data Entry program.

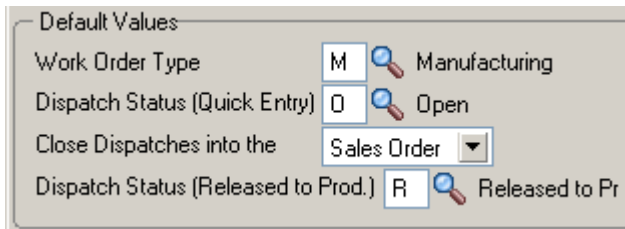
Next Automatic Work Order Number- enter the next work order number to assign when using the next Work Order Number feature in the Work Order Data Entry.

Next Automatic Contract Number- enter the next contract number to assign when using the next Contract Number feature in the Contract Data Entry.

Next Automatic Template Contract Number- enter the next template contract number to assign when using the Next Template Contract Number feature **NTC** in the [Contract Data Entry](#). A template contract is used to generate a regular contract (such as a standard service contract) whenever a particular item is sold. If you enter a template contract once and then assign it to an item in **Inventory Maintenance**, the system will automatically set up a contract adhering to the rules of the template for any customer who purchases that item.

Default Values

This group of options allows for setting default values to be used when entering new Work Orders, Dispatches and generating a sales document upon closing the Dispatch.

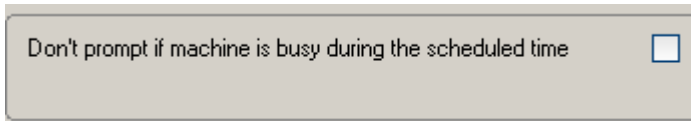


Work Order Type- select the default WO type to be assigned when entering a new Work Order.

Dispatch Status - select the status to be used by default when new Dispatch is created.

Close Dispatches into the- select Sales Order/Invoice to indicate whether charges from a closed dispatch should generate a sales order or an invoice. Select None to not generate any document when closing dispatch.

Dispatch Status (Released to Prod)- specify the status to be applied to the Dispatches released to Production.



Don't prompt if machine is busy during the scheduled time- check this box to suppress the prompt appeared upon accepting the Dispatch if the machine is busy on other active dispatches during current time period (Dispatch Starting - Ending Date/time).

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Present Sales Kit as a Set of Regular Items

Item Contract Instead Of Order Contract

Retain Work Order History

Allow Quote Hours in Work Order

PM Work Order Generate Based On W.O. Close Date

Commit Quantity During MFG Dispatch Generation

Default W.O. Customer

Present Sales Kit as a Set of Regular Items- If this check box is selected, the Sales Kit Item number will be replaced with a comment line indicating sales kit number during Dispatch Data Entry, Sales Order Entry or Invoice Data Entry. All the components of that kit will be presented as regular line items.

Item Contract Instead of Order Contract- Check the **Item Contract Instead of Order Contract** box to attach the contract specified for the Item in the **Inventory Maintenance** program instead of the contract specified in the **Sales Order Entry** to the Work Orders generated for the item.

Retain Work Order History- Select this check box to retain Work Order history information. If this checkbox is selected the work Order will be moved to the Work Order History when it is closed. Clear this check box if you do not want to retain the history.

Allow Quote Hours in Work Order- Select this checkbox to have the **Quote Hours** and **Quote Amount** fields visible on the **Labor Charge Entry**.

PM Work Order Generation Based On W.O Close Date- check this box to generate the next preventive maintenance WO based on the Work Order Close Date.

Commit Quantity During MFG Dispatch Generation- Select this checkbox to commit the Item quantity on MFG Dispatches being generated. If this checkbox is selected the On Work Order and Req for Work Order fields (in the Item Maintenance Quantities grid) are updated respectively for Bill and Component items.

Note: It is highly recommended to not enable this option if W/O module is activated in your system.

Default W.O. Customer- select the default Customer Number to be loaded as the customer number of the Work Order generated by the Calculate Quantity to Produce/Purchase program.

Lot/Serial Distribution in Dispatch Data Entry

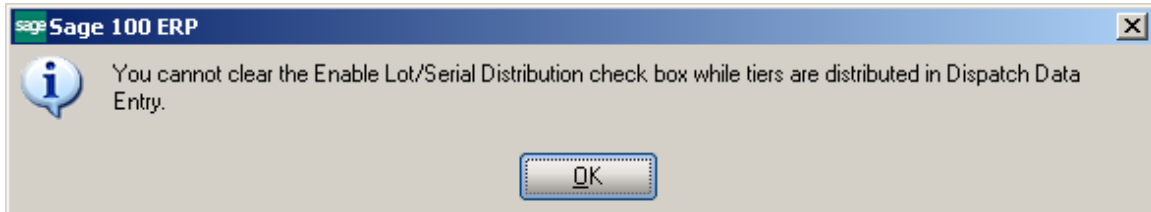
Enable Lot/Serial Distribution

Require Lines to be Fully Distributed

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Enable Lot/Serial Distribution -Select this check box to enable the distribution of lot and serial numbers in the Dispatch Data Entry. If this check box is selected, you can distribute and commit quantities for lot or serial items using the Lot/Serial Number Distribution window.

This check box cannot be cleared if Dispatch Entry distributions already exist. The following message appears when trying to clear the checkbox:



Require Lines to be Fully Distributed - Select this check box to require the data entry lines for lot or serial items to be fully distributed in Dispatch Data Entry. Clear this check box if you do not want to require to fully distribute the data entry lines for lot or serial items in Dispatch Data Entry. If this check box is cleared, all lot or serial line items can be partially distributed. This field is available only if the **Enable Lot/Serial Distribution** check box is selected.

Refer to **Lot/Serial Distribution** section for details.

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Lines Tab

The screenshot shows the Sage Material Planning and Production Setup (MPP) 12/3/2015 window, Lines Tab. The window is divided into several sections:

- 1. Main** | **2. Entry** | **3. Line Entry**
- Use Alternate Warehouse for Out-of-Stock Items**:
- Check for Available Quantity**:
- Default Warehouse**: 000
- OP Warehouse**: OP
- Billing Rate and Cost Calculation Priority**:
 - Highest: Technician Code
 - Middle: Technician Code
 - Lowest: Technician Code
- Sales Account Priority**:
 - 1. Technician Code
 - 2. Labor Code
 - 3. Skill Code
 - 4. Nature of W.O.
 - 5. Work Order Type
- Material Job Code**: 011-000-000
- Labor Job Code**: 022-000-000
- Job Code Size**: Seg 1 3, Seg 2 3, Seg 3 3
- Labor Billing Presentation**: Special Item
- Miscellaneous Item**: [Empty]
- Sales Account**: 111-00-00
- COGS Account**: 205-00-00
- Product Line**: [Empty]
- Order In Item No**: Technician Code
- Other Receivables**: [Empty]
- Notes payable**: [Empty]
- Bypass Cost G/L Postings For Labor Items**:
- Calculate Taxes on Labor Based on**: None

Use Alternate Warehouse for Out-of-Stock Items- Select this check box to fill dispatch lines from an alternate warehouse if the primary warehouse is out of stock for the selected item. Clear this check box if you do not want to fill dispatch lines from an alternate warehouse. This field is available only if the Require Multiple Warehouses check box is selected in the Inventory Management options.

Check for Available Quantity - Select this check box to force the **Entry Exceeds Available Quantity** message to appear in the Dispatch Data Entry when the quantity ordered is greater than the quantity available in the warehouse. Clear this check box if you do not want the message to appear.

Default Warehouse -The warehouse selected here is used as the default when entering items in the Dispatch Data Entry.

This close-up screenshot shows the Job Code fields from the Sage MPP software:

- Material Job Code**: 011-000-000
- Labor Job Code**: 022-000-000
- Job Code Size**: Seg 1 3, Seg 2 3, Seg 3 3

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Job Codes are used to track material and labor cost and revenue in the contract file. Job Codes are entered for each inventory item, for posting of material related information and in the Technician, Labor and Skill Code Master files for labor information tracking.

You can add new codes in the **Job Codes Maintenance** program in the **Material Planning and Production Management** Main menu.

If no Job Codes are assigned to inventory items or charge codes, the default job codes specified here will be used for material or labor items.

A total of nine characters can be used for Job Codes. You can define segmentation of the Job Codes by changing the appropriate setting in the **Job Code Size** field.

Labor Billing Presentation group is a set of controls that allows the user to choose from the following options for charges or labor billing presentations.

The screenshot shows a form titled 'Labor Billing Presentation'. The 'Labor Billing Presentation' dropdown is set to 'Miscellaneous Item'. The 'Miscellaneous Item' text box contains 'DESK-1000'. The 'Sales Account' is '111-00-00' and the 'COGS Account' is '205-00-00'. The 'Product Line' is empty. The 'Order In Item No' dropdown is set to 'Technician Code'. The 'Calculate Taxes on Labor Based on' dropdown is set to 'None'. There are checkboxes for 'Other Receivables', 'Notes payable', and 'Bypass Cost G/L Postings For Labor Items'.

- If **None** is selected, the system will not process labor charges.

The screenshot shows a form titled 'Labor Billing Presentation'. The 'Labor Billing Presentation' dropdown is set to 'Inventory Item'. The 'Miscellaneous Item' text box is empty. The 'Sales Account' is '111-00-00' and the 'COGS Account' is '205-00-00'. The 'Product Line' is 'C&A CABLES & ACCESSORIES'. The 'Order In Item No' dropdown is set to 'Technician Code'. The 'Calculate Taxes on Labor Based on' dropdown is set to 'None'. There are checkboxes for 'Other Receivables', 'Notes payable', and 'Bypass Cost G/L Postings For Labor Items'.

- If **Inventory Item** is selected a regular Item will be loaded to the **Sales Order/SO Invoice** generated based on the **Dispatch Labor/Skill** line. The system will build an Inventory Item based on the Technician Code of the person who performed the job and Labor or Skill Code of the job that was performed.
 - The **Product Line** should be specified.

The **Product Line** entered here will be used to get the default information for the Inventory Item being generated upon closing the Dispatch. The **Tax Class, Description (Extended Description), Default Warehouse, Price and Cost** fields will be populated correspondingly from MPP files. The **Material Job Code** specified on the MPP Options will be applied to the Inventory Item if no Job Code is entered for the selected **Product Line**.

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- If **Miscellaneous Item** is selected in the **Labor Billing Presentation** field, the system will build a Miscellaneous Item based on the Technician Code of the person who performed the task and Labor or Skill Code of the job that was performed.
 - The **Miscellaneous Item** should be selected to get the default information when a Misc. Item is generated upon closing the Dispatch.

For the generated **Miscellaneous Item** the **Tax Class, Price** and **Cost** fields are populated with corresponding values from MPP files.

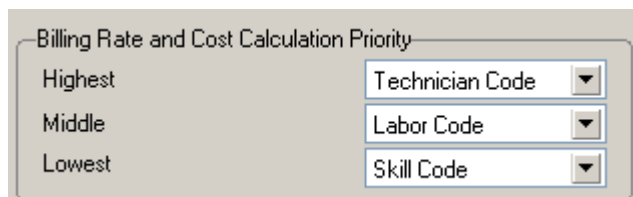
- If **Special Item** is selected, the system will load a Special Item line to the **Sales Order/SO Invoice** generated based on the **Dispatch Labor/Skill** line.
 - The **Sales** and **COGS Accounts** entered here will be applied to the Special Item line loaded in the Sales Order/SO Invoice if no **Sales** and **COGS Accounts** will be found for corresponding fields in the Dispatch Detail table.

The **Calculate taxes on Labor based on** drop-down box allows the user to define how **Sales Taxes** should be calculated. The following options are available: **None, Dispatch Line, System Default**.

- **None**-means the **Tax Class** will not be shown on the **Dispatch Line** and it will be set to "NT" for the line item loaded in the Sales Order or Invoice transaction.
- **Dispatch Line**-means the **Tax Class** specified on the Dispatch Labor Line will be carried over to the corresponding line item loaded in the Sales Order or Invoice transaction.
- **System Default**-means that the **Tax Class** of corresponding Item (Inventory, Misc, Special) generated upon closing the Dispatch(based on the Labor Billing Presentation) will be applied.

The **Bypass Cost G/L Postings For Labor Items** check box allows to process items generated for labor with zero cost, that is, cost is not posted to G/L.

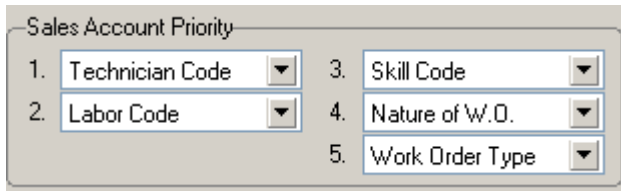
The **Billing Rate and Cost Calculation Priority** group of controls will define the priority by which labor billing rates and costs will be calculated. Rate and Cost can be used from **Technician Code, Labor Code, or Skill Code**.



The screenshot shows a control panel titled "Billing Rate and Cost Calculation Priority". It contains three rows of controls. The first row has a radio button labeled "Highest" and a dropdown menu currently showing "Technician Code". The second row has a radio button labeled "Middle" and a dropdown menu currently showing "Labor Code". The third row has a radio button labeled "Lowest" and a dropdown menu currently showing "Skill Code".

Sales Account Priority defines the priority of using the G/L accounts for sales postings of Service Management.

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The image shows a dialog box titled "Sales Account Priority". It contains five numbered items, each with a dropdown menu:

1. Technician Code
2. Labor Code
3. Skill Code
4. Nature of W.O.
5. Work Order Type

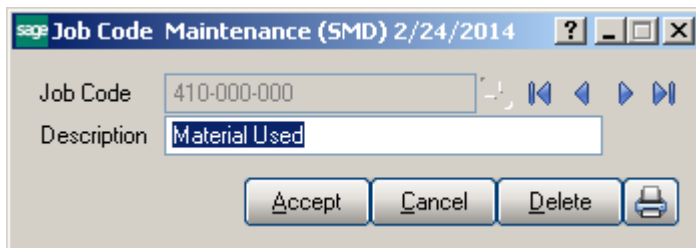
G/L accounts are assigned in the **Technician Code Maintenance**, **Labor Code Maintenance**, **Skill Code Maintenance**, **Nature of W.O.** and **Work Order Type Maintenance**.

The first in the list will be used if on file, otherwise the second will be used, etc.

Job Code Maintenance

Job Codes are used to track material and labor cost and revenue in the contract file. You can assign job codes to the inventory items and charge codes in order to track their usage by service contracts.

The **Job Code Maintenance** program from the **MPP Main** menu allows you to add and remove Job Codes.



The image shows a window titled "Job Code Maintenance (SMD) 2/24/2014". It contains the following fields and controls:

- Job Code: 410-000-000
- Description: Material Used
- Buttons: Accept, Cancel, Delete, and a printer icon.

If no Job Codes are assigned to inventory items or charge codes, the default job codes specified in **Material Planning and Production Setup** will be used for material or labor items.

A total of nine characters can be used for Job Codes. You can define segmentation of the Job Codes by changing the appropriate setting on the **Line Entry** tab of **Material Planning and Production Setup**.

Skill Code Maintenance

The **Skill Codes** represents special abilities needed to perform a task. The **Skill Code Maintenance** program is used to maintain, edit and add skill codes used in **Material Planning and Production Management** Module.

Skills defined in this program are used in Technician Code Maintenance to describe different skills, at appropriate levels, for each technician. This allows you to pick the appropriate or most qualified technician during Work Order or Dispatch Data Entry.

The screenshot shows a software window titled "Skill Code Maintenance (MPP) 12/4/2015". The window contains a form with the following fields and values:

- Skill Code: ADM
- Description: Administration
- Job Code: 022-000-000 (with a magnifying glass icon and the label "Labor Job Code")
- Sales Account: 111-00-00 (with a magnifying glass icon and the label "Other Receivables")
- Tax Class: NT (with a magnifying glass icon and the label "Nontaxable")
- Skill Cost: 45.00
- Billing Rate: .00

At the bottom of the window, there are buttons for "Accept", "Cancel", "Delete", and a "COGS G/L" button. There are also navigation arrows and a help icon.

Job Code is used when posting labor charges to the contract file.

Sales Acct is used for postings when closing dispatches with labor (based on the priority in Options).

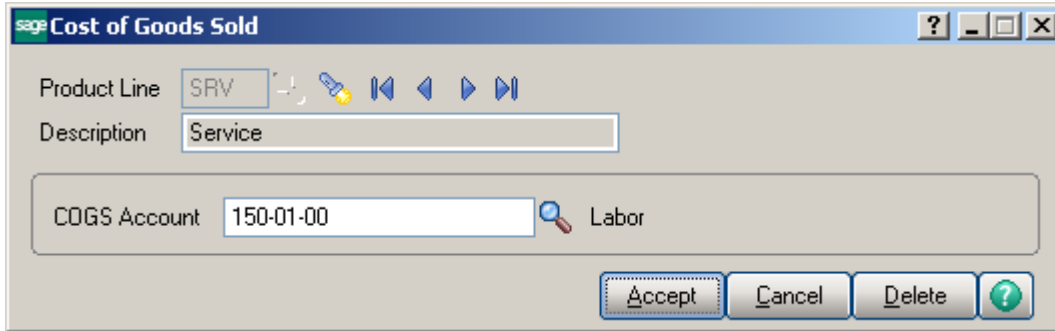
Skill Cost is used for posting cost to contracts for transactions generated when closing dispatches with labor (based on billing rate calculation).

Billing Rate is the billing rates for labor items subject to contract settings or the billing rate calculation priority set-up in **MPP Options**.

Clicking the **COGS G/L** button opens the **Cost Of Goods Sold** screen, where you can specify account to be used for the labor items generated from the selected Skill during dispatch closing into Sales Orders or Invoices.

The COGS G/L button is available only if the Labor Billing Presentation is set to Inventory Item in the Service Management Options.

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The screenshot shows a software dialog box titled "sage Cost of Goods Sold". It has a standard Windows-style title bar with a question mark, minimize, maximize, and close buttons. The main area contains three input fields: "Product Line" with the value "SRV", "Description" with the value "Service", and "COGS Account" with the value "150-01-00". To the right of the "COGS Account" field is a magnifying glass icon and the text "Labor". At the bottom of the dialog, there are four buttons: "Accept", "Cancel", "Delete", and a help icon (a question mark inside a circle).

Different G/L accounts may be set for different **Product Lines** and for all the Product Lines (empty Product Line) not having separate accounts specified.

The COGS Account specified for current Product Line is used for the generated inventory items if the **Product Line** matches the one set for Inventory Item in the **Material Planning and Production Setup**.

If there is no account specified for that Product Line, the program uses the **COGS Account** specified for blank **Product Line**.

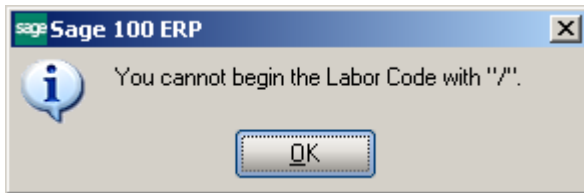
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Labor Code Maintenance

Labor Code represents the type of work a technician can perform.

The **Labor Code Maintenance** program is used to maintain, edit and add labor codes used in the **MPP** Module.

The **Labor Code** cannot start with “/” symbol and the following message will popup if a labor code starting with “/” is entered:



Labor Code	INSTALL	
Description	Installation and Services	COGS G/L
Skill Code	ADM	Administration
Job Code	022-000-000	Labor Job Code
Sales Account	195-00-00	Software costs (net)
Tax Class	NT	Nontaxable
Labor Cost	25.00	
Billing Rate	50.00	
Regular Earnings	01	Regular
Overtime Earnings	03	Overtime

Skill Codes are used to specify to which Skill Code group this labor code belongs. A single Skill Code can include any number of individual labor codes. Using the **Skill Code** during Dispatch Data Entry can reduce confusion and speed up your data entry.

Job Codes are used when posting labor charges to the contract file.

Sales Account is used for postings when closing dispatches with labor (based on the priority set in the **Material Planning and Production Setup**).

Labor Cost is used for posting cost to contracts for transactions generated when closing dispatches with labor (based on billing rate calculation).

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Billing Rate is the billing rates for labor items subject to contract settings or the billing rate calculation priority set-up in the **Material Planning and Production Setup**.

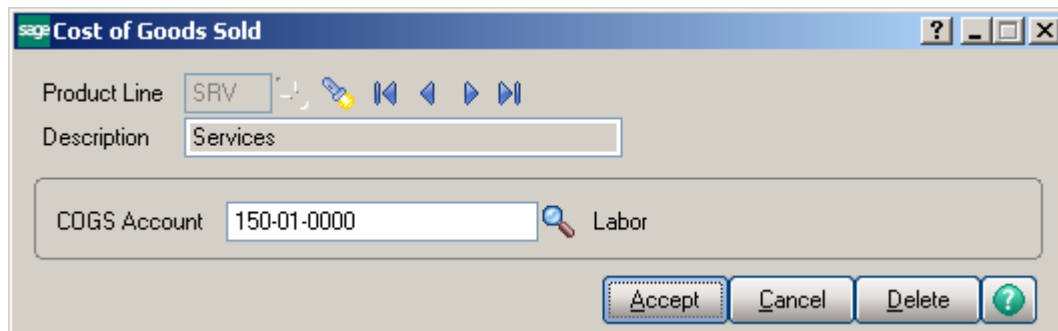
Select the **Regular** and **Overtime Earnings Codes** from the **Earnings List**. Earnings Codes are set in the **Earnings Code Maintenance** under the **Payroll Setup** menu.

The **Retainer Factor** is used when calculating used hours from the contract hours.

The **Overtime Factor** is used for calculation of hours during Labor lines entry for the hours out of the coverage period defined by the **Coverage Code** of the Work Order.

Tax Class will be used in the Dispatch by default, if the WO's **Ship To Address** has **Calculate taxes on Labor** checked and the **Calculate taxes on Labor** option is not set to **None** in the **Material Planning and Production Setup**. If new item (labor presenting) is generated during dispatch closing, this **Tax Class** will be set for it.

Clicking the **COGS G/L** button opens the **Cost Of Goods Sold** screen, where you can specify account to be used for the labor items generated from the selected Labor during dispatch closing into Sales Orders or Invoices.



The screenshot shows the 'SAP Cost of Goods Sold' dialog box. It features a title bar with the SAP logo and the text 'Cost of Goods Sold'. Below the title bar, there are several input fields and buttons. The 'Product Line' field contains 'SRV'. The 'Description' field contains 'Services'. The 'COGS Account' field contains '150-01-0000'. To the right of the 'COGS Account' field, there is a magnifying glass icon and the text 'Labor'. At the bottom of the dialog, there are four buttons: 'Accept', 'Cancel', 'Delete', and a help button (a green circle with a question mark).

Different G/L accounts can be set for different **Product Lines** and for all the Product Lines (empty Product Line) not having separate accounts specified.

The account specified for the **Product Line** set in the **Service Management Options** will be used for the generated inventory items.

If there is no account set for that Product Line, the program uses the account set **without Product Line**.

Shift Maintenance

The **Shift Maintenance** program added under the **Material Planning and Production Management** Setup menu is used to setup shift schedules by week days.

	Shift	Start Time	End Time
1	1	09:00 AM	12:30 PM
2	2	01:00 PM	05:30 PM
3	3	06:00 PM	11:00 PM
4			

Plant Code Maintenance

The **Plant Code Maintenance** program is used to setup Plant Codes and assign the Default Machine Code to the Plant Code.

Plant Code	Description	Default Machine Code
UNION	Union city	M001

The Lookup button next to the Plant Code field lists the Plant codes setup in the system.

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Plant Code	Description	Machine Code	Name
	South West	M1	MATK204-Auto 204 Auto
PL1	Plant 1	A1	Machine A1
UNION	Union city	M001	Machine #1 M1

Machine Code Maintenance

The **Machine Code Maintenance** program is used to setup machines with respective mold types they can handle. The Machine Codes set up here are available in the Dispatch Board used to generate Work Orders.

During Work Order generation the program validates the Machine Code/Mold type to match the Mold type set on the Item.

Machine Code Maintenance (MPP) 3/11/2015

Machine Code: M001

Machine Name: Machine #1

ABV Name: M1

Labor Cost: .00

Plant Code: UNION (Union city)

Active:

Molds...

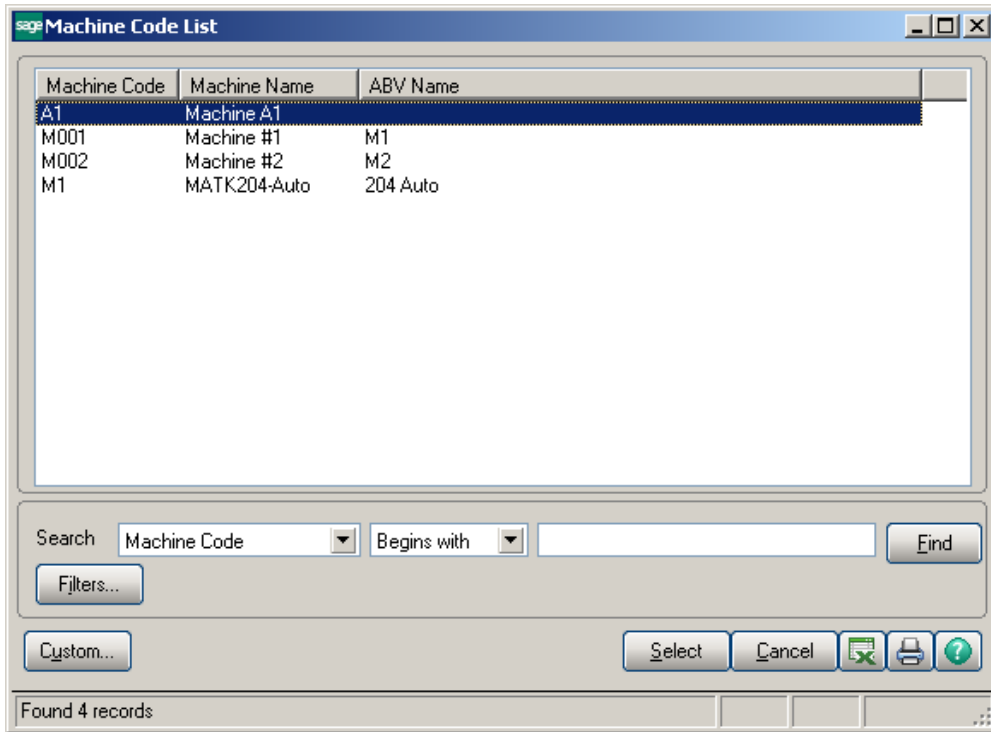
Accept Cancel Delete

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Enter new **Machine Code** to add in the system or select an existing one to make changes if necessary; e.g. change the Plant Code, Labor Cost etc.

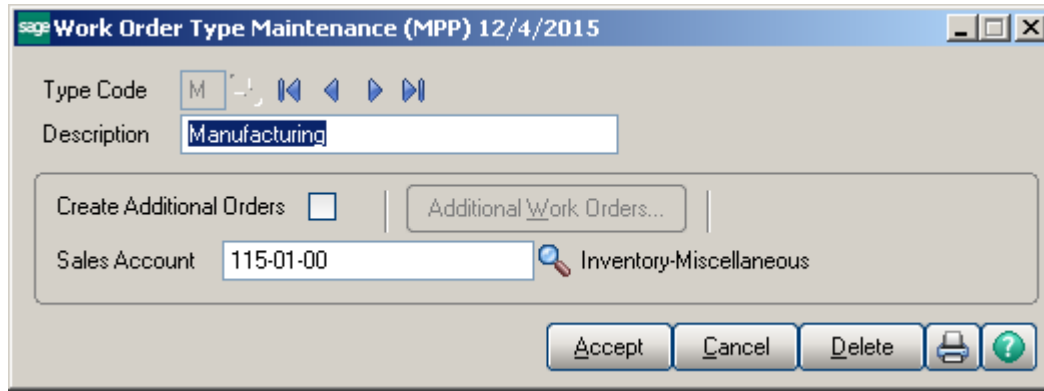
Press the **Molds** button to assign the mold type to current machine.

The Lookup button lists all Machine codes setup in the system:



Work Order Type Maintenance

The **Work Order Type Maintenance** program is used to maintain WO type codes.



The screenshot shows a software window titled "sage Work Order Type Maintenance (MPP) 12/4/2015". The window contains the following elements:

- Type Code:** A text box containing the letter "M" with navigation arrows to its right.
- Description:** A text box containing the word "Manufacturing".
- Create Additional Orders:** A checkbox that is currently unchecked.
- Additional Work Orders...:** A button with a magnifying glass icon.
- Sales Account:** A text box containing "115-01-00" with a magnifying glass icon to its right.
- Inventory-Miscellaneous:** Text displayed next to the magnifying glass icon.
- Buttons:** A row of buttons at the bottom: "Accept", "Cancel", "Delete", a printer icon, and a help icon (a question mark in a circle).

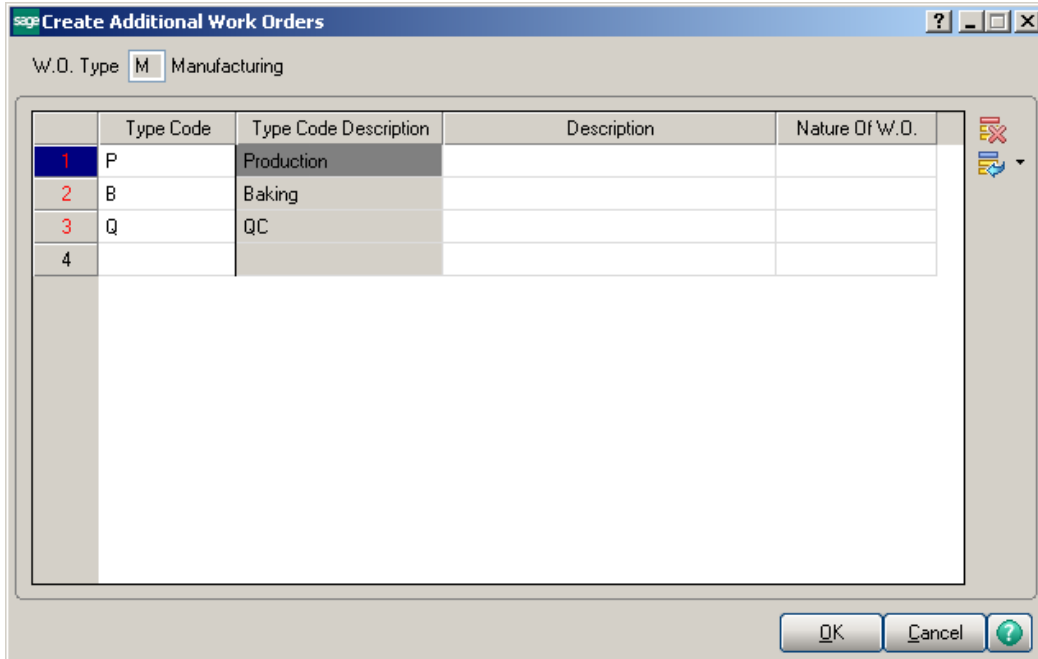
Sales Acct is used for postings when closing dispatches with labor (based on the priority in **Service Management Options**).

Enter the **Type Code** and check the **Create Additional Orders** box to have the program create records for additional Work Orders. The WOs will be generated at the moment you're accepting a new Work Order of respective type in the **Work Order Entry**.

If you delete all the additional Type Codes in the list, and close the **Create Additional Work Orders** screen, the check box in the **Work Order Type Maintenance** will be automatically cleared. You must check it anew and click the button, if you want to add new Type codes after it.

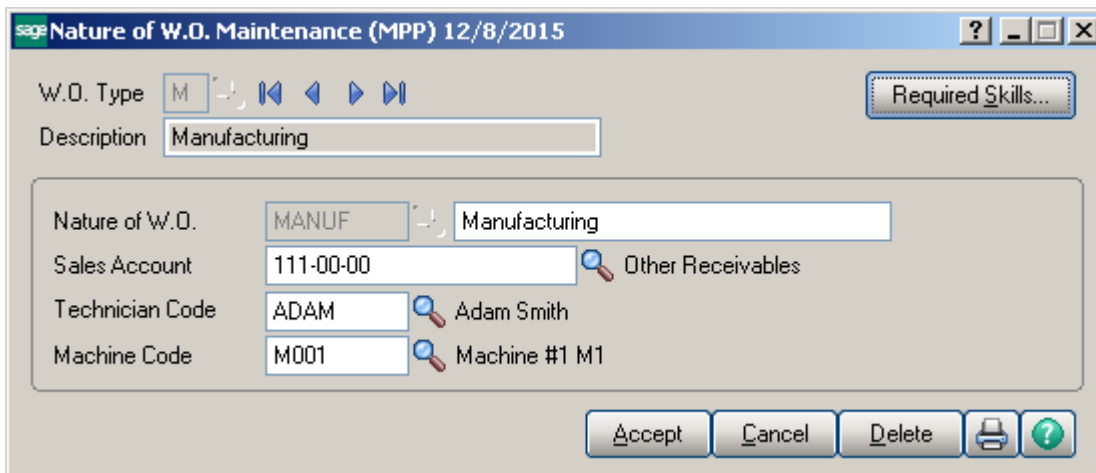
Here is the **Create Additional Work Orders** screen with 3 WO types selected to be generated additionally for current Work Order type.

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Nature of W.O Maintenance

The **Nature of W.O. Maintenance** program is used to maintain, edit and add Nature of WO codes used in the **Material Planning & Production Management** module. This program can also be used to list the skills required for a Work Order type.



Enter **W.O. Type** or select it from the lookup for the Nature of W.O. you wish to maintain.

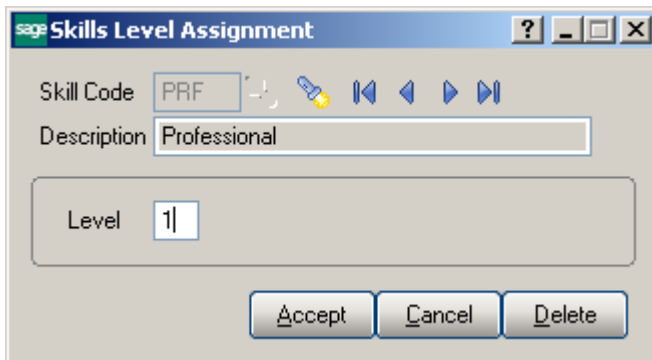
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Enter the desired **Nature of W.O.** code to add or maintain and a **Description** for the Nature of WO.

Sales Acct is used for postings when closing dispatches with labor (based on the priority in the **Service Management Options**).

Select the **Technician Code** to be loaded by default when selecting the **Nature of WO**.

Use the **Required Skills** button on the **Nature of W.O. Maintenance** screen to open the **Skills Level Assignment** screen. Use this screen to specify the list of skills needed for the assigned WOs.



The screenshot shows a dialog box titled "Skills Level Assignment" with a Sage logo in the top-left corner. The dialog has a standard Windows-style title bar with a question mark, minimize, maximize, and close buttons. Inside the dialog, there are three input fields: "Skill Code" containing "PRF", "Description" containing "Professional", and "Level" containing "1". To the right of the "Skill Code" field are several navigation icons: a search icon, a refresh icon, and four arrow icons (left, right, double left, double right). At the bottom of the dialog are three buttons: "Accept", "Cancel", and "Delete".

Routing Maintenance

Routing Maintenance is a program that allows setup of steps to be used when generating Work Orders for Bill Items.

The term "Routing" is used in this case to describe the total set of steps, of any kind, taken to complete a dispatch or Work Order.

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Routing Maintenance (MPP) 12/8/2015

Routing Number: EQP_MFG
Description: Equipment / AC MFG

Steps by Dispatch

	Step No.	Description	Req. Hours	Gen. W.O.	W.O. Type	Nature Of W.O.	Mfg	Next Step No., Alt-X	Labor Code	Technician	Machine
1	0010	Pull Product	3.00	<input checked="" type="checkbox"/>	S		<input type="checkbox"/>				
2	0030	Assemble Case / Enclosure	5.00	<input checked="" type="checkbox"/>	M	ASSEMBLY	<input checked="" type="checkbox"/>	INSTALL	ADAM	M002	
3	0050	Install Motor / Pump	4.00	<input checked="" type="checkbox"/>	M	INSTALL	<input type="checkbox"/>				
4	0070	Install Temp Control / Heat Pa	4.00	<input checked="" type="checkbox"/>	M	MANUF	<input checked="" type="checkbox"/>	LAB1			M1
5			.00	<input type="checkbox"/>			<input type="checkbox"/>				

Accept Cancel Delete

Enter the **Routing Number** that represents the series of steps to be performed in completing a repair, installation or manufacturing.

Enter the **Description** (effectively, the name) of the routing in this field. You may use up to thirty characters for the description.

Enter the number of the step you wish to add or maintain in the **Step Number** field. Use the **Next Number** icon to accept the next automatically incremented step number.

If the **Step Number** represented by the next incremented value already exists, then the difference between the current step number and the step represented by the multiple will be divided by two.

If you are entering the first step number for a new routing, clicking the **Next Number** icon will insert **Step Number** automatically based on the **Automatically Increment Steps By** option set in the **Material Planning and Production Setup**.

Enter the **Step Description**. You may use as many characters as you wish to describe each step in the routing. The **Step Text Maintenance** window will be opened allowing the user to enter extended description.

Enter the **Required Hours** planned to complete this step.

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Routing Number: EQP_MFG
Description: Equipment / AC MFG

Steps by Dispatch

	Step No.	Description	Req. Hours	Gen. W.O.	W.O. Type	Nature Of W.O.	Mfg	Labor Code	Technician	Machine
1	0010	Pull Product	3.00	<input checked="" type="checkbox"/>	S		<input type="checkbox"/>			
2	0030	Assemble Case / Enclosure	5.00	<input checked="" type="checkbox"/>	M	ASSEMBLY	<input checked="" type="checkbox"/>	INSTALL	ADAM	M002
3	0050	Install Motor / Pump	4.00	<input checked="" type="checkbox"/>	M	INSTALL	<input type="checkbox"/>			
4	0070	Install Temp Control / Heat Pa	4.00	<input checked="" type="checkbox"/>	M	MANUF	<input checked="" type="checkbox"/>	LAB1		M1
5			.00	<input type="checkbox"/>			<input type="checkbox"/>			

Accept Cancel Delete

Select the **Gen. W.O** box to mark the step as a WO, which can be dispatched when an item with this routing is sold or needs repairing.

If the **Generate W.O** box is checked, select a **W.O Type** describing the WO. This will be transferred automatically to the generated Work order, and can be used for assigning a machine with the molds appropriate for completing the WO.

If the **Generate W.O** box is checked, enter a **Nature of W.O** describing the Work Order. This will be transferred automatically to the generated Work Order

The **Mfg (Manufacturing)** check box is available only for Steps with the **Generate W.O** option selected.

If the **Mfg** box is selected for a **Step**, the **Labor Code** and **Machine Code** fields become visible enabling selection for that Step.

For **Manufacturing** Step, Dispatch with Labor Charge line will be generated when generating **W.O** using the specified **Labor Code**, **Machine** and the **Technician** (if selected).

The **Steps by Dispatch** option allows for setup of routings for which a single Work Order will be generated with respective Dispatches for all steps of Routing. This option is available only for newly created Routing Numbers.

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Routing Number: MFGROUTING
Description:
W.O. Type: Nature of W.O.: W.O. Description: Steps by Dispatch:

Step No.	Mfg	Labor Code	Technician	Machine	Dispatch Description
1	<input type="checkbox"/>				

Buttons: Accept, Cancel, Delete, Print, Help

Upon selecting the **Steps by dispatch** checkbox the Routing Maintenance screen changes allowing to setup steps for a W.O Type.

Routing Number: MFGROUTING
Description:
W.O. Type: M Nature of W.O.: MANUF W.O. Description: Production/Mold Steps by Dispatch:

Step No.	Mfg	Labor Code	Technician	Machine	Dispatch Description
1	<input checked="" type="checkbox"/>	LAB1	ADAM	M001	Material Selection
2	<input checked="" type="checkbox"/>	LAB2	ADAM	M002	Tooling Project Management
3	<input type="checkbox"/>	LAB1	ADAM	M1	
4	<input type="checkbox"/>				

Buttons: Accept, Cancel, Delete, Print, Help

When Work order is generated for a Bill Item having such Routing Number assigned one Work Order with the specified W.O Type will be generated and for each steps having the MFG flag set, manufacturing dispatches will be generated with respective Dispatch Description entered. For the step not marked as MFG a Dispatch is generated only with Labor Code loaded in the **Labor Charge Data Entry**.

Dispatch/W.O. Status Maintenance

The **Dispatch/W.O. Status Maintenance** program is used to maintain Work Order /Dispatch status codes, which are used to display the current status of WOs and dispatches. For example, WO can be opened or closed, entered or waiting for a receipt.

The screenshot shows the Sage Dispatch/W.O. Status Maintenance (MPP) 12/15/2015 window. The 'Status Code' field contains 'C' and the 'Description' field contains 'Closed'. Below these are two checkboxes: 'Allow Cascade Replacement' (unchecked) and 'Retain during Cascade Replacement' (unchecked). The 'Use this Status in' dropdown menu is set to 'Work Order & Disj'. There are also color selection options for 'For W.O.' (R: 95, G: 95, B: 203) and 'For Dispatches' (R: 50, G: 53, B: 95). At the bottom are buttons for 'Accept', 'Cancel', 'Delete', a printer icon, and a help icon.

Check the **Allow Cascade Replacement** box if you want to have the selected Status applied to all Dispatches associated with the W.O. when applying it to the Work Order. This checkbox is disabled if the **Use this Status in** option is set to **Dispatch**.

Check the **Retain during Cascade Replacement** box if you want the Status to be retained for the Dispatches while applying the cascade replacement to the Work Order. This checkbox is disabled if the **Use this Status in** option is set to **Work Order**. The user can select the status to be used only in the **Work Order**, **Dispatch** or both in **Work Order and Dispatch**.

sage Dispatch/W.O. Status Maintenance (MPP) 12/15/2015

Status Code L

Description Late /Conflict

Allow Cascade Replacement

Retain during Cascade Replacement

Use this Status in Work Order & Dispatch

Use color in Dispatch

For W.O. R: 0 G: 0 B: 0

For Dispatches R: 0 G: 0 B: 0

Accept Cancel Delete [Printer] [Help]

Through the **Status Code** Lookup button the **W.O. /Dispatch Status List** is opened. There are several standard Status Codes that are always present in this list. Those Status Codes are set in the system upon Service Management Module setup. Besides them you can add new codes for your special needs, delete them and modify their settings. However, the standard Status Codes cannot be deleted. For those codes Yes is displayed in the Necessary column of the **W.O./Dispatch Status List**.

The screenshot shows a window titled 'sage W.O./Dispatch Status List'. It contains a table with the following data:

Status Code	Description	Use this Status in	Necessary
C	Closed	W.O. & Dispatch	Yes
E	Entered	W.O. & Dispatch	Yes
H	Hold A/R	W.O. & Dispatch	Yes
L	Late /Conflict	W.O. & Dispatch	No
O	Open	W.O. & Dispatch	Yes
R	Released to Pro	W.O. & Dispatch	No
U	Updated Rcpt.	W.O. & Dispatch	Yes
W	Wait. for Rcpt	W.O. & Dispatch	Yes







Below the table, there is a search section with a dropdown menu set to 'Status Code' and a 'Begins with' dropdown. A 'Find' button is to the right. Below that is a 'Filters...' button. At the bottom, there are buttons for 'Custom...', 'Lookup Wizard...', 'Select', 'Cancel', and a help icon. A status bar at the very bottom indicates 'Found 8 records'.

Check the **Use color for WOs/Dispatches in [Scheduling Board](#)** box, to display Color Bars for statuses of Work Orders or Dispatches, correspondingly. When the box is checked, the color selection fields become enabled. You can enter RGB of the color, or click the **Lookup Colors** icon to select color in the standard Windows **Color** dialog box.

The previews display currently selected colors. You can use the arrows to easily copy one of the selected colors to the other.

The **Work Order** and **Dispatch** status colors are displayed also on the **Dispatch/W.O. Status Listing** report.

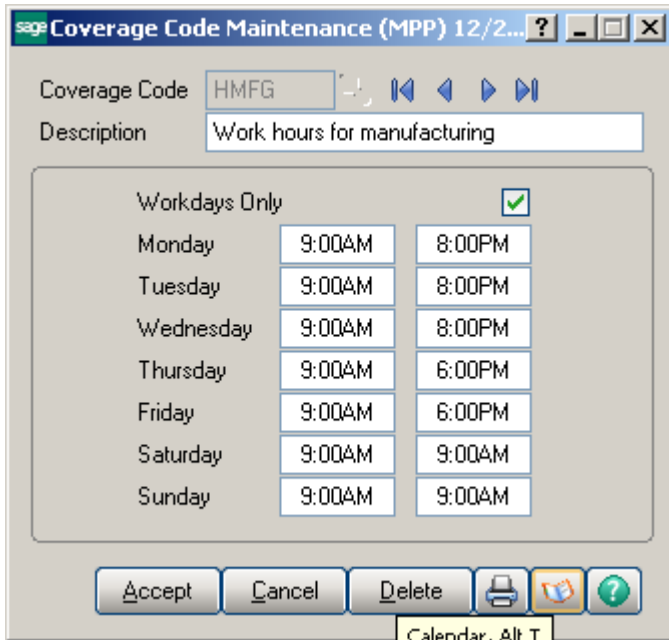
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Status Code	Description	Cascade Replacement		Use this Status in	Dispatch Board	
		Allow	Retain during		W.O. Color	Dispatch Color
C	Closed	No	No	W.O. & Dispatch		
E	Entered	No	No	W.O. & Dispatch		
H	Hold A/R	No	No	W.O. & Dispatch		
L	Late /Conflict	No	No	W.O. & Dispatch		
O	Open	No	No	W.O. & Dispatch		
R	Released to Pro	No	No	W.O. & Dispatch		
U	Updated Rcpt.	No	No	W.O. & Dispatch		
W	Wait. for Rcpt	No	Yes	W.O. & Dispatch		

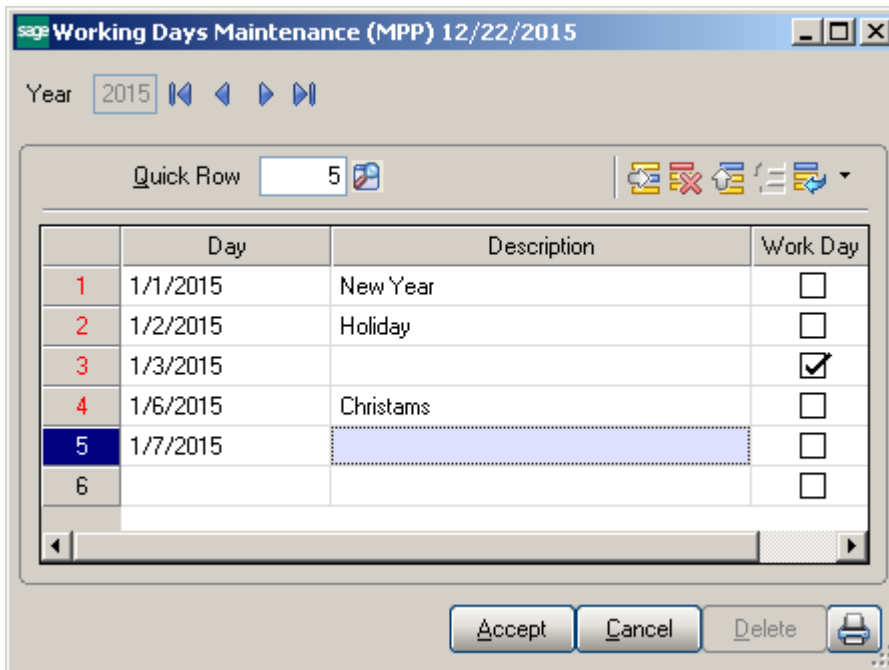
Current Page No.: 1 Total Page No.: 1 Zoom Factor: 100%

Coverage Code Maintenance

The **Coverage Code Maintenance** allows entry of coverage hours for each day of the week. Each Coverage Code can be specified as **Workdays Only** or not.



Clicking the **Calendar** button displays the **Working Days Maintenance** screen, where you can specify the Workdays and Holidays.

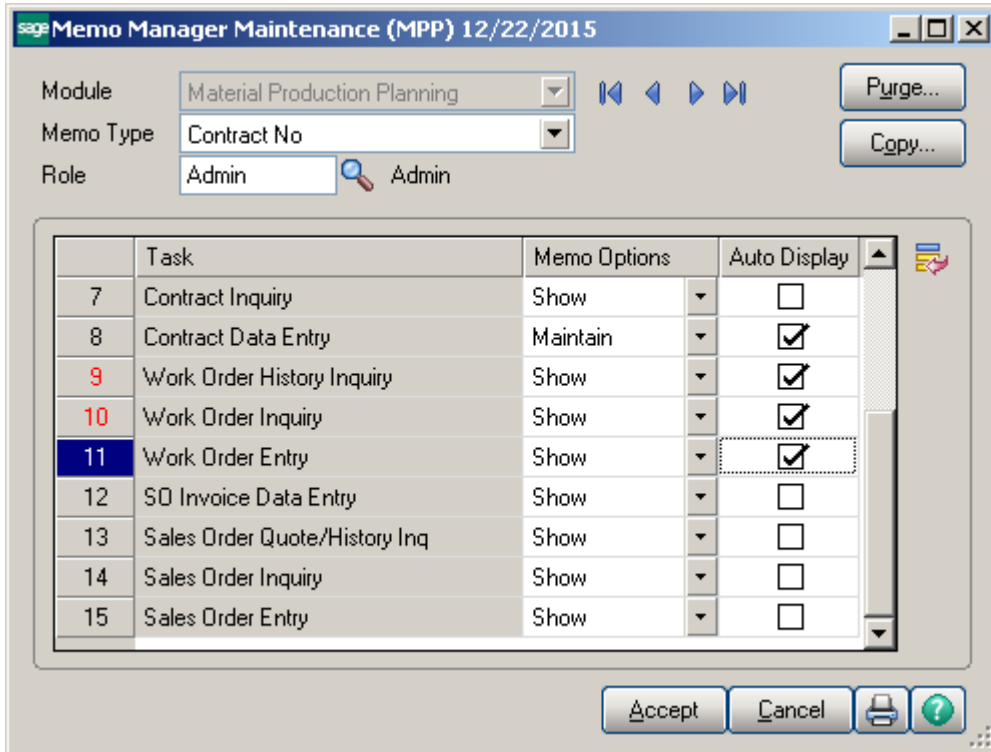


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The **Work Days Only** option allows the user to include only workdays when calculating the Due Date/Time of the Work Order.

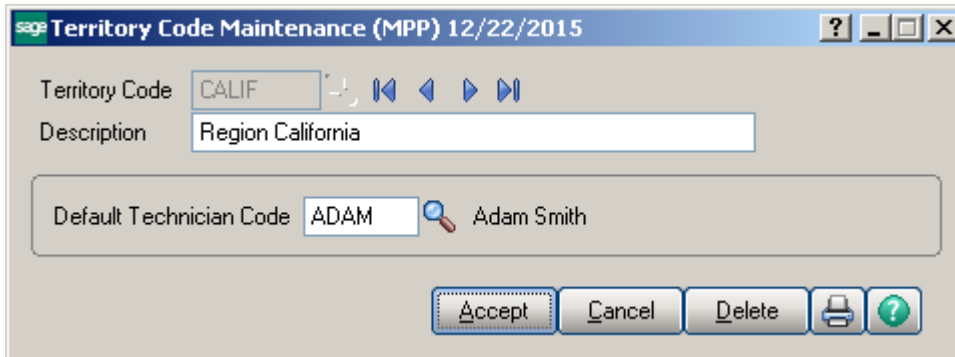
Memo Manager Maintenance

The **Memo Manager Maintenance** program allows setting Memo Options for Material Production Planning module to be shown/ maintained in the selected WOs .



Territory Code Maintenance

The technician code specified in the **Default Technician Code** field of **Territory Code Maintenance** is the default technician for current territory.



The screenshot shows a SAP window titled "Territory Code Maintenance (MPP) 12/22/2015". The window contains the following fields and controls:

- Territory Code:** A text field containing "CALIF" with navigation buttons (back, forward, search) to its right.
- Description:** A text field containing "Region California".
- Default Technician Code:** A text field containing "ADAM" with a search icon and the name "Adam Smith" to its right.
- Buttons:** A row of five buttons at the bottom: "Accept", "Cancel", "Delete", a printer icon, and a help icon (question mark).

The Territory Code can then be used as a selection criterion in the Technician Maintenance, Customer Maintenance, Ship to Maintenance, Work Order Entry, Scheduling Board and some other programs in order to match technicians and Work Order job sites with the Territory Code.

Technician Code Maintenance

The **Technician Code Maintenance** program is used to setup technician codes used in the **Material Planning and Production Management** module.

The **Technician Code Maintenance** program is used to enter technicians' qualifications using a set of skill codes and a performance evaluation level (0 to 9) for each skill.

Dispatch Entry uses skill information taken from **Technician Code Maintenance** to match skill requirements with a list of available personnel. This returns a list showing only the qualified personnel available to perform the task.

The screenshot shows the 'Technician Code Maintenance (MPP) 12/22/2015' window. It features a title bar with the Sage logo and window controls. The main area contains several input fields and checkboxes. The 'Technician Code' field is set to 'ADAM'. Below it are 'Last Name' (Adam) and 'First Name' (Smith) fields. A 'Skills...' button is located to the right. A section with a grey border contains 'Labor Cost' (25.00), 'Billing Rate' (30.00), 'Territory Code' (CALIF), 'Sales Account' (111-00-00), 'E-mail Address' (empty), 'Employee No.' (00-0000001), and 'J/C Cost Code Segment Value' (010). There are also 'Active' and 'Overtime Exception' checkboxes. At the bottom, there are 'Accept', 'Cancel', 'Delete', a printer icon, and a help icon.

Enter new **Technician Code** to add or an existing one to modify data.

Enter the **Last** and **First Names** and **E-mail Address** of the technician in the appropriate fields.

Use the **Labor Cost** field and the **Billing Rate** field to enter hourly cost and price information for a given Technician Code.

Enter the **Territory Code** for the area covered by the technician. The code must have been previously entered in the **Territory Code Maintenance** screen. This code can be used to search for Work Orders and Dispatches elsewhere in the system.

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Sales Acct is used for postings when closing dispatches with labor (based on the priority in **Material Planning & Production Management Setup**).

Employee Number sets the connection between the Technician Code and Employee Number used in the **Payroll** module.

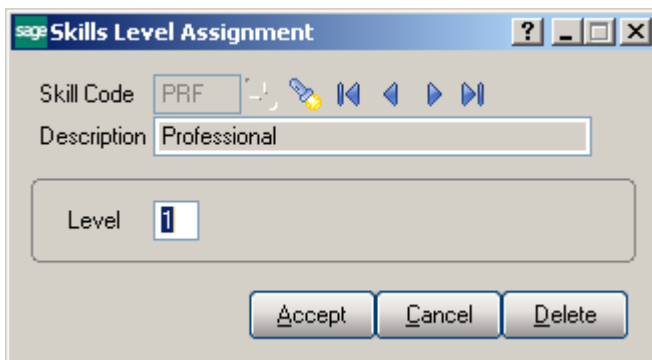
The **J/C Cost Code Segment Value** is used during the import in the **Job Posting Entry**, to substitute the **J/C Cost Code Seg. for Tech Posting** specified in the **Material Planning & Production Management Setup**.

Check the **Overtime Exception** box to denote that workday for this technician equals to 10 hours instead of usual 8.

Clear the **Active** check box, if the **Technician** is not available for assigning dispatches. The Technicians with the **Active** option turned off cannot be selected anywhere for new Work Orders and Dispatches. Existing Work Orders and Dispatches of the inactive technician can be still processed.

Press the **Skills** button to submit the technician qualification information using the existing skills defined in the **Skill Code Maintenance** program.

The following screen will appear.



The screenshot shows a dialog box titled "sage Skills Level Assignment". It has a title bar with a question mark, minimize, maximize, and close buttons. The main area contains a "Skill Code" field with the value "PRF" and a "Description" field with the value "Professional". Below these fields is a "Level" field with the value "1". At the bottom of the dialog are three buttons: "Accept", "Cancel", and "Delete".

Enter the desired **Skill Code** for the technician.

Enter the **Skill Level Number** representing the technical expertise required for satisfactory task completion. Skill level can be from 0 to 9.

Inventory Management Options

The **MRP Warehouse Code** has been added on the Main tab of the **Inventory Management Options** to allow setting the warehouse code to be used as the warehouse for transactions generated if **Calculate Quantity to Produce** (MRP run) program is processed at the item level (not at warehouse level).

The screenshot shows the 'Inventory Management Options (MPP) 12/22/2015' dialog box. The 'Main' tab is selected. The 'MRP Warehouse Code' field is highlighted with a blue box and contains the value 'MRF'. Other fields include 'Require Multiple Warehouses' (checked), 'Reorder by Warehouse' (unchecked), 'Default Warehouse Code' (000), 'Inventory Period' (Calendar Months, 2015, 12), 'Segment Substitution' (None), 'Track Warehouse Transfers as Issues' (unchecked), 'Calculate Commission by Inventory Item' (checked), 'Include in Quantity Available' (No POs and WOs), 'Enable Warranty Tracking' (checked), 'Integrate with General Ledger' (checked), and 'Integrate with Job Cost' (checked). Buttons for 'Accept', 'Cancel', and a help icon are at the bottom.

Warehouse Code Maintenance

The **Include In MRP** checkbox has been added on the **Warehouse Code Maintenance** to allow indicating the Warehouse(s) to be included in MRP run when calculating demand for items at the item level.

sage Warehouse Code Maintenance (MPP) 12/22/2015

Warehouse Code: MRP

Description: MRP warehouse

Name: MRP

Address: 1101 W. MAC ARTHUR BLVD.

ZIP Code:

City: State:

Country:

Telephone: Ext:

Fax:

E-mail Address:

Contact:

Include In MRP:

Accept Cancel Delete [Printer Icon] [Help Icon]

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Item Maintenance

The **Planning Code**, **MFG Priority Code** and **MFG Code** fields have been added on the main tab of the Item Maintenance.

Planning Code field is an informational field, which supports up to 5 alphanumeric characters and is used as selection field in the Calculate **Items Quantity To Produce** program.

The screenshot shows the Sage Item Maintenance (MPP) 12/22/2015 window. The main tab is selected, showing various fields for item maintenance. The Item Code is BEL25 and the Description is HON 4 DRAWER LETTER FILE W/D LK. The Product Line is WF&A (WORKSTATION FURN & ACCESS). The Product Type is Finished Good, Valuation is FIFO, and Procurement is Make. The Unit of Measure is EACH. The Price Code is STD (STANDARD QUANTITY PRIC), Default Whse is 000 (CENTRAL WAREHOUSE), and the Primary Vendor is 01-AIRWAY. The Planning Code is 001, MFG Priority Code is 1, and the MFG Code is Made to Stock. The Sales and Purchases sections show prices and costs. The Quantities table shows on-hand, on-P.O., on-S.O., on-Bk.Ord, Committed, On W/O, and Req for W/O for two warehouses.

Whse	Description	On Hand	On PO	On S.O	On Bk.Ord	Committed	On W/O	Req for W/O	Av
000	CENTRAL ...	5.00	25.00	200.00	.00	200.00	153.00	.00	
001	EAST WA...	.00	124.00	272.00	.00	272.00	.00	.00	

MFG Priority Code– is used to define MFG sort for the item. Items are loaded into the MRP grid sorted by the manufacturing priority code entered for each item.

MFG Code – is used to define material planning groups to manage purchasing, production and scheduling processes. The following options are available:

- Made to Order
- Made to Stock

Mold and machine information is setup for each Item in the **Item Molds Machine** grid opened through the **Item Molds Machine** hyperlink button. The information entered here is required for work order generation and auto-scheduling functions.

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The screenshot shows the SAP 'Item Molds Machine (MPP)' window for item BEL25. The window title is 'sage Item Molds Machine (MPP) 12/22/2015'. The item code is 'BEL25' and the description is 'HON 4 DRAWER LETTER FLE W/O LK'. The 'Quick Row' is set to 1. A table displays mold data with columns: Mold Number, Modified, Prefer Code, Machine Cod, ty Produced Per Ho, and Queue Time. A 'Mold Info' button is visible next to the first row.

	Mold Number	Modified	Prefer Code	Machine Cod	ty Produced Per Ho	Queue Time
1	0000000002	<input type="checkbox"/>	1	M002	5.00	20.00
2	0000000001	<input type="checkbox"/>	2	M001	.00	.00
3		<input type="checkbox"/>			.00	.00

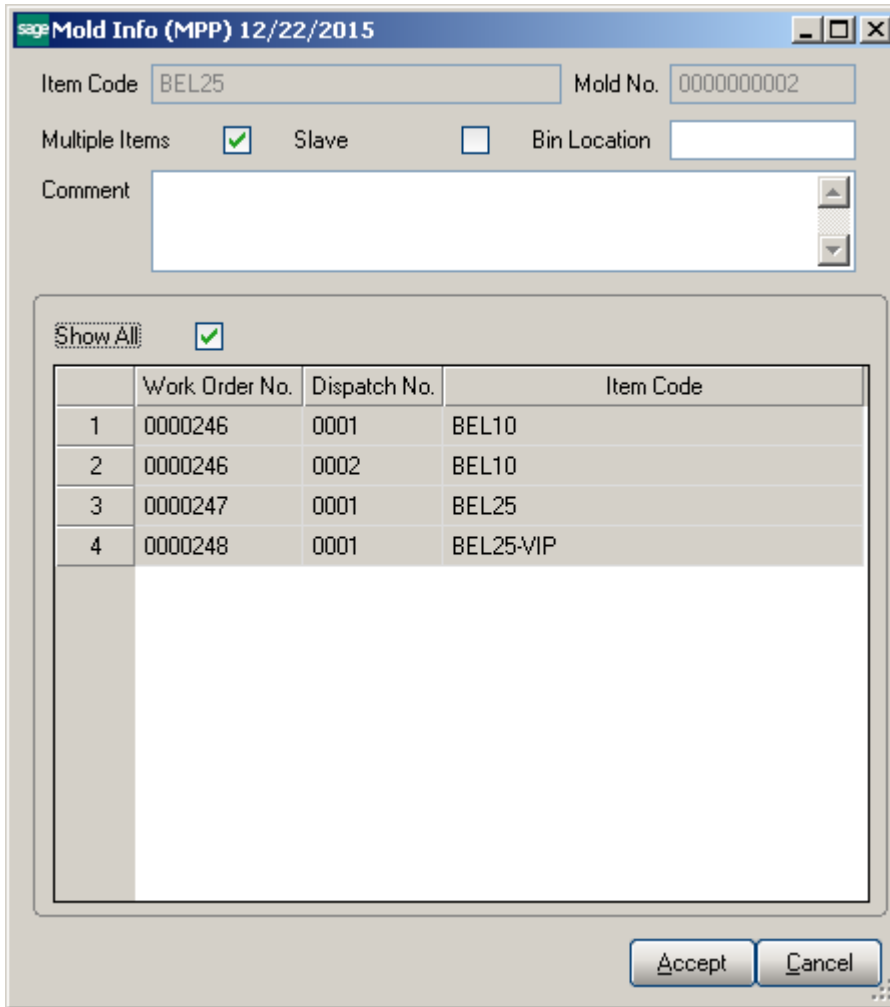
Multiple Items can be linked to the same Mold Number. Press the Mold Info button:

The screenshot shows the 'Mold Info (MPP)' window for item BEL25 and mold number 0000000002. The window title is 'sage Mold Info (MPP) 12/22/2015'. The 'Multiple Items' checkbox is checked, and the 'Slave' checkbox is unchecked. The 'Bin Location' field is empty. A 'Comment' field is present. Below, a 'Show All' checkbox is unchecked, and a table displays columns for Work Order No., Dispatch No., and Item Code.

Work Order No.	Dispatch No.	Item Code
----------------	--------------	-----------

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The **Mold Info** screen is opened with current Item and Mold number selected. Select the **Multiple Items** checkbox to indicate multiple Items can be assigned to current Mold number. If the selected item is not flagged as **Slave** it is considered to be the master Item. In this case when assigning another Item to current Mold number the **Slave** checkbox will be automatically set upon checking the Multiple Items checkbox:



	Work Order No.	Dispatch No.	Item Code
1	0000246	0001	BEL10
2	0000246	0002	BEL10
3	0000247	0001	BEL25
4	0000248	0001	BEL25-VIP

The **Show All** option allows for viewing the Work Order numbers generated for all the Items linked to current one.

The Multiple Items flag (indicating that this mold is used by more than one item) impacts quantity calculation in the Calculate Quantity to Produce/Purchase program. Refer to [Processing Master/Slave Items](#) for details.

Material Requirement Planning

Calculate Quantity to Produce/Purchase

The **Calculate Quantity to Produce/Purchase** program added under the **Material Production Planning Main** menu is designated to simplify and speed up the work processes of purchasing and the production managers, enabling them to plan more effectively.

This program allows for processing the selected Items and calculating quantity requirements for each Item based on the selected MRP run options. The program calculates also the component requirements for each Item by Warehouse.

Select Field	Operand	Value
Item Code	All	
Material Planning Code	All	
Machine Code	All	
Order Number	All	

MRP Run Processing Options:

Show Items With Zero Req. Qty- select this checkbox if you don't want to load the Items with zero quantity required into the material production planning grid.

Calculate Quantity at Item Level – select this checkbox if you want the demand to be calculated at the Item level (instead of warehouse level). Only the warehouses flagged as “Include in MRP” in the Warehouse Code Maintenance are included in the

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calculation and the calculated quantities are shown under the Warehouse code selected as **MRP Warehouse** in the **Inventory Management Options**.

Include Items Based on SO Selection Only – select this checkbox to include in the demand calculation only the items of the selected Order(s) lines. If the ordered Item is a Bill the program uses the bill of materials structure to disassemble all components into the lowest level items and loads also those items.

Calculate Demand Based on SO – this option is enabled upon selecting the **Include Items Based on SO Selection Only** checkbox. If checked the demand is determined based on the open Sales Orders for the selected Ship Date.

Add SO Items to Selection – this checkbox is enabled only if the above two options are turned off. It allows for adding also Sales Orders' Items to the Items selected based on other Code selection criteria.

The **Machine Code**, **Technician Code** and **Start Date/Time** options are used for Manufacturing WO/Dispatch generation.

Item Code	Whse	Vendor No.	Qty On Hand	Qty On SO	Qty On B	Qty On P	Qty On WO	Req For	Qty Avail	RP Run R	Avail MRP	Exder Met	Record	Qty	EOR	Max Qty	
15	6655	000	01-CONT	23.00	.00	.00	.00	.00	23.00	840.00	817.00	Econ	30.00	70.00	100.00		
16	6655	001	01-CONT	5.00	3.00	.00	.00	.00	2.00	36,640.00	156,638.00	Max	10.00	30.00	70.00	5	
17	6655	MRP	01-CONT	.00	.00	.00	.00	.00	.00	960.00	960.00	Econ	.00	.00	.00		
18	720-100	001	01-CONT	60.00	15.00	.00	.040	.00	20.00	1,015.00	14,870.00	13,855.00	Econ	.00	.00	.00	1
19	720-100	MRP	01-CONT	.00	.00	.00	.00	.00	.00	100.00	100.00	Econ	.00	.00	.00		
20	BEL10	001	01-CONT	7.00	3,123.00	.00	.00	142.00	2,974.00	.00	2,974.00	Econ	.00	.00	.00		
21	BEL10	MRP	01-CONT	.00	20.00	.00	.00	.00	20.00	.00	20.00	Econ	.00	.00	.00		
22	BEL10-VIF	001	01-CONT	84.00	11.00	.00	212.00	1.00	143.00	141.00	2,974.00	2,833.00	Max	.00	.00	100.00	
23	BEL10-VIF	MRP	01-CONT	.00	.00	.00	.00	.00	.00	20.00	20.00	Econ	.00	.00	.00		
24	BEL25	000	01-AIRWA	5.00	200.00	.00	25.00	155.00	15.00	.00	15.00	Econ	.00	.00	.00		
25	BEL25	001	01-AIRWA	.00	272.00	.00	124.00	.00	.00	148.00	.00	148.00	Max	.00	.00	100.00	
26	BEL25-VIF	000	01-AIRWA	7.00	8.00	.00	.00	.00	155.00	156.00	15.00	171.00	Econ	.00	.00	.00	
27	BEL25-VIF	001	01-AIRWA	.00	.00	.00	122.00	.00	.00	122.00	248.00	126.00	Econ	.00	.00	.00	
28	PLS-TRA	000	01-CONT	259.00	.00	.00	244.01	.00	452.00	466.99	15.00	481.99	Econ	.00	.00	.00	
29	PLS-TRA	001	01-CONT	192.00	4.00	.00	110.00	.00	143.00	163.00	3,222.00	3,059.00	Econ	.00	.00	.00	
30	PLS-TRA	MRP	01-CONT	.00	.00	.00	.00	.00	.00	20.00	20.00	Econ	.00	.00	.00		
31	TIP	000	01-CONT	.00	.00	.00	4.03	.00	155.00	150.97	15.00	165.97	Econ	.00	.00	.00	
32	TIP	001	01-CONT	.00	.00	.00	226.00	.00	.00	226.00	248.00	22.00	Max	.00	.00	100.00	
33	TIP-XI	001	01-CONT	32.00	4.00	.00	252.02	.00	143.00	145.02	2,974.00	2,828.98	Max	.00	.00	100.00	
34	TIP-XI	MRP	01-CONT	.00	.00	.00	.00	.00	.00	20.00	20.00	Econ	.00	.00	.00		

The following selection options may be applied:

- Item code
- Material Planning Code
- Machine Code
- Order Number
- Ship Date

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- Warehouse

MRP columns:

- **Item Code** – item number from inventory master file. The program lists all components (purchased or manufactured) to meet the selected items demand
- **Whse** – the warehouse code for the information or the MRP Warehouse code setup in the I/M options if MRP run is at item level
- **Vendor No** – vendor number for purchase items. The Make or Buy drop down in the inventory file is used to determine if a PO is to be generated for the item.
- **Qty On Hand (QOH)** – quantity on hand for the warehouse
- **Qty on SO (SOQ)** – sales order quantity represents quantity on sales orders for the entered date range or item's demand based on the Bypass Sales Order Selection MRP run option
- **Qty on BO (BOQ)** – backorder quantity, quantity on back orders for the entered date range or item's demand based on the Bypass Sales Order Selection MRP run option
- **Qty on PO (POQ)** - quantity on purchase orders
- **Qty on WO (WOQ)** - quantity on existing work orders
- **Qty Req for WO (QRWO)** component quantity needed for planned work orders
- **Qty Avail (QAVL)** – is calculated using the formula below:
$$QAVL = QOH - SOQ - BOQ + POQ + WOQ - QRWO$$
- **MRP Run Req** - this value represents the requirements on items entered on the bill of material line's tab for any BOM item with negative Qty Avail (QAVL) value. The **MRP Run Req** quantity is calculated for component Items only, it doesn't make sense for Bill parent Item. It is calculated as the Bill Recommended Qty multiplied by the component's Quantity/Bill.
- **Qty Avail MRP Run (MRPQ)**, this value is calculated as follows:
$$MRPQ = QAVL - MRP \text{ Run Req}$$
- **Reorder Method** – MAX, ROP or EOQ.
- **Reorder Qty** – is the minimum available quantity at which to reorder this item. This field value is defaulted from the Item Reorder Maintenance.
- **EOR** – Economic Order quantity is the quantity normally reordered when the available stock falls to or below the reorder point. This field value is defaulted from the Item Reorder Maintenance.
- **Max Qty**- If Maximum Stock Level is selected in the Reorder Method field, enter the maximum level for this item. This field value is also defaulted from the Item Reorder Maintenance.
- **Calc. Demand** – is calculated based on the Reorder method as follows:
 - For Max Stock level Reorder method, if the Qty Available is below reorder, Recommended Qty=Buf Max Quantity –MRPQ (Qty Avail MRP Run)
 - For Reorder Point method if Available quantity is below the Reorder, Recommended Qty=Reorder Point Quantity – MRPQ (Qty Avail MRP Run)

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- For Economic Qty method, if Available is below reorder, Recommended Qty=Economic Ord. Quantity
- **Mold Type**- this field is defaulted to the Mold Type setup for an Item in the Item Mold Maintenance and can be changed here. If there are several Molds setup, the Mold Type with the highest Prefer Code (for example from 001, 003, 005 the one with 001 will be loaded). The user is not allowed entering the Mold Type manually. It is necessary to select from the lookup list.
- **Machine Code**- this field is defaulted to the Machine Code setup for an Item in the Item Mold Maintenance and can be changed here.
- **Include**- select this checkbox to include the line in the Manufacturing WO generation

The following actions are available:

- **Recalculate/Relink**
- **Auto Scheduling**
- **Generate Manufacturing**
- **Generate PO**

Recalculate/Relink- this button is used for linking/relinking Master/Slave Items in case Multiple Items are being produced through the same Mold.

Pressing the **Auto Scheduling** button will generate and schedule work orders based on the machine/mold information entered for an Item in the **Calculate Quantity to Produce** grid taking into account Shifts setup in the [Week Shift Maintenance](#). If the **Start Date** checkbox is selected with a Date/Time entered, the Manufacturing Dispatch Starting Date/Time fields will be defaulted to that Date/Time if the Machine specified for an Item is available for that Date/Time and the Ending Date will be calculated taking into account the shifts setup in the **Week Shift Maintenance**.

Generate Manufacturing WO- press this button to generate work orders based on the demand calculated. The user may schedule the generated work Orders using the **Schedule Board** program.

Generate PO- press this button to generate Purchase Orders for Items with Buy Procurement type. Purchase orders are generated both for components of BOM items or items sold on sales order.

Here is an example of material requirement calculation for Bill Item BEL10 for warehouse code: "001".

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Calculate Quantity to Produce/Purchase

Show Items With Zero Req Qty Include Items Based On SO Selection Only
 Calculate Quantity at Item Level Calculate Demand Based On SO
 Sort by MFG Code Add SO Items To Selection

Machine Code Start Date Time
 Technician Code

Select Field	Operand	Value
Item Code	Equal to	BEL10
Material Planning Code	All	
Machine Code	All	
Order Number	All	

Item Code	Whse	Qty Avail	MRP Run Req	Qty Avail MRP Run Req	Order Method	Reord. Qty	EOR	Max Qty	Calc. Demand
-----------	------	-----------	-------------	-----------------------	--------------	------------	-----	---------	--------------

Proceed Clear Recalculate/Relink Auto Scheduling Gen. Manufacturing Generate PO Accept Cancel

Press **Proceed** after making the necessary selections:

Calculate Quantity to Produce/Purchase

Show Items With Zero Req Qty Include Items Based On SO Selection Only
 Calculate Quantity at Item Level Calculate Demand Based On SO
 Sort by MFG Code Add SO Items To Selection

Machine Code Start Date Time
 Technician Code


	Item Code	Whse	MRP Run Req	Qty Avail MRP Run Req	Order Method	Reord. Qty	EOR	Max Qty	Calc. Demand	Mold Number	Machine Code	Technician Code	Include
1	1001-HON-H252LK	001	35,688.00	35,688.00	Max Stock	5.00	10.00	20.00	35,708.00				<input type="checkbox"/>
2	1001-HON-H254	001	11,896.00	5,470.00	Max Stock	10.00	20.00	50.00	5,520.00				<input type="checkbox"/>
3	200-230	001	11,896.00	5,457.00	Economic	.00	2,000.00	.00	7,457.00				<input type="checkbox"/>
4	230-182-Z	001	8,922.00	6,956.00	Economic	.00	1,000.00	.00	7,956.00				<input type="checkbox"/>
5	2480-8-50	001	23,792.00	23,627.00	Max Stock	200.00	600.00	800.00	24,427.00				<input type="checkbox"/>
6	6655	001	142,752.00	142,750.00	Max Stock	10.00	30.00	70.00	142,820.00				<input type="checkbox"/>
7	720-100	001	14,870.00	13,855.00	Economic	.00	.00	.00	13,855.00				<input type="checkbox"/>
8	BEL10	001	.00	2,974.00	Economic	.00	.00	.00	2,974.00	0000000002	M002		<input type="checkbox"/>
9	BEL10-VIP	001	2,974.00	2,833.00	Max Stock	.00	.00	100.00	2,933.00				<input type="checkbox"/>
10	PLS-TRAY	001	2,974.00	2,811.00	Economic	.00	.00	.00	2,811.00				<input type="checkbox"/>
11	TIP-X	001	2,974.00	2,828.98	Max Stock	.00	.00	100.00	2,928.98				<input type="checkbox"/>

Proceed Clear Recalculate/Relink Auto Scheduling Gen. Manufacturing Generate PO Accept Cancel

The Bill Item is loaded in the grid with its components.

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The **Mold Number** and **Machine Code** with **Prefer Code 1** setup for current Item in the Item Molds Machine entry are automatically loaded in the grid.

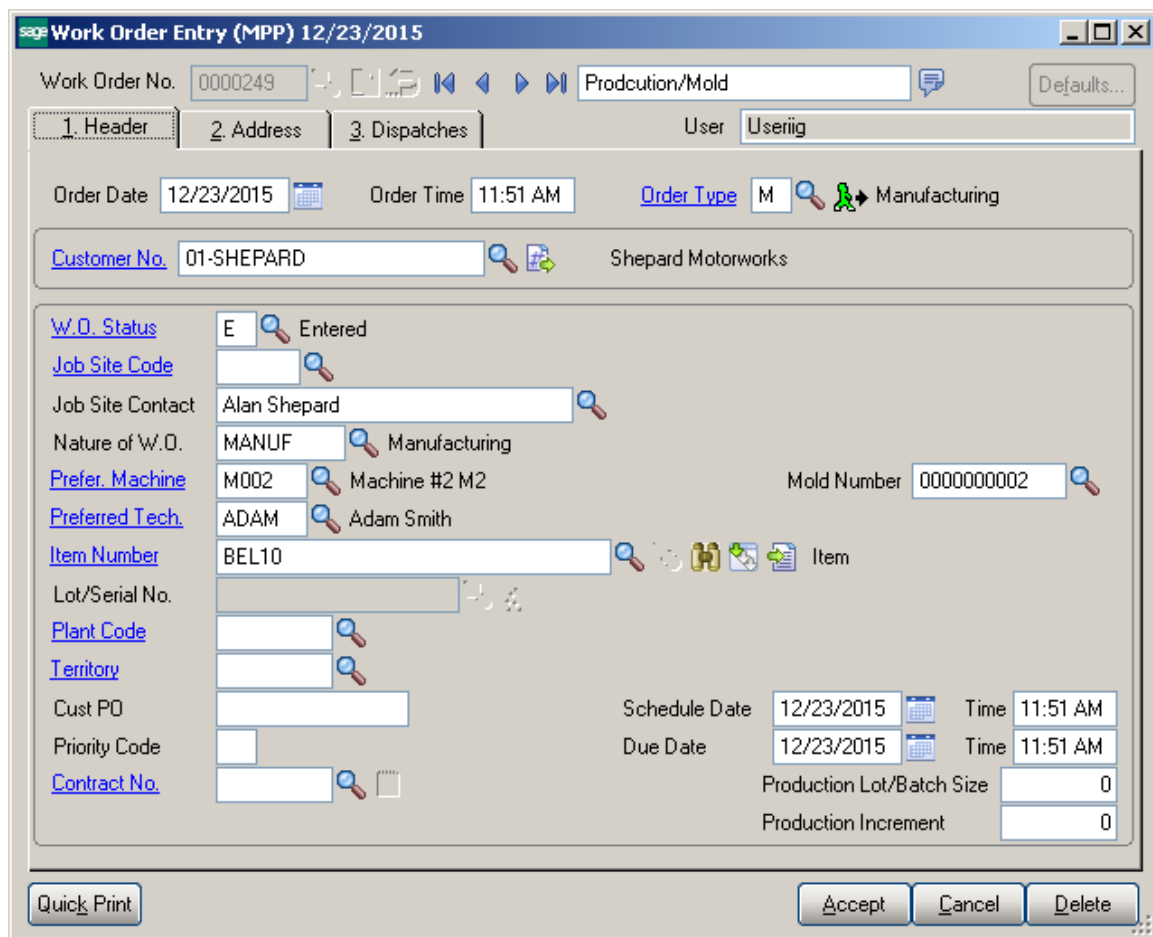
Select the **Include** checkbox. You can **Include** all lines by pressing the  **Select All** button or just clicking in the box to select an individual line.

The drill down buttons on the right hand of the grid enables drill down to Item Inquiry, Bill Item Inquiry (enabled for Bill Items), Where used Inquiry (enabled for component Items), Item Vendor Maintenance, Item Molds Machine entry and MRP Inquiry.

After selecting the lines and pressing **Accept** the information is saved in a special table (SM_ItemsQtyToProduce) used for generating Work Orders from Production Scheduling Board.

If Bill Item has options, the BOM option components' quantities will take part in this calculation.

Here is the Work Order with respective Manufacturing Dispatch generated for Make Item# BEL10 by the **Gen Manufacturing WO** button:



The screenshot displays the 'Work Order Entry (MPP) 12/23/2015' window. At the top, the 'Work Order No.' is 0000249, and the 'Production/Mold' field is empty. The user is 'Useriig'. The 'Order Date' is 12/23/2015, and the 'Order Time' is 11:51 AM. The 'Order Type' is 'M', and the 'Customer No.' is '01-SHEPARD' with the company name 'Shepard Motorworks'. The 'W.O. Status' is 'E' (Entered). The 'Job Site Contact' is 'Alan Shepard'. The 'Nature of W.O.' is 'MANUF' (Manufacturing). The 'Prefer. Machine' is 'M002' (Machine #2 M2), and the 'Mold Number' is '0000000002'. The 'Preferred Tech.' is 'ADAM' (Adam Smith). The 'Item Number' is 'BEL10'. The 'Schedule Date' and 'Due Date' are both 12/23/2015, with a time of 11:51 AM. The 'Production Lot/Batch Size' is 0, and the 'Production Increment' is 0. At the bottom, there are buttons for 'Quick Print', 'Accept', 'Cancel', and 'Delete'.

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The **Customer No** of the generated WO is the **Default W.O Customer** entered in the **Material Planning and Production Setup** window.

Dispatch No.	Dispatch Date	Machine	Machine Name	Status
0001	12/23/2015	M002	Machine #2 M2	Open
0002	12/23/2015	M002	Machine #2 M2	Open

BOM components are loaded into the WO Dispatch Transaction.

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Work Order No: 0000249
Dispatch No.: 0001
Production/Mold: Production/Mold
Material Selection:
User: Useriig

1. Header | 2. Lines

Quick Row: 2

Serial No.	Item Code	Ordered	Unit Price	Extension	Comment
2	BEL10-WIP	2,974.00	117.900	350,634.60	
3	PLS-TRAY	2,974.00	121.500	361,341.00	
4	TIP-XI	2,974.00	117.900	350,634.60	
5	/LAB2	5,948.00	.000	25.00	
6		.00	.000	.00	

Description: HON 4 DRAWER LETTER FLE W/O LK
Warehouse: 001
Unit Of Measure: EACH
Price Level:
Total Amount: 1,287,469.60

Quick Print | Manufacturing | Labor | Accept | Cancel | Delete

Daily Production entry transactions are created for closed WO transactions.

Processing Master/Slave Items

The **Recalculate/Relink** action is intended for the Items linked to the same Mold Number.

After the lines are loaded in the grid you may press the **Recalculate/Relink** button to link the Items assigned to the same Mold Number and marked as **Multiple Items** (Master/Slave) in the **Mold Info** screen launched from the **Item Mold Machine** entry.

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Calculate Quantity to Produce/Purchase

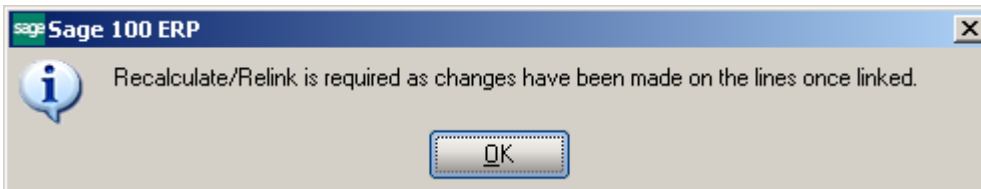
Show Items With Zero Req Qty Include Items Based On SO Selection Only
 Calculate Quantity at Item Level Calculate Demand Based On SO
 Sort by MFG Code Add SO Items To Selection

Machine Code: Start Date: 3/17/2015 Time: 12:00 AM

Item Code	Whse	MRP Run Req	Qty Avail MRP Run	Reorder Method	Reord. Qty	EOR	Max Qty	Calc. Demand	Mold Number	Machine Code	Include
1 1001-HON-H252LK 000		182.00	123.00	Economic Qty	30.00	80.00	200.00	203.00			<input type="checkbox"/>
2 1001-HON-H252LK 001		38,668.00	38,668.00	Max Stock Lev	5.00	10.00	20.00	38,668.00			<input type="checkbox"/>
3 1001-HON-H254 000		52.00	34.00	Economic Qty	50.00	100.00	300.00	100.00			<input type="checkbox"/>
4 1001-HON-H254 001		12,724.00	6,298.00	Max Stock Lev	10.00	20.00	50.00	6,348.00			<input type="checkbox"/>
5 200-230 000		52.00	4,098.00	Economic Qty	.00	.00	.00	4,098.00			<input type="checkbox"/>
6 200-230 001		12,724.00	6,285.00	Economic Qty	.00	2,000.00	.00	8,285.00			<input type="checkbox"/>
7 230-182-Z 000		39.00	3,084.00	Economic Qty	.00	.00	.00	3,084.00			<input type="checkbox"/>
8 230-182-Z 001		9,543.00	7,577.00	Economic Qty	.00	1,000.00	.00	8,577.00			<input type="checkbox"/>
9 2480-8-50 001		25,448.00	25,283.00	Max Stock Lev	200.00	600.00	800.00	26,083.00			<input type="checkbox"/>
10 6655 000		728.00	705.00	Economic Qty	30.00	70.00	100.00	775.00			<input type="checkbox"/>
11 6655 001		154,672.00	154,670.00	Max Stock Lev	10.00	30.00	70.00	154,740.00			<input type="checkbox"/>
12 720-100 001		14,665.00	13,650.00	Economic Qty	.00	.00	.00	13,650.00			<input type="checkbox"/>
13 BEL10 000		.00	3.00	Economic Qty	.00	.00	.00	173.00	002	M002	<input type="checkbox"/>
14 BEL10 001		.00	.00	Economic Qty	.00	.00	.00	248.00	002	M002	<input type="checkbox"/>
15 BEL10-VIP 001		.00	2,833.00	Max Stock Lev	.00	.00	100.00	2,933.00			<input type="checkbox"/>
16 BEL25 000		.00	13.00	Economic Qty	.00	.00	.00	173.00	002	M002	<input type="checkbox"/>
17 BEL25 001		.00	148.00	Max Stock Lev	.00	.00	100.00	248.00	002	M002	<input type="checkbox"/>
18 BEL25-VIP 000		13.00	173.00	Economic Qty	.00	.00	.00	173.00	002	M002	<input type="checkbox"/>
19 BEL25-VIP 001		248.00	126.00	Economic Qty	.00	.00	.00	248.00	002	M002	<input type="checkbox"/>
20 PLS-TRAY 000		13.00	477.99	Economic Qty	.00	.00	.00	477.99			<input type="checkbox"/>
21 PLS-TRAY 001		248.00	3,059.00	Economic Qty	.00	.00	.00	3,059.00			<input type="checkbox"/>

Proceed Clear Recalculate/Relink Auto Scheduling Gen. Manufacturing Generate BQ Accept Cancel

Upon pressing the **Recalculate/Relink** button the lines having the same Mold Number, Warehouse and marked as Master/Slave become highlighted in red. After making any change on one of the linked lines it is necessary to Recalculate/Relink the lines again, otherwise the following message will appear while performing other actions (e.g. Auto Scheduling).



Upon pressing Recalculate/Relink button:

- The **Include** checkbox becomes selected for all linked lines if it is selected at least for one line.
- The **Calc. Demand Quantity** on all linked lines is updated with the greater one if it is changed on one of them so that the **Calc. Demand Quantity** becomes the same for all linked Items

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Calculate Quantity to Produce/Purchase

Show Items With Zero Req Qty Include Items Based On SO Selection Only
 Calculate Quantity at Item Level Calculate Demand Based On SO
 Sort by MFG Code Add SO Items To Selection

Machine Code: Start Date: 3/17/2015 Time: 12:00 AM

Select Field	Operand	Value
Item Code	All	
Material Planning Code	All	
Machine Code	All	

	Item Code	Whse	MRP Run Req	Qty Avail MRP Run	Reorder Method	Reord. Qty	EOR	Max Qty	Calc. Demand	Mold Number	Machine Code	Include
1	1001-HON-H252LK	000	182.00	123.00	Economic Qty	30.00	80.00	200.00	203.00			<input type="checkbox"/>
2	1001-HON-H252LK	001	38,668.00	38,668.00	Max Stock Lev	5.00	10.00	20.00	38,668.00			<input type="checkbox"/>
3	1001-HON-H254	000	52.00	34.00	Economic Qty	50.00	100.00	300.00	100.00			<input type="checkbox"/>
4	1001-HON-H254	001	12,724.00	6,298.00	Max Stock Lev	10.00	20.00	50.00	6,348.00			<input type="checkbox"/>
5	200-230	000	52.00	4,098.00	Economic Qty	.00	.00	.00	4,098.00			<input type="checkbox"/>
6	200-230	001	12,724.00	6,285.00	Economic Qty	.00	2,000.00	.00	8,285.00			<input type="checkbox"/>
7	230-182-Z	000	39.00	3,084.00	Economic Qty	.00	.00	.00	3,084.00			<input type="checkbox"/>
8	230-182-Z	001	9,543.00	7,577.00	Economic Qty	.00	1,000.00	.00	8,577.00			<input type="checkbox"/>
9	2480-8-50	001	25,448.00	25,283.00	Max Stock Lev	200.00	600.00	800.00	26,083.00			<input type="checkbox"/>
10	6655	000	728.00	705.00	Economic Qty	30.00	70.00	100.00	775.00			<input type="checkbox"/>
11	6655	001	154,672.00	154,670.00	Max Stock Lev	10.00	30.00	70.00	154,740.00			<input type="checkbox"/>
12	720-100	001	14,665.00	13,650.00	Economic Qty	.00	.00	.00	13,650.00			<input type="checkbox"/>
13	BEL10	000	.00	3.00	Economic Qty	.00	.00	.00	173.00	002	M002	<input checked="" type="checkbox"/>
14	BEL10	001	.00	.00	Economic Qty	.00	.00	.00	248.00	002	M002	<input type="checkbox"/>
15	BEL10-VIP	001	.00	2,833.00	Max Stock Lev	.00	.00	100.00	2,933.00			<input type="checkbox"/>
16	BEL25	000	.00	13.00	Economic Qty	.00	.00	.00	173.00	002	M002	<input checked="" type="checkbox"/>
17	BEL25	001	.00	148.00	Max Stock Lev	.00	.00	100.00	248.00	002	M002	<input type="checkbox"/>
18	BEL25-VIP	000	13.00	173.00	Economic Qty	.00	.00	.00	173.00	002	M002	<input checked="" type="checkbox"/>
19	BEL25-VIP	001	248.00	126.00	Economic Qty	.00	.00	.00	248.00	002	M002	<input type="checkbox"/>
20	PLS-TRAY	000	13.00	477.99	Economic Qty	.00	.00	.00	477.99			<input type="checkbox"/>
21	PLS-TRAY	001	248.00	3,059.00	Economic Qty	.00	.00	.00	3,059.00			<input type="checkbox"/>

Proceed Clear Recalculate/Relink Auto Scheduling Gen. Manufacturing Generate BQ Accept Cancel

During Auto Scheduling a separate Work Order/Dispatch is generated for each linked line. The Dispatches are created with the same Starting-Ending Dates/Times as the same Mold is used for linked Items.

Material Planning & Production Management 55

Work Order No. 0000248 MFG Door

Dispatch No. 0001

1. Header 2. Lines User Useriig

Dispatch Date 3/18/2015 Dispatch Status 0 Open

Starting Date 3/18/2015 Starting Time 09:00 AM Commit Quantity

Ending Date 3/24/2015 Ending Time 10:34 AM

Machine M002 Machine #2 M2 Mold Number 002

MFG Item Code BEL25 Lot/Serial No.

Quantity on WO 173.00

Outside Processing

Send Out... Receive...

Quick Print Manufacturing Labor Accept Cancel Delete

After Work Orders are generated the Work Order numbers are shown in the Mold Info screen:

Material Planning & Production Management 56

sage Mold Info (MPP) 3/17/2015

Item Code: BEL25 Mold Number: 002

Multiple Items: Slave: Bin Location:

Comment:

Show All:

	Work Order No.	Item Code
1	0000237	BEL25
2	0000240	BEL25
3	0000248	BEL25

Accept Cancel

The **Show All** option allows for viewing the Work Order numbers generated for all the Items linked to current one.

Material Planning & Production Management 57

sage Mold Info (MPP) 3/17/2015

Item Code: BEL25 Mold Number: 002

Multiple Items: Slave: Bin Location:

Comment:

Show All:

	Work Order No.	Item Code
1	0000237	BEL25
2	0000240	BEL25
3	0000248	BEL25
4	0000253	BEL10

Accept Cancel

Once the WOs/Dispatches have been generated with a Mold Number already assigned, the following message will appear while pressing **Proceed** button on the **Calculate Quantity to Produce/Purchase** screen:

Sage 100 ERP

Mold Number "002" is planned for the following Item/WO(s):
BEL10 0000253
BEL25 0000237
BEL25 0000240
BEL25 0000248
WO for item "BEL10" will be scheduled after completion of planned WO for mold "002".
Do you want to bypass creating WO(s) for mold "002"?

Bypass Schedule Bypass All Schedule All

Work Order Generation

Production Scheduling Board

Schedule Board provides the following functions:

- Ability to create work orders by:
 - a. Manually dragging and dropping work orders into machine and date/time specific cells for items and quantity set by the MRP program. Program will validate that the item dragged can be run produced on the machine selected
 - b. Auto create and schedule work orders based on the demand set by the MRP program
- Visibility over production schedule.
 - a. Work order generated can be dragged and dropped from one machine to another or from one day / shift to another
 - b. Views can be setup to display certain day shift or WO by type, Mold Setup, Production, etc. using view selection grid
- Managing daily functions by right clicking on a work order

Options for User - 'IIG'

Options Type: 001 Description: Shift1

Filters Fields View

Show on Startup

- Toolbar
- Fields
- Grid Lines
- Show History
- Blanks

View Date Range

Current Week

Number Of Days Before Current Date: 10

Number Of Days After Current Date: 10

Show as

Column: Machine Duplicate

Row: Date Duplicate

Unassigned Machines

Freeze

Show despite the filtering

Color

- Use color for W.O. in Color Bars
- Use color for Dispatches in Color Bars
- Show Color Bars Over Text

Sort of the same duplicate by: W.O Number

Date/Time Range

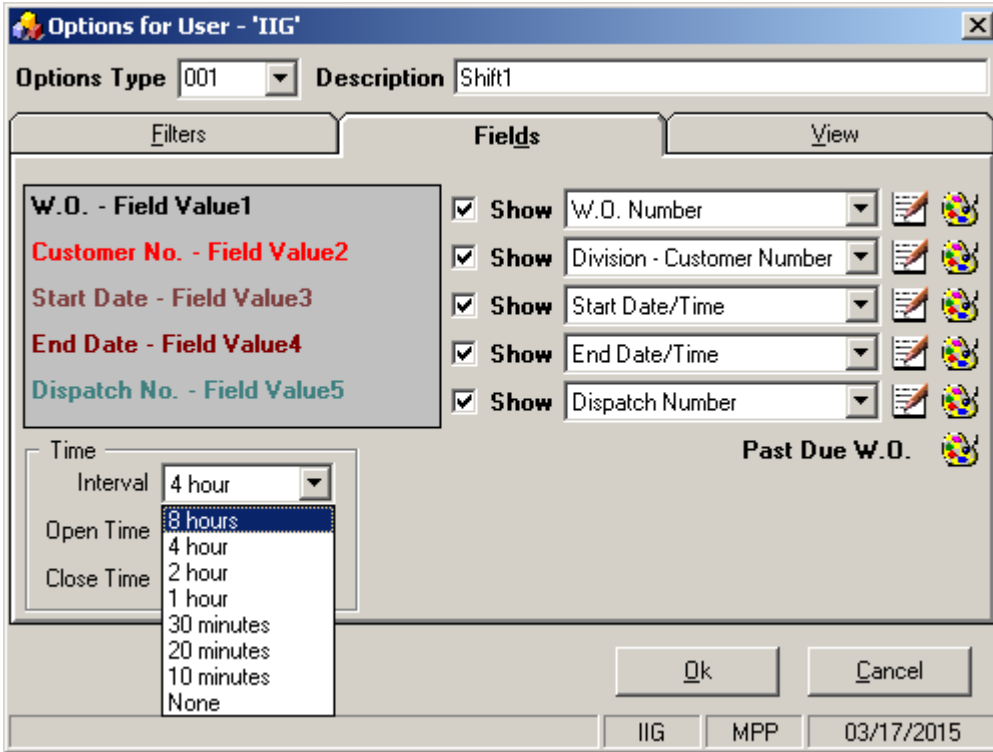
Show Items

Ok Cancel

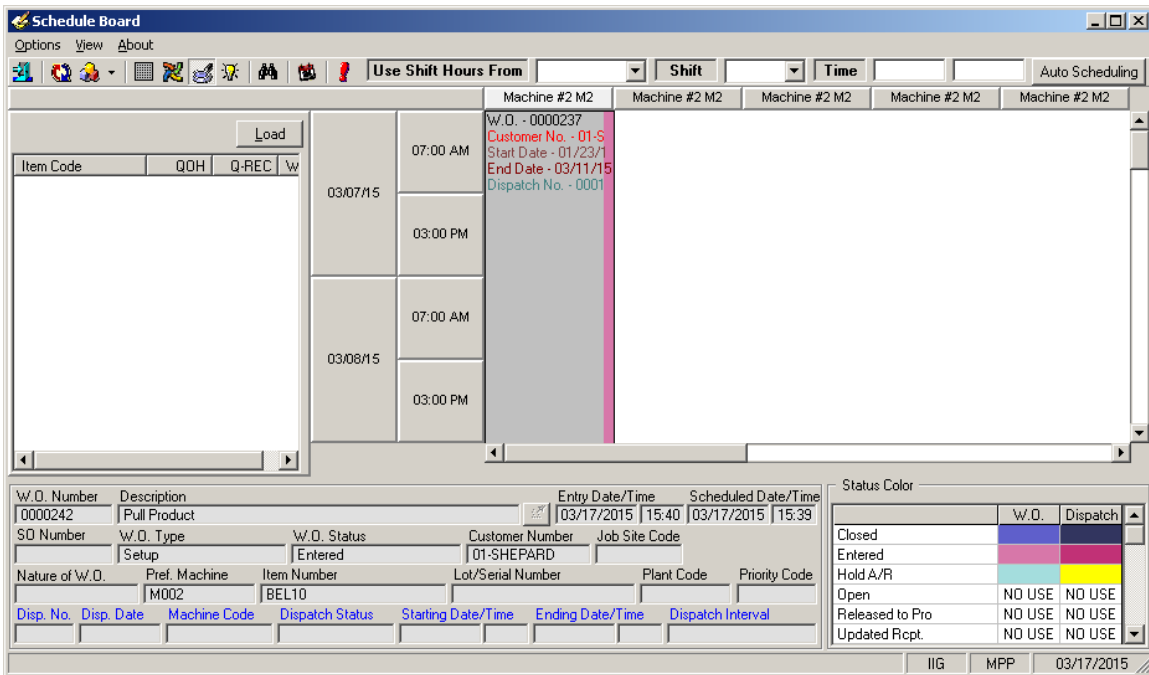
IIG MPP 03/17/2015

Select the **Show Items** checkbox to have the Items loaded in the Item list.

Material Planning & Production Management 59



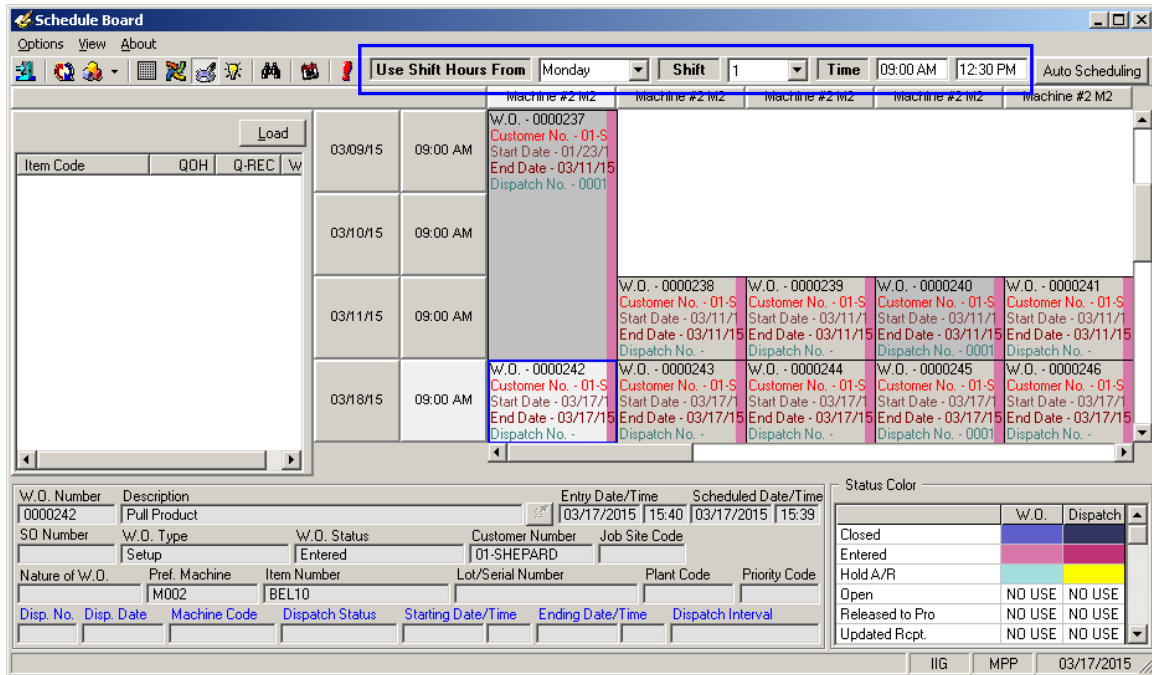
4 and 8 hours intervals added in the Interval drop down allows for showing Work Orders/Dispatches on the Board by 4/8 hours interval:



Material Planning & Production Management 60

Use Shift Hours From drop down allows the user to select a day (Monday, Tuesday, etc.) and specify the Shift for that day. Upon selecting a day with respective shift the starting/ending times are automatically loaded from Shift Maintenance.

The Schedule Board is refreshed automatically to show only the W.O./Dispatches for current Shift.



If no Shift is selected the W.O./Dispatches are shown based on the Time Interval set in the Board Options:

Upon pressing **Load** button the Items processed through the **Calculate Quantity to Produce/Purchase** program and saved in the SO068_MPPIItemsQtyToProduce.M4T table are loaded in the Item list at the left hand of the Board. It is necessary to have the **Include** checkbox selected for respective lines in the **Calculate Quantity to Produce/Purchase** program and accepted.

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The screenshot displays the 'Schedule Board' application. The main interface is a grid where columns represent dates and times, and rows represent machine codes. Work Order (W.O.) details are shown in colored boxes within the grid cells. A detailed view at the bottom provides specific information for a selected W.O., including its number, description, entry and scheduled dates, and various status and dispatch parameters.

W.O. Number	Description	Entry Date/Time	Scheduled Date/Time	Status Color
0000247		12/22/2015 14:41	12/22/2015 14:41	
SD Number	W.O. Type	W.O. Status	Customer Number	Job Site Code
	Manufacturing	Entered	01-ABF	2
Nature of W.O.	Pref. Machine	Item Number	Lot/Serial Number	Plant Code
	M002	BEL25		
Disp. No.	Disp. Date	Machine Code	Dispatch Status	Starting Date/Time
0001	12/22/2015	A1	Open	12/22/2015 11:42
				Ending Date/Time
				12/23/2015 11:42
				Dispatch Interval
				24 hours 0 minutes

Work Order Generation can be processed also from **Schedule Board**. The Columns of the **Board** display dates and the **Rows** are Machine Codes setup in the system:

Production **Scheduling Board** can be used to manage the Production. Work Orders can be moved from one day/shift to next or from one machine to another.

Production Scheduling Board Views can be setup to display machines in a given Plan, Machine Type, or Work Orders for a specific shift. If needed a Board View can be setup to Show the hours of Operation on the Board.

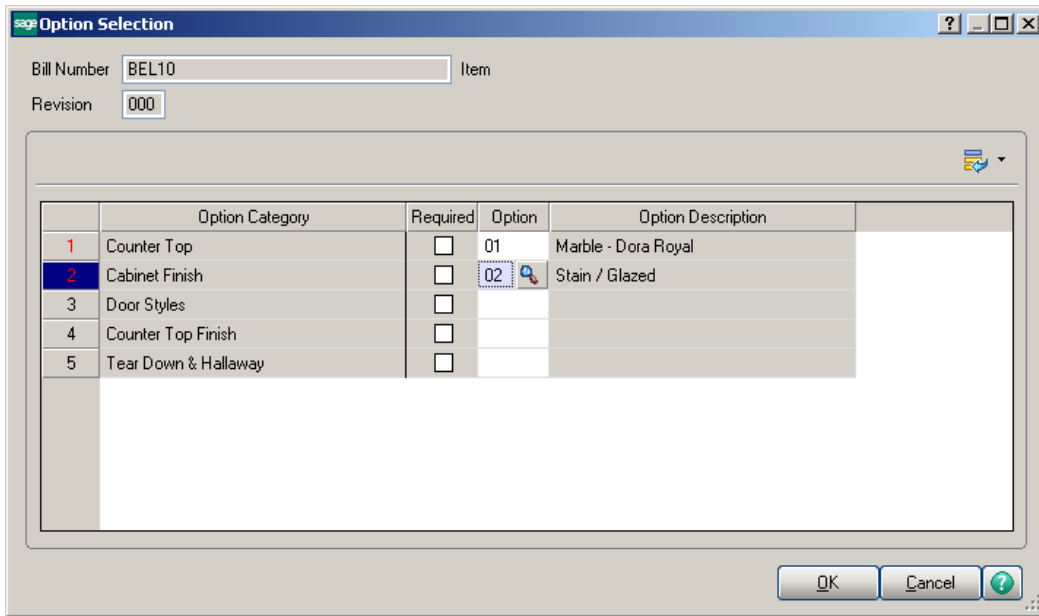
Drag the Item and drop into a cell in the Production Scheduling Board.

Material Planning & Production Management 62

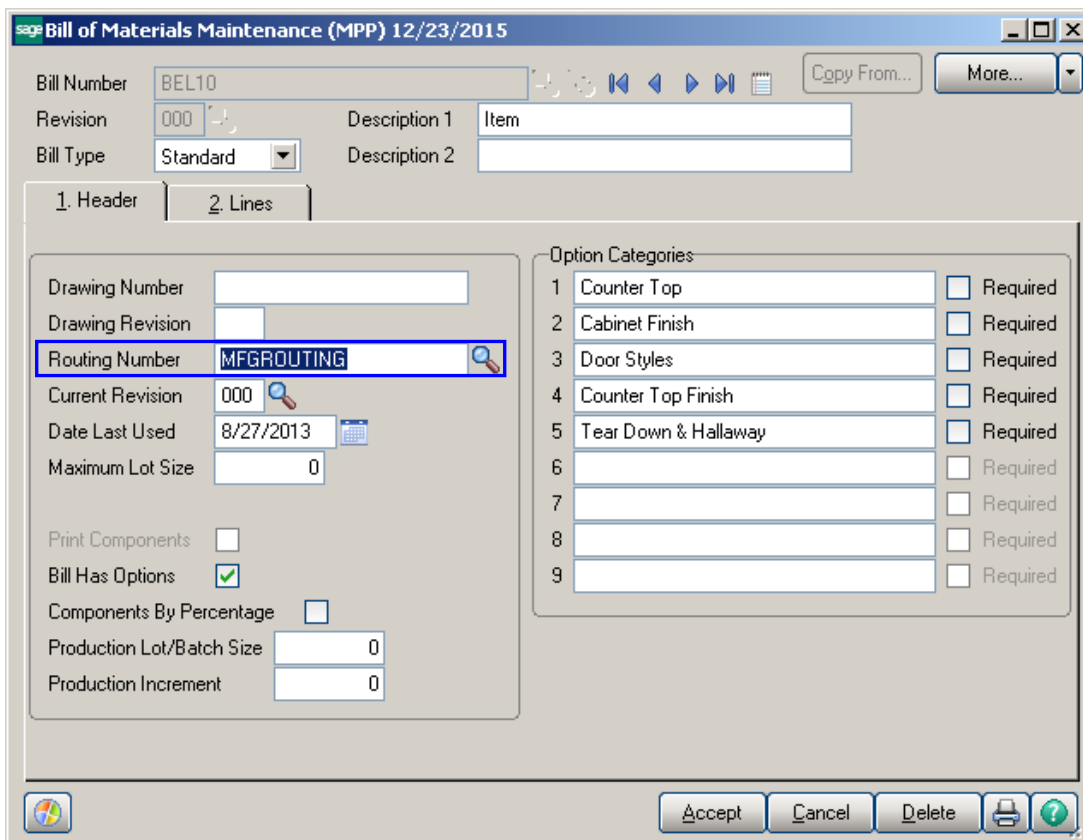
The following message appears for the user to confirm new Work Order generation for current Date and Machine code:

If the user selects **Yes** to generate Work Order, the Bill Options Selections screen is opened allowing the user to select Bill option.

Material Planning & Production Management 63

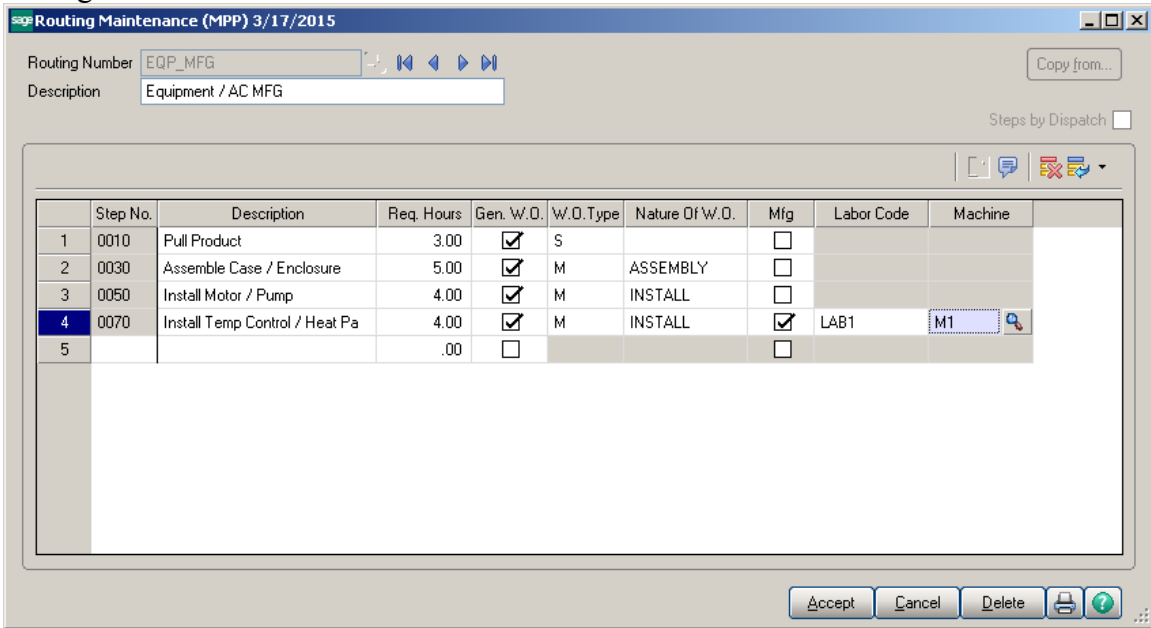


Work Order generation is done based on the Routing Number specified on the Bill Item Header.

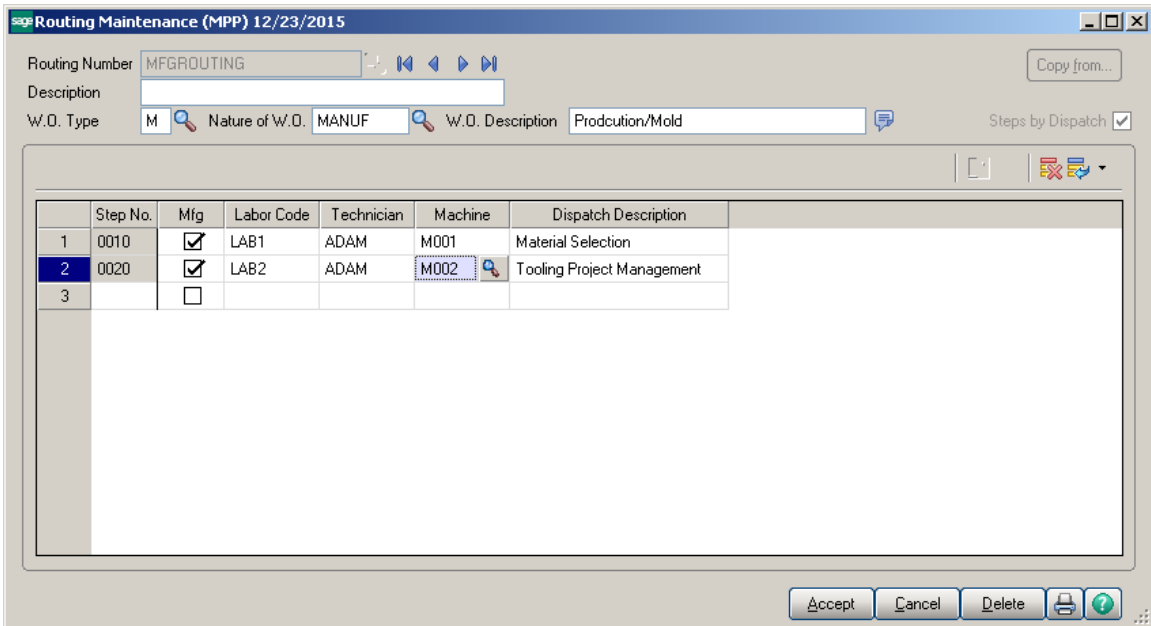


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The number of Work Orders being generated is based on the Routing steps. Work Orders are generated for all the steps having the Gen. W. O. option selected. Manufacturing Dispatch is automatically created for a Work Order generated for a Routing Step flagged as Mfg.



If the **Routing Number** is marked as **Steps by Dispatch**, a single Work Order is generated with respective Dispatches created for each Step of the Routing Number flagged as **Mfg**.



Here is a Work Order with respective Manufacturing Dispatches generated for Bill Item: BEL10:

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Work Order No. 0000253 Production/Mold Defaults... User Userig

Dispatch No.	Dispatch Date	Machine	Machine Name	Status
0001	12/23/2015	M002	Machine #2 M2	Open
0002	12/23/2015	M002	Machine #2 M2	Open

Quick Print Accept Cancel Delete

*Note: The Customer number is defaulted from **Material Planning and Production Setup** so you may have the Default WO Customer setup in the system.*

Material Planning & Production Management 66

Work Order No. 0000253 Production/Mold Defaults...

1. Header 2. Address 3. Dispatches User Useriig

Dispatch No.	Dispatch Date	Machine	Machine Name	Status
0001	12/23/2015	M002	Machine #2 M2	Open
0002	12/23/2015	M002	Machine #2 M2	Open

Dispatching/ Material Labor/ Transaction

Quick Print Accept Cancel Delete

Press the Dispatching button to open the Dispatch Data Entry:

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The screenshot shows the Sage Dispatch Data Entry (MPP) 12/23/2015 window. The window is divided into several sections. At the top, there are fields for Work Order No (0000253), Dispatch No (0001), Production/Mold, Material Selection, and User (Userig). Below this, there are tabs for '1. Header' and '2. Lines'. The '1. Header' tab is selected. The main area contains fields for Dispatch Date (12/23/2015), Dispatch Status (0), Starting Date (12/23/2015), Starting Time (03:38 PM), Ending Date (12/23/2015), Ending Time (03:38 PM), and Commit Quantity (checked). There are also fields for Machine (M002), Technician (ADAM), Mold Number (0000000002), MFG Item Code (BEL10), Lot/Serial No., and Quantity on WO (20.00). At the bottom, there are buttons for 'Send Out...', 'Receive...', 'Quick Print', 'Labor', 'Accept', 'Cancel', and 'Delete'.

Go to the Lines tab. The Bill Item is automatically exploded in the Dispatch Data Entry with the Component Item of Option Bill added in the lines.

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Work Order No: 0000253 Production/Mold
Dispatch No: 0001 Material Selection

User: Useriig

1. Header 2. Lines

Quick Row: 1

Serial No. Add New Increment

	Item Code	Ordered	Unit Price	Extension	Comment
1	BEL10	20.00	78.120	1,562.40	
2	BEL10-VIP	20.00	121.830	2,436.60	
3	FINSTNGLAZE	360.00	.000	.00	
4	PLS-TRAY	20.00	125.550	2,511.00	
5	SLBMDR	960.00	.000	.00	
6	TIP.XI	20.00	121.830	2,436.60	

Description Item
Warehouse MRP
Unit Of Measure EACH
Price Level

Total Amount: 9,051.60

Quick Print Manufacturing Labor Accept Cancel Delete

Bill Options button in the Dispatch Data entry allows for viewing Bill Options:

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	Option Category	Required	Option	Option Description
1	Counter Top	<input type="checkbox"/>	01	Marble - Dora Royal
2	Cabinet Finish	<input type="checkbox"/>	02	Stain / Glazed
3	Door Styles	<input type="checkbox"/>		
4	Counter Top Finish	<input type="checkbox"/>		
5	Tear Down & Hallaway	<input type="checkbox"/>		

If the **Commit Quantity During MFG Dispatch Generation** flag is set on the Entry tab of the **Material Planning and Production Setup**, the **Commit Quantity** checkbox will be automatically selected on the generated manufacturing Dispatch to commit the quantities on Work Order. Press the Item Inquiry button on the Dispatch line to see the quantities updated:

Material Planning & Production Management 70

The screenshot shows the Sage Item Maintenance (MPP) window for item BEL10. The window is titled 'sage Item Maintenance (MPP) 12/23/2015'. It features a navigation bar with tabs for Main, Additional, Quantity, History, Transactions, Orders, and Cost Detail. The main area is divided into several sections:

- Product Line:** WF&A WORKSTATION FURN & ACCESS. Product Type: Finished Good. Weight: 35. Valuation: FIFO. Volume: 0.0000. Procurement: Make. Inventory Cycle: B.
- Unit of Measure:** Standard: EACH. Purchases: EACH (No. of EACH: 1). Sales: EACH (No. of EACH: 1).
- Price Code:** STD STANDARD QUANTITY PRIC. Primary Vendor: 01-CONT Container Corporation Of Usa. Default Whse: 000 CENTRAL WAREHOUSE. Warranty Code: 30 DAY 30 days from shipment. Planning Code: 001. MFG Priority Code: 1. MFG Code: Made to Order. Item Molds Machine.
- Sales:** Retail Price: 84.000. Standard Price: 84.000. Last Sold: .
- Purchases:** Standard Cost: 32.750. Average Cost: 1,952.185. Last Receipt: 8/27/2013.
- Last Costs:** Item: 2,076.243. Allocated: .000. Total: 2,076.243.
- Quantities Table:**

Whse	Description	On Ha...	On PO	On SO	On Bk Ord	Committed	On WO	Req for WO	Availa
000	CENTRAL ...	270.00	.00	560.00	.00	560.00	297.00	.00	290.
001	EAST WA...	7.00	.00	3,128.00	.00	3,128.00	6,090.00	.00	3,121.
MRP	MRP wareh...	.00	.00	20.00	.00	20.00	120.00	.00	20.

At the bottom of the window are buttons for Accept, Cancel, Delete, and a help icon.

The Quantity On WO for Bill Item reflects the Quantity Ordered in the manufacturing dispatch(es).

For component Items the Req for WO field is updated with respective quantity from manufacturing dispatch Quantity Ordered:

The Components defined for the Bill Item are loaded into the created Work Order. Users can change the quantity loaded if actual quantity used is different than component quantity entered in the Bill of Material program.

The actual Labor defined for the Bill item is loaded into the Created Work Order. Users can change the labor based on actual Labor hours for the production.

Work Order Entry

In addition to the **Production Scheduling Board**, the **Work Order Entry** program can be used for creation of Work Orders and manufacturing dispatches.

Work Order No. 0000254

1. Header | 2. Address | 3. Dispatches

User Useriig

Order Date 12/23/2015 Order Time 04:13 PM Order Type M Manufacturing

Customer No. 01-ABF American Business Futures

W.O. Status E Entered

Job Site Code 2 American Business Futures

Job Site Contact John Quinn

Nature of W.O.

Prefer. Machine M002 Machine #2 M2 Mold Number 0000000002

Preferred Tech.

Item Number BEL25 HON 4 DRAWER LETTER FILE W/C

Lot/Serial No.

Plant Code

Territory

Cust PO

Priority Code

Contract No.

Schedule Date 12/23/2015 Time 04:13 PM

Due Date 12/23/2015 Time 04:13 PM

Production Lot/Batch Size 0

Production Increment 0

Quick Print

Accept Cancel Delete

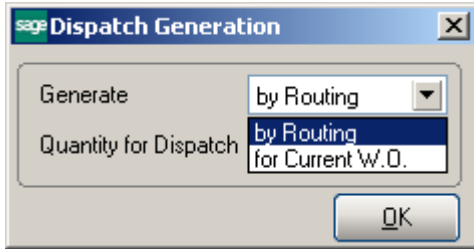
MFG Dispatch Generation

The **MFG Dispatch Generation** button added on the header tab of **Work Order Entry** allows for generating manufacturing dispatch for a Bill Item (having at least one component) directly during WO Entry.

Two options are provided for generation:

- **by Routing**
- **for Current W.O.**

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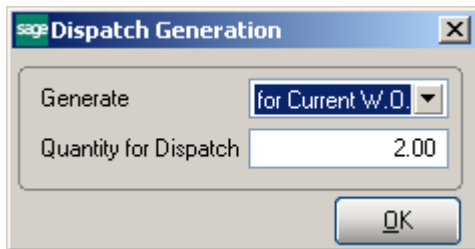


If **by Routing** is selected the Dispatch will be generated by the Routing (having a step marked as MFG) assigned to current Bill Item in the **Bill of Materials Maintenance**.



For this option the **Work Order-> MFG Dispatch** generation logic is the same as from **Calculate Quantity to Produce/Purchase** program.

Here is the MFG dispatch generation by the second: **for current WO** option:



After entering the **Quantity for Dispatch** and pressing **Ok** button a manufacturing dispatch is created for current WO

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SAP Dispatch Data Entry (MPP) 12/23/2015

Work Order No. 0000254 Make step

Dispatch No. 0001 User Useriig

1. Header 2. Lines

Dispatch Date 12/23/2015 Dispatch Status 0 Open

Starting Date 12/23/2015 Starting Time 04:22 PM Commit Quantity

Ending Date 12/23/2015 Ending Time 04:22 PM

Machine M002 Machine #2 M2 Mold Number 0000000002

Technician

MFG Item Code BEL25 Lot/Serial No.

Quantity on WO 2.00

Outside Processing

Send Out... Receive...

Quick Print Manufacturing Labor Accept Cancel Delete

Lot Number Generation

The **Mold Number** assigned to the work order is used when generating Lot/serial number for Make Item with Lot/Serial Valuation.

Pressing the **Lot/Serial Number** generation button added next to the Lot/Serial No field will generate the lot number based on the specified mold number and Julian date. If the size of the Lot/Serial No field being generated is more than 15 characters, it will be truncated from left.

The screenshot shows the Sage Work Order Entry (MPP) 1/8/2016 window. The window title is "Work Order Entry (MPP) 1/8/2016". The main area contains several fields and buttons. At the top, there is a "Work Order No." field with the value "0000257" and a "Defaults..." button. Below this, there are tabs for "1. Header", "2. Address", and "3. Dispatches". The "User" field is set to "Useriig". The "Order Date" is "1/8/2016" and the "Order Time" is "04:12 PM". The "Order Type" is "M" and the "Order Type" dropdown is set to "Manufacturing". The "Customer No." is "01-ABF" and the customer name is "American Business Futures". The "W.O. Status" is "E" (Entered). The "Job Site Code" is "2" and the "Job Site Contact" is "John Quinn". The "Nature of W.O." is blank. The "Prefer. Machine" is "M1" and the "Mold Number" is "0000000001". The "Preferred Tech." is blank. The "Item Number" is "2480-8-50" and the item name is "DESK FILE 8\" CAP 50". The "Lot/Serial No." is "573960000000001" and there is a "Lot/Serial Number Generation" button next to it. The "Plant Code" is blank. The "Territory" is blank. The "Cust PO" is blank. The "Priority Code" is blank. The "Contract No." is blank. The "Schedule Date" is "1/8/2016" and the "Time" is "04:12 PM". The "Due Date" is "1/8/2016" and the "Time" is "04:12 PM". The "Production Lot/Batch Size" is "0" and the "Production Increment" is "0". At the bottom, there are buttons for "Quick Print", "Accept", "Cancel", and "Delete".

The generated lot number is saved in the work order transaction and is loaded into the Daily Production Entry transaction, created when manufacturing dispatch is closed.

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Production Generation

B/M Production is automatically generated upon closing a Manufacturing Dispatch.

The screenshot shows the 'Sage Dispatch Data Entry (MPP) 1/8/2016' window. It contains the following fields and controls:

- Work Order No: 0000254
- Dispatch No: 0001
- Make step: [text field]
- User: Userig
- Dispatch Date: 12/23/2015
- Dispatch Status: 0
- Starting Date: 12/23/2015
- Starting Time: 04:22 PM
- Ending Date: 12/23/2015
- Ending Time: 04:22 PM
- Commit Quantity:
- Machine: M002
- Technician: [text field]
- MFG Item Code: BEL25
- Lot/Serial No.: [text field]
- Mold Number: 0000000002
- Quantity on WO: 2.00
- Buttons: Send Out..., Receive..., Quick Print, Labor, Accept, Cancel, Delete

The following screen is opened with the quantity on work order defaulted to Quantity Produced. The user is allowed to change the quantity produced. If the user reduces the Quantity Produced a prompt appears about leaving the work order open for the remaining quantity. In this case after generating Production a new dispatch will be created with "Open" status with Items Ordered Quantity equal to original Qty Ordered – Quantity Produced.

The screenshot shows the 'Sage Production Generation' dialog box. It contains the following fields and controls:

- Quantity Produced: 2.00
- Button: OK

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If Batch processing is enabled for Production Entry the B/M Production Entry Batch screen is opened upon pressing Ok.

The screenshot shows the 'sage B/M Production Entry Batch' window. The title bar includes the Sage logo and the window name. The main area contains several input fields and buttons. The 'Batch Number' field is set to '00001'. There are navigation arrows and buttons for 'Modify...', 'Verify', 'Renumber...', and 'Merge...'. The 'Status' is set to 'Available', and 'Entries' is '0'. The 'Created By' and 'Modified By' fields are empty. At the bottom, there are buttons for 'Accept', 'Cancel', 'Delete', and a help icon.

Here is the Production Entry generated after the manufacturing Dispatch is closed:

The screenshot shows the 'sage Production Entry (MPP) 1/8/2016' window. The title bar includes the Sage logo and the window name. The main area contains several input fields and buttons. The 'Production Number' is '0000042' and the 'Batch' is '00001'. There are tabs for '1. Header' and '2. Lines'. The 'Production Date' is '1/8/2016'. The 'Bill Number' is 'BEL25' and 'Bill Type' is 'Standard'. The 'Revision' is '000', 'Option Code' is empty, 'Quantity' is '2.00', and 'Unit of Measure' is 'EACH'. The 'Effective Date' is '1/8/2016'. The 'Parent Warehouse' and 'Component Warehouse' are both '000', with a search icon and 'CENTRAL WAREHOUSE' text next to each. There is an 'Explode Sub-Assemblies' checkbox. At the bottom, there are buttons for 'Accept', 'Cancel', 'Delete', a printer icon, and a help icon.

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	Component Item Code	Quantity/Bill	Extended Quantity	Comment
1	BEL25-VIP	1.00	2.00	
2	PLS-TRAY	1.00	2.00	
3	TIP	1.00	2.00	
4	/MISC_CHARGE1	5.00	10.00	
5		.00	.00	

Description	HON 4 DRAWER LETTER FLE W/O LK
Revision	000
Warehouse	000
Unit Of Measure	EACH

Actual Inventory and Labor information from the Work Order transaction is loaded into the Daily Production Entry transaction.

After the Production is updated the Bill Item Qty On Hand is updated with quantity produced and the **Qty On WO** and **Qty Req For WO** are released.

The generated **Production** number is displayed on the Header tab of the Dispatch Entry: The **Production** button allows for launching respective Production Entry.

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sage Dispatch Data Entry (MPP) 1/8/2016

Work Order No 0000254

Dispatch No. 0001

1. Header 2. Lines

User Useriig

Dispatch Date 12/23/2015

Dispatch Status C Closed

Starting Date 12/23/2015

Starting Time 04:22 PM

Ending Date 12/23/2015

Ending Time 04:22 PM

Commit Quantity

Machine M002 Machine #2 M2

Mold Number 0000000002

Technician

MFG Item Code BEL25

Lot/Serial No.

Production 0000042

Quantity on WO 2.00

Outside Processing

Send Out... Receive...

Quick Print Manufacturing Labor OK

Upon pressing **Production** button the Production Entry Lines tab is opened:

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Production Number: 0000042 Batch: 00001

1. Header 2. Lines

Quick Row: 1

Lot/Serial Number: [Empty]

	Component Item Code	Quantity/Bill	Extended Quantity	Comment
1	BEL25-VIP	1.00	2.00	
2	PLS-TRAY	1.00	2.00	
3	TIP	1.00	2.00	
4	/MISC_CHARGE1	5.00	10.00	
5		.00	.00	

Description: HON 4 DRAWER LETTER FLE W/O LK
Revision: 000
Warehouse: 000
Unit Of Measure: EACH

Accept Cancel Delete [Print] [Help]

Auto Scheduling

When Work orders are generated from **Calculate Quantity To Produce** program by **Auto Scheduling** button, the work orders are auto-assigned to machine code specified on the **Calculate Quantity To Produce** screen.

The duration of dispatch is calculated based on the information entered for each mold/machine combination (**Calc. Demand Qty/QtyProduced PerHour + Queue Time**) taking into account the Shifts setup in the Week Shift Maintenance. If there is Start Date specified on the **Calculate Quantity To Produce** screen that Date/Time is taken into account when checking for Machine availability.

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sage Dispatch Data Entry (MPP) 1/8/2016

Work Order No. 0000260 Prepare Door Ends

Dispatch No. 0001

User Userrig

1. Header 2. Lines

Dispatch Date 1/8/2016 Dispatch Status 0 Open

Starting Date 1/8/2016 Starting Time 10:00 AM Commit Quantity

Ending Date 1/18/2016 Ending Time 11:08 AM

Machine M002 Machine #2 M2 Mold Number 0000000002

Technician

MFG Item Code BEL25 Lot/Serial No.

Quantity on WO 346.00

Outside Processing
Send Out... Receive...

Quick Print Manufacturing Labor Accept Cancel Delete

sage Week Shifts Maintenance (MPP) 1/8/2016

Week Day Friday

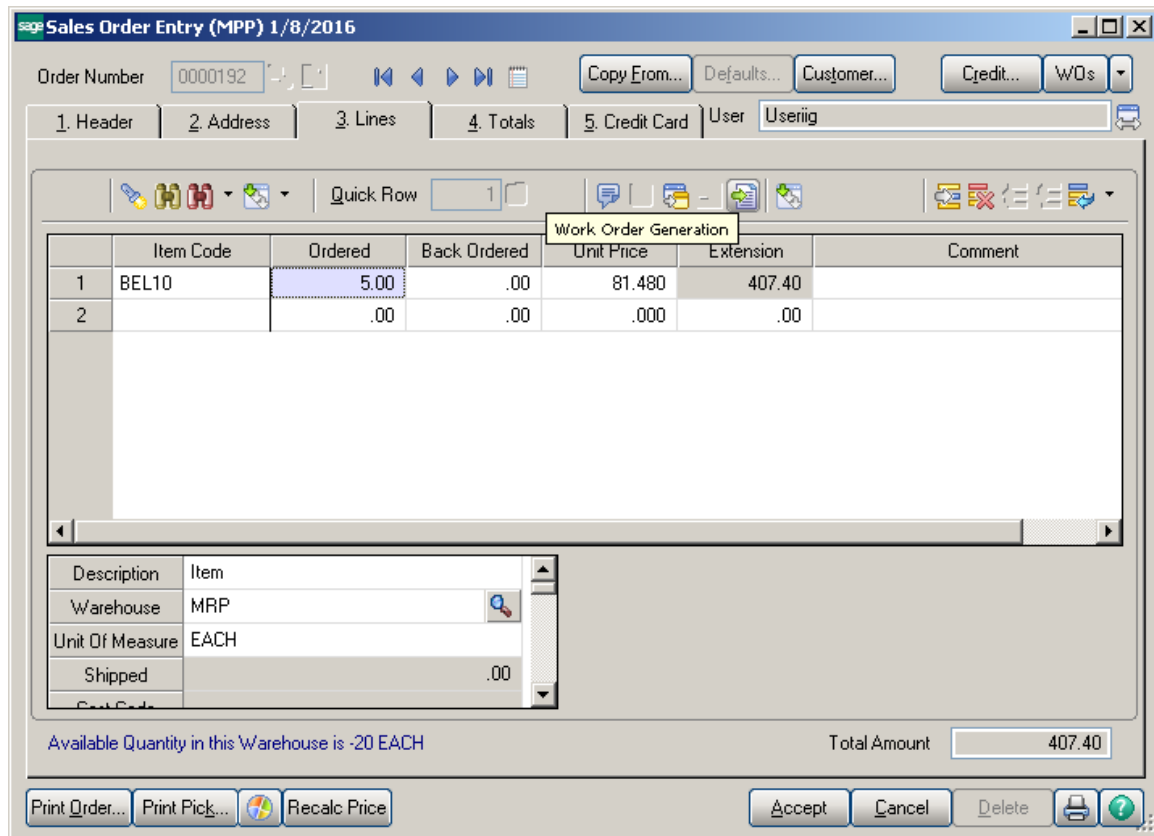
Quick Row 1

	Shift	Start Time	End Time
1	1	09:00 AM	01:00 PM
2	2	02:00 PM	06:00 PM
3			

Accept Cancel Delete

Sales Order Entry

This enhancement provides also ability of creating Work Orders from the Sales Order Entry program.



Press the **Work Order Generation** button to generate Work Order(s) for the selected Bill Item based on the Routing entered for current Bill Item in the Bill of Materials Maintenance.

If the selected **Bill Number** has options, the Options Selection screen is displayed allowing the user to select options.

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	Option Category	Required	Option	Option Description
1	Counter Top	<input type="checkbox"/>	01	Marble - Dora Royal
2	Cabinet Finish	<input type="checkbox"/>	02	Stain / Glazed
3	Door Styles	<input type="checkbox"/>	03	Item
4	Counter Top Finish	<input type="checkbox"/>		
5	Tear Down & Hallaway	<input type="checkbox"/>		

The Generate Work Orders screen is opened with the Bill number selected and disabled

Work Order Fields

Next W.O. Number: 0000267

Routing Number: []

Bill Number: BEL10

Options: 01,02,03

Generate Cancel

Based on the Routing assigned to current Bill Item the program will generate either a single Work Order with respective MFG dispatches generated for each step flagged as MFG or it will generate Work Orders for all the steps of Routing having the **Gen. W.O** flag set in the **Routing Maintenance**. For the steps having **Mfg** checkbox selected in the Routing Maintenance Dispatches are automatically created under the Work Order with a Labor Code, Technician and **Machine Code** specified for that Step of the Routing.

Press the **Edit/View** button to see the Work Order and dispatches generated for the Sales Order Bill line:

Material Planning & Production Management 83

sage Sales Order Entry (MPP) 1/8/2016

Order Number: 0000192

1. Header | 2. Address | 3. Lines | 4. Totals | 5. Credit Card | User: Userig

Generation
Edit/View

Quick Row: 1

	Item Code	Ordered	Back Ordered	Unit Price	Extension	Comment
1	BEL10	5.00	.00	2,750.920	13,754.60	
2		.00	.00	.000	.00	

Description	Item
Warehouse	MRP
Unit Of Measure	EACH
Shipped	.00

Total Amount: 13,754.60

Print Order... | Print Pick... | Recalc Price | Accept | Cancel | Delete

sage Generated Work Orders (MPP) 1/8/2016

Sales Order No.: 0000192

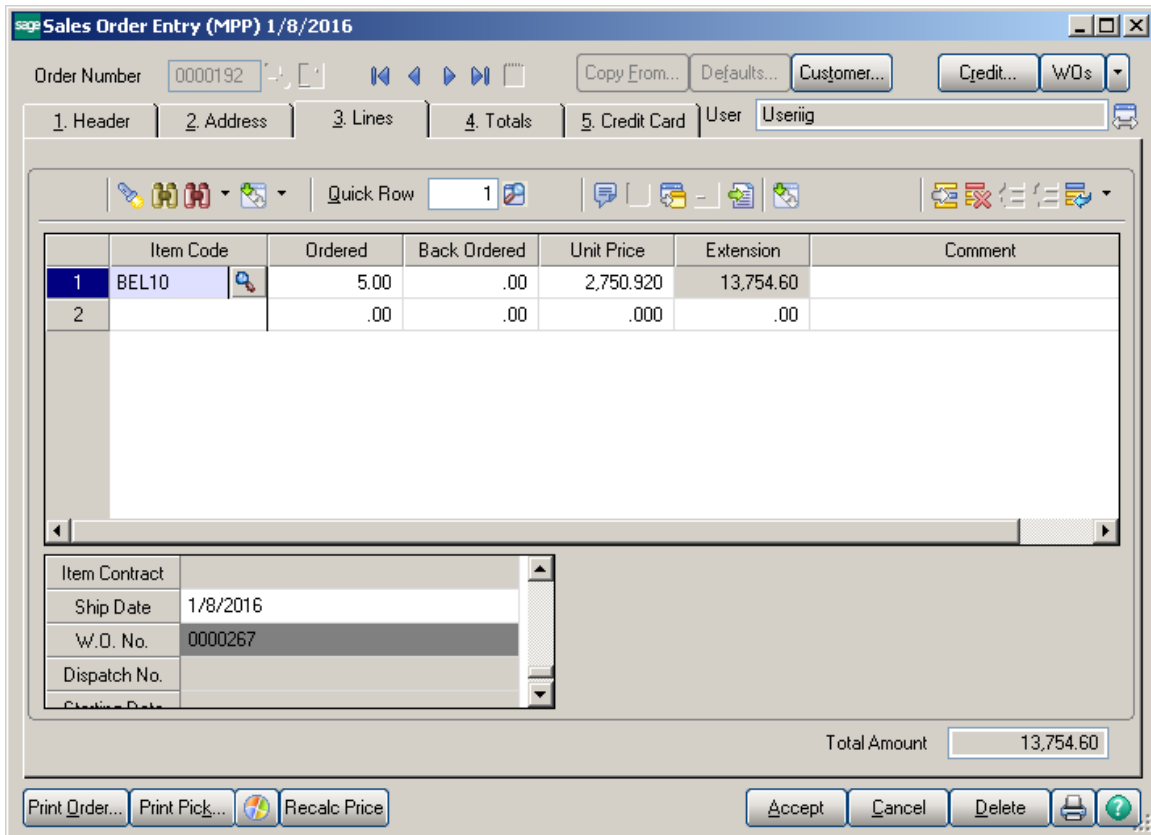
Quick Row: 0

	W.O. Number	W.O. Description	W.O. Date	Technician Code	W.O. Ty
1	0000267	Production/Mold	1/8/2016		Manufacturing

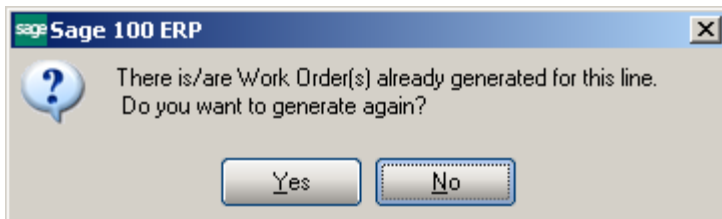
Accept | Cancel

The WO Number generated from a SO line is loaded in the **W.O. No.** field in the Sales Order secondary grid.

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If there are multiple WOs generated for a line, the last Work Order number is displayed. The user may generate a new Work Order for a sales Order even if there are Work Orders already generated. In this case a prompt appears about the Work Orders already generated for Sales Order.



Here is the Work Order generated with respective MFG Dispatches:

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Dispatch No.	Dispatch Date	Machine	Machine Name	Status
0001	1/8/2016	M002	Machine #2 M2	Open
0002	1/8/2016	M002	Machine #2 M2	Open

The Bill Item Components are loaded from the BOM into the WO Dispatch Transaction.

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The screenshot shows the Sage Dispatch Data Entry (MPP) 1/8/2016 window. At the top, the Work Order No. is 0000267 and the Dispatch No. is 0001. The Production/Mold and Material Selection fields are empty. The User is Useriig. The interface has tabs for 1. Header and 2. Lines. Below the tabs is a toolbar with icons for search, refresh, and other functions. A 'Quick Row' field is set to 1. Below the toolbar is a table with columns: Serial No., Item Code, Ordered, Unit Price, Extension, and Comment. The table contains 6 rows of material data. Below the table is a section for Description, Warehouse, Unit Of Measure, and Price Level. The Total Amount is 15,785.05. At the bottom, there are buttons for Quick Print, Labor, Accept, Cancel, and Delete.

Serial No.	Item Code	Ordered	Unit Price	Extension	Comment
1	BEL10	5.00	2,750.920	13,754.60	
2	BEL10-VIP	5.00	127.070	635.35	
3	FINSTNGLAZE	90.00	.000	.00	
4	PLS-TRAY	5.00	130.950	654.75	
5	SLBMDR	240.00	.000	.00	
6	TIP.XI	5.00	127.070	635.35	

Description	Item
Warehouse	MRP
Unit Of Measure	EACH
Price Level	1

Total Amount: 15,785.05

Buttons: Quick Print, Manufacturing, Labor, Accept, Cancel, Delete

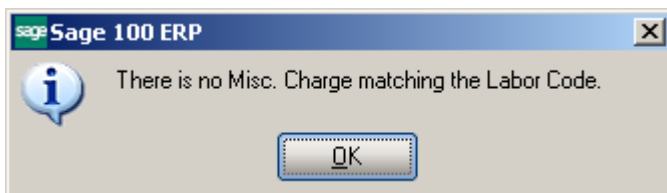
The Labor Code specified in the Routing Maintenance is loaded in the Labor Charge Data Entry line if there is Miscellaneous Charge Item matching that Labor Code setup in the Miscellaneous Item Maintenance.

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	Labor/Skill Code	Technician Code	Hours Spent	Billing Rate	Extension
1	LAB1	ADAM	.00	30.000	.00
2			.00	.000	.00

Description	Machine#1 Labor
Disc %	0.000
Import To JC	<input type="checkbox"/>
Machine Code	M002

To be able to enter a Labor line in the Labor **Charge Data Entry** it is necessary to have respective Miscellaneous Charge Item (matching the Labor Code) setup in the Miscellaneous Item Maintenance. The following message appears if no Misc. Charge is found with the Item Code matching the Labor Code entered:

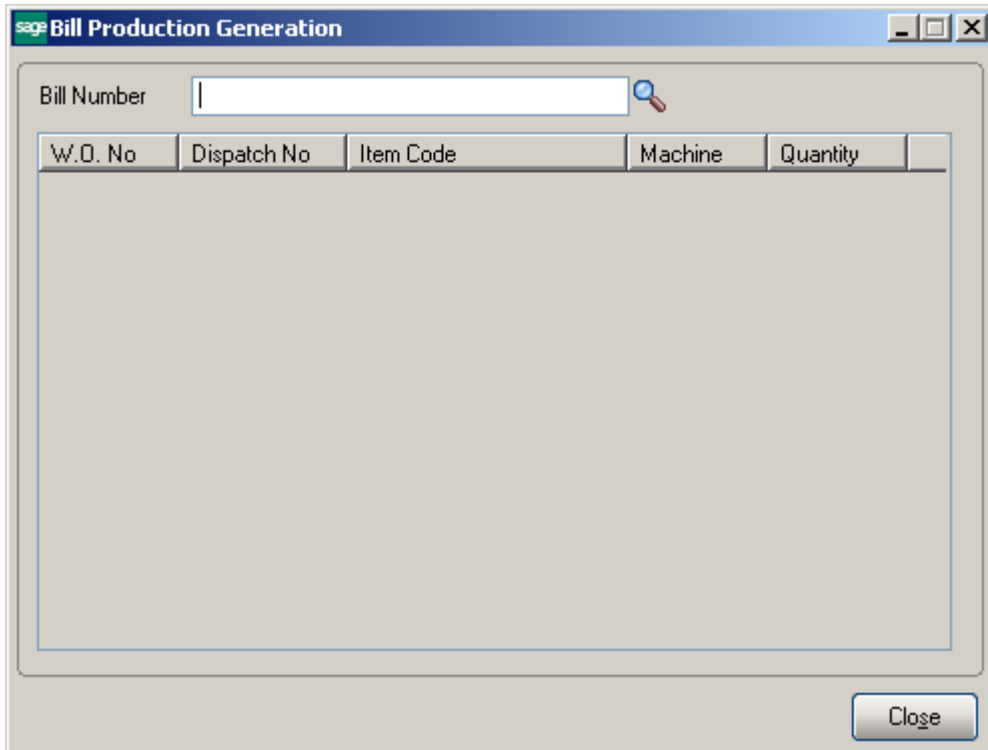


Daily Production entry transactions are created when Dispatch is closed. The Labor line added in the Labor Charge Entry is loaded in the generated Production lines as a **Miscellaneous Charge** line.

If Work Order is generated from Sales Order header, the selected Bill Item is loaded to the generated Work Order. No manufacturing dispatch is generated in this case.

Bill Production Generation

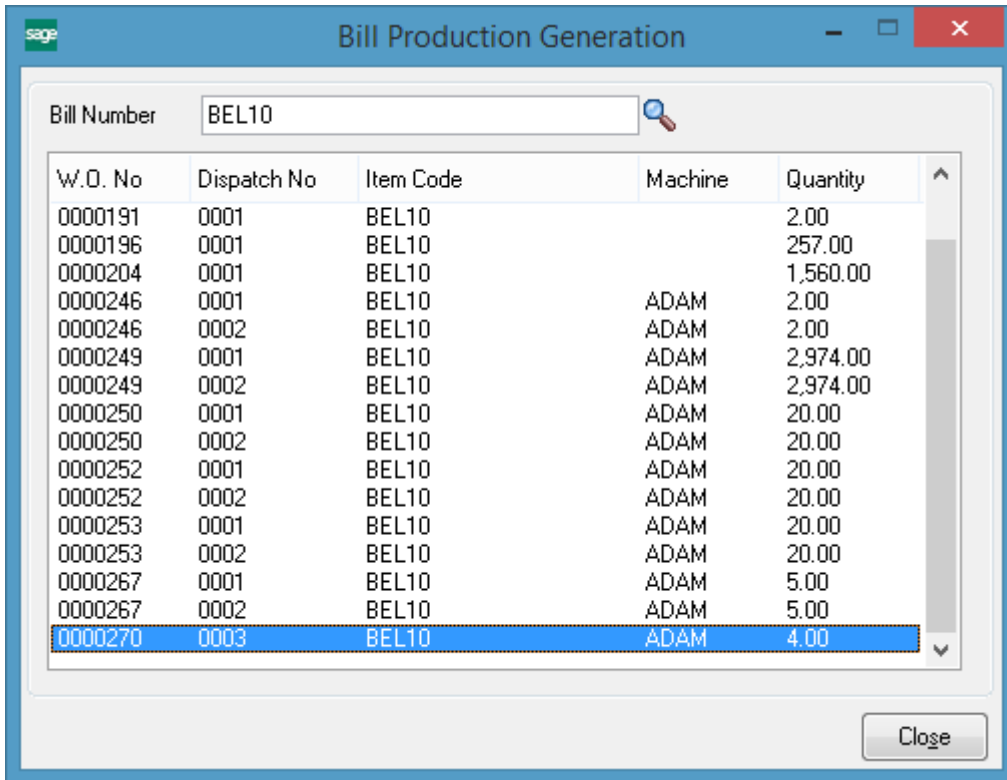
The **Bill Production Generation** program added under the **Material Planning & Production Management-> Main** menu allows for generating Production for a selected WO Number created for current Bill Item.



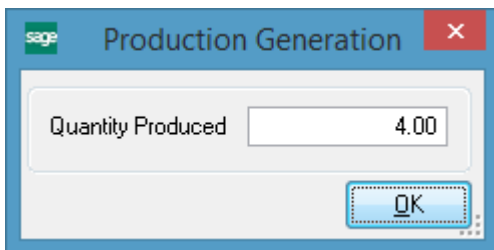
W.O. No	Dispatch No	Item Code	Machine	Quantity
---------	-------------	-----------	---------	----------

Upon entering a Bill number or selecting it from the Bill Number lookup all Work Orders generated for that Bill number are loaded in the list box.

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Double clicking on a selected WO line will open the Production Generation screen with the Quantity loaded as Quantity Produced.



Press Ok to proceed with production generation.

Custom UDFs

Dispatch Data Entry

The **Dispatch Data Entry** program has been modified to allow transferring the Dispatch UDF fields' values to respective UDF-s added on the B/M Production Entry.

The screenshot shows the Sage Dispatch Data Entry (MPP) 1/8/2016 window. The window title is "sage * Dispatch Data Entry (MPP) 1/8/2016". The interface includes a header section with the following fields: "Work Order No." (0000260), "Dispatch No." (0003), and "Prepare Door Ends". Below the header are tabs for "1. Header", "2. Lines", and "3. Production", with "3. Production" selected. A "User" field contains "Useriig". The main area displays three custom fields: "Custom Field1" (Test Prod), "Custom Field2" (200.00), and "Custom Field3" (1/8/2016). At the bottom, there are buttons for "Quick Print", "Labor", "Accept", "Cancel", and "Delete", and the word "Manufacturing" is displayed in red.

In order to have the UDF data transferred from Dispatch Data Entry to Production Entry, the UDF fields' names added on the Dispatch Data Entry should match the ones added on the Production Entry.

It is necessary to select the Data Source and respective column on the Data Sources tab of the Edit UDF screen:

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Field Name: UDF_CUSTOM_FIELD1 [Locked]
Description: Custom Field1
Control Type: Multi-Line [Locked]
Drop-Box
List-Box
Check-Box

Field in Use..... Yes
Bytes Used..... 279 of 20,000
Name Space Used..... 528

Bytes Used is the sum of the lengths of all columns in the table. Name Space Used is bytes-used plus the lengths of all column names.

1. Attributes | 2. Validation | 3. Data Sources

Business Object	Select	Data Source	Column	Ignore	Expression	DM
BM_Production_bus	<input type="checkbox"/>			<input type="checkbox"/>		
BM_Production_bus:CreateFromMPPDispatch	<input checked="" type="checkbox"/>	SM_DispatchHeader	UDF_CUSTOM_FIELD1	<input type="checkbox"/>		

OK Cancel

If the UDF fields are created correctly and the data source specified, the UDF fields' values are transferred to the Production Entry generated upon closing the Manufacturing Dispatch.

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sage® Production Entry (MPP) 1/8/2016

Production Number 0000044 Batch 00003 Defaults...

1. Header 2. Lines

Production Date 1/8/2016

Bill Number BEL25 HON 4 DRAWER LETTER FILE W/O LK
Bill Type Standard

Revision 000
Option Code
Quantity 1.00
Unit of Measure EACH
Effective Date 1/8/2016

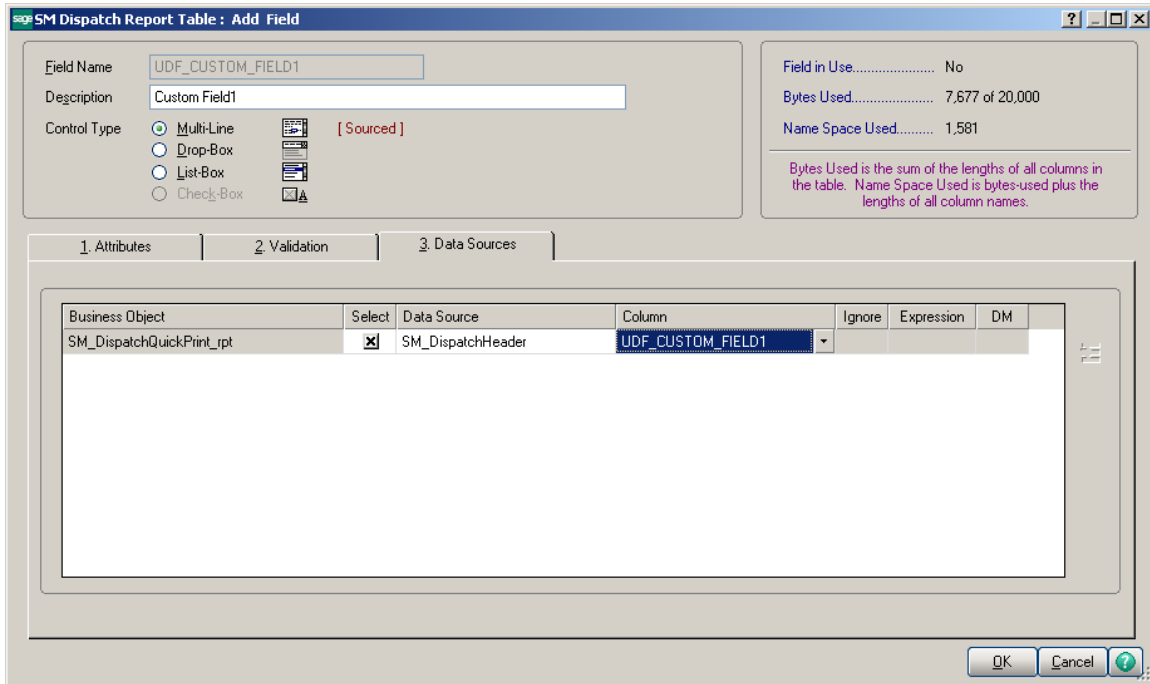
Parent Warehouse 000 CENTRAL WAREHOUSE
Component Warehouse 000 CENTRAL WAREHOUSE
Explode Sub-Assemblies

Custom Field1 Test Prod
Custom Field2 200.00
Custom Field3 1/8/2016

Accept Cancel Delete

Dispatch Quick Printing

The **Dispatch Quick Printing** program has been modified to allow printing custom UDF fields and the generated Production Number. In order to have the UDFs populated in the SM_Dispatch worktable it is necessary to add those UDF fields in the SM Dispatch Report Table and select respective data source:



Here is the SM_Dispatch Worktable with the UDF fields populated:

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File Name: D:\MAS\MAS520\MPP\MAS90\MAS_MPP\SMMP\SM_DispatchWrk\IG01110858848.M

Key Size: N/A Rcd Size: 12,160 Rcd Count: 5 Company: MPP Type: Keyed

0.....10.....20.....30.....40.....50.....60.....70..

116	OvertimeStartDate\$	[]
117	OvertimeStartTime\$	[]
118	Overtime\$	[]
119	ImportToJC\$	[]
120	HoursSpent	.00
121	BillingRate	.00
122	RetainerFactor	.00
123	OvertimeFactor	.00
124	GeneratedProductionNo\$	[]
125	TaskMachineCode\$	[M002]
126	TaskMachineName\$	[Machine #2 M2]
127	DispatchMachineCode\$	[M002]
128	DispatchMachineName\$	[Machine #2 M2]
129	DispatchDescription\$	[]
130	DispatchExtDescriptionKey\$	[]
131	DispatchExtDescriptionText\$	[]
132	UDF_CUSTOM_FIELD1\$	[Test Prod]
133	UDF_CUSTOM_FIELD2	200.00
134	UDF_CUSTOM_FIELD3\$	[20160108]

Key Scan and Display Options

Key Column Separator: [] Key Scan Filter: [] Formatted Display: [x]

Key No.: []

Key: []

Buttons: Edit... Delete Print Refresh

MRP Inquiry

The **MRP Inquiry** program has been added under the **Material Planning and Production Management** Inquiries menu to allow reviewing information for an item by Transaction type and Required Date. The demand, supply, and Proj. On Hand quantities for an item can be viewed.

Type	Document No.	Required Date	Demand	Supply	Proj. On Hand
------	--------------	---------------	--------	--------	---------------

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sage MRP Inquiry (MPP) 1/11/2016

Item Code: BEL10 U/M: EACH On Hand: 309.00

Description: Item

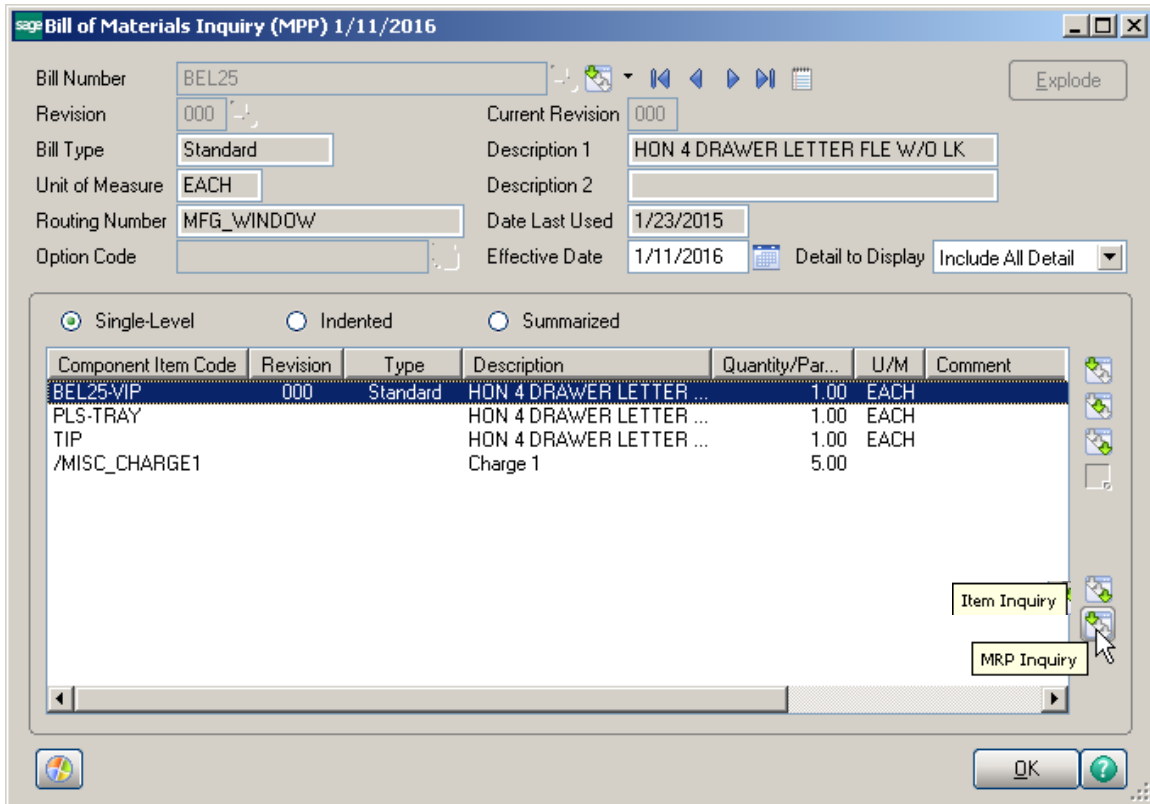
	Type	Document No.	Required Date	Demand	Supply	Proj. On Hand
12	WO	0000163/0001	9/3/2013	.00	35.00	1
13	WO	0000196/0001	9/12/2013	.00	257.00	1,506.00
14	SO	0000187	10/29/2013	1,580.00	.00	3,086.00
15	WO	0000204/0001	10/29/2013	.00	1,560.00	1,526.00
16	WO	0000246/0001	12/15/2015	.00	2.00	1,524.00
17	WO	0000246/0002	12/15/2015	.00	2.00	1,522.00
18	SO	0000190	12/22/2015	20.00	.00	1,542.00
19	SO	0000191	12/23/2015	5.00	.00	1,547.00
20	WO	0000249/0001	12/23/2015	.00	2,974.00	1,427.00
21	WO	0000249/0002	12/23/2015	.00	2,974.00	4,401.00
22	WO	0000250/0001	12/23/2015	.00	20.00	4,421.00
23	WO	0000250/0002	12/23/2015	.00	20.00	4,441.00
24	WO	0000252/0001	12/23/2015	.00	20.00	4,461.00
25	WO	0000252/0002	12/23/2015	.00	20.00	4,481.00
26	WO	0000253/0001	12/23/2015	.00	20.00	4,501.00
27	WO	0000253/0002	12/23/2015	.00	20.00	4,521.00
28	SO	0000192	1/8/2016	5.00	.00	4,516.00
29	WO	0000267/0001	1/8/2016	.00	5.00	4,521.00
30	WO	0000267/0002	1/8/2016	.00	5.00	4,526.00

Order Zoom

OK

Bill of Materials Inquiry

The **Item Inquiry** and **MRP Inquiry** buttons added to the **Bill of Materials Inquiry** screen allows for drill down respectively to Item Inquiry and MRP Inquiry for the selected component line.



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sage Item Inquiry (MPP) 1/11/2016

Item Code: BEL25-VIP
 Description: HON 4 DRAWER LETTER FLE W/O LK

1. Main | 2. Additional | 3. Quantity | 4. History | 5. Transactions | 6. Orders | 7. Cost Detail

Product Line: WF&A WORKSTATION FURN & ACCESS
 Product Type: Finished Good
 Valuation: FIFO
 Procurement: Make

Unit of Measure: Standard EACH
 Purchases EACH No. of EACH 1
 Sales EACH No. of EACH 1

Price Code: STD STANDARD QUANTITY PRIC
 Default Whse: 000 CENTRAL WAREHOUSE
 Planning Code: 11 MFG Priority Code: 2

Primary Vendor: 01-AIRWAY
 Warranty Code:
 MFG Code:
[Item Molds Machine](#)

Sales: Retail Price 135.000
 Standard Price 135.000
 Last Sold:
 Purchases: Standard Cost 86.500
 Average Cost 653.600
 Last Receipt 7/1/2013
 Last Costs: Item 653.600
 Allocated .000
 Total 653.600

Quantities

Whse	Description	On Hand	On PO	On SO	On Bk Ord	Committed	On WD	Req for WD	Av
000	CENTRAL ...	183.00	.00	8.00	.00	8.00	.00	844.00	
001	EAST WA...	.00	122.00	.00	.00	.00	.00	496.00	
MRP	MRP wareh...	.00	.00	.00	.00	.00	.00	5.00	

OK [Print] [Help]

The screenshot shows the Sage MRP Inquiry (MPP) window for item BEL25-VIP. The window title is "sage MRP Inquiry (MPP) 1/11/2016". The item code is "BEL25-VIP" and the description is "HON 4 DRAWER LETTER FLE W/O LK". The unit of measure (U/M) is "EACH" and the on-hand quantity is "183.00".

	Type	Document No.	Required Date	Demand	Supply	Proj. On Hand
1	SO	0000177	1/22/2013	8.00	.00	191.00-
2	PO	0010018	3/20/2013	.00	122.00	69.00-
3	WO	0000236/0002	1/23/2015	123.00	.00	192.00-
4	WO	0000248/0001	12/22/2015	.00	2.00	190.00-
5	WO	0000247/0001	12/23/2015	2.00	.00	192.00-
6	WO	0000268/0001	1/11/2016	5.00	.00	197.00-
7	WO	0000260/0003	1/18/2016	343.00	.00	540.00-
8	WO	0000261/0001	1/28/2016	346.00	.00	886.00-
9	WO	0000264/0001	2/5/2016	248.00	.00	1,134.00-
10	WO	0000265/0001	2/13/2016	248.00	.00	1,382.00-

Production Release Status

Change Manufacturing Dispatches Status/Date

The **Change Manufacturing Dispatches Status/Date** program added under the **Material Planning and Production Management ->Main** menu allows for processing all manufacturing dispatches for a given status and dispatch date range to check for availability of inventory for production of quantity (all the components) on the dispatch. Additional selections for WO type, Nature of W.O. and Customer Number are available:

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Select Field	Operand	Value
W.O. Type	All	
Nature of W.O.	All	
Customer Number	All	
Dispatch Status	All	
Dispatch Date	All	

W.O. No.	spatch N	Item Code	Whse Code	Qty Avail.	Qty Ord.	Customer No.	Dispatch Dat	Disp. St.	Start Date	Include
----------	----------	-----------	-----------	------------	----------	--------------	--------------	-----------	------------	---------

Press **Select** to load all Dispatches meeting the selection criteria:

Select Field	Operand	Value
W.O. Type	All	
Nature of W.O.	All	
Customer Number	All	
Dispatch Status	All	
Dispatch Date	All	

W.O. No.	spatch N	Item Code	Whse Code	Qty Avail.	Qty Ord.	Customer No.	Dispatch Dat	Disp. St.	Start Date	Include	
18	0000252	0002	BEL10	MRP	.00	20.00	01-SHEPARD	12/23/2015	0	12/23/2015	<input type="checkbox"/>
19	0000253	0001	BEL10	MRP	.00	20.00	01-SHEPARD	12/23/2015	0	12/23/2015	<input type="checkbox"/>
20	0000253	0002	BEL10	MRP	.00	20.00	01-SHEPARD	12/23/2015	0	12/23/2015	<input type="checkbox"/>
21	0000260	0003	BEL25	000	449.00	343.00	01-SHEPARD	1/8/2016	0	1/8/2016	<input type="checkbox"/>
22	0000261	0001	BEL25	000	449.00	346.00	01-SHEPARD	1/19/2016	0	1/19/2016	<input type="checkbox"/>
23	0000264	0001	BEL25	001	.00	248.00	01-SHEPARD	1/29/2016	0	1/29/2016	<input type="checkbox"/>
24	0000265	0001	BEL25	001	.00	248.00	01-SHEPARD	2/6/2016	0	2/6/2016	<input type="checkbox"/>
25	0000267	0001	BEL10	MRP	.00	5.00	01-ABF	1/8/2016	0	1/8/2016	<input type="checkbox"/>
26	0000267	0002	BEL10	MRP	.00	5.00	01-ABF	1/8/2016	0	1/8/2016	<input type="checkbox"/>
27	0000268	0001	BEL25	000	.00	5.00	01-ABF	1/11/2016	0	1/11/2016	<input type="checkbox"/>

The **Qty Available** column displays the min quantity available to produce current Bill based on the components quantity available in the Warehouse. Here the user can change the Dispatch Status and Dispatch start Date. If there is enough inventory in stock for current Bill ($Qty\ Ordered < Qty\ Avail$) the user can change the Dispatch Status to the one setup as the **Dispatch Status (Released to Production)** in the **Material Planning and Production Setup** without any warning.

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If there is not enough inventory in stock for current Bill (Qty Ordered > Qty Avail) a message appears upon changing a **Dispatch Status** to the one setup as the Dispatch Status (Released to Production) in the **Material Planning and Production Setup**:

The screenshot shows the 'Change Manufacturing Dispatches Status/Date (MPP) 1/12/2016' window. At the top, there is a table for selecting fields to filter by:

Select Field	Operand	Value
W.O. Type	All	
Nature of W.O.	All	
Customer Number	All	
Dispatch Status	All	
Dispatch Date	All	

Below this is a main table of work orders:

	W.O. No.	W.D. Type	Nature of W.O.	Customer Number	Dispatch Status	Dispatch Date	Qty Avail	Qty Ord	Customer No.	Dispatch Date	Disp. St.	Start Date	Include
18	0000252	0002	BEL10	MRP			.00	20.00	01-SHEPARD	12/23/2015	O	12/23/2015	<input type="checkbox"/>
19	0000253	0001	BEL10	MRP			.00	20.00	01-SHEPARD	12/23/2015	O	12/23/2015	<input type="checkbox"/>
20	0000253	0002	BEL10	MRP			.00	20.00	01-SHEPARD	12/23/2015	O	12/23/2015	<input type="checkbox"/>
21	0000260	0003	BEL25	000			449.00	343.00	01-SHEPARD	1/8/2016	O	1/8/2016	<input type="checkbox"/>
22	0000261	0001	BEL25	000			449.00	346.00	01-SHEPARD	1/19/2016	R	1/19/2016	<input checked="" type="checkbox"/>
23	0000264	0001	BEL25	001					01-SHEPARD	1/29/2016	O	1/29/2016	<input type="checkbox"/>
24	0000265	0001	BEL25	001					01-SHEPARD	2/6/2016	O	2/6/2016	<input type="checkbox"/>
25	0000267	0001	BEL10	MR					01-SHEPARD	1/8/2016	O	1/8/2016	<input type="checkbox"/>
26	0000267	0002	BEL10	MR					01-SHEPARD	1/8/2016	O	1/8/2016	<input type="checkbox"/>
27	0000268	0001	BEL25	000					01-SHEPARD	1/11/2016	O	1/11/2016	<input type="checkbox"/>

An error message dialog box is overlaid on the table, stating: 'There is not enough inventory in stock to generate production.' The dialog box has an 'OK' button.

At the bottom of the window, there are buttons for 'Clear', 'Select', 'Cancel', and 'Proceed'.

After pressing Ok the status will be changed. It is necessary to select the **Include** checkbox and press Proceed to have the Date and Status changes updated on respective Dispatches.

Auto Generate Production for Component Bill

Bill of Material Maintenance

The **Auto Production** checkbox has been added to the **Bill of Materials Maintenance** Lines grid to allow indicating the component Item, which is manufactured item (item that has its own BOM) needed to be produced together.

Bill of Materials Maintenance (MPP) 1/13/2016

Bill Number: BEL10
Revision: 000
Bill Type: Standard

Description 1: Item
Description 2:

1. Header 2. Lines

Quick Row: 1

	Component Item Code	Revision	Step No.	Quantity/Bill	
1	BEL10-VIP	*		1.00	
2	PLS-TRAY			1.00	
3	TIP-XI			1.00	
4	/LAB2			2.00	
5				.00	

Del Change No.:
Del Change Dte:
Extended Desc:
Auto Production:

Accept Cancel Delete

Two Dispatches (One for the main Bill Number and one for the component Bill) will be generated for production of these items when Work Order is generated for the Bill Number from the **Calculate Quantity To Produce/Purchase** program.

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Calculate Quantity to Produce/Purchase

Show Items With Zero Req Qty Include Items Based On SO Selection Only
 Calculate Quantity at Item Level Calculate Demand Based On SO
 Sort by MFG Code Add SO Items To Selection

Machine Code: Start Date: 4/3/2015 Time: 12:00 AM

Item Code	Whse	MRP Run Req	Qty Avail	MRP Run	Reorder Method	Reord. Qty	EOR	Max Qty	Calc. Demand	Mold Number	Machine Code	Include
1	1001-HON-H252LK	MRP	180.00	186.00	Economic Qty	.00	.00	.00	186.00			<input type="checkbox"/>
2	1001-HON-H254	MRP	60.00	60.00	Economic Qty	.00	.00	.00	60.00			<input type="checkbox"/>
3	200-230	MRP	60.00	60.00	Economic Qty	.00	.00	.00	60.00			<input type="checkbox"/>
4	230-182Z	MRP	45.00	45.00	Economic Qty	.00	.00	.00	45.00			<input type="checkbox"/>
5	2480-8-50	MRP	120.00	138.00	Economic Qty	.00	.00	.00	138.00			<input type="checkbox"/>
6	6655	MRP	720.00	720.00	Economic Qty	.00	.00	.00	720.00			<input type="checkbox"/>
7	720-100	MRP	75.00	75.00	Economic Qty	.00	.00	.00	75.00			<input type="checkbox"/>
8	BEL10	MRP	.00	15.00	Economic Qty	.00	.00	.00	5.00	002	M002	<input checked="" type="checkbox"/>
9	BEL10-VIP	MRP	15.00	32.00	Economic Qty	.00	.00	.00	32.00			<input type="checkbox"/>
10	PLS-TRAY	MRP	15.00	15.00	Economic Qty	.00	.00	.00	15.00			<input type="checkbox"/>
11	TIP-XI	MRP	15.00	15.00	Economic Qty	.00	.00	.00	15.00			<input type="checkbox"/>

Proceed Clear Recalculate/Relink Auto Scheduling Gen. Manufacturing Generate BQ Accept Cancel

Here are 2 Dispatches generated for current Bill Item:

Material Planning & Production Management 104

Work Order No. 0000281 Install Temp Control / Heat Pa Defaults...

1. Header 2. Address 3. Dispatches User Useriig

Dispatch No.	Dispatch Date	Machine	Machine Name	Status
0001	4/3/2015	M002	Machine #2 M2	Open
0002	4/3/2015	M002	Machine #2 M2	Open

Quick Print Accept Cancel Delete

This is the Dispatch generated for main Bill:

Material Planning & Production Management 105

sage Dispatch Data Entry (MPP) 4/3/2015

Work Order No 0000281 Install Temp Control / Heat Pa
Dispatch No. 0001

1. Header 2. Lines User Useriig

Dispatch Date 4/3/2015 Dispatch Status 0 Open

Starting Date 4/3/2015 Starting Time 11:53 AM Commit Quantity
Ending Date 4/3/2015 Ending Time 11:53 AM

Machine M002 Machine #2 M2 Mold Number 002
MFG Item Code BEL10 Lot/Serial No.

Quantity on WO 5.00

Outside Processing
Send Out... Receive...

Quick Print Manufacturing Labor Accept Cancel Delete

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The screenshot shows the Sage Dispatch Data Entry (MPP) 4/3/2015 window. The title bar includes the Sage logo and the window name. The main area contains the following information:

- Work Order No: 0000281
- Dispatch No: 0001
- Work Order Description: Install Temp Control / Heat Pa
- User: Useriig
- Navigation tabs: 1. Header, 2. Lines
- Quick Row: 1
- Serial No. field with Add New and Increment checkboxes.
- Table with columns: Item Code, Ordered, Unit Price, Extension, Comment.
- Summary table with fields: Description, Item, Warehouse, Unit Of Measure, Price Level.
- Total Amount: 2,357.85
- Buttons: Quick Print, Manufacturing, Labor, Accept, Cancel, Delete.

	Item Code	Ordered	Unit Price	Extension	Comment
1	BEL10	5.00	81.480	407.40	
2	BEL10-VIP	5.00	127.070	635.35	
3	PLS-TRAY	5.00	130.950	654.75	
4	TIP-XI	5.00	127.070	635.35	
5	/LAB2	10.00	.000	25.00	
6		nn	nnn	nn	

Description	Item
Warehouse	MRP
Unit Of Measure	EACH
Price Level	

Here is the second dispatch generated for component Bill:

Material Planning & Production Management 107

Work Order No. 0000281 Install Temp Control / Heat Pa
Dispatch No. 0002 User: Userriig

1. Header 2. Lines

Quick Row 1

Serial No. Add New Increment

	Item Code	Ordered	Unit Price	Extension	Comment
1	BEL10-VIP	5.00	127.070	635.35	
2	200-230	20.00	179.000	3,580.00	
3	230-182-Z	15.00	125.550	1,883.25	
4	720-100	25.00	429.000	10,725.00	
5	/MISC_CHARGE3	15.00	.000	50.00	23
6		nn	nnn	nn	

Description: HON 4 DRAWER LETTER FLE W/O LK
Warehouse: MRP
Unit Of Measure: EACH
Price Level:

Total Amount: 16,873.60

Quick Print Manufacturing Labor Accept Cancel Delete

Quantity Produced: 5.00

OK

When the Dispatch generated for the main Bill Number is closed, the first Production is generated for the component Bill and then for the Main Bill Number:

Material Planning & Production Management 108

sage Production Entry (MPP) 4/3/2015

Production Number 0000043 Batch 00003 Defaults...

1. Header 2. Lines

Production Date 4/3/2015

Bill Number BEL10-VIP HON 4 DRAWER LETTER FLE W/O LK
Bill Type Standard

Revision 000
Option Code
Quantity 5.00
Unit of Measure EACH
Effective Date 4/3/2015

Parent Warehouse MRP MRP warehouse
Component Warehouse MRP MRP warehouse
Explode Sub-Assemblies

Accept Cancel Delete ?

Material Planning & Production Management 109

sage Production Entry (MPP) 4/3/2015

Production Number 0000043 Batch 00003 Defaults...

1. Header 2. Lines

Quick Row 1

Lot/Serial Number

	Component Item Code	Quantity/Bill	Extended Quantity	Comment
1	200-230	4.00	20.00	
2	230-182-Z	3.00	15.00	
3	720-100	5.00	25.00	
4	/MISC_CHARGE3	3.00	15.00	23
5		.00	.00	

Description PRINTER STAND W/ BASKET
Revision 000
Warehouse MRP
Unit Of Measure EACH

Accept Cancel Delete

Material Planning & Production Management 110

sage Production Entry (MPP) 4/3/2015

Production Number 0000044 Batch 00003 Defaults...

1. Header 2. Lines

Production Date 4/3/2015

Bill Number BEL10 Item

Bill Type Standard

Revision 000

Option Code

Quantity 5.00

Unit of Measure EACH

Effective Date 4/3/2015

Parent Warehouse MRP MRP warehouse

Component Warehouse MRP MRP warehouse

Explode Sub-Assemblies

Accept Cancel Delete

Material Planning & Production Management 111

sage Production Entry (MPP) 4/3/2015

Production Number 0000044 Batch 00003 Defaults...

1. Header 2. Lines

Quick Row 1

Lot/Serial Number

	Component Item Code	Quantity/Bill	Extended Quantity	Comment
1	BEL10-VIP	1.00	5.00	
2	PLS-TRAY	1.00	5.00	
3	TIP-XI	1.00	5.00	
4	/LAB2	2.00	10.00	
5	/LAB1	.00	.00	Labor Description: Machin
6		.00	.00	

Description HON 4 DRAWER LETTER FLE W/O LK
Revision 000
Warehouse MRP
Unit Of Measure EACH

Accept Cancel Delete

Outside Processing

Dispatch Data Entry

The **Dispatch Data Entry** program has been modified to enable outside processing for bill components which are processed outside your company.

Work Order No 0000282
Dispatch No. 0001
User Useriig

1. Header 2. Lines

Dispatch Date 4/3/2015 Dispatch Status 0 Open

Starting Date 4/3/2015 Starting Time 12:07 PM Commit Quantity
Ending Date 4/3/2015 Ending Time 12:08 PM

Machine M002 Machine #2 M2 Mold Number 002
MFG Item Code BEL10-VIP Lot/Serial No.
Quantity on WD 15.00

Outside Processing
Send Out... Receive...

Quick Print Manufacturing Labor Accept Cancel Delete

The Outside processing is performed by the following steps:

- a. sending Items for outside processing
- b. receiving the Items already processed

Upon pressing **Send Out** button all the components with Standard and Average Cost valuation types (LIFO, FIFO and Lot/Serial valuation types are not supported) are automatically loaded into the **Send out Items for outside Processing** grid.

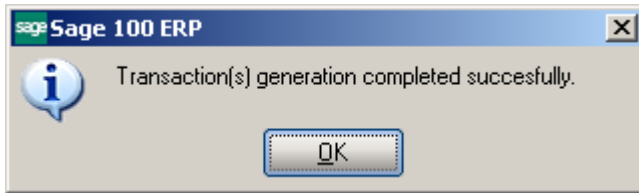
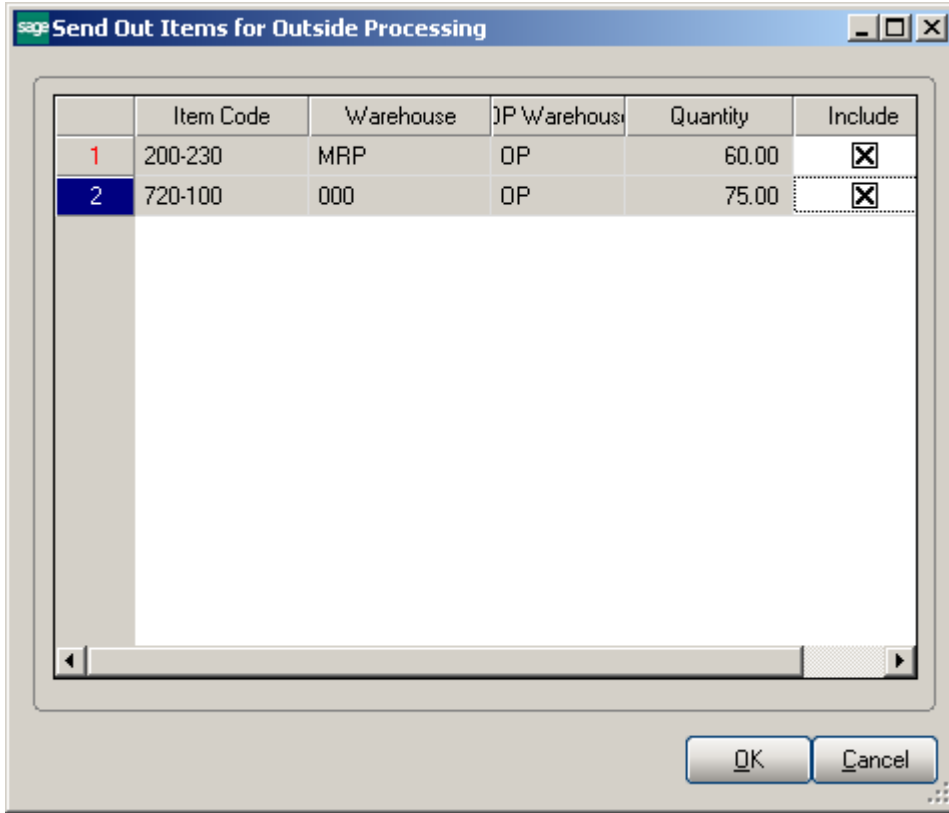
Material Planning & Production Management 113

	Item Code	Warehouse	OP Warehouse	Quantity	Include
1	200-230	MRP	OP	60.00	<input type="checkbox"/>
2	720-100	000	OP	75.00	<input type="checkbox"/>

The Warehouse field displays the Warehouse Code from the Dispatch line and the OP warehouse is the **OP Warehouse** code specified for current Item in the Item Maintenance or the OP Warehouse Code setup in the **Material Planning and Production Setup** if there is not one selected in the **Item Maintenance**.

It is necessary to select include checkbox for a component and press OK to have Transfer Transaction automatically generated.

Material Planning & Production Management 114



Transfer transaction(s) is/are generated for the Items send out for outside processing.
Here is the Transfer transaction generated:

Material Planning & Production Management 115

The screenshot shows the Sage Transaction Entry (MPP) 4/3/2015 window. The window title is "sage Transaction Entry (MPP) 4/3/2015". The "Transaction Type" is set to "Transfers" and the "Entry Number" is "00000001". There are navigation buttons (back, forward, etc.) next to the entry number. Below this, there are tabs for "1. Header" and "2. Lines", with "1. Header" selected. The "Transaction Date" is "4/3/2015". The "Transfer From Warehouse" is "000" (CENTRAL WAREHOUSE) and the "Transfer To Warehouse" is "OP" (Outside Processing). The "Comment" field contains "SM Outside Processing". At the bottom right, there are buttons for "Accept", "Cancel", "Delete", and a help icon.

The Outside Processing Warehouse is set as the **Transfer To** Warehouse for current transaction.

For the Dispatch lines send out for outside processing the Item Code cell becomes red colored:

Material Planning & Production Management 116

Work Order No: 0000282
Dispatch No.: 0001
User: Useriig

1. Header | 2. Lines

Quick Row: 3

Serial No. [] Add New Increment

Serial No.	Item Code	Ordered	Unit Price	Extension	Comment
1	BEL10-VIP	15.00	121.830	1,827.45	
2	200-230	60.00	179.000	10,740.00	
3	230-182-Z	45.00	121.500	5,467.50	
4	720-100	75.00	429.000	32,175.00	
5	/MISC_CHARGE3	45.00	.000	50.00	23
6		nn	nnn	nn	

Description: HON 4 DRAWER LETTER FLE W/O LK
Warehouse: 000
Unit Of Measure: EACH
Price Level: 1

Total Amount: 50,259.95

Quick Print | Manufacturing | Labor | Accept | Cancel | Delete

It is necessary to manually update Transfer transaction generated during Send Out process.

Receiving of Items is performed similar to sending just by pressing the **Receive** button. While receiving Items Item may be replaced by another Item. While receiving Items Transfer transaction is generated for receiving the Item from OP Warehouse to the Warehouse specified on the Dispatch Line.

If a replacement Item is entered for an Item in the **Receive Items from Outside Processing** grid an adjustment transaction will be generated for that Item and the Item Code in the Dispatch Line will be replaced with that item Code.

Material Planning & Production Management 117

sage Receive Items from Outside Processing

	Item Code	Replace Item Code	Warehouse	Warehou	Quantity	Include
1	200-230		MRP	OP	60.00	<input type="checkbox"/>
2	720-100		000	OP	75.00	<input type="checkbox"/>

OK Cancel

sage Receive Items from Outside Processing

	Item Code	Replace Item Cod	Warehouse	P Warehou	Quantity	Include
1	200-230	230-182-Z	MRP	OP	60.00	<input checked="" type="checkbox"/>
2	720-100		000	OP	75.00	<input checked="" type="checkbox"/>

OK Cancel

Material Planning & Production Management 118

Work Order No: 0000282
 Dispatch No: 0001
 User: Useriig

1. Header | 2. Lines

Quick Row: 2

Serial No. [] Add New Increment

	Item Code	Ordered	Unit Price	Extension	Comment
1	BEL10-VIP	15.00	121.830	1,827.45	
2	230-182-Z	60.00	121.500	7,290.00	
3	230-182-Z	45.00	121.500	5,467.50	
4	720-100	75.00	429.000	32,175.00	
5	/MISC_CHARGE3	45.00	.000	50.00	23
6		nn	nnn	nn	

Description: HON 4 DRAWER LETTER FLE W/O LK
 Warehouse: MRP
 Unit Of Measure: EACH
 Price Level: 1

Total Amount: 46,809.95

Quick Print | Manufacturing | Labor | Accept | Cancel | Delete

If Batch processing for Transaction entry is enabled in the **Inventory Management Options** a **Batch** is created with a comment indicating the Batch is created for Outside Processing and all transaction auto generated during outside processing are located in that batch.

Batch Number: 00001
 Comment: SM Outside Processing
 Private Batch:

Status: Available
 Entries: 1

Created By: IIG 4/3/2015 01:59:24 pm
 Modified By: IIG 4/3/2015 01:59:24 pm

Buttons: Modify..., Verify, Renumber..., Merge..., Accept, Cancel, Delete, ?

Lot/Serial Distribution

Dispatch Data Entry

Use the **Lot/Serial Number Distribution** button to distribute the transaction quantity or to display the lot and serial numbers that are already distributed for the current line item.

Work Order No: 0000277 MFG Product

Dispatch No.: 0003 User: Userig

1. Header 2. Lines

Quick Row: 3

Serial No. Add New Increment

	Item Code	Ordered	Unit Price	Extension	Comment
1	TEST_BILL	2.00	84.000	168.00	
2	1001-HON-H252LK	2.00	87.000	174.00	
3	2480-8-50	6.00	33.902	203.41	
4	BEL10-VIP	4.00	131.000	524.00	
5		.00	.000	.00	

Description: DESK FILE 8" CAP 50
 Warehouse: 000
 Unit Of Measure: EACH
 Price Level: 1

Total Amount: 1,069.41

Quick Print Manufacturing Labor Accept Cancel Delete

When entering a lot or serial item during line entry, you are required to distribute the total quantity entered for the item to one or more lot/serial numbers. You can enter the lot/serial numbers and quantities one at a time until the total quantity for the item is fully distributed. If the **Require lines to be Fully Distributed** flag is set in the **Material Planning and Production Setup** screen you must fully distribute all lot and serial lines before accepting Dispatch Entry.

Material Planning & Production Management 120

	Lot Number	Available	Distribute
1	101	9,699.00	2.00
2	10210	198.00	2.00
3	JAN10	323.00	2.00
4		.00	.00

Distribution Balance: .00

Available -This field displays the lot or serial number quantity available for the selected lot or serial number and can only be viewed.

Distribute-Type the total quantity to distribute for the lot or serial number selected.

The **Distribution Balance** field at the bottom of the window reflects a running total of the remaining quantity to distribute. This balance does not reflect the quantity entered for the current line.

Note When the warehouse code, or unit of measure is changed on a previously saved line with existing lot and serial distribution records, the previously entered distribution records are removed.

Material Planning & Production Management 121

Work Order No: 0000277 MFG Product

Dispatch No: 0003

User: Useriig

1. Header 2. Lines

Quick Row: 5

Serial No: 55-127 Add New Increment

	Item Code	Ordered	Unit Price	Extension	Comment
1	TEST_BILL	2.00	84.000	168.00	
2	1001-HON-H252LK	2.00	87.000	174.00	
3	2480-8-50	6.00	33.902	203.41	
4	BEL10-VIP	4.00	131.000	524.00	
5		.00	.000	.00	

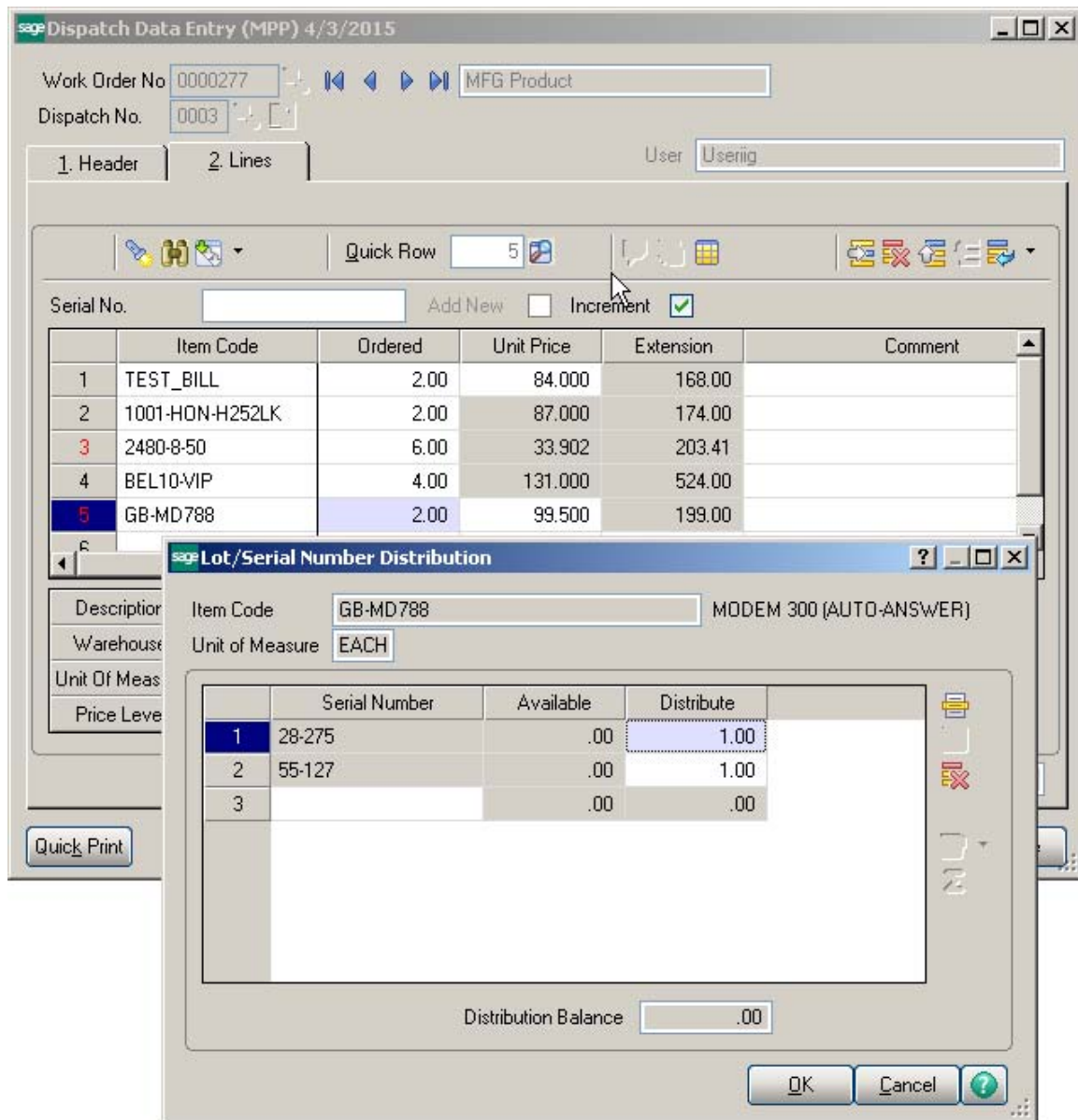
Description
Warehouse
Unit Of Measure
Price Level

Total Amount: 1,069.41

Quick Print Manufacturing Labor Accept Cancel Delete

For **Serial Items** Serial number scanning is provided on the Dispatch entry Lines:
In the **Add New** mode upon scanning serial number respective Serial Item is loaded in the grid with the ordered quantity set to 1 and the Serial Item is distributed by the scanned Serial number.
If the **Increment** checkbox is selected upon scanning each Serial Number the ordered quantity is incremented by one with respective Serial Number auto distributed.

Material Planning & Production Management 122



The Lot/Serial distribute quantity is always committed regardless the Dispatch Header Commit checkbox setting.

When **Manufacturing Dispatch**, having Bill Item with Lot/Serial components fully distributed, is closed the distribution is carried over to the Production generated.

The Lot/Serial distribution is carried over also to the Sales Order/SO Invoice generated upon closing the Dispatch if the Lot/Serial items are fully distributed.

Processing of BOM's with Percentage

Bill of Material Maintenance

The **Components By Percentage** checkbox has been added on the **Header** tab of **Bill of Materials Maintenance** to enable entering Percentage for component items instead of **Quantity/Bill**.

Option Categories	
1	<input type="checkbox"/> Required
2	<input type="checkbox"/> Required
3	<input type="checkbox"/> Required
4	<input type="checkbox"/> Required
5	<input type="checkbox"/> Required
6	<input type="checkbox"/> Required
7	<input type="checkbox"/> Required
8	<input type="checkbox"/> Required
9	<input type="checkbox"/> Required

Upon selecting this checkbox on the **Bill of Materials Header** the Quantity/Bill field is hid and the **Percentage** field is shown instead:

The **Production Lot/Batch Size** field is intended for entry of the lot/batch quantity of the product to be produced. It is loaded to the respective field in the Work Order entry upon selecting the Bill Item.

The **Production Increment** field is intended for determination of the optimum production lot/batch size of a product and the ordering quantities of associated raw materials together.

Material Planning & Production Management 124

Bill of Materials Maintenance (MPP) 4/3/2015

Bill Number: TEST_BILL
Revision: 000
Bill Type: Standard

Description 1: Test Bill Item
Description 2:

1. Header | 2. Lines

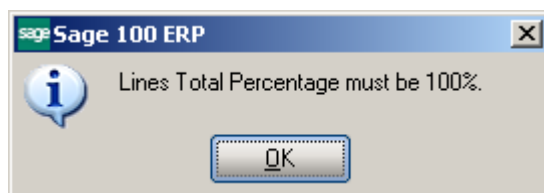
Quick Row: 2

	Component Item Code	Revision	Step No.	Percentage	Co
1	1001-HON-H252LK	*	0010	50.00	
2	BEL10-VIP	*	0020	20.00	
3	2480-8-50		0030	30.00	
4				.00	

Description: HON 4 DRAWER LETTER FLE W/O LK
Find No.:
Unit Of Measure: EACH
Cost Account:

Accept Cancel Delete ?

Checking is performed upon **Accept** to not allow accepting the entry if the sum of components percentages is not 100.



When Manufacturing Dispatch, Production is generated for Bill Item with Percentages entered for components, the components' quantity in the Dispatch and production entries is calculated based on the Percentage specified in the Bill of Materials Entry. Here is an example of Manufacturing Dispatch created for Bill Item with components percentages:

Material Planning & Production Management 125

Work Order No. 0000286
Dispatch No. 0001
User Useriig

1. Header 2. Lines

Quick Row 1

Serial No. Add New Increment

	Item Code	Ordered	Unit Price	Extension	Comment
1	TEST_BILL	1.00	84.000	84.00	
2	1001-HON-H252LK	.50	87.000	43.50	
3	2480-8-50	.30	34.950	10.49	
4	BEL10-VIP	.20	131.000	26.20	
5		.00	.000	.00	

Description Item
Warehouse 000
Unit Of Measure EACH
Price Level 1

Total Amount 164.19

Quick Print Manufacturing Labor Accept Cancel Delete

The **Production Lot/Batch Size** and **Production Increment** fields' values are defaulted to the Work Order and are applied when generation Dispatch from Work order entry:

Material Planning & Production Management 126

sage Work Order Entry (MPP) 4/3/2015

Work Order No. 0000268 Defaults...

1. Header | 2. Address | 3. Dispatches | User Useriig

Order Date 3/17/2015 | Order Time 05:34 PM | Order Type M Manufacturing

Customer No. 01-ABF American Business Futures

W.O. Status E Entered

Job Site Code 2 American Business Futures

Job Site Contact John Quinn

Nature of W.O.

Prefer. Machine M002 Machine #2 M2 | Mold Number 002

Item Number TEST_BILL Item

Lot/Serial No.

Plant Code

Schedule Date 3/17/2015 Time 05:34 PM

Due Date 3/17/2015 Time 05:34 PM

Cust PO

Priority Code

Production Lot/Batch Size 5

Production Increment 2

Quick Print | Accept | Cancel | Delete

Routing Steps on Work Order Printing

Work Order Printing

The **Print Additional Bill Item Routing** option added on the **Work Order Printing** program allows for printing the information about the steps of Bill Item Routing.

The screenshot shows the Sage Crystal Work Order Printing dialog box. The window title is "Sage Crystal Work Order Printing". The "Form Code" field is set to "STANDARD" and the "Description" field is "Work Order Quick Print". There is a "Save" button with a dropdown arrow. Below these are options for "Number of Copies" (set to 1), "Collated" (unchecked), and "Multi-Part Form Enabled" (unchecked). The "Print Additional Bill Item Routing" checkbox is checked. At the bottom, there is a dropdown menu set to "Adobe PDF" and buttons for "Alignment", "Print", "Preview", "Setup", and a help icon.

Select the **Print Additional Bill Item Routing** checkbox to print the information of the Routing assigned to the Bill Item.

After Work Order report is printed the **Work Order Additional Printing** is opened.

Material Planning & Production Management 128

Work Order Printing MPP Demo Company (MPP)

Work Order Number: 0000310
Work Order Date: 4/3/2015
Customer Number: 01-ABF

Preferred Machine: Machine #2 M2
W.O. type: M
Nature of W.O.:
W.O. Status: E
W.O. Priority:

American Business Futures
 Racine Warehouse
 5411 Kendrick Place
 Racine, WI 53120

American Business Futures
 2131 N. 14th Street
 Suite 100
 Accounting Department
 Milwaukee, WI 53205-1204

W.O. Description: MFG Product

Dispatch No.	Dispatch Date	Dispatch Machine				
0001	4/3/2015	Machine #2 M2				
TEST_BILL	Item		2.00	84.000	0.000	168.00
1001-HON-H252LK	HON 2 DRAWER LETTER FLE W/ LCK		2.00	87.000	0.000	174.00
2480-8-50	DESK FILE 8" CAP 50		6.00	33.902	0.000	203.41
BEL10-VIP	HON 4 DRAWER LETTER FLE W/O LK		4.00	131.000	0.000	524.00
LAB1	Machine#1 Labor		0.00	0.000	0.000	0.00
Dispatch Total :						1,069.41
0002	4/3/2015	Machine #2 M2				
TEST_BILL	Item		2.00	84.000	0.000	168.00
1001-HON-H252LK	HON 2 DRAWER LETTER FLE W/ LCK		2.00	87.000	0.000	174.00
2480-8-50	DESK FILE 8" CAP 50		6.00	33.902	0.000	203.41
BEL10-VIP	HON 4 DRAWER LETTER FLE W/O LK		4.00	131.000	0.000	524.00
LAB2	Machine#002 Labor		0.00	0.000	0.000	0.00
Dispatch Total :						1,069.41

Current Page No.: 1 Total Page No.: 2 Zoom Factor: 100%

Work Order Additional Printing

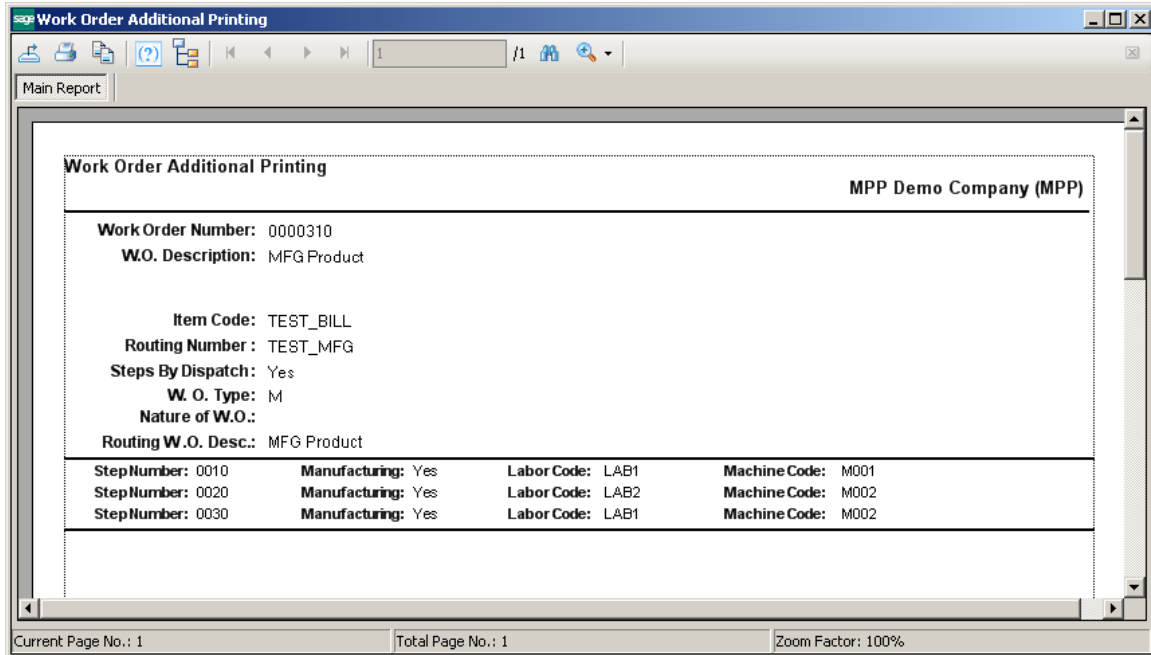
MATERIAL PRODUCTION PLANNING WORK ORDER ADDITIONAL PRINTING

Adobe PDF

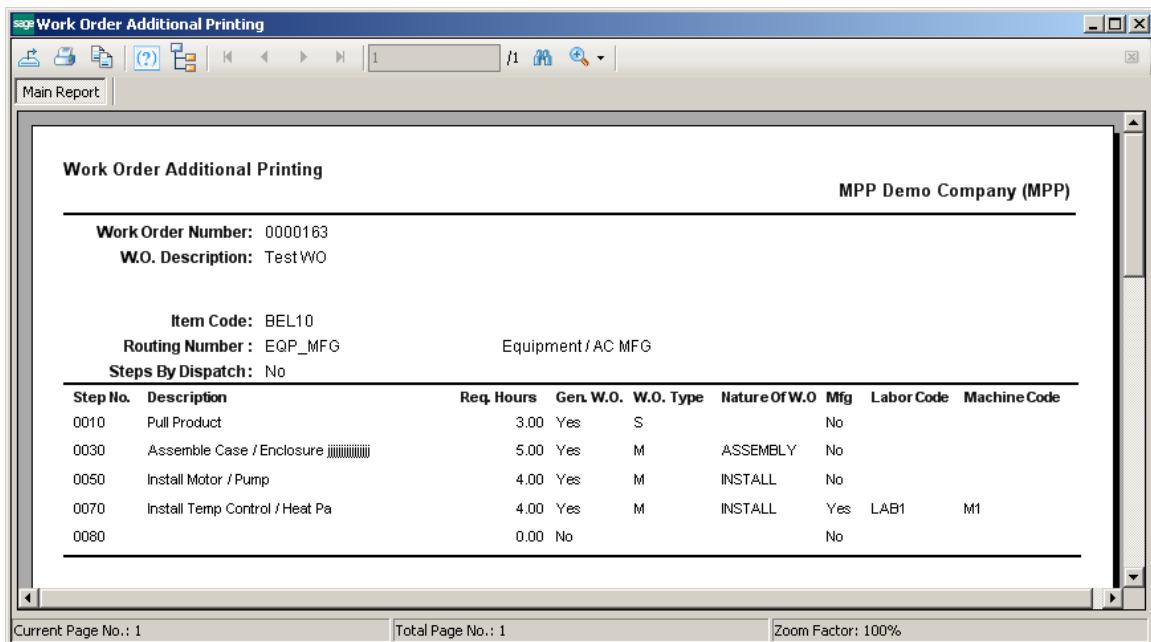
Print Preview Setup

The **Work Order Additional Printing** prints information about the Bill Item, the Routing assigned to it and the steps of Routing. Here is an example of printout for a **Routing Number** marked as **Steps by Dispatch** in the **Routing Maintenance**.

Material Planning & Production Management 129

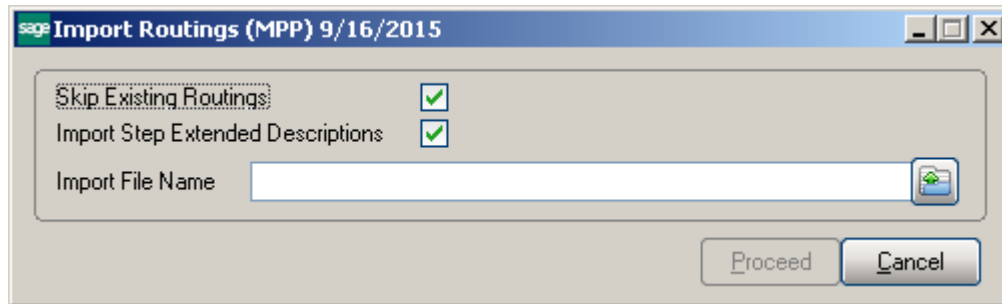


This is an example of printout for a Routing Number not marked as **Steps by Dispatch** in the **Routing Maintenance**.



Import Routings from W/O Module

The **Import Routings from W/O Module** utility program has been added under the **Material Planning and Production Management-> Utilities** menu to allow importing the Routings setup in W/O module of any Company (with W/O module activated) to the Material Planning and Production Management-> Routing Maintenance.



Skip Existing Routings – is defaulted to checked.

Import Step Extended Description - is defaulted to checked.

Import File Name - it is necessary to select the WOCXXX.soa file (where XXX is the Company code) from any Company with W/O module activated and having Routings setup.

