

Manufacturing in IM For MAS 90/200

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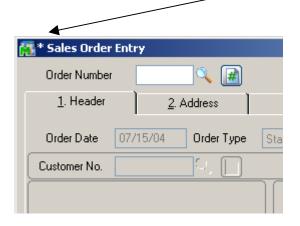
Installation Instructions and Cautions

PLEASE NOTE: MAS 90 must already be installed on your system before installing any IIG enhancement. If not already done, perform your MAS 90 installation and setup now; then allow any updating to be accomplished automatically. Once MAS 90 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 MAS 90 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.

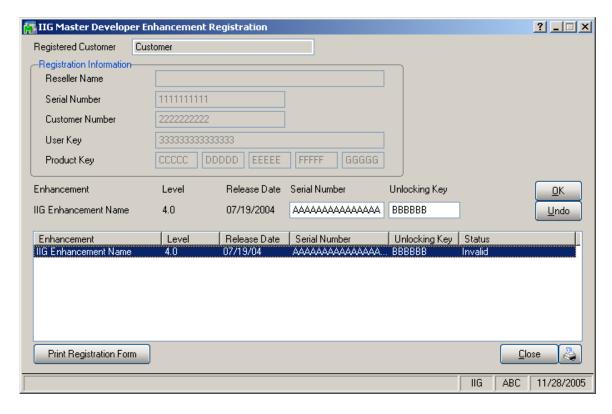
Follow all the instructions on this page before you run Customizer Update!

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 MAS 90.

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**.



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.

IIG Registration Form can be printed by using the **Print Registration Form** button.

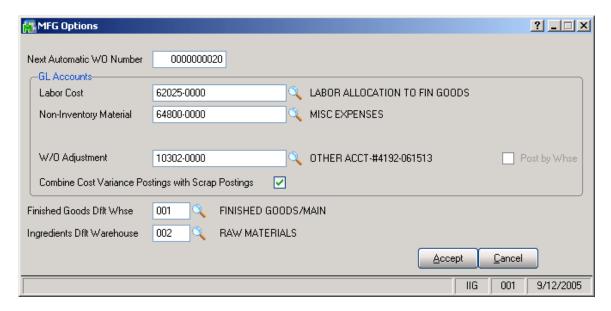
Introduction

The **Manufacturing in IM** enhancement enables entering recipes and generating Work Orders for these recipes. Recipes can have different Item Classifications: Current, Sample and Obsolete.

Two additional transaction types are available: MF (manufacturing issue) for the Materials, and MR (manufacturing receipt) for Finished Goods.

MFG Options

The MFG Options program has been added under the Inventory Management Setup menu.



The Labor Cost and Non-Inventory Material GL Accounts will be credited during WO Register.

The W/O Adjustment field will be debited during Work Order Entry Register.

If the **Post by Whse** checkbox is selected, G/L segment substitution processing is available for the specified **W/O Adjustment** G/L Account, if the **Sub Account** is selected

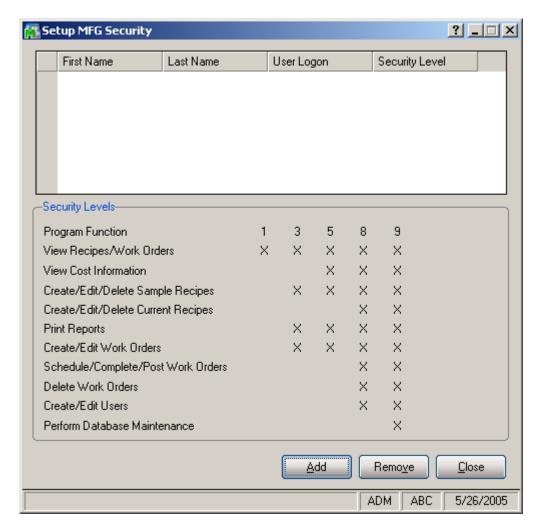
from the **G/L Segment for Whse Postings** drop-down box on the **Inventory Management Options**.

If the Combined Cost Variance Postings with Scrap Postings check box is selected the Variance Postings and Scrap Postings will be added to the same W/O Adjustment G/L Account.

Note: When the Combined Cost Variance Postings with Scrap Postings check box is selected, G/L segment substitution processing is not available for the specified W/O Adjustment G/L Account.

Security

The **Setup MFG Security** program has been added under the **Inventory Management Setup** menu.



After installation of the **Manufacturing in IM** enhancement, only the "admin" User has full access to the new features, including the **Setup MFG Security** program.

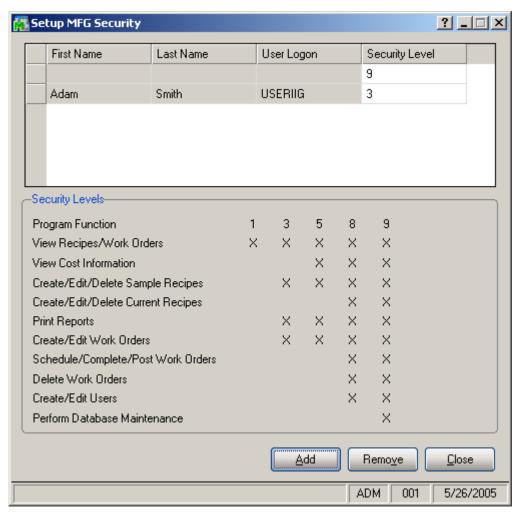
User having access to the **Setup MFG Security** program can give access to **Manufacturing** features, for the **Users** existing in the system, according to the displayed schema of **Security Levels**.

The "X" marks indicate access to the feature for the Level.

The 9th Level gives full access to the User.

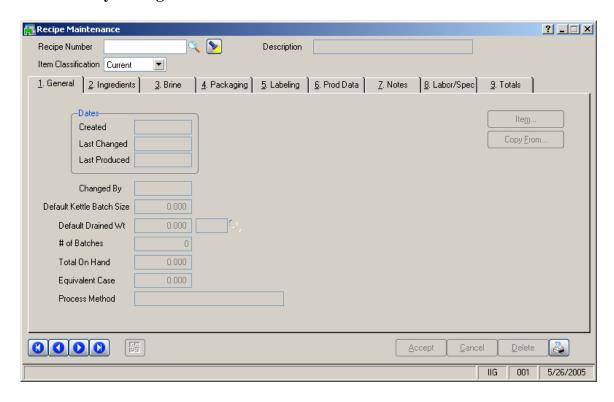
You can **Add** and **Remove** user security lines with the corresponding buttons.





Recipe Maintenance

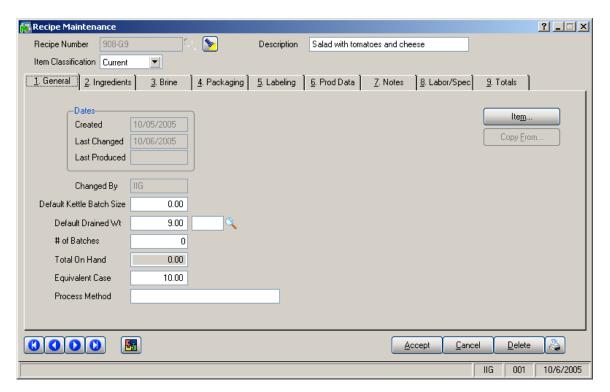
The **Recipe Maintenance** program has been added under the **Inventory Management Main** menu.

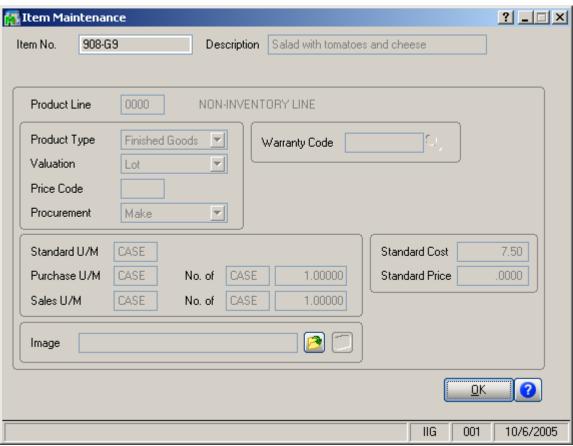


The first **Lookup** lists already entered Recipes, while the second lookup is the **Inventory Items List**.

If a non-existent **Item Number** is entered, the **Item Maintenance** on-the-fly entry screen is opened, ready for entry of the new inventory item.

The Inventory information of the Item corresponding to the **Recipe** can be reviewed at any time, by clicking the **Item...** button.





Recipes can have different **Item Classifications**:

- Current;
- Sample;
- Obsolete.

Current Recipes are active recipes that can be normally used in Manufacturing processing.

Sample Recipes are entered in advance for future use.

Obsolete Recipes are recipes used in the past.

Sample and **Obsolete** Recipes cannot be used when entering new **Work Orders**.

The Created, Last Changed, Last Produced Dates are displayed on the Recipe Header, along with the User ID of the user who changed the Recipe last, in the Changed By field.

The **Last Changed** date is updated each time the **Recipe** is modified and accepted.

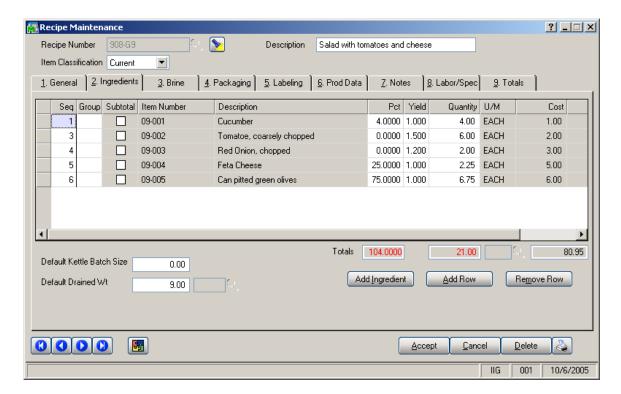
The Last Produced Date is updated during WO Register/Update, when Work Order created for the Recipe is produced.

When entering new **Recipe**, after entering **Recipe Number**, you can click the **Copy From** button, to create new **Recipes** selecting existing one as a base.

The **Default Drained Weight** is used for the comparison with the **Ingredients Total Quantity**, and forces recalculation of **Ingredient Quantities**.

U/M can be specified for the **Default Drained Weight** (displayed in the field next to the **Default Drained Weight** field) and can be changed, if there is no line entered. The U/M of the **Total Quantity** will be set to the same U/M, and cannot be changed.

If no **U/M** is specified, the **Total Quantity** can have own **U/M** specified.



The **Sequence** column allows rearranging rows in the tab, by the numbers entered. The rearrangement is made automatically.

Regular Inventory Items can be added by clicking the **Add Ingredient** button.

Non-inventory Ingredients can be added by clicking the **Add Row** button and entering Description, Quantity, Price, Cost fields in the new row.

Non-inventory **Ingredients** affect the financial processing of Work Orders with their **Prices** and **Costs** but do not affect any **Warehouses** with their **Quantities**.

Ingredient **Percents** can be entered instead of entering **Quantities**, which will be calculated automatically, as a percent of the **Default Drained Weight**.

When the **Default Drained Weight** is entered, the program automatically recalculates the **Quantities** according the **Percents** of the lines. The **Totals** are displayed below the **Percent** and **Quantity** columns. If there are **Quantities**

changed after the last automatic recalculation, so that the **Total Quantity** is different from the **Default Drained Weight**, the **Total Quantity** is displayed in red. If the **Total Percent** is different from 100, it is displayed in red.

If there is **U/M** specified for the **Total**, all the Inventory Ingredients should be entered in **U/M**s convertible to the **U/M** of the **Total**.

For Inventory Ingredients, the **Standard Cost** of the **Item** (specified in the **Inventory Maintenance**) is always displayed as the Cost of the row, and cannot be changed here.

For non-Inventory Ingredients, the **Cost** is defaulted to zero, and can be entered here manually.

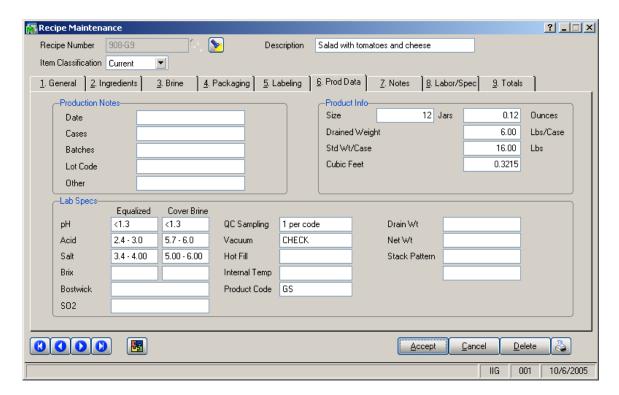
The **Description** and **U/M** of Inventory Ingredients are also displayed from the **Inventory Maintenance** and cannot be changed.

The **Group** and **Subtotal** columns are optional and are used for grouping non-Inventory rows by the group letter and indicating the rows for which the subtotal of the corresponding group should be printed in the **Kettle Ingredient Checklist Report**.

The **Yield** is entered to calculate the extended cost of the Item (taking into account expected loss during production). The Cost is multiplied by the Yield to form the extended cost. The **Yield** is defaulted to 1 (no loss).

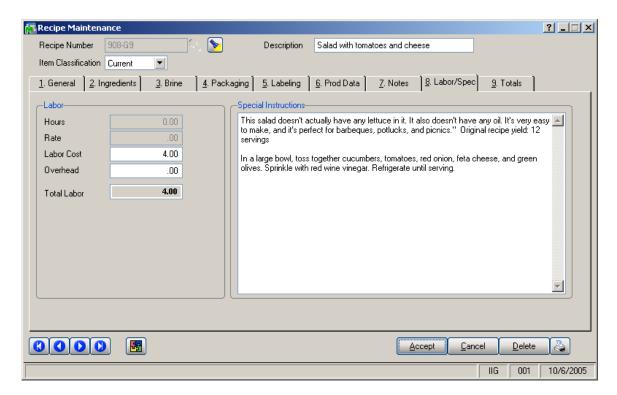
The **Brine**, **Packaging**, **Labeling** tabs are similar to the **Ingredients** tab, including affecting the total Costs of the production, except that the quantities specified in those tabs are not taken into account when calculating the **Drained Weight**.

The **Brine**, **Packaging**, **Labeling** tabs are not required to be filled with any data.

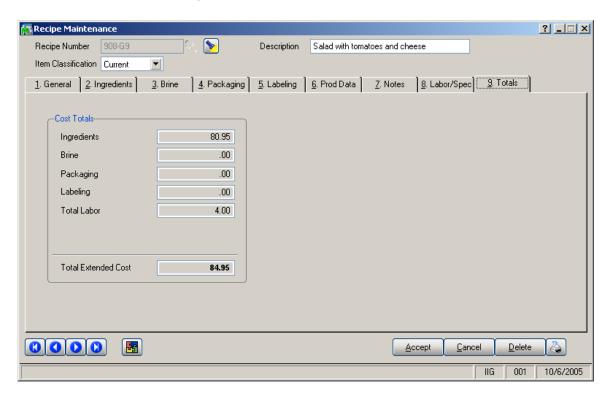


This tab contains informational-only fields, printed on the reports.

The **Product Info** fields group allows entering only numeric information.



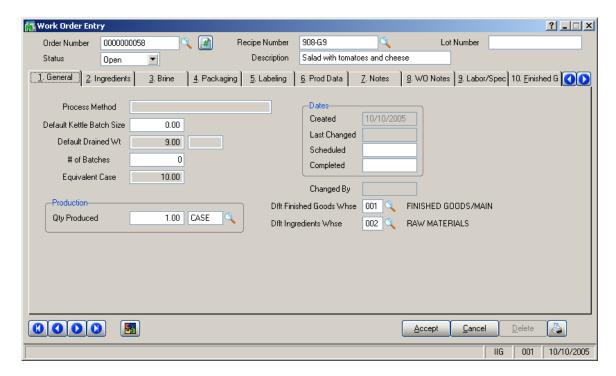
The **Labor Cost** entered here is posted to the separate **G/L Account** specified in the **MFG Options**.



The **Totals** tab displays information on **Cost Totals** by separate tabs and for the entire Recipe.

Work Order Entry

The Work Order Entry program has been added under the Inventory Management Main menu.



New entered Work Order **Status** is defaulted to **Open**.

The **Warehouses** are defaulted from the settings in the **MFG Options**.

The **Default Ingredients Warehouse** will be applied to all the Ingredients and other Materials, and can be changed for individual lines.

Make sure you select the correct **Warehouse** before selecting the **Recipe Number**.

The **Recipe Number** should be selected (*note*, that only an existing Recipe Number can be selected).

All information of the selected **Recipe** is automatically loaded into the corresponding fields of the **Work Order**.

The **Quantities**, **Description**, and other information loaded from the **Recipe** are saved on the **Work Order** at the

moment the **Recipe** has been selected, and can be changed for the **Order** independent of the **Recipe** after that. When the **Recipe** is selected anew on the **Order**, the program loads (without displaying any prompt) its information entirely from the **Recipe**, discarding the changes already done to the **Order**.

The selected **Recipe** cannot be changed if the **Order Status** is already changed to **Released**, or **Completed**.

Work Order Status can be Open, Scheduled, Released, Completed.

When the **Status** is **Open**, no Quantities are committed.

When the **Status** is **Scheduled**, **Released** and **Completed**, the Materials Ouantities are committed.

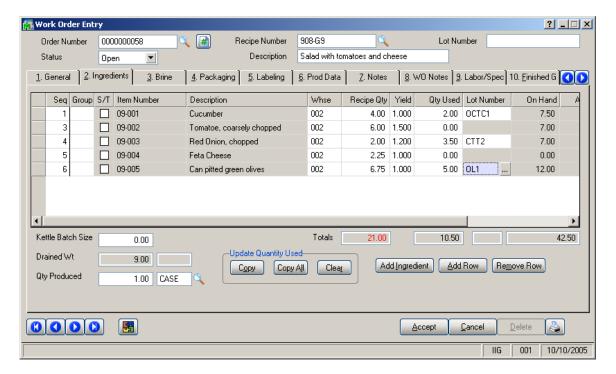
In the **Released** and **Completed** Statuses, the **Finished Goods** Quantities are committed to the corresponding Warehouses.

As the Quantity on MFG is included in the Qty on Work Order, the Committed Quantities will affect the Inventory Availability in case Work Orders / POs and WOs is specified for the Include in Quantities Available field in the Inventory Management Options.

The **Quantity Produced** is defaulted to 1 on the **Recipe** selection.

When the **Quantity Produced** is changed, the program recalculates all the quantities (no matter whether they have been changed manually or not) multiplying the original **Recipe** quantities by the new **Quantity Produced**. Only the Quantities set to zero on the original Recipe are not recalculated.

Ingredients information of the selected recipe is loaded onto the **Ingredients** tab of the **Work Order Entry.**



The **Lot Number** is a read-only field, which is used in the report printings.

The **Costs** for Inventory Ingredients are loaded from the Items at the moment of the Work Order creation and saved on the Order independent of further changes on the Items, and cannot be changed for the Order.

With the group of buttons **Update Quantity Used**, you can change **Quantity Used** for multiple rows simultaneously.

Click the **Copy** button to calculate the **Quantity Used** as multiples of **Recipe Quantity** and **Yield**, for all the rows on the current tab.

Click the **Copy All** button to calculate the **Quantity Used** as multiples of **Recipe Quantity** and **Yield**, for all the rows on all the tabs.

Click the **Clear** button to set the **Quantity Used** to zero, for all the rows on the current tab.

The **Used Quantities** are **Committed** to the **Inventory**.

The **Quantity On Hand** and **Available** are displayed for **Inventory Ingredients**. These **Quantities** are automatically refreshed at the moment the committed quantities are changed.

The **Quantity Available** is displayed taking into account the **Committed Used Quantity**.

Negative **Quantities Available** is displayed in red.

Lot Items should be distributed when the **Quantity Used** is set to non-zero quantity.

The **Lot Number** column displays red asterisks if the Item is not distributed.

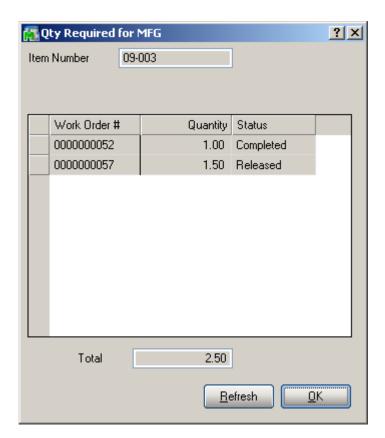
If the entire **Quantity Used** is distributed to the same Lot Number, it is displayed in the **Lot Number** column.

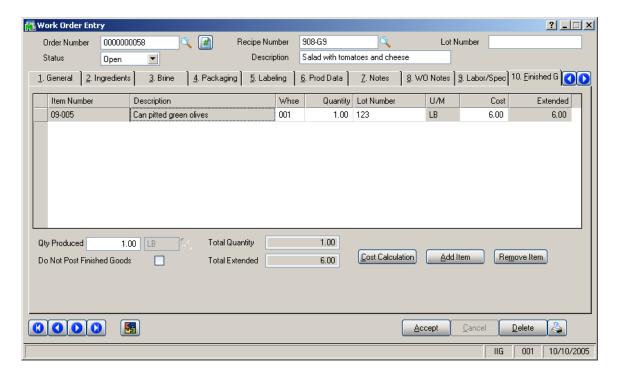
If the quantity is distributed to multiple Lot Numbers, all the Lot Numbers (separated with slashes) can be viewed by double-clicking at the **Lot Number** cell.

If the distribution is done incompletely, the Lot Number is displayed in red.

The distributed **Lot Numbers** get Committed, independent of the **Status** of the Work Order (for all **Statuses**).

Right-click an ingredient item and select **Commit Status** to see the quantities required for manufacturing, with Work Order Numbers, corresponding committed Quantities and commit Statuses.





The **U/M** of the **Finished Goods** selected should be convertible to the **Produced U/M**.

The **Cost** of the Quantity Produced of the specified Finished Goods items will be set as specified in the **Finished Goods** tab on the Work Order.

Click the **Cost Calculation** button to calculate the actual cost of the Finish Goods item. The actual cost is calculated as the sum of the Work Order's Material Cost and Labor Cost divided into the Finish Goods Quantity. If there is only one Finished Goods item, the Cost is calculated and set in the Cost field as if the user has entered it.

If there is more than one Finished Goods item in the lines, the following message will be displayed:

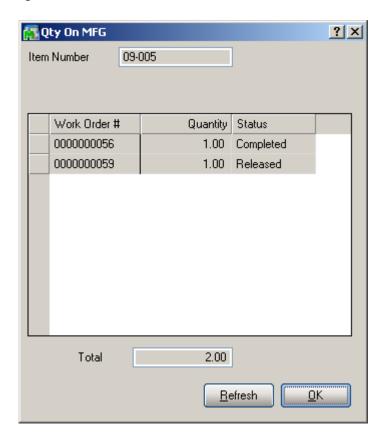


Since Work Orders with the **Completed Status** can be posted with the **Work Order Register**, the program validates the entire Order at the moment its **Status** is set to **Completed**. All the lines are checked to be correctly committed and distributed. If a line with any problem is found, the programs displays corresponding message and sets the focus to the corresponding tab, row, and column, for quick fix of the problem.

Work Order with Status set to Completed cannot be Accepted until it becomes completely valid.

An Order can be **Printed** from the **Work Order Entry** program and posted directly after printing, from the automatically opened **Work Order Entry Register** screen.

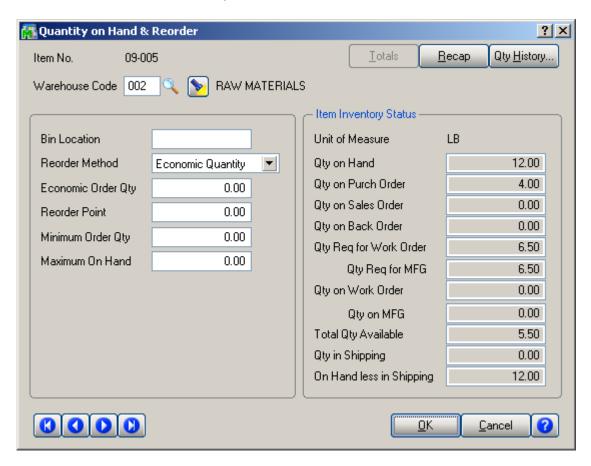
Right-click a finished goods item and select **Commit Status** to see the quantities currently in the manufacturing, with Work Order Numbers, corresponding committed Quantities and commit Statuses.



If the **Do Not Post Finished Goods** box is checked on the **Finished Goods** tab for the selected Work Order, the **W/O Adjustment** G/L account (specified on the MFG Options) will be used instead of Inventory G/L Account in the **Work Order Entry Register**.

Inventory Maintenance

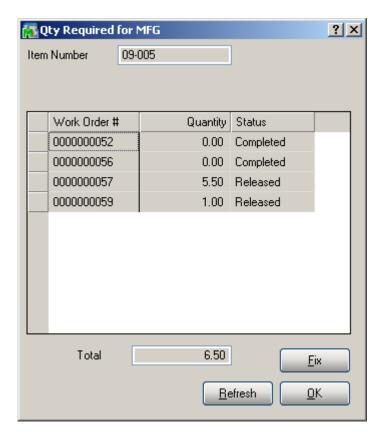
The Quantity Required for MFG and Quantity on MFG fields have been added on the Quantity on Hand & Reorder screen of the Inventory Maintenance.



The Quantity Required for MFG is included in the Quantity Required for Work Order, and Quantity on MFG is included in the Quantity on Work Order. This is to ensure correct processing (updating or not) Quantity Available throughout the system based on the Inventory Management Options (depending on the setting of the Work Orders are included in Quantities Available).

Clicking on the **Quantity Required for MFG** and **Quantity on MFG** labels opens the **Quantity Required for MFG** and **Quantity on MFG** screens, correspondingly.

On both screens, there is the **Fix** button that allows modifying the Quantities.

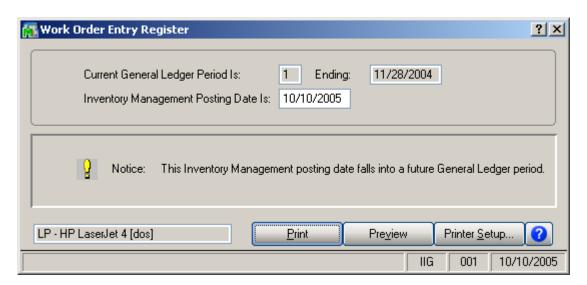


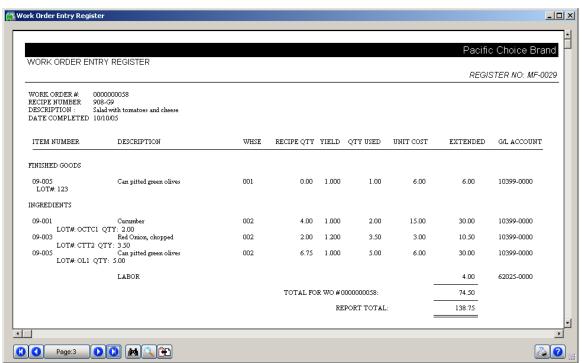
The **Fix** button is shown if the **Qty on Work Order** and **Qty Required for Work Order** are different from the **Committed Quantity** of the Work Order line.

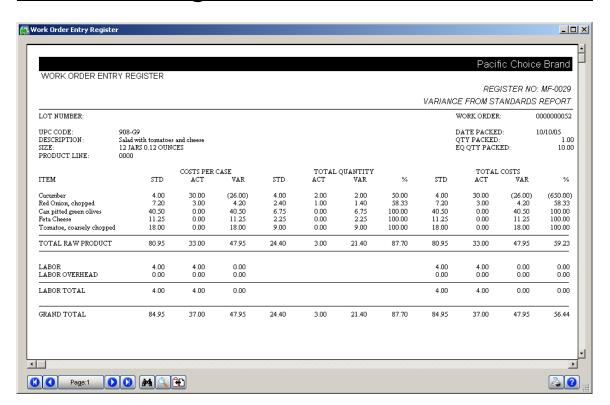
The **Inventory Inquiry** screen has been modified to include the **Quantity Required for MFG** in the **Committed Quantity**.

Work Order Entry Register

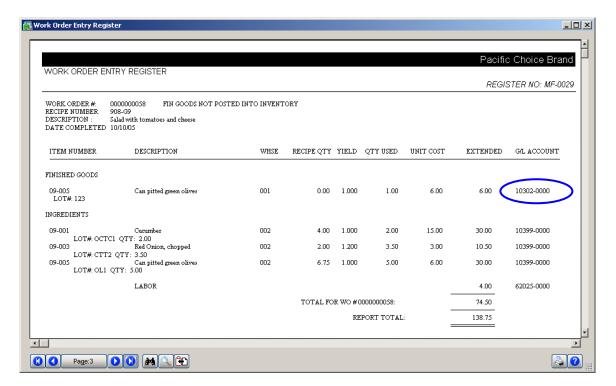
The Work Order Entry Register program has been added under the Inventory Management Main menu.







IF the **Do Not Post Finished Goods** checkbox is selected on the **Finished Goods** tab of the **Work Order Entry**, the **W/O Adjustment** G/L Account (specified on the MFG Options) is used instead of Inventory G/L Account to post a Work Order with the **Work Order Entry Register**.



Only Work Orders with the **Status** set to **Completed** can be posted with the **Work Order Entry Register** program.

All the **Completed Orders** will be posted at the same time.

After the **Work Order Entry Register** report, the program also prints the **Variance From Standards Report**.

Actual **Costs** of the items are updated during this **Work Order Entry Register** (for the processed quantities of the items).

The **Register** takes the corresponding Quantities of the **Materials** used out from the specified Warehouses, and adds the produced Quantities of the **Finished Goods** to the specified Warehouses.

The following **Types** of **Transactions** are generated: **MF** (manufacturing issue) for the Materials, and **MR** (manufacturing receipt) for Finished Goods.
These Transactions can be viewed in the **Transactions** tab of the **Inventory Maintenance**. The **Search** by these Types is also provided in that screen.

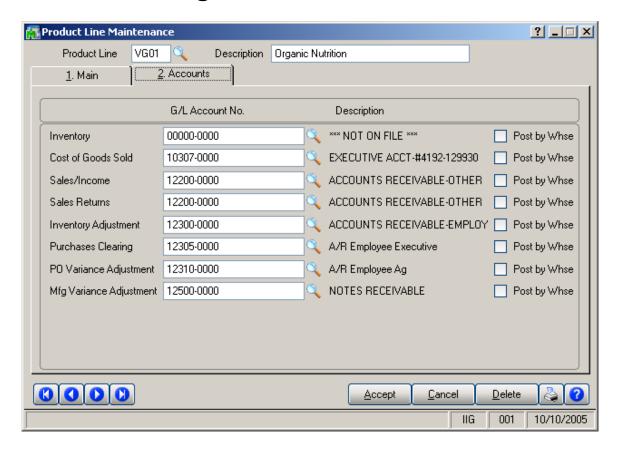
For postings, the **Inventory Account** specified on the **Product Line** of the Material Inventory **Item** is credited, for Material Issue.

The **Inventory Account** specified on the **Product Line** of the Finished Goods Inventory **Item** is debited, for Manufacturing Receipt.

Non-Inventory Material Costs are credited to the **Non-Inventory Material GL Account** specified in the **MFG Options**.

Labor Costs are credited to the **Labor Cost GL Account** specified in the **MFG Options**.

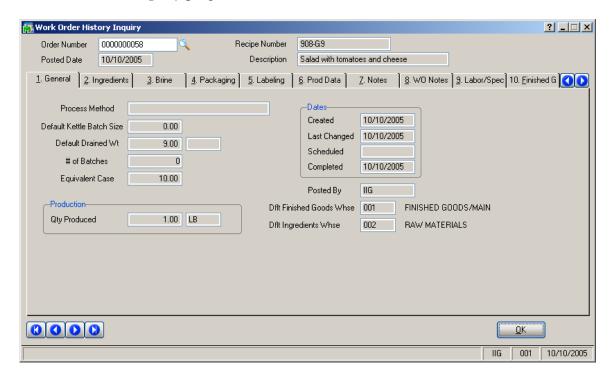
The balance resulting as a difference between the total Cost of the produced **Finished Goods** and the total Cost of the used **Materials and Labors** is posted to the **MFG Variance Adjustment Account** specified on the **Product Line** of the **Recipe** Item.



Work Order History Inquiry

The Work Order History Inquiry program has been added under the Inventory Management Main menu.

After posting with the **Work Order Entry Register** program, the Work Order is moved to **History** and can be viewed with this **Inquiry** program.



MFG Reports

The following Reports have been added under the new **Inventory Management MFG Repots** menu:

- Recipe Listing
- Recipe Detail Report
- Kettle Ingredient Checklist
- Standard Batch Spec Sheet
- Standard Cost Worksheet
- Variance From Standards Report
- Production Usage Sheet
- Production Time Sheet
- Where Item Used Report
- Where Lot Used Report
- Variance Summary Report

The Reports allow selections and sorting by various parameters.

Here is an example:

