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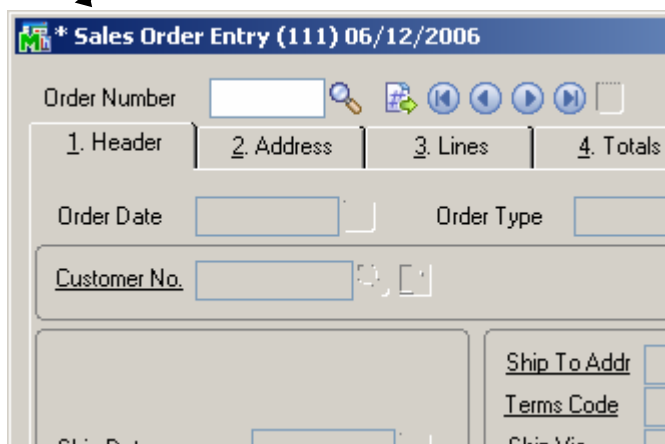
An *asterisk* in a window's title bar indicates that the screen has been modified. This means that **Custom Office** is installed.

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.

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

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.**

In case 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.*

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Security

The **Setup MFG Security** program has been added under
the **Inventory Management Setup** menu.
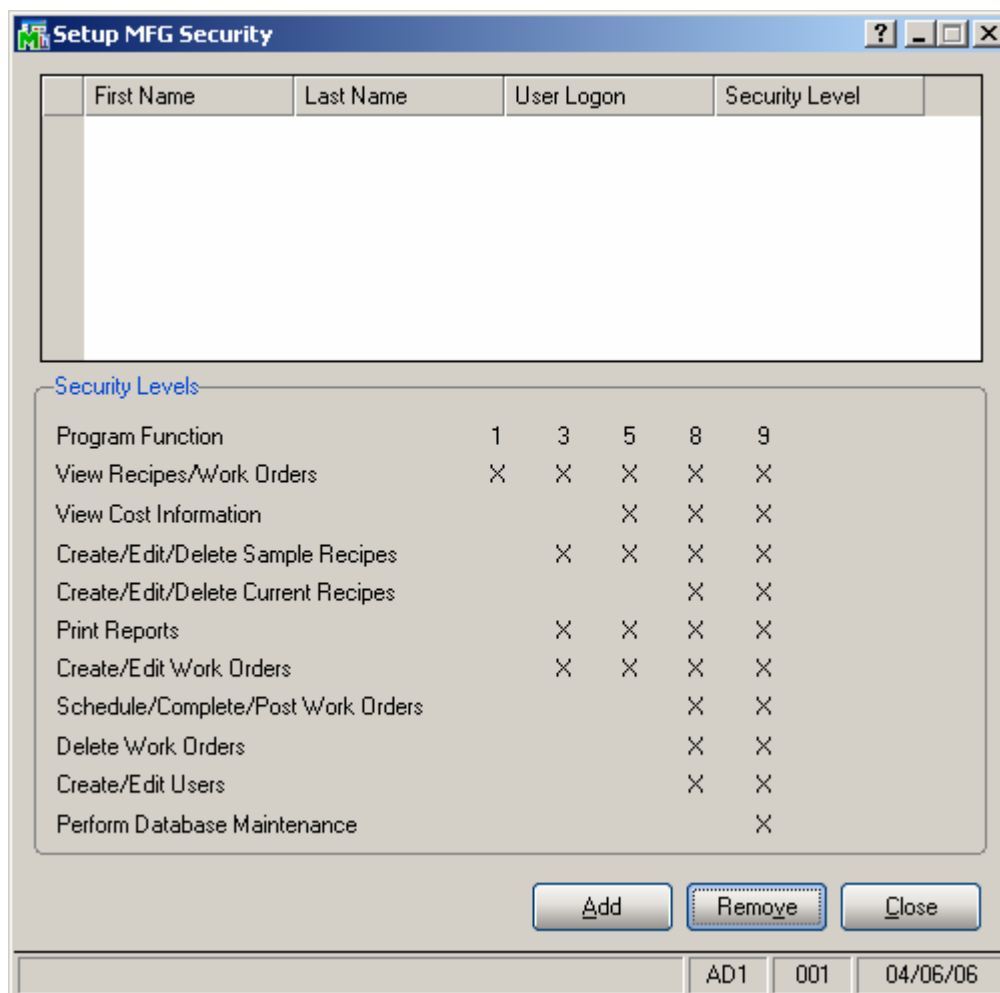
After installation of the **Manufacturing in IM**
enhancement, only the "admin" User has full access to the
new features, including the **Setup MFG Security** program.

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.

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The 9th Level gives full access to the User.

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

Program Function	1	3	5	8	9
View Recipes/Work Orders	X	X	X	X	X
View Cost Information			X	X	X
Create/Edit/Delete Sample Recipes		X	X	X	X
Create/Edit/Delete Current Recipes				X	X
Print Reports		X	X	X	X
Create/Edit Work Orders		X	X	X	X
Schedule/Complete/Post Work Orders				X	X
Delete Work Orders				X	X
Create/Edit Users				X	X
Perform Database Maintenance					X

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.

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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**.

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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.

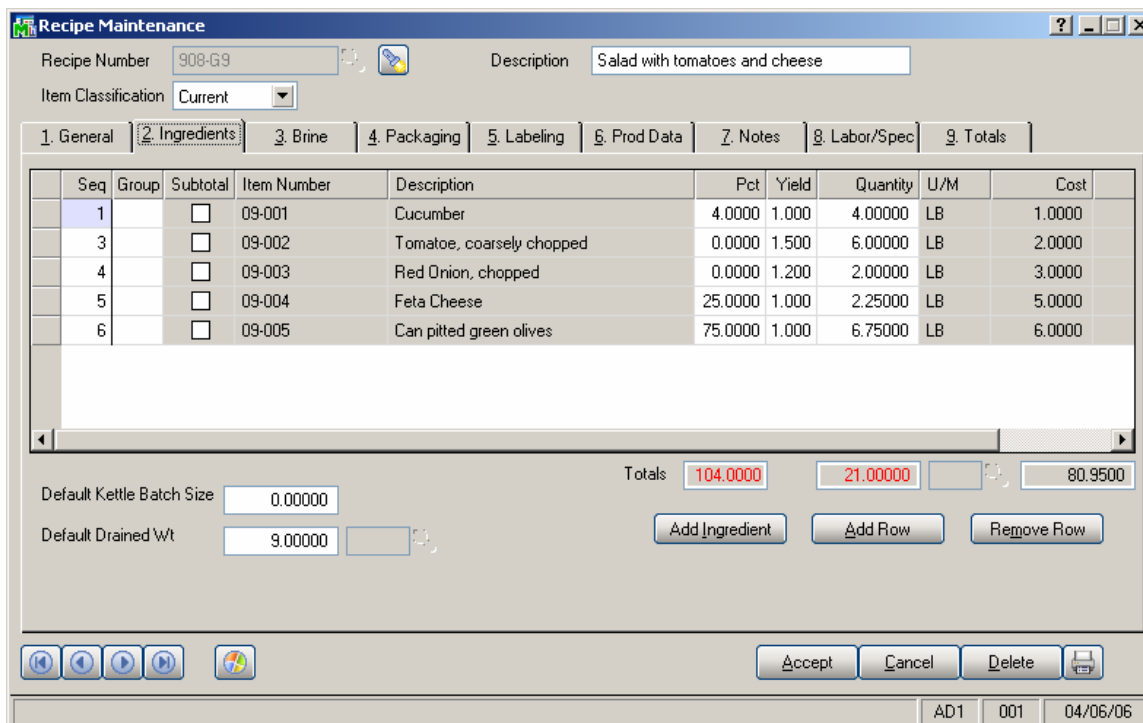The **Last Changed** date is updated each time the **Recipe** is modified and accepted.

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.

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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

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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.

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

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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 Quantities 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.

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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.

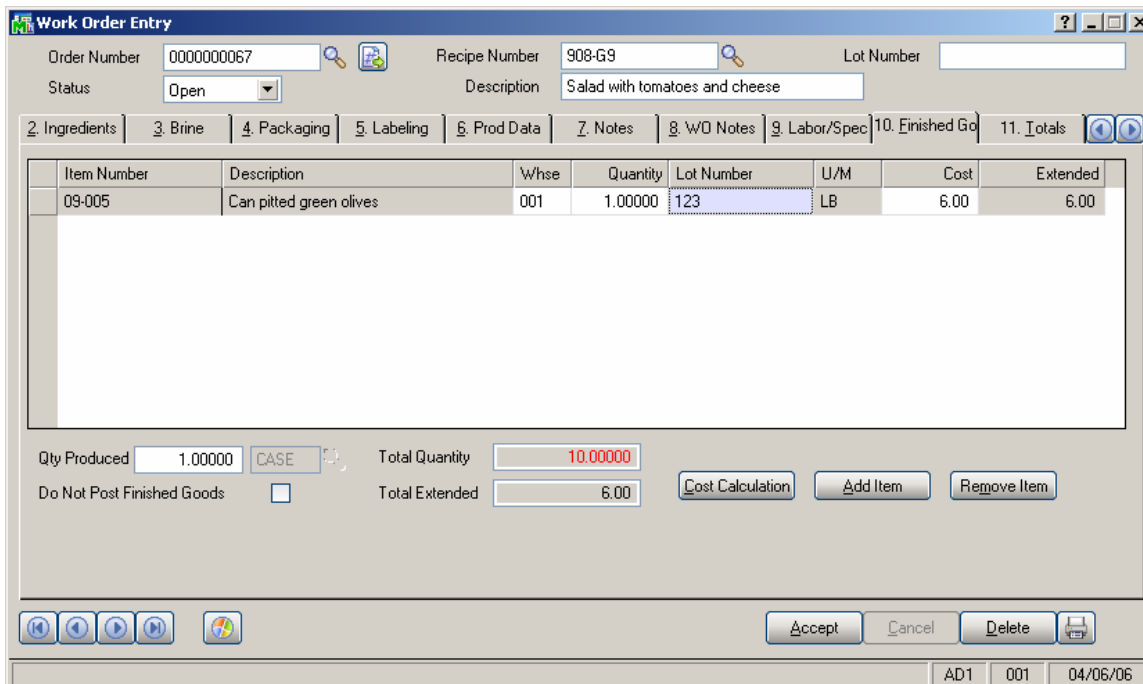If the distribution is done incompletely, the Lot Number is displayed in red.

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.

Work Order #	Quantity	Status
0000000057	2.00000	Released
0000000059	0.00000	Released

Item Number: 09-001

Total: 2.00000

[Refresh] [OK]

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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:
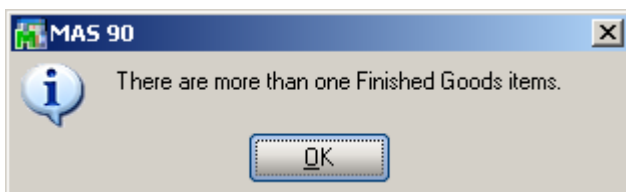
Since Work Orders with the **Completed Status** can be posted with the **Work Order Register**, the program validates the entire Order at the moment its **Status** is set to **Completed**. All the lines are checked to be correctly committed and distributed. If a line with any problem is found, the programs 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.

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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.

Work Order #	Quantity	Status
0000000059	1.00000	Released

Item Number 09-005

Total 1.00000

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**.

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Work Order Entry Register

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

```
Work Order Entry Register                                                                    _ □ ×
```

```
                                                                              Manufacturing
WORK ORDER ENTRY REGISTER
                                                                    REGISTER NO: MF-0032
                                                          VARIANCE FROM STANDARDS REPORT

LOT NUMBER:                                              WORK ORDER:        0000000067

UPC CODE:        908-G9                                  DATE PACKED:       04/06/06
DESCRIPTION:     Salad with tomatoes and cheese         QTY PACKED:        10.00000
SIZE:            12 JARS 0.12 OUNCES                     EQ QTY PACKED:     100.00000
PRODUCT LINE:    0000
```

ITEM	COSTS PER CASE			TOTAL QUANTITY				TOTAL COSTS			
	STD	ACT	VAR	STD	ACT	VAR	%	STD	ACT	VAR	%
Cucumber	4.00	0.92	3.08	40.00	2.00	38.00	95.00	40.00	9.16	30.84	77.10
Tomatoe, coarsely chopped	18.00	0.20	17.80	90.00	1.00	89.00	98.89	180.00	2.00	178.00	98.89
Red Onion, chopped	7.20	0.23	6.98	24.00	0.75	23.25	96.88	72.00	2.25	69.75	96.88
Can pitted green olives	40.50	0.30	40.20	67.50	0.50	67.00	99.26	405.00	3.00	402.00	99.26
TOTAL RAW PRODUCT	69.70	1.64	68.06	221.50	4.25	217.25	98.08	697.00	16.41	680.59	97.65
LABOR	4.00	0.40	3.60					40.00	4.00	36.00	90.00
LABOR OVERHEAD	0.00	0.00	0.00					0.00	0.00	0.00	0.00
LABOR TOTAL	4.00	0.40	3.60					40.00	4.00	36.00	90.00
GRAND TOTAL	73.70	2.04	71.66	221.50	4.25	217.25	98.08	737.00	20.41	716.59	97.23

```
           Page:1
```

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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.

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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.

	G/L Account No.		Description	
Inventory	10399-0000	🔍	CASH SALES CLEARING	☑ Post by Whse
Cost of Goods Sold	10307-0000	🔍	EXECUTIVE ACCT-#4192-129930	☑ Post by Whse
Sales/Income	12200-0000	🔍	ACCOUNTS RECEIVABLE-OTHER	☑ Post by Whse
Sales Returns	12200-0000	🔍	ACCOUNTS RECEIVABLE-OTHER	☑ Post by Whse
Inventory Adjustment	12300-0000	🔍	ACCOUNTS RECEIVABLE-EMPLOY	☑ Post by Whse
Purchases Clearing	12305-0000	🔍	A/R Employee Executive	☑ Post by Whse
PO Variance Adjustment	12310-0000	🔍	A/R Employee Ag	☑ Post by Whse
Mfg Variance Adjustment	12500-0000	🔍	NOTES RECEIVABLE	☑ Post by Whse

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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.

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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: