



INVENTORY AND WAREHOUSE MANAGEMENT TRAINING GUIDE

Version 1.0

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OnRamp Solutions
1081 South Service Rd W
Oakville, ON L6L 6K3
905 901 5020

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Welcome

Thank you for your interest in OnRamp. We at OnRamp Solutions designed the OnRamp ERP to meet and exceed your manufacturing resource planning demands. We know manufacturing and we believe that we have created an ERP system that is easy to learn, easy to use, and powerful enough to help you and your business overcome any challenge.

To help your business successfully adopt OnRamp as quickly as possible, we have designed this document to guide you through some of our most commonly used features.

Overview

This guide was written to help you learn how to use the OnRamp Inventory and Warehouse Management module. Some of the screens and reports may be similar to those found in other ERP systems you have used. This guide describes how to:

- Manage warehouse locations
- Manage inventory at those locations
- Introduces Machine Monitoring Devices

Conventions

The training guide is structured to help you learn the material in class with a qualified instructor. Each chapter contains: a list of learning objectives for the chapter, an explanation of the chapter concepts, steps on how to perform the chapter actions, an exercise to help you learn the material, and, finally, a summary of the chapter.

This guide uses the following typographical conventions:

- **Bold** text - used to highlight important information in text. Used to denote click actions in procedures.
- *Italic* text - used to label tables and images. Used in notes.
- **Notes** - used to denote important notes related to the text.
- **Warnings** - used to denote warning messages. Ignored warnings can result in permanent negative consequences.

Customer Feedback

For questions, comments, or complains related to OnRamp Solutions documentation, training, or presentations, please contact us at: info@onramp-solutions.com.

Plant Location System

Learning Objectives

This chapter will cover:

- The Plant Location System
- The purpose of a Plant Location System
- Where you should use a Plant Location System

Overview

A Plant Location System is a logical and consistent system that is implemented to easily indicate where your work centers, machines, racks, inventory, fixtures, and other shop components are located in your shop floor, or plants.

A consistent system is one that can be applied as a standard across multiple locations.

A plant location system should be designed to:

- **Improve communication** – Easy to understand and convenient way of indicating where everything can be found.
- **Improve efficiency** – Save time storing things and finding them.
- **Improve standardization** – Provide a structured and logical way to identify storage and pick locations.
- **Support 5S** – “A place for everything and everything in its place”.

Most plant location systems follow a grid type setup, where the x axis of the grid is alphabetic (A, B, C, ...) and the y axis is numeric (1, 2, 3, ...). With the grid laid on top of the map, you can find any general location based on their alphanumeric coordinates, for example F3.

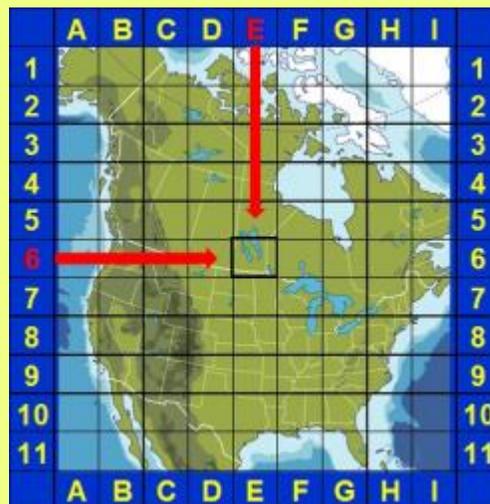
In the following example map of North America, you can see the grid at work:

North America Map Example

In this image, a grid has been laid over a map of North America.



Based on this grid, instead of telling someone to look for a city in Manitoba, you can let them know to look at location **E6** of the map to find the general location



And if you to have a more detailed map of that area, you could again specify the grid location of **H14** to find the city of Winnipeg.

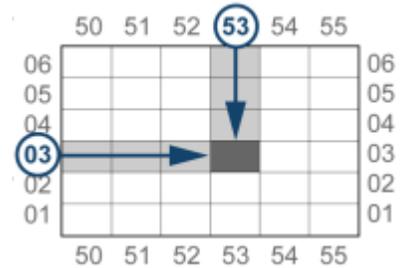


This grid system can be applied to everything down to a shelf, or a drawer.

Shop Floor Grid System

This grid location system can also be applied to shop floors or plants, with your locations indicated with a “horizontal/vertical” numerical format. For example, the plant location **5303** would mean:

- Horizontal axis **53**
- Vertical axis **03**



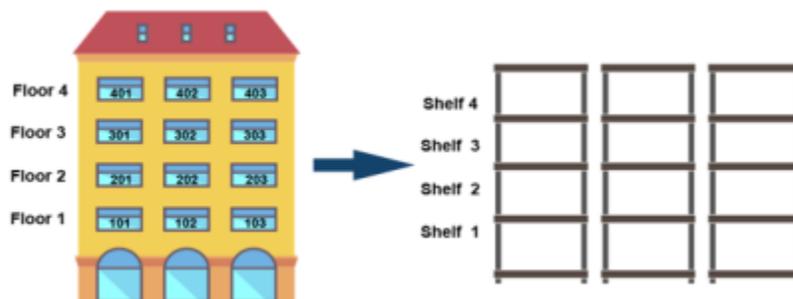
A grid system makes locating anything quick and easy., such as:

- Work centers
- Machines
- Equipment
- Racks
- Positions within Racks

Location System Guidelines

By applying the grid system to your shop, you can make it easier to coordinate your material locations, decreasing hours spend searching for something. Though to ensure the system is easy to use and easy to understand, when implementing a grid system, there are a few things you can do to help avoid user confusion, such as:

- Make sure to place visible layout-markers that can be seen from anywhere on the shop floor.
- Place the grid numbers between the beams, not on them.
- Use same grid numbering on all plant maps.
- Create a guide that you can use to help your employees learn the plant location system. The guide should be implemented and maintained at all locations along with a best practices section.
- Number shelving racks like an apartment building with the bottom/ left shelf as 101, the shelf to the right as 102, the second shelf as 201, etc.



Using the Grid System Example

We have to retrieve something from a shelf on a rack. The shelves are numbered from the bottom up and left to right.

The rack number is defined by the following value **5103A-304**. This means:

- Number grid location – 5103
- Rack location – A
- Shelf height – 3rd from the bottom
- Shelf location – 4th from the left

With this information, we can quickly find the desired shelf and product:



5103A										
Shelf 5	501	502	503	504	505	506	507	508	509	510
Shelf 4	401	402	403	404	405	406	407	408	409	410
Shelf 3	301	302	303	304	305	306	307	308	309	310
Shelf 2	201	202	203	204	205	206	207	208	209	210
Shelf 1	101	102	103	104	105	106	107	108	109	110

Grid System in OnRamp

If you have applied the grid system to your shop floor, you can use [Inventory Location Master](#) to create and manage your grid locations. These locations can then be assigned to everything, from work centers and equipment, to scrap and parts.

When you print stock tags, the location is automatically printed to ensure that your staff knows where to place and where to find the item.

Also, when receiving purchase orders, the desired primary location for the order is printed on the receipt.

Finally, your shop work orders will reference the "Deliver to" location, ensuring that manufactured parts are stored in the correct location while awaiting shipping.

Important Considerations

In your shop, be sure to take the following into consideration when implementing a plant location system:

- Be consistent with grid and part location numbering. It must always be in line with the Location System Guidelines and applied the same way everywhere in the plant.
- Always label the area between the beams/ uprights. This avoids confusion when applying the grid locations.
- Do not split the grid once the location system is finalized. This can lead to confusion.
- Use clear visible labelling on shelves in the right format. The labels must be big enough to be easily seen and kept in good condition.

Inventory in OnRamp

Learning Objectives

This chapter will cover:

- Reviewing inventory
- Adjusting inventory

Overview

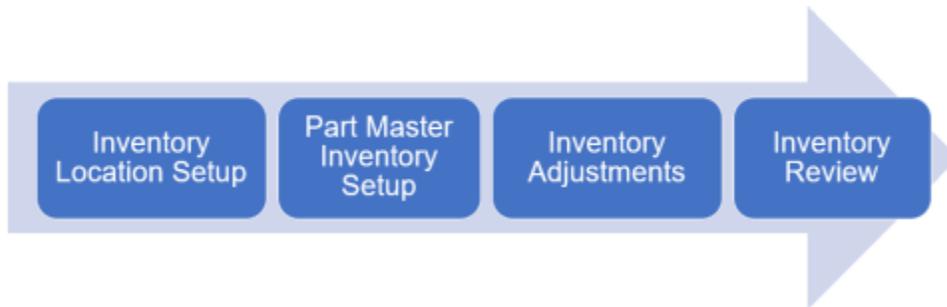
OnRamp tracks all changes to your inventory, based on information set on the **Part Master** screen. Here, on the **Inventory** tab, you can set:

- The inventory grid location
- The unit of measure
- The backflush rules

By counting the amount of parts acquired via order entry, OnRamp can tell you how much inventory you have, where it is, and how many you may need.

Inventory Workflow

The following steps should be taken to track product location in inventory.



Special Inventory Transactions

To ensure accuracy, certain inventory transactions can be performed to adjust location quantities.

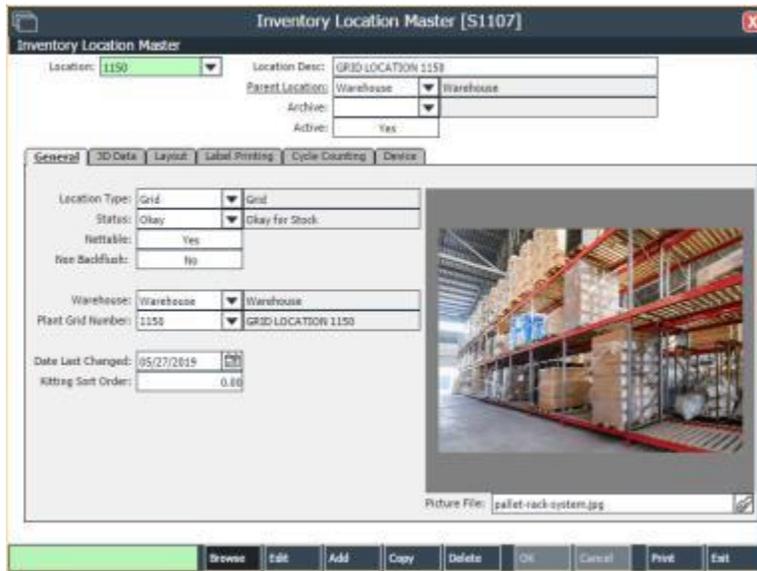
Use the screens under the following folder **Production > Inventory > Inventory Review** to review current inventory:

- **Inventory by Part [S1535]** - used to review the quantity of inventory available.
- **Inventory Transactions by Part [S1109]** - used to review the inventory transactions for a part.

Use the screens under the following folder **Production > Inventory > Inventory Applications** to adjust current inventory:

- **Inventory Location Master [S1107]** - used to setup inventory locations.
- **Inventory Move [S1155]** - used to move inventory to a different location.
- **Inventory Adjustment [S1619]** - used to add or remove inventory from a specific lot.
- **Unplanned Receipt [S1614]** - used to add inventory to a new lot.
- **Unplanned Issue [S1613]** - used to remove inventory from a lot.

Adding inventory locations



Inventory Location Master screen

To add inventory locations:

1. Navigate to the **Inventory Location Master [S1107]** screen.
2. On the screen task bar, click **Add**.
3. Enter the desired information.
4. If required, select the different tabs to enter more information related to the inventory location.
5. Click **OK**.

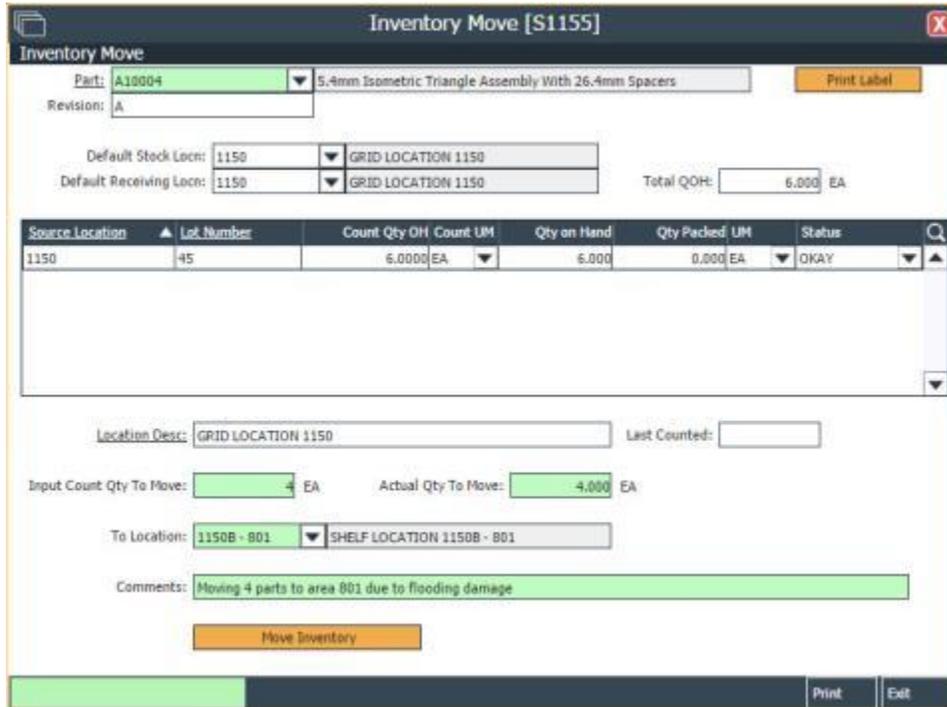
Result

You have created an inventory location.

Notes

- To action a previously created item, select the item and click the desired mode: **Edit**, **Copy**, or **Delete**.
- You can take pictures of inventory locations with OnRamp's Android App.

Moving inventory



Inventory Move [S1155]

Part: **A10004** 5.4mm Isometric Triangle Assembly With 26.4mm Spacers Print Label

Revision: A

Default Stock Locn: 1150 GRID LOCATION 1150

Default Receiving Locn: 1150 GRID LOCATION 1150 Total QOH: 6.000 EA

Source Location	Lot Number	Count Qty OH	Count UM	Qty on Hand	Qty Packed UM	Status
1150	45	6.0000	EA	6.000	0.000 EA	OKAY

Location Desc: GRID LOCATION 1150 Last Counted:

Input Count Qty To Move: 4 EA Actual Qty To Move: 4.000 EA

To Location: 1150B - 801 SHELF LOCATION 1150B - 801

Comments: Moving 4 parts to area 801 due to flooding damage

Move Inventory

Print Exit

Inventory Move screen

To move inventory:

1. Navigate to the **Inventory Move [S1155]** screen.
2. Select the desired **Part**.
3. Select the desired **Source Location**.
4. Enter the desired information.
5. Click **Move Inventory**.

Result

You have recorded in OnRamp that the inventory quantity has been moved to the new location.

Notes

- You can move inventory with OnRamp's Android App.
- Screens **Inventory Move - Move Oldest Inventory to Point of Use Location [S2329]** and **Inventory Move - Entire QOH/All Lots of a Part [S2262]** function in the same way as Inventory Move [S1155], with exception to the functionality detailed in the screen title:
 - **S2329** moves the oldest inventory in stock to the Point-of-Use location set on the **Part Master > Inventory > Point of Use Location** field.
 - **S2262** moves all the inventory of a part, including Quantity-on-Hand, to the specified location.
- Once the move is complete, you can print labels with the new information to attach to the moved inventory by clicking the **Print Label** button.
- The **Inventory Move** action does not update the part default location. To update the default location for the part, navigate to **Part Master > Inventory** and update the **Default Location** field.
- To move inventory out of stock, use the [Unplanned Issue \[S1613\]](#) screen.
- For Quantity-on-Hand corrections with no received order, use the [Unplanned Receipt \[S1614\]](#) screen.

Adjusting inventory

For correct inventory quantities with an incorrect location:

1. Navigate to the **Inventory Move** [S1155] screen.
2. Select the desired part.
3. Select the desired lot number.
4. Enter the desired information: Quantity to move, To Location, Comments.
5. Click **Move Inventory**.

Result

You have updated the inventory location information in OnRamp. This creates two inventory transactions: A **MoveFrom** transaction to remove the inventory from the incorrect location and a **MoveTo** transaction to add the inventory to the correct location.

For inventory quantities on a specific lot:

1. Navigate to the **Inventory Adjustment** [S1619] screen.
2. Select the desired part.
3. Select the desired lot number.
4. On the screen task bar, click **Edit**.
5. Edit the desired information.
6. Click **OK**.

Result

You have updated the inventory quantity on the selected lot in OnRamp. This creates one inventory transaction: An **InvAdj** transaction to update the inventory quantity to the lot.

Unplanned Receipts for low inventory quantities without a specific lot:

1. Navigate to the **Unplanned Receipt** [S1614] screen.
2. Select the desired part.
3. Enter the desired information.
4. Click **Finalize**.

Result

You have added inventory to the select location in OnRamp. This creates one inventory transaction: An **UnpRec** transaction to increase the inventory quantity with a new lot number assigned.

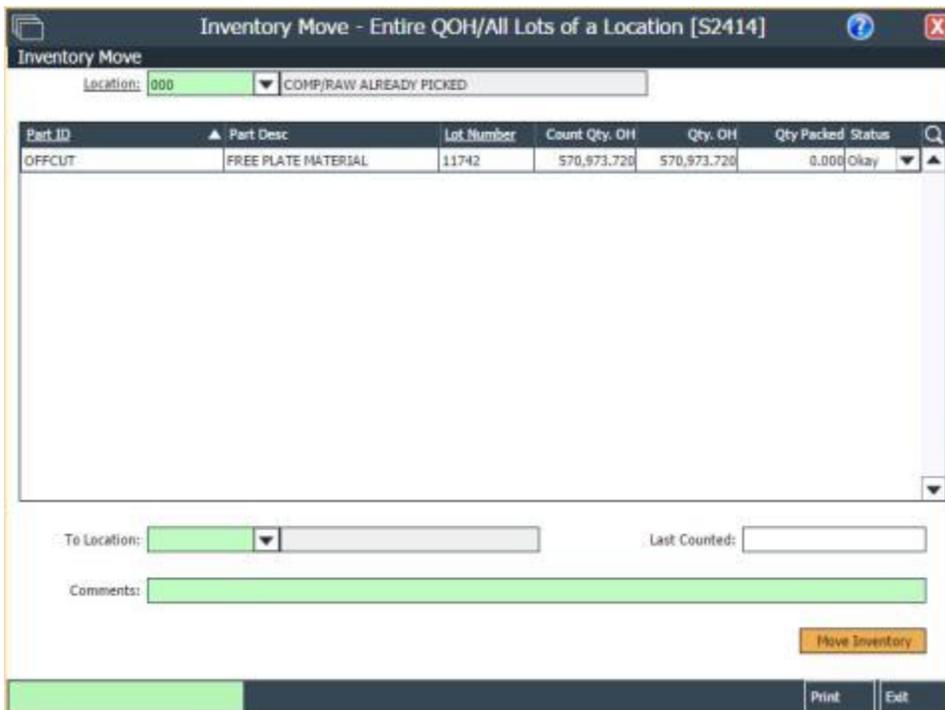
Unplanned Issues for high inventory quantities:

1. Navigate to the **Unplanned Issue** [S1613] screen.
2. Select the desired part, lot, and quantity.
3. Enter the desired information.
4. Click **Finalize**.

Result

You have removed inventory from the select location in OnRamp. This creates one inventory transaction: An **Unplss** transaction to remove the inventory.

Moving all inventory



Part ID	Part Desc	Lot Number	Count Qty. OH	Qty. OH	Qty Packed	Status
OFFCUT	FREE PLATE MATERIAL	11742	570,973.720	570,973.720	0.000	Okay

Inventory Move - Entire QOH screen

To move all inventory:

1. Navigate to the **Inventory Move - Entire QOH** [S2414] screen.
2. Select the desired **Location**.
3. Select the desired **To Location**.
4. (Optional) In the **Comments** field, enter a comment.
5. Click **Move Inventory**.

Result

You have moved all the inventory at the location to the new location.

Machine Monitoring Device

A Machine Monitoring Device, or MMD, functions as both a data acquisition and information display device. Your operators can view the work order detail on the screen while OnRamp ERP gathers data that is then fed to reports and dashboards. For example, operators can input Downtime Reasons that automatically update your downtime reports and display on relevant dashboards.

With added peripherals, you can greatly increase productivity and reports. For example:

- A keycard reader allows operators to sign in and sign out of their work center, which updates their work orders and related reports and dashboards to show that they were the ones processing that work order.
- A barcode scanner allows operators to quickly scan the work order to bring up information related to that work order, like assembly instructions.

The OnRamp MMD

The OnRamp MMD is an easy to install, and easy to setup data acquisition and information display device that will connect your shop floor directly into OnRamp ERP.

The OnRamp MMD allows OnRamp ERP to collect and display machine data, including:

- Work order information
- Employee information
- Cycle and weld time statistics
- Schedule positions
- Part count
- Downtime reason
- Slideshow frames to display:
 - Work order statistics
 - General announcements
 - Visitor greetings
 - Work instructions
 - Dashboards

Once the OnRamp MMD is [set up in the ERP](#) and the [configuration file](#) has been updated, you can launch the MMD by double clicking on the **Launch Shop Monitor** icon on the MMD desktop.



After setup is complete, turning the OnRamp MMD on will automatically start the Shop Monitor.