

MainBoss Advanced 4.2 Operations Quick-Start

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Introduction

Welcome to MainBoss Advanced

This guide offers a quick introduction to the day-to-day use of MainBoss Advanced.

Note: Before you read this guide, please read [Getting Started](#) so you understand the fundamentals of how MainBoss is used.

For full information about day-to-day use, see the full [Day-to-Day Operations](#) guide.

Rules of Thumb

Rule 1: Adapt a set of policies and follow them.

Consistency matters. For example, you should use the same naming conventions for equipment, locations, and so on. Records that break the pattern will be hard to find in alphabetic lists and may appear out of place on reports.

Rule 2: When in doubt, leave it blank.

If you don't know what should go into a field, leave it blank. Inaccurate information is worse than no information at all. If the field is mandatory, check your organization's policies or get clarification from someone who has more MainBoss experience.

If you leave a (non-mandatory) field blank, MainBoss almost always lets you go back and fill it in later. Therefore, if you're missing some piece of information when you first fill out a form, you can go back and fill in the field later when you've tracked down the info you need.

Rule 3: To fill out a form, work from the top down.

In general, the most important fields are at the top of the window. Optional fields are later on. Therefore, forms are usually easiest to fill out if you start at the top of the window and work down.

The **<Tab>** key goes to the next field in the window and **<Shift-Tab>** goes to the previous field. This means you can **<Tab>** from one field to another without having to reach for the mouse. (Most people find that the more you can avoid the mouse, the faster you can work.)

Basic Principles of MainBoss Advanced

Unit: **A unit is anything that might require maintenance.**

This includes equipment, vehicles, and places. In a factory, for example, your units will mostly be pieces of manufacturing equipment. In a shopping mall, each store might be considered a separate unit, with additional units for washrooms, the parking lot, and so on.

Sub-Unit: **A sub-unit is part of a unit.**

For example, you might sub-divide complex equipment into smaller sub-units so that you can track the maintenance record of each piece. Similarly, in a shopping mall, you might subdivide large areas into smaller ones (e.g. “Department store, north section”, “Department store, east section”, and so on) so that workers have a clearer idea of where to go when they’re sent to fix a problem.

There’s no hard-and-fast dividing line between what is a sub-unit and what is simply a spare part. For example, if a piece of equipment has a self-contained motor, do you treat the motor as a sub-unit or simply a spare part? The answer depends on whether or not you want to track the motor’s maintenance independently from the containing equipment. If you’re likely to move such motors from one unit to another and if you care about the motor’s past maintenance history, then you should treat the motor as a sub-unit. Otherwise, there may be no point in treating the motor as a sub-unit.

Request: **A request reports a problem or asks for work to be done (e.g. renovations).**

Requests are often based on complaints from people outside the maintenance department. Requests provide preliminary information about the problem such as the location of the problem, the name of the person reporting it, the date/time the report was received, and a brief description of the problem itself.

Since problems may be reported by non-maintenance personnel, requests are designed to be simple enough that anybody can fill one out.

Work order: A work order is a detailed description of work to be done.

Work orders are designed to be filled out by maintenance personnel. In many organizations, work orders are written up by a supervisor or dispatcher, then issued to the people who'll do the actual work.

Work orders are more detailed than work requests. For example, a work order may specify the amount of time the job is expected to take, the materials to be used, and so on. Such details are not present in a work request.

General Principle: Requests describe *problems* while work orders describe *solutions*.

Items: Items are materials used in your maintenance work.

Items include spare parts, tools, lubricants, and anything else whose use you wish to track. MainBoss can report on your materials inventory, including how much of an item you have on hand, where particular items are stored, and when you need to re-order more stock.

When setting up inventory records, start with the most important items in your inventory, such as expensive or vital spare parts. Tracking simple items like nails or 60-watt light bulbs is often more trouble than it's worth...but if your operations depend on certain materials, those are the ones you should track.

Note that MainBoss's records depend on physical inventory control. If anyone can go into a storeroom and take out materials without recording the fact in MainBoss, then you can't expect MainBoss's data to be accurate.

Task: A description of work to be done during planned maintenance or in some other standard maintenance job.

For example, you might have a task record describing a standard oil change and inspection on a vehicle. Task records often contain step-by-step instructions or check-lists of actions to be done during the work.

Unit Maintenance Plan: A complete description of a planned maintenance job. This includes the unit that should be serviced, the task that should be done, and the timing for doing that work.

For example, a unit maintenance plan might describe regular oil changes on a car. The unit is the car whose oil needs to be changed; the task might be a check-list of what should be done in each oil change; the timing might be “every three months or 3000 miles”.

MainBoss uses your unit maintenance plans to create actual work orders. For example, when the time comes for an oil change on a particular vehicle, MainBoss will create a work order for the job using information from the unit maintenance plan record.

Maintenance Organization: A collection of data describing the operations of a single maintenance organization. Each maintenance organization you have corresponds to a separate database.

While many MainBoss customers will only have one maintenance organization database, some may have more. For example, consider a property management company that maintains properties for several different clients. The company may choose to keep each client’s data separate from the others, or may decide to have a single database combining data from all clients.

You must have a separate set of license keys for each maintenance organization database you maintain.

Storeroom: A place where you store spare parts and other materials.

For each storeroom, you create *storeroom assignments* which specify what items the storeroom should contain and the maximum/minimum quantities for each item.

Note that a storeroom doesn’t have to be a normal room. For example, if you have service trucks that each are supposed to contain standard work materials, you can treat each truck as a storeroom and can track the contents to make sure each truck has everything it needs.

Expense Category: A way to label costs on a work order.

For example, you might have separate categories for inside labor (your own personnel), outside labor (done by hired contractors), electrical supplies, plumbing supplies, spare parts, and so on. You assign an expense category to each cost on a work order so that you can track and categorize your expenses. (Expense categories are only available if you have licensed the MainBoss **Accounting** module.)

Expense Model: A list of what expense categories are allowed on a particular work order.

For example, a property management company may have a separate expense model for each tenant. This makes it possible to associate different expense categories with different tenants. (Expense models are only available if you have licensed the MainBoss **Accounting** module.)

Cost Center: A way of associating MainBoss costs with your organization's actual accounting system.

Typically, each cost center corresponds to a single general ledger account in your accounting system. However, you can create multiple cost centers which are all associated with the same general ledger account, if you want to break down your costs in more detail than your ledger accounts allow.

Purchase Order: Information on materials or labor you wish to purchase from a specific supplier or contractor.

In addition to listing the materials or services you wish to purchase, a purchase order can specify where each item should be delivered, how goods should be shipped, when materials are needed, and much more. Purchase orders may contain *miscellaneous items*, which are expenses beyond goods and services (e.g. surcharges for quick delivery).

Receipt: A record that lists materials and labor received in response to a purchase order.

When all specified goods and services are received, the purchase order is closed.

Assignment: An indication that a work order, request or purchase order is of interest to a particular person.

You can assign work orders, requests or purchase orders to any number of people. If the assignees are MainBoss users, MainBoss makes it easy for them to find their assignments by listing them in the **My Assignment Overview** section of the control panel.

The workers who work on a job are automatically assigned to the work order. You might also assign a work order to whoever will supervise the work and anyone else with an interest in the work. You might assign a request to the requestor and to anyone else with an interest in seeing that the request is honored (e.g. the person at the help-desk who received the initial call). You might assign a purchase order to the person who created the purchase order, the person who authorized it, and the receiving clerk who's expected to receive the purchased goods.

Notifications: Email messages that MainBoss can send to people under various circumstances. (In order for notifications to occur, you must have licensed the MainBoss Service module.)

Notifications may be sent in connection with requests, work orders, and/or purchase orders. In order to be notified, you must be assigned to the request/work order/purchase order; by default, all assignees receive any notifications sent out, but specific assignees can be set up so that they do not receive notifications.

Notifications are sent whenever a request, work order or purchase order changes state (e.g. when a work order goes from **Draft** to **Open** or from **Open** to **Closed**). They are also sent when someone adds a new comment to the request, work order or purchase order. This means that adding such a comment can be used to broadcast a message to all assignees.

Security Roles: Settings that determine what you can and can't do with MainBoss.

Your MainBoss administrator assigns security roles to you. These determine what operations you can perform inside MainBoss.

Licensed Module: A collection of related operations in MainBoss.

The operations that are available in MainBoss are determined by which modules your organization has licensed. If you don't have a particular license, you will not see various entries related to that module.

Important: Your licenses and your security roles determine what you can and can't see in MainBoss. For example, if you haven't licensed a particular module, information related to that module won't be displayed in MainBoss windows. If you do not have a particular set of security permissions, some types of information may be hidden from you and some operations may be disabled. Therefore, what you see on your screen may differ from the pictures displayed in this guide.

Requests

To use the features discussed in this chapter, your site must have licensed the **MainBoss Requests** module. You must also have appropriate security permissions. Security roles related to requests are `Request`, `RequestView`, and `RequestFulfillment`. This chapter assumes you have the `Request` role, i.e. the fullest possible set of permissions related to requests.

Creating Requests

You create requests from the **Requests** entry of the control panel. Click **New Request** to create a new request.

The screenshot shows the 'New Request' window with the following fields and controls:

- Number**: Text input field.
- Subject**: Text input field.
- Effective Date**: Text input field.
- State**: Text input field.
- Status**: Text input field.
- Estimated Completion Date**: Text input field.
- Requestor**: A dropdown menu with a red arrow button to the right. Below it are fields for **Name**, **Business Phone**, and **Email**.
- Unit**: Text input field with a dropdown arrow.
- ☐ **Use Access Code from Unit**: A checkbox.
- Access Code**: Text input field with a dropdown arrow.
- Priority**: Text input field with a dropdown arrow.
- Description**: A large text area.
- Comments**: A text area.
- ☒ **Select for Printing**: A checkbox.
- Buttons**: **Save & New**, **Save & Print**, **Save** (with a dropdown arrow), **Save & Close**, **In Progress** (with a dropdown arrow), **Cancel** (with a dropdown arrow), **Link Work Orders**, **New Work Order**, and **New Requestor Comment**.

Every request needs to be attributed to someone; this person is called the *requestor*. If your organization only accepts requests from authorized requestors, you specify the requestor by choosing an existing name from your **Requestors** table. Otherwise, if you accept requests from new requestors, you can add a new requestor by clicking the “**Requestor**” field’s second arrow button and choosing **New Requestor**.

Although the unit is optional, you should fill it in if possible. “**Subject**” is a brief subject line summarizing the problem and “**Description**” is a full description—as long as you need.

Normally, the “**Number**” field is automatically filled in by MainBoss, using whatever numbering conventions your organization has established.

If you have an email address for the requestor, you can send email to the requestor at any time by clicking **New Requestor Comment**. (In order for this to work, you must have the **MainBoss Service** module. You must also have set an option that says this particular requestor is eligible to receive emailed acknowledgements.)

Typical Request Life Cycle

To illustrate how requests are processed, here’s one possible life cycle for a request:

1. Someone phones your service help-desk to report a problem. Help-desk personnel go to **Requests** in the MainBoss control panel and click **New Request** to create a new request.
2. Help-desk personnel record information about the problem in the new request record. Then they click **Save & Close** to save the request and close the window.
3. Sometime later, a maintenance department dispatcher goes to **Requests | New Request** in the MainBoss control panel. This lists all new requests, including the one that the help-desk just made.
4. The dispatcher selects the new request in the table viewer list. Information from the request is displayed in the table viewer. The dispatcher examines the request and determines what ought to be done.
 - ☐ If the request is acceptable, the dispatcher clicks **In Progress**, indicating that the request has been seen and accepted. MainBoss opens a window where the dispatcher can record any comments about the request.
 - ☐ Otherwise, the dispatcher drops the arrow beside the **In Progress** button and clicks **Void**. This rejects the request. MainBoss opens a window where the dispatcher can enter a reason for rejecting the request.

The dispatcher typically repeats the above process for every request in the new request list.

5. The dispatcher next goes to **Requests | In Progress Requests** to review the requests there. This table viewer shows requests that have been accepted and marked as in progress. The dispatcher goes through the list and decides which are ready to be turned into work orders. If necessary, the dispatcher may contact the requestor to obtain more information about the problem.
6. To turn a request into a work order, the dispatcher clicks on the request in the table viewer, then clicks **New Work Order**. (This is discussed in the next chapter.) Creating a work order from a request puts the request in **Requests | In Progress | In**

Progress Requests with linked Work Order, although the request also remains listed in **Requests | In Progress Requests**.

7. The dispatcher assigns the work order to maintenance personnel who then do the work as specified.
8. When the job is finished, the work order is closed. Once the work order is closed, the dispatcher must close the request too.
9. The dispatcher goes to **Requests | In Progress | In Progress Requests with linked Work Order** and finds the appropriate request in the list. The dispatcher selects this request, then clicks **Close Request**.

Request Status Codes

A request may be assigned a *status code*. Typically, such a code indicates that the request requires attention from someone, or that it is unusual in some way.

For example, some organizations like to put requests on hold until someone from the maintenance department verifies that a problem actually exists. In this case, you might give the request a status like `Waiting for verification`. This status indicates that the request requires personal action from someone (whoever is assigned to verify the problem). Once this action has been taken, the status code can be removed and the request can continue with normal processing.

Your organization can create any status codes that make sense for the way you work. To see what codes have been defined by your organization, see **Coding Definitions | Requests | Request Statuses**.

You assign status codes to a request by clicking **New Requestor Comment** in a request table viewer or in a request record. This opens a window where you can specify a status. You use the same process to remove an existing status.

Requests, Web Requests, and MainBoss Service

If your organization has licensed the **MainBoss Service** module, users can submit requests by email to an automated processing system. If your organization has licensed the **Web Requests** module, users can submit requests through a web site. These modules offer several benefits:

- ☐ Email and web requests are automatically placed into your database files. Your personnel don't have to enter the requests by hand.

Many organizations with MainBoss Service have found a dramatic decrease in phone calls to the maintenance department. When people can report problems by email or the web, they don't use the phone. This frees up phone-answering personnel for other work.

- In order to keep the requestor informed, MainBoss sends email acknowledgements to the requestor at various points in the request process. This happens automatically when requests are created, when they're marked "in progress", when they're closed, and whenever someone uses **New Requestor Comment**. Requestors are kept informed, and maintenance personnel don't have to deal with people phoning in to ask what's happening with their request.
- MainBoss lets you specify whose email requests will be accepted. You list the email addresses from which the automatic processing program should accept requests. Requests sent from other addresses will not be accepted.

The [Installation and Administration Guide](#) explains how to set up these facilities when you begin using MainBoss.

Work Orders

To use the features discussed in this chapter, you must have appropriate security permissions. Security roles related to work orders are `WorkOrder`, `WorkOrderView`, `WorkOrderFulfillment`, and `WorkOrderSummary`. This chapter assumes you have the `WorkOrder` role, i.e. the fullest possible set of permissions related to work orders.

Creating a Work Order

The sections that follow describe how to create a complete work order. Your organization may choose to skip certain steps. For example, some organizations may not use MainBoss's inventory facilities to keep track of work materials. If so, you can skip allocating materials for the job.

Before and After: When you first create a work order, you often don't have exact information. For example, you might specify when you expect the job to start and when you expect it to end. Once the job is finished, you can go back and put in the actual start and finish times.

The same applies to materials. Before a job, you can predict what materials you might need and record those materials in the work order. After a job, you can record what materials you actually used.

Emergencies: In emergencies, you may not have time to write up a work order before the job. However, you should write up the work order *after* the job, recording all relevant information. Work orders aren't just instructions for workers, they're a record of the work you do. This means it's *especially* important to record what you did during an emergency, since such work is often more high profile than run-of-the-mill maintenance.

Starting a New Work Order

To start a new work order, go to the **Work Orders** table viewer and click **New Work Order**.

You can also start a new work order by selecting an existing request from a requests table viewer (e.g. **Requests** | **New Request**), then clicking **New Work Order**.

Saving the Work Order: As you enter information into a work order, save the information from time to time by clicking **Save**. This ensures that you don't lose your work if something goes wrong (e.g. the power goes out).

Work Order Notes: “**Duration**” is given as a number of days, rounded up. Therefore, the smallest duration is 1.

If your organization doesn’t use expense models, just set “**Expense Model**” to the default model. Otherwise, follow your organization’s expense model policies.

The easiest way to print a work order is to open the work order and click **Print**.

Work Order Status Codes: Work orders may be assigned status codes. Typically, a status code indicates that the work order needs someone’s personal attention before it can proceed. For example, your organization may have status codes like

Waiting for management approval
Waiting for parts
Waiting for customer sign-off

Once the issue has been resolved, the status code may be removed and the work order may resume normal processing.

Your organization can create any status codes that make sense for the way you work. To see what codes have been defined by your organization, see **Coding Definitions | Work Orders | Work Order Statuses**.

You assign status codes to a work order by clicking **Add Work Order Comment** in a work order or in a work order table viewer. This opens a window where you can specify a status. You use the same process to remove an existing status.

Work Order Resources

The **Resources** section of work order lets you record labor and materials needed a job. This section uses the following terminology:

Demand

A demand is made *before* the job begins.

- ☐ A demand for labor means assigning someone to do the job. This could include inside workers (your own personnel) and/or outside workers (hired contractors).
- ☐ A demand for materials means reserving materials for the job, so that the items will be available when they’re needed.

There must be a demand for every labor and material expense associated with the work order.

Actualize

Actualizing a demand means recording what labor and materials were actually used. This is usually done after a job is over; however, for jobs that last longer than a day, you might actualize demands at the end of each day, recording what labor and materials were actually used during the day.

Scheduling Labor

The **Resources** section of a work order can record the following types of labor expenses:

Hourly Inside: Work done by your own personnel and charged for by the hour.

Per Job Inside: Work done by your own personnel and charged for on a flat fee basis (e.g. a vehicle oil change which has a fixed price no matter how long it actually takes).

Hourly Outside: Work done by an outside contractor and charged for by the hour.

Per Job Outside: Work done by an outside contractor and charged for on a flat fee basis.

During MainBoss set-up, you create records for each type of expense. For example, an Hourly Inside record specifies a worker and the worker's cost per hour. It might say that Chris Smith gets paid \$20 an hour.

To assign an inside worker to a job, you select an Hourly Inside or Per Job Inside record that names the worker and how much the worker is paid for such work. To record that an outside contractor is going to do work, you select an Hourly Outside or Per Job Outside record that names the contractor and how much the contractor will be paid.

Note: It's possible to have several records for the same worker, inside or outside. For example, if Chris Smith gets paid extra for overtime, you might have one Hourly Inside record for Chris's normal rate and another Hourly Inside record for overtime. When you assign personnel to a job or recording labor expenses, make sure to choose the correct record.

Any worker who appears in a labor demand (inside or outside, hourly or per job) is automatically an assignee for the associated work order (provided that the worker is on the list of recognized Work Order Assignees). You don't have to create an assignment explicitly in the work order's **Assignments** section.

Reserving Materials for a Work Order

When you assign materials to a work order before the work is done, you estimate what materials the work is likely to require. MainBoss then puts these materials *on reserve*. For example, if you want to replace two tires on a forklift truck, you can put two tires of the right type on reserve when you make up the work order.

When you reserve an item, you tell MainBoss the storeroom where you'll obtain that item. For example, if a particular item is found in three different storerooms, you tell MainBoss which storeroom you'll go to.

Often it's not necessary to put materials on reserve. For example, there's no point reserving common items like screws, tape, glue, etc.—you probably have plenty in stock, and if you do run out, you can buy more quickly and easily. On the other hand, it might be crucial to reserve items if you don't keep many on hand, if they're difficult to buy, or if the job has a high importance.

You reserve materials by creating demands in the **Items** subsection of a work order's **Resources** section. You do so by specifying a *demand item* record. This record specifies the materials you want and the storeroom where you'll get them.

We recommend the following process:

- ☐ Before a job, you create demands for any important items you expect you'll need. This puts the items on reserve. (There's no need to reserve simple items that you always have lots of, e.g. masking tape.)
- ☐ When you're ready to do a job, you remove reserved items from your storerooms and record that they've been transferred to *temporary storage*. Typically, you use the unit being repaired as the temporary storage location; this is a way to say, "I've taken the parts to the unit's location."
- ☐ After you've actually used an item, you actualize the corresponding demand. No matter how certain you are that you'll use an item, we recommend that you don't actualize until you use the item. Actualizing creates an accounting transaction that can't simply be deleted if you find out you didn't need the item after all. (If you want to undo an accounting transaction, you have to create a formal correction record. MainBoss demands this formality in order to preserve an accurate audit trail.)
- ☐ If you use an item and you don't already have an existing demand for that item, you have to create a demand record first. Then you can actualize the demand.

Opening a Work Order

When you first create a work order, it's considered to be in the *draft* state. While it's in this state, you can freely change any of the information on it.

However, when you're ready to print off the work order and hand it to a worker, you *open* the work order. This locks down some of the information, so that you have an accurate record of what was actually on the work order at the time it was issued to workers. For example, the "**Subject**", "**Unit**" and "**Work Description**" are all locked down when you mark the work order as open. However, other information (such as labor and material demands in the **Resources** section) can still be changed.


In the control panel, **Work Orders | Open Work Orders** lists open work orders: jobs that have been issued to workers (or are ready to be issued) but that have not yet been closed.

Note: **My Assignment Overview | Open Work Orders** lists any open work orders to which you've been assigned.

If necessary, you can **Suspend** an open work order to return it to the draft state. This unlocks all the information again if you really need to make changes.

Closing a Work Order

After a job is finished, you should close the associated work order. This means that you record final information about the job; for example, you record the actual labor and material costs (as opposed to any estimates you made when creating the original work order).

To close a work order, you begin by selecting it in **Work Orders | Open Work Orders**. Click , then do the following.

- ☐ Review the work order's information and make any corrections that might be necessary. For example, when you create a work order, you specify dates when the job is supposed to start and end. When you close a work order, you should record when the job *actually* started and ended.
- ☐ In the **Resources** section of the work order, create demands for labor or materials that were used on the job but aren't already on the work order.
- ☐ In the **Resources** section, click on each demand and then click **Actualize**. Record the actual labor/materials used.
- ☐ In the **Chargebacks** section, record any expenses that should be charged to customers or clients. To do this:
 - ☐ Click **New Chargeback** to create a new chargeback record.
 - ☐ In "**Code**", enter an identification code.
 - ☐ In "**Billable Requestor**", specify who will be billed for the expenses.
 - ☐ In the **Chargeback Activities** section, click **New Chargeback Activity** for each expense to be charged.
- ☐ In the **Details** section of the work order, use "**Comments**" to record any comments about the corrections you made. For example, if you couldn't do the job on the date(s) when it was originally scheduled, you might find it useful to record the reason for delay. Also record any downtime and a closing code (in accordance with your organization's policies).
- ☐ Click **Close Work Order** to close the work order.

Make sure you distinguish between the **Close Work Order** button (which closes the work order) and **Close** (which just closes the window).

After you close a work order, you should close any requests associated with that work order. If you have MainBoss Service, and if MainBoss has been told to send acknowledgements to the requestor, MainBoss will tell the requestor that the work order has been closed. When you close the request, you have the option of entering comments that will be added to the emailed acknowledgement.

Recording Meter Readings

If a unit has an associated meter, MainBoss makes it easy to record meter readings directly from any work order on that unit. Open the work order and go to the **Meters** section. Click on the meter whose reading you want to record, then click **New Work Order Meter Reading**. MainBoss will open a window where you can record the meter reading.

Defective Meter Readings: If you record a meter reading that is lower than the last reading, MainBoss issues a message saying that the reading is defective. Someone may have mistyped the previous reading, or you may need to set the meter offset. For more about meter offsets, see the full [Day-to-Day Operations](#) guide.

Planned Maintenance

To use the features discussed in this chapter, your site must have licensed the **Planned Maintenance** module. You must also have appropriate security permissions. Security roles related to planned maintenance are `UnitMaintenancePlans`, `UnitMaintenancePlansView`, and `UnitMaintenancePlansFulfillment`. It is also useful to have at least `WorkOrderSummary`. This chapter assumes you have the `UnitMaintenancePlans` and `WorkOrder` role, i.e. the fullest possible set of permissions related to planned maintenance and work orders.

The [Configuration Guide](#) explains how to set up planned maintenance (PM). This guide explains how to use your existing plans to create planned maintenance work orders.

An Overview of Planned Maintenance: In day-to-day operations, you don't need to know all the details about how planned maintenance facilities are set up. Nevertheless, it's useful to know the main points:

- Each PM job is described with a *task* record. A task record looks a lot like a work order. For example, a task record for an oil change describes what should be done in an oil-change job. It may specify resources (labor and materials) and other information of the type found on work orders.
- A *maintenance timing* record specifies a schedule for performing a job. The schedule may be based on date (e.g. "every 3 months") or on a meter reading (e.g. "every 3000 miles"). It may also combine the two (e.g. "every 3 months or 3000 miles").
- A *unit maintenance plan* specifies a unit, a task, and a schedule. For example, the unit might be a specific car, the task might describe an oil-change job, and the schedule might be "every 3 months or 3000 miles". A unit may appear in many unit maintenance plans; for example, the same car may appear in multiple plans, indicating all the planned maintenance jobs that should be performed on the car. Similarly, a task record may appear in many unit maintenance plans; for example, the oil-change task would be used in each unit maintenance plan for each car that requires a regular oil-change.
- Each unit maintenance plan has a *scheduling basis*. Typically, this is the last time you performed the job on the unit. For an oil change on a car, the scheduling basis tells the last time you performed an oil change on the car. This information makes it possible for MainBoss to calculate the next time the oil should be changed for that car.

Generating Planned Maintenance Work Orders

In order to schedule planned maintenance (PM), you must explicitly tell MainBoss to generate appropriate work orders.

Important: PM work orders are not generated until you tell MainBoss to do so. You must explicitly tell MainBoss to generate the work orders.

PM work orders are always generated for a specific period. For example, every Friday you might generate work orders for the next week (up to and including the next Friday). MainBoss will then check all the unit maintenance plans and all the associated scheduling basis information to see which jobs will come due in the specified period. MainBoss will also check all the meter readings that have been recorded and will determine which jobs will come due based on those readings.

You specify a time period by giving the last day of the period. MainBoss will generate work orders for all jobs up to and including that day. For example, suppose that the last time, you generated all work orders up to March 30. The next time you generated work orders, you might tell MainBoss to generate work orders up to April 15; then MainBoss will generate work orders for all PM jobs that come due from March 31 to April 15 (inclusive).

To generate PM work orders, go to **Unit Maintenance Plans | Generate Planned Maintenance** and click **New Planned Maintenance Batch**. MainBoss opens a window where you can begin the generation process.

The screenshot shows the 'New Planned Maintenance Batch' window. The 'Details' tab is selected, displaying the following information:

- User Contact:** jagardner
- Scheduling Parameters:**
 - Entry Date:** Friday, March 6, 2015 4:29:09.04 PM
 - End Date:** Friday, March 13, 2015
 - Unit Maintenance Plan:** 38 entries selected
- Work Order Generation Parameters:**
 - ☐ Single Purchase Orders
 - Purchase Order Creation State:** [Dropdown]
 - Work Order Creation State:** [Dropdown]
 - For Access Code:**
 - ☐ Prefer value from Task
 - ☒ Prefer value from Unit
 - ☐ Only use value from Task
 - ☐ Only use value from Unit
 - For Expense Model:**
 - ☐ Prefer value from Task
 - ☒ Prefer value from Unit
 - ☐ Only use value from Task
 - ☐ Only use value from Unit
- Comments:** [Large text area]

At the bottom of the window are buttons for **Generate**, **Save**, **Save & Close**, and **Close**. The status bar at the bottom right indicates 'Active' and provides a 'Help' link.

Check the date in “**End Date**” and make sure it’s what you want. MainBoss will generate all PM work orders up to and including the specified date.

Click **Generate**. MainBoss will generate an initial list of work orders for the planned maintenance tasks that are due. This list is displayed in the **Generation Details** section. Examine the list to make sure it’s what you expect. If it’s acceptable, click **Commit** to create the actual work orders.

Adjusting Planned Maintenance Work Orders

After MainBoss has generated a set of PM work orders, you may adjust any of those work orders to reflect special circumstances. For example, suppose that a PM task description assigns a job to a particular worker, but that worker is sick or on vacation. In this case, you can adjust the generated work order to assign the job to someone else.

As another example, suppose a vehicle is scheduled for a routine oil change but you’ve also received a complaint about a slow leak in one of the vehicle’s tires. You may choose to modify the oil change work order to tell workers to deal with the slow leak too.

You can adjust a work order at any time, but many organizations find it convenient to review PM work orders immediately after the work orders have been generated.

After you **Commit** to a set of work orders, the **Work Orders** section of the planned maintenance generation record will list the work orders that were generated. To view any of the work orders, select the work order in the list, then click **View Work Order**.

Standard (Boilerplate) Work Orders

Your organization may define standard work orders (also called *boilerplate* work orders). These are pre-existing *templates* that can be used to create work orders quickly. For example, a property management company might have a standard procedure for what should be done after a tenant moves out or before a new tenant moves in. Similarly, a company with a number of vehicles to maintain might have standard procedures for what should be done when changing a muffler or brake pads.

In order to make standard work orders, you write up a task just like the ones you use for planned maintenance. Once you’ve written up the task, you can create a work order at any time based on the task: just go to **Unit Maintenance Plans | Tasks** and click **New Work Order from Task**.

You can also create boilerplate work orders from unit maintenance plans—go to **Unit Maintenance Plans** and click **New Unplanned Maintenance Work Order**.

If you start from a task, you have to specify the unit where the work should be done. If you start from a unit maintenance plan, the unit is already part of the plan.

Maintenance Plans With No Schedule: Some jobs may have no specific schedule. For example, consider changing a car's muffler; this will become necessary sooner or later, but it's hard to predict exactly when.

In such cases, you can create a unit maintenance plan that specifies the task (changing the muffler) and the unit (the car). For the maintenance plan's schedule, you can specify any maintenance timing record, but checkmark the **Inhibit** checkbox in the unit maintenance plan's **Details** section. This tells MainBoss never to schedule this job automatically; instead, you can use **New Unplanned Maintenance Work Order** to create a work order from unit maintenance plan when you discover you actually have to do the job.

General Inventory Control

To use the features discussed in this chapter, your site must have licensed the **Inventory** module. You must also have appropriate security permissions. Security roles related to inventory are `Item`, `ItemView`, `ItemFulfillment`, and `ItemSummary`. This chapter assumes you have the `Item` role, i.e. the fullest possible set of permissions related to inventory.

MainBoss's inventory facilities record the materials that you use in your maintenance work. For example, you can use the **Items** table to record the parts that are required to perform maintenance on the units you maintain.

As inventory materials are used, MainBoss automatically adjusts its database according to the information recorded on work orders. For example, if a particular work order states that you put a new tire on a forklift truck, MainBoss automatically reduces the count of tires in your inventory (as of the date of issue as stated on the work order).

You may also make manual adjustments to inventory totals. This lets you account for breakage, transfers from one storeroom to another, and other factors that affect your inventory.


Inventory Details

On Hand: When MainBoss states how much of an item is currently *on hand*, it means the quantity expected to be present in a particular storeroom or in all storerooms combined.

On Order: The quantity of an item *on order* is the total quantity specified on issued purchase orders, minus any quantity that has already been received. For more on purchase orders, see *Purchasing/Receiving* on page 26.

On Reserve: When you create a work order, you can reserve inventory materials for use in the work order. These materials are said to be *on reserve*. You put materials on reserve when you use **New Demand Item** in the **Resources** section of an open work order. More precisely, the materials are put on reserve when you **Save** the demand.

Materials can be removed from reserve in several ways:

- ☐ You can **Void** (cancel) the work order. In this case, all materials that were on reserve become available for use again.
- ☐ The  button in the **Resources** section of the work order deletes demands from the list. Deleting a demand makes reserved materials available once more.

- **Actualize** says that reserved materials have actually been used. For example, suppose you use **New Demand Item** to reserve 10 quarts of oil for a job, then use **Actualize** to say that the job actually used 8 quarts. MainBoss will update its records to say that you now have only 2 quarts on reserve, since you used 8 of the original 10 quarts. (MainBoss will also update its records to say that you have 8 quarts less on hand.)
- When you close a work order, MainBoss removes all outstanding reservations for materials on that work order. For example, suppose you reserved 10 quarts of oil but only used 8 quarts. This leaves 2 quarts still on reserve. However, when you close the work order, MainBoss removes those 2 quarts from the reserve. Since the work order has been closed, the job is finished and the extra 2 quarts obviously weren't needed.

The total quantity of an item on reserve is the sum of all *on reserve* quantities from *draft* and *open* work orders. For example, if one work order calls for 10 quarts of oil and another calls for 20, you have a total of 30 quarts on reserve.

Stock Available: When MainBoss tells you the total quantity of an item *available* (either in a single storeroom or in all storerooms combined), the quantity is calculated as

$$\text{Stock Available} = \text{On Hand} + \text{On Order} - \text{On Reserve}$$

When MainBoss needs to determine whether stock should be restocked, it looks at the *available* quantity, not the quantity on hand.

Finding Which Storeroom Contains a Particular Item

Suppose you need a particular item. You want to know which storerooms contain that item and the quantity that each storeroom contains.

Go to **Items** in the control panel. Click on the item in the list. In the **Storeroom Assignments** area below the list, you'll see locations where the item is stored. Clicking on any entry in the area will show you the quantity of the item in the selected location.


Unit Parts

The **Parts** section of a unit record can list the parts that may be required when you perform maintenance on the unit. By checking this list, you can ensure that you have the right parts whenever you head out to perform work on a unit.

In order to set up a **Parts** list, you first create records in the **Items** table, describing what each part is. Once you have created an item record, you can use the **Usage** section of the record to record which units use the item as a spare part. Alternatively, you can use **Units | Parts** to create records which tell which items are used with which units.

Recording Price Quotes

You can record price quotes on an item using the item record:

1. In the control panel, select **Items** and click on the item for which you want to record a price quote. Click .
2. In the item record's **Pricing** section, click **New Item Pricing**. MainBoss opens a window where you can record the price quote.


You can record different price quotes for different vendors. The **Pricing** section of the item record lists all the price quotes you've recorded.

Taking Physical Inventory

Keeping an accurate inventory is notoriously difficult, even with computerized record-keeping. For this reason, most organizations periodically take a physical count of their stock. After taking inventory, you should then compare the numbers from the physical count to the numbers in MainBoss's records. If there is a disagreement, you should update MainBoss's records to reflect the actual numbers.

In order to do a physical count, print off a report using **Items | Reports | Location and Status**. This displays which items are expected to be in which locations.

After you have taken inventory, you should adjust MainBoss's records to reflect any differences between the real count and the expected quantities.

1. In the control panel, select **Items | Storeroom Assignments**. MainBoss displays a list of storeroom locations and what items they contain.
2. In the list of records, find the storeroom that contains the item whose count should be changed, then click on the line for the item. Click . MainBoss opens a window that lets you edit the existing information.
3. In the **Item Activity** section of the record, click **New Physical Count**. MainBoss opens a window where you can specify the physical count for the item in this particular storeroom.
4. In "**Item Adjustment Code**", select a code indicating the reason for the change.
5. Fill in the rest of the fields as appropriate, then click **Save & Close** to save your information and return to the previous window.

Other Inventory Operations

A number of other inventory operations are available in the **Item Activity** section of storeroom assignment records:

New Item Adjustment (found on the drop-down list for **New Physical Count**):

May be used for any non-standard adjustment to item quantities recorded in your records. For example, if an item accidentally gets broken, you should record what happened by creating an adjustment record.

When you record an adjustment, you specify an adjustment code. Possible adjustment codes are set up by your MainBoss administrator. For more on such codes, see the MainBoss [Configuration](#) guide.

New Item Issue:

Used in situations in which materials are issued from inventory, other than in connection with a work order. For example, a rental management company might issue a supply of light bulbs to tenants so that tenants can change their own bulbs rather than calling in maintenance personnel.

When you record an issue, you specify an issue code. Possible issue codes are set up by your MainBoss administrator. For more on such codes, see the MainBoss [Configuration](#) guide.

Item Transfer To and **Item Transfer From** (found on the drop-down list for **New Item Issue**):

Lets you record transfers of materials from one storeroom to another. **Item Transfer From** is used if you start with the record for the storeroom where the items were kept originally. **Item Transfer To** is used if you start with the record for the storeroom where the items are going.

Purchasing/Receiving

To use the features discussed in this chapter, your site must have licensed the **Purchasing** module. You must also have appropriate security permissions. Security roles related to purchasing are `PurchaseOrder`, `PurchaseOrderView`, `PurchaseOrderReceive`, and `PurchaseOrderSummary`. This chapter assumes you have the `PurchaseOrder` role, i.e. the fullest possible set of permissions related to purchasing.

MainBoss offers you the ability to create purchase orders for materials from suppliers and services from outside contractors. Any purchase order will be in one of the following states:

- ❑ **Draft:** A purchase order starts in the draft state. Typically, a purchase order remains in the draft state until it receives approval from management.
- ❑ **Issued:** Once the purchase order has been approved, you *issue* it. Typically, this means printing off the purchase order and sending it to the vendor (the supplier or contractor).

Once a purchase order has been issued, you can't add more items to it. If you've issued a purchase order but find that you have to make changes, MainBoss lets you *withdraw* the purchase order. This moves the purchase order back from the issued stage to the draft stage.

You cannot record the receipt of goods or services in connection with a purchase order until the purchase order is issued.

- ❑ **Closed:** Once you have received all the items specified in the purchase order, the purchase order may be closed. The purchase order may also be closed if some items have been received and orders for all outstanding items have been cancelled.

A closed purchase order can't be edited. If you really want to make changes, you have to *reactivate* it (which puts it back into the issued state). If you want to add comments to the purchase order, you should do so before you close it.

- ❑ **Void:** A void purchase order has been canceled in the draft state. If you want to cancel a purchase order in some other stage, you must return it to the draft state first.

Purchase Order Status Codes: Like requests and work orders, purchase orders may be assigned status codes. Typically, a status code indicates that the purchase order needs someone's personal attention. For example, your organization may have a status code like `Waiting for approval` to indicate that a purchase order is waiting for management authorization. Once the issue has been resolved, the status code may be removed and the purchase order may resume normal processing.

Your organization can create any type of status codes that make sense for the way you purchase. To see what codes have been defined by your organization, see **Coding Definitions** | **Purchase Orders** | **Purchase Order Statuses**.

You assign status codes to a purchase order by clicking **Add Purchase Order Comment** in a purchase order or in a purchase order table viewer. This opens a window where you can specify a status. You use the same process to remove an existing status.

Creating a Purchase Order

To create a purchase order, go to **Purchase Orders** in the control panel and click **New Purchase Order**. MainBoss opens a window where you can record information about the purchase.

Details: The **Details** section states general information about the purchase order. In particular, you specify the “**Vendor**” (the supplier or contractor who will provide the goods/services), information about payment and shipping, and the “**Required By Date**” (when you need to receive the materials). There are two comment fields in this section: “**Comments to Vendor**” will be included on the printed purchase order, while the “**Comments**” area lets you record comments for your maintenance department’s internal use only.

Line Items: The **Line Items** section lists what you want to purchase. You add to it with the following buttons (available on a drop-down list):

New Purchase Item: Adds an item to the list. To specify the item, you use a storage assignment, giving both the item you want to order and the storeroom where you will put that item when you receive it.

New Purchase Hourly Outside: Adds labor costs to the list, paid for by the hour.

New Purchase Per Job Outside: Adds labor costs to the list, paid for by the job (e.g. a flat rate for a vehicle oil change).

New Purchase Miscellaneous Item: Adds a miscellaneous expense to the list. For example, you might use this to cover a surcharge for expedited delivery.

For all line items, you provide a “**Purchase Order Text**”, which is the text that should appear on the purchase order. Typically, this will be the exact name for the materials or service, as used by the vendor. This may include an identification code from the vendor’s catalog.

Work Orders: The **Work Orders** section lists any work orders associated with this purchase order. For example, if a work order calls for an outside contractor to do a job, you can create a related purchase order to pay for that contractor’s services.

First, you create the work order and the purchase order separately. Then you specify that the purchase order applies to the work order. To do this, go to the purchase order’s **Work Orders** section, then click **New Work Order Purchase Order**. MainBoss opens

a window where you can state which work order should be associated with this purchase order.

Issuing a Purchase Order

Once you have filled out a purchase order and have obtained approval from management (if necessary), you are ready to issue the purchase order to the vendor. In the control panel, go to **Purchase Orders** | **Draft Purchase Orders** which lists all your draft purchase orders. Click the purchase order you want to issue, then click **Issue**. MainBoss opens a window where you can set the effective date of the purchase order (if necessary) and record any comments that may be appropriate.

Once you have put the purchase order into the issued state, you typically print it and send it to the vendor.

Receiving Goods and Services

When you receive items from a vendor, you should record what you have received. If the vendor's shipment contains items in response to several purchase orders, you create a receipt record for each original purchase order.

You can only create receipts for issued purchase orders. You cannot create them for draft, closed, or void purchase orders.

To create a new receipt, go to **Purchase Orders** | **Receipts** in the control panel and click **New Receipt**. This lets you create a receipt record stating what you have received.

The **Details** section of the receipt record includes:

Entry Date: The date on which the goods/services were received.

Purchase Order: The purchase order on which the goods/services were originally ordered.

Waybill: An identification number for this receipt. You choose this number. Many organizations use whatever identification number the vendor assigned to the shipment.

Reference: A reference number for the receipt. Typically, this is the vendor's identification code for the shipment.

Once you have specified this information, **Save** the receipt record, then go to the **Activity** section. This will list the line items from the original purchase order (provided that you have filled in the "**Purchase Order**" field in the **Details** section). To indicate the receipt of any line item, click the item and then click **Receive**. MainBoss will open a window where you can record what you received and its actual cost.

Closing a Purchase Order

Once you have received all the goods/services on a purchase order, you can close the purchase order. To do so, go to **Purchase Orders | Issued** in the control panel. Click on the purchase order you want to close, then click **Close Purchase Order**.