



Preventive Maintenance User Guide



Scheduling and managing maintenance cycles
for building equipment

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Overview

Preventive Maintenance Manager provides tools to schedule and dispatch equipment maintenance and repairs, and track those repairs throughout the maintenance cycle. Additionally, standard equipment templates may be associated with specific pieces of equipment, and with industry standard maintenance tasks and schedules, assuring easy set-up and standardization.

Standard Equipment Templates

Equipment Templates allow you to define the steps and frequency of work for specific types of building equipment. Utilizing the templates allows you standardize your maintenance program and expedite any future step changes.

WARNING: All changes to Templates at the Portfolio Template Library level affect all building level equipment to which it is linked. This includes, but is not limited to, any edits, additions or deletions made to template tasks. Once equipment in multiple buildings has been associated to specific templates, any template changes should be made carefully.

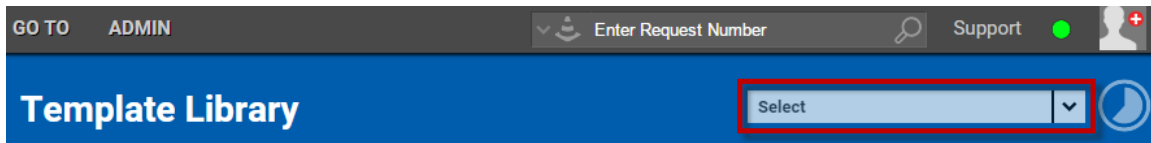
Note: You may not have access to this functionality with your existing account permissions. To add the permission, please contact your system administrator or your Building Engines Client Account Manager for details.


Creating a Preventive Maintenance Template

This section describes the process of creating a new equipment template.

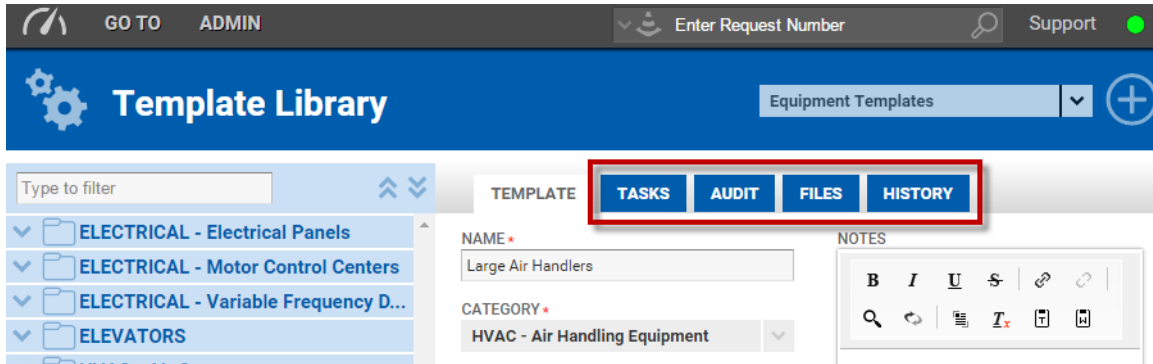
To create a new template:

1. Click **Go To → Preventative Maintenance → Template Library**.
2. Select a Template Library.



3. Click .
4. Enter a template **NAME** and select a **CATEGORY**.
5. (Optional) Use the **NOTES** box to enter additional template information.
6. Click **SAVE**.

- 7. After you click **SAVE**, additional tabs become available that allow you to complete the template setup. All information added at the template level is automatically carried down to the equipment tied to the template.



- a. **TASKS** – add periodic maintenance tasks to the template.
- b. **AUDIT** – review building equipment that is currently connected to the template.
- c. **FILES** – add or view any documents attached to the template.
- d. **HISTORY** – review date/time stamped history for template activity.

Managing Tasks in the Portfolio Template Library

This section describes the process of modifying an existing equipment template.

WARNING: All changes to Templates at the Portfolio Template Library level will affect all building level equipment to which it is linked. This includes, but is not limited to, any edits, additions or deletions made to template tasks. Once equipment in multiple buildings has been associated to specific templates, any template changes should be made carefully.

To manage an existing template:

1. Click **Go To → Preventative Maintenance → Template Library**.
2. Select a Template Library.
3. Using the list of templates on the left side, select the template you want to edit.
4. Click the **TASKS** tab.



5. Click **+**, and select **New Task**.
 - a. Enter a **NAME** for the task.
 - b. Enter the **COMPLETE IN (DAYS)**. *Note: When a task remains open beyond the specified amount of **Complete In days** it becomes overdue.*
 - c. (Optional) Enter the **EXPECTED (HRS)** the task takes to complete.
 - d. Select a **FREQUENCY**.
 - e. (Optional) Add **NOTES, STEPS, PARTS AND TOOLS**, and **METER READINGS** to populate the body of the task.
6. Click **SAVE**.

To edit a task:

1. Open an existing task.
2. Make edits as necessary and click **SAVE**.

To delete a task:

1. Open an existing task.
2. Scroll to the bottom of the task and click **DELETE**.

To audit which equipment is currently connected to the template:

1. Open an existing task.
2. Click **AUDIT**.
3. View equipment list.

Searching for a Preventive Maintenance Template

This section describes how to search for an existing preventive maintenance template.

To search for a template:

1. Click **Go To → Preventive Maintenance → Template Search**.
2. Click **SEARCH** or use the column filters to locate the desired template.

Configuring PM Equipment and Tasks

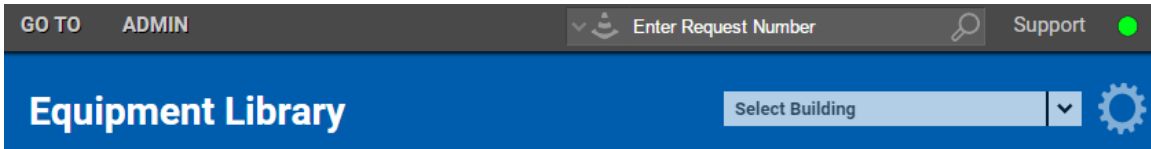
This section describes the process of adding new equipment, creating schedule and unscheduled tasks, associating templates, and adding documents.


Adding New Equipment

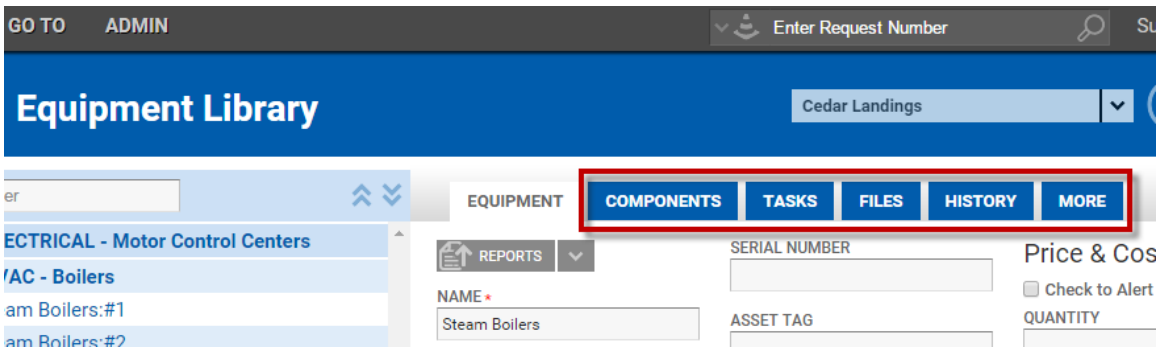
Equipment can be added to a building via two ways. You can either create the equipment from scratch, or leverage the copy feature in the Portfolio Template Library.

To create a piece of equipment from scratch:

1. Click **Go To → Preventative Maintenance → Equipment Library**.
2. Select a building from the building field.



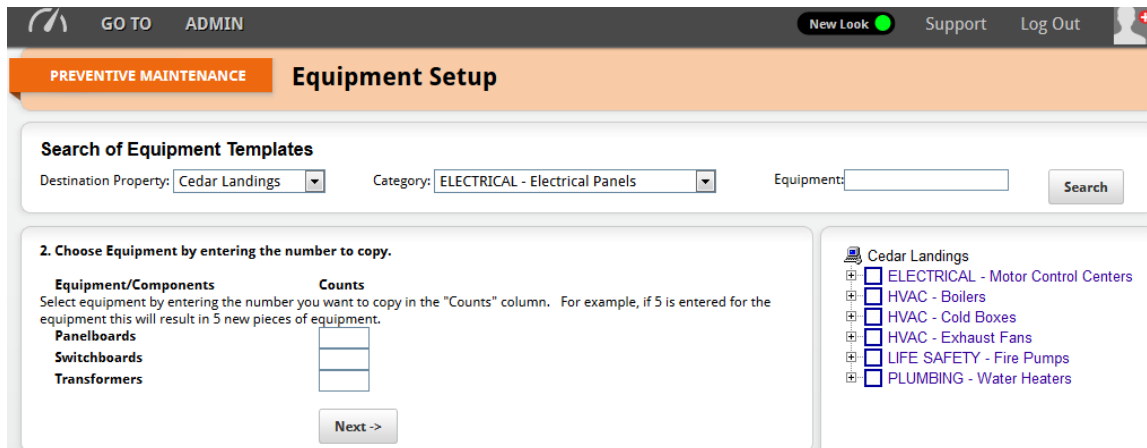
3. Click .
4. Enter the equipment **NAME** and **CATEGORY**.
5. (Optional) Add any additional details as they are available (Location, Make, Model, Serial Number, etc.).
6. Click **SAVE** to create the equipment record, and unlock the equipment tabs.



To copy a piece of equipment from the Template Library:

1. Click **Go To → Preventative maintenance → Equipment Setup**.
2. Select the **Destination Property** and the template **Category** that the equipment template is being copied to.

3. Click **Search**, and the templates from the selected category appear.



4. Enter the equipment number in the **Counts** field, and click **Next ->**.

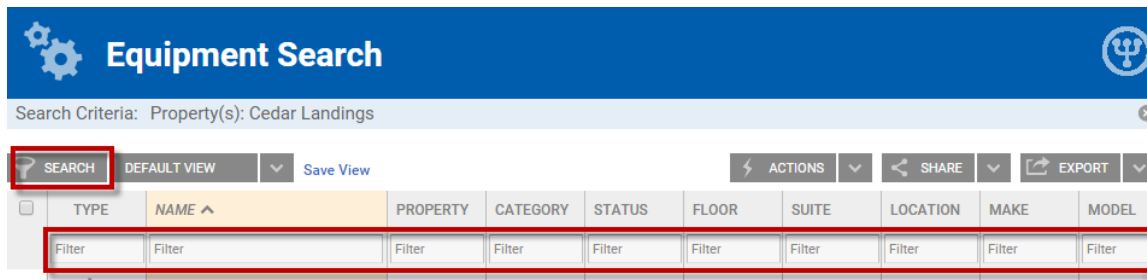
5. Enter a **Name** and **Location** for the new pieces of equipment.

6. Select an **Assignee**, and click **Finish**.

Searching for Equipment

This section describes how to locate a piece of equipment in your equipment library. To search for a piece of equipment:

1. Click **Go To → Preventative Maintenance → Equipment Search**.
2. Use the **SEARCH** or column filters to locate the desired piece of equipment.



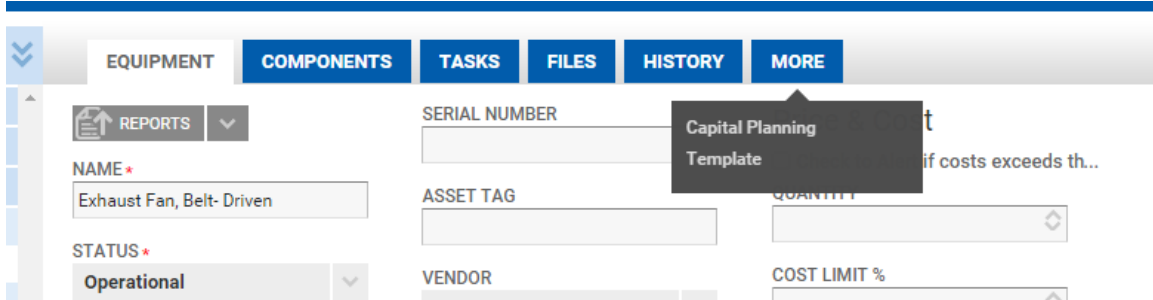
Associating a Piece of Equipment to a Template

Associating a piece of equipment to a template pushes all of the template tasks to the piece of equipment. This section describes associating a template to a piece of equipment.

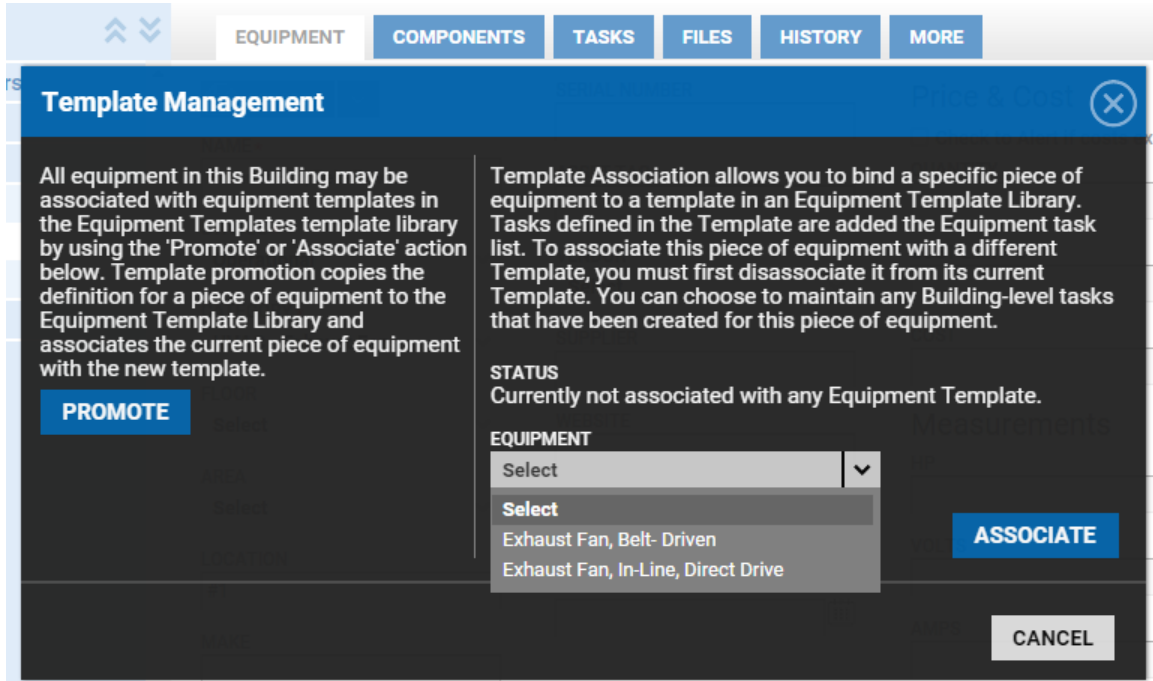
To associate a piece of equipment to a template:

1. Click **Go To → Preventative Maintenance → Equipment Search**.

2. Use the **SEARCH** or column filters to locate the desired piece of equipment.
3. Select the piece of equipment from the search grid.
4. Click **MORE**, and select **Template**.



5. Select an **EQUIPMENT** template and click **ASSOCIATE**.




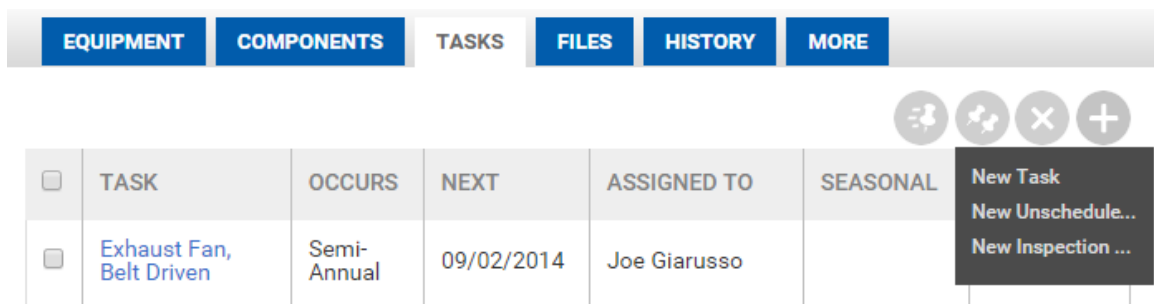
6. The piece of equipment is now be linked to the selected template and any tasks on this template are automatically copied to the piece of equipment.
7. To remove an association from this template, click **DISASSOCIATE**. *Note: your access level may not allow you to view the **Template** tab.*

Adding a Task to Equipment


This section describes how to add an additional task to a piece of equipment.

To add a task:

1. Click **Go To → Preventative Maintenance → Equipment Search**.
2. Use the **SEARCH** or column filters to locate the desired piece of equipment.
3. Select the piece of equipment from the search grid.
4. Click the **TASKS** tab.
5. Click , and select **New Task**.



<input type="checkbox"/>	TASK	OCCURS	NEXT	ASSIGNED TO	SEASONAL
<input type="checkbox"/>	Exhaust Fan, Belt Driven	Semi-Annual	09/02/2014	Joe Giarusso	

6. Enter the task **NAME**, **NEXT (fire) DATE**, **COMPLETE IN (DAYS)**, **EXPECTED (HRS)**, **FREQUENCY**, and **ASSIGNEE**.
7. (Optional) Add **NOTES**, **STEPS**, **PARTS AND TOOLS**, and **METER READINGS**.
8. Click **SAVE**.
9. (Optional) To delete a task, select the box next to the **TASK** and click .



<input checked="" type="checkbox"/>	TASK	OCCURS	NEXT	ASSIGNED TO	SEASONAL	TYPE
<input checked="" type="checkbox"/>	Exhaust Fan, Belt Driven	Semi-Annual	09/02/2014	Joe Giarusso		

Creating an Unscheduled Task

Unscheduled tasks may be used to document unplanned repair work performed on a piece of equipment during the course of other maintenance. Unscheduled tasks may be created from the PM task or from the equipment record.

To create an unscheduled task from within a PM task:

1. Click **ADD UNSCHEDULED**.



2. Enter a **NAME** for the task, select an **ASSIGNEE**, and enter the number of days allotted to complete the work. Additional task notes can be entered in the **NOTES** field.

3. Click **SAVE**.

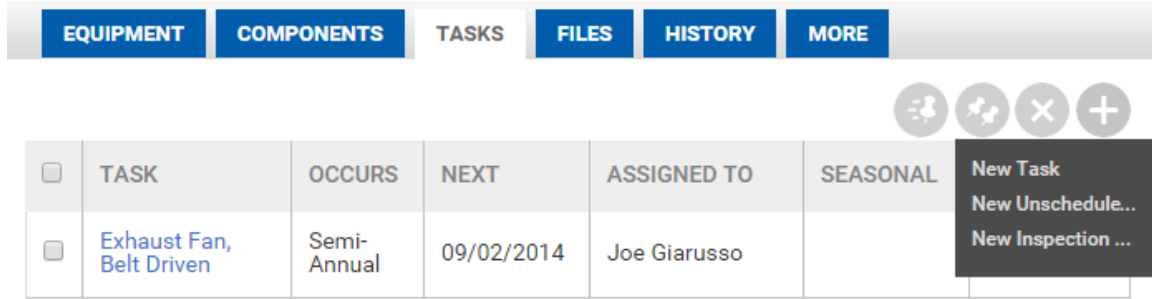
Creating an Unscheduled Task from the Equipment Record

If a problem is discovered with a piece of equipment and an open PM task does not exist, an unscheduled task can be created from the equipment record.

To create an Unscheduled Task:

1. Click **Go To → Preventative Maintenance → Equipment Search**.
2. Use the **SEARCH** or column filters to locate the desired piece of equipment.
3. Select the piece of equipment from the search grid.
4. Click the **TASKS** tab.

5. Click , and select **New Unscheduled Task**.




<input type="checkbox"/>	TASK	OCCURS	NEXT	ASSIGNED TO	SEASONAL	
<input type="checkbox"/>	Exhaust Fan, Belt Driven	Semi-Annual	09/02/2014	Joe Giarusso		New Task New Unschedule... New Inspection ...

6. Enter a **NAME** for the task, select an **ASSIGNEE**, and enter the number of days allotted to complete the work. Additional task notes can be entered in the **NOTES** field.
7. Click **SAVE**.

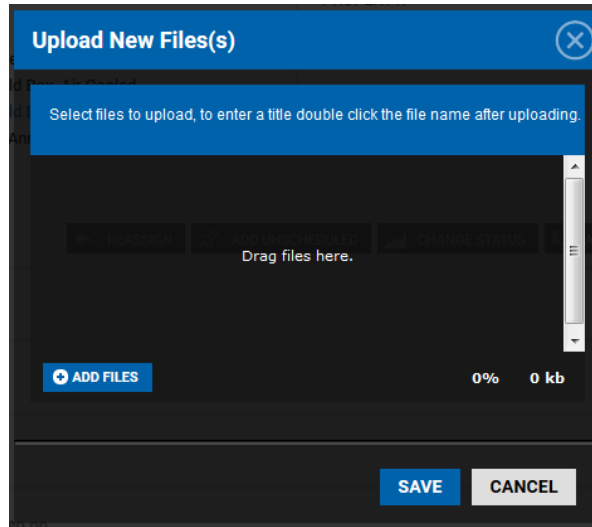
Adding a File to Piece of Equipment

The Files tab allows you to add documents, pictures, schematics, and videos to a piece of equipment's tasks. These resources can be accessed as a reference via the mobile application when the equipment is being serviced.

To add a file to a piece of equipment:

1. Click **Go To → Preventative Maintenance → Equipment Search**.
2. Use the **SEARCH** or column filters to locate the desired piece of equipment.
3. Select the piece of equipment from the search grid.
4. Click the **FILES** tab.
5. Click .

6. Use the **ADD FILES** function to access your computer hierarchy and select the document you wish to attach, or drag and drop the file into the window.



7. Click **SAVE**.

Managing PM Tasks

This section describes the common day-to-day functionality associated with maintaining your preventive maintenance program.

Using the Preventive Maintenance Task Calendar

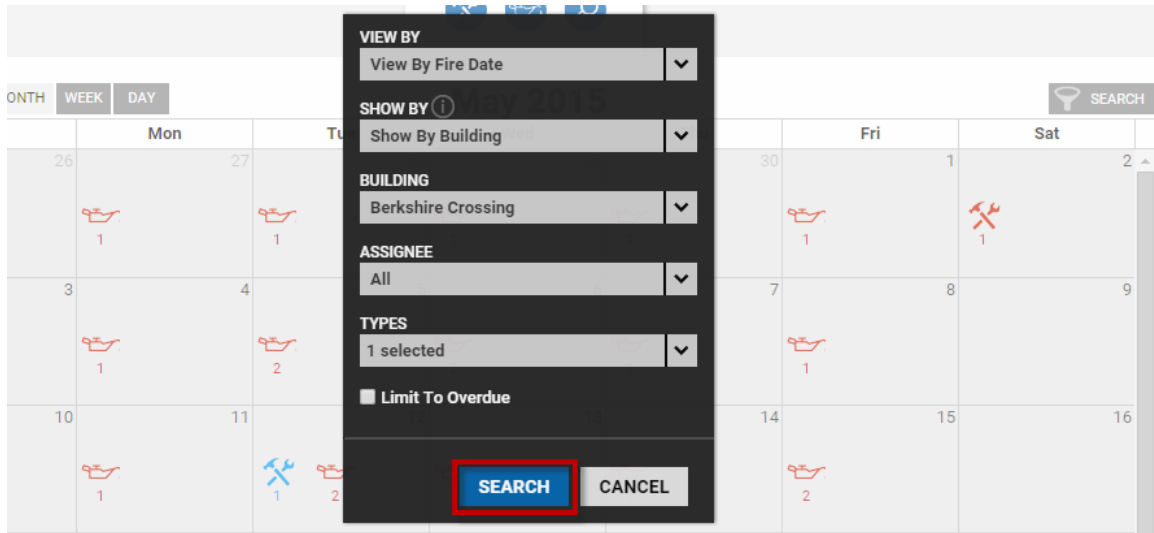
The task calendar provides you with a monthly, weekly, and daily breakdown of the preventive maintenance tasks assigned to you and your colleagues.

*Note: For full functionality instruction on the Task Calendar, see the **Task Calendar User Guide**.*

To access the task calendar:

1. Click **Go To → Task Calendar**.
2. Click **SEARCH** and select a **BUILDING**.
3. (Optional) Use the additional **SEARCH** fields to filter the calendar by due date, task type, and assignee.

4. Click **SEARCH**.

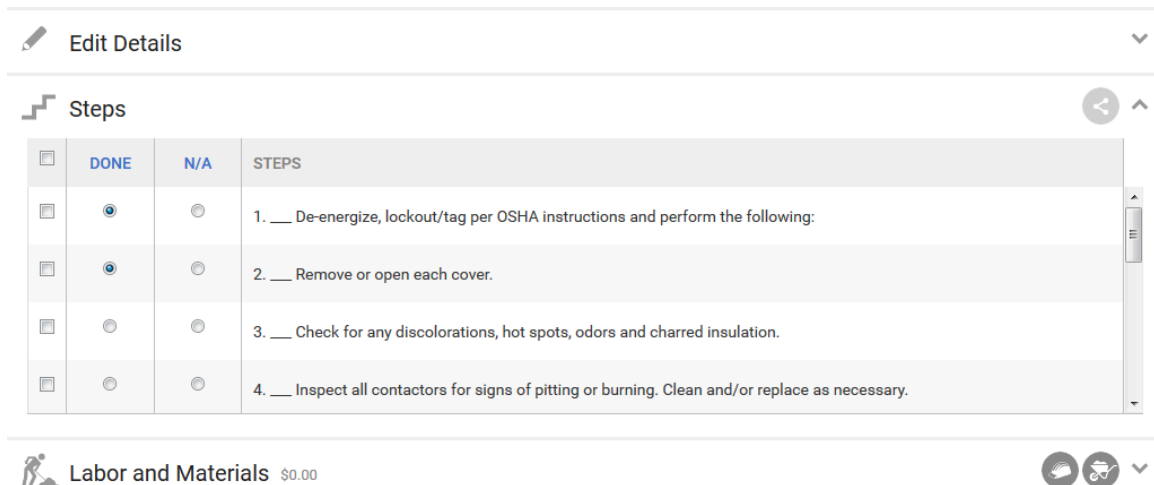


Completing the Steps on a Preventive Maintenance Task

This section describes the process of completing the steps on a preventive maintenance task from the desktop version of the application.

To complete the steps on a PM task:

1. Navigate to the specific New or Open PM Task.
2. Click the **Steps** section to expand.
3. As steps are completed, click either **Done** or **N/A** (Not Applicable). *Note: Certain **Steps** may be required before the PM Task may be changed to the Completed status.*




Entering Meter Readings on a Preventive Maintenance Task

This section describes the process of entering the meter readings that are associated to the preventive maintenance tasks.

To enter meter readings on a PM task:

1. Navigate to the specific New or Open PM Task.
2. Click the **Meter Readings** section to expand the field.
3. Enter the meter readings into the provided fields.

 Meter Readings ^

READINGS	LOCATION	AMOUNT	UNITS
1. Compressor Phase 1		<input type="text"/>	Amps
2. Compressor Phase 2		<input type="text"/>	Amps
3. Compressor Phase 3		<input type="text"/>	Amps

[SAVE](#)







4. Click **SAVE**. ****WARNING!!** You MUST click **SAVE** after entering meter reading data for the application to properly save your readings** *Note: The system will alert you if any meter readings are outside of any specified range.*

Changing the Status of a Preventive Maintenance Task

This sections describes the process of changing the status of a preventive maintenance task.

To change status from the **Search Tasks** page:

1. Select the checkboxes to the left of the PM Task (or group of PM Tasks) to make a status change.
2. Click the **Actions** dropdown and select **Change Status**.

	SEARCH	Request #	PROPERTY	ASSIGNEE	STATUS	TASK	EQUIPMEN.	CATEGORY	DOE	CHARGES	NOTE	
<input checked="" type="checkbox"/>	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	
<input checked="" type="checkbox"/>		151383214	Cedar Landings	 Joe Giarusso	Open	Cold Box, Air-Cooled	Cold Box, Air-Cooled	HVAC - Cold Boxes	02/02/2015	03/04/2015	\$0.00	
<input checked="" type="checkbox"/>		151383206	Cedar Landings	 Joe Giarusso	Open	Cold Box, Air-Cooled	Cold Box, Air-Cooled	HVAC - Cold Boxes	02/02/2015	03/04/2015	\$0.00	
<input checked="" type="checkbox"/>		151348039	Cedar Landings	 Joe Giarusso	Open	Motor Control Center	Motor Control Centers	ELECTRICAL - Motor Control	01/26/2015	02/25/2015	\$0.00	Due to the nature of the

3. If changing the status to **Complete**, an option will be provided to manually set the completion date and time.
4. Change the task status, add a comment if applicable, and click **SAVE**.

To change the status from within a specific PM Task:

1. Click **CHANGE STATUS**.

2. If changing the status to **Complete**, an option will be provided to manually set the completion date and time.
3. Change the task status, add a comment if applicable, and click **Save**.

Reassigning a Preventive Maintenance Task

This sections describes the process of reassigning a preventive maintenance task.

To reassign from the **Search Tasks** page:

1. Select the checkboxes to the left of the PM Task (or group of PM Tasks) to be reassigned.
2. Click the **Actions** dropdown and select **Reassign**.

SEARCH	Request #	DEFAULT VIEW	Save View	ACTIONS	SHARE	EXPORT					
TYPE	REQUEST	PROPERTY	ASSIGNEE	STATUS	TASK	EQUIPMEN.	CATEGORY	DATE	CHARGES	NOTE	
<input checked="" type="checkbox"/>	151383214	Cedar Landings	Joe Giarusso	Open	Cold Box, Air-Cooled	Cold Box, Air-Cooled	HVAC - Cold Boxes	02/02/2015	03/04/2015	\$0.00	
<input checked="" type="checkbox"/>	151383206	Cedar Landings	Joe Giarusso	Open	Cold Box, Air-Cooled	Cold Box, Air-Cooled	HVAC - Cold Boxes	02/02/2015	03/04/2015	\$0.00	
<input checked="" type="checkbox"/>	151348039	Cedar Landings	Joe Giarusso	Open	Motor Control Center	Motor Control Centers	ELECTRICAL - Motor Control	01/26/2015	02/25/2015	\$0.00	Due to the nature of the

3. In the dialog box, select the appropriate assignee, notification method, and add a message if applicable.

4. Click **SAVE**.

To reassign from within a specific PM Task:

1. Click **REASSIGN**.

The screenshot shows a task page for "Motor Control Center - #151348033" at "Washington Avenue - {BEI DEMO - CARL}". The task is assigned to "Joe Giarusso" and is currently "Open". The task note states: "Due to the nature of the equipment controlled by this panel, it may not be possible to completely de-energize this equipment during this inspection. Use caution when working on energized equipment." A red arrow points to the "REASSIGN" button in the action bar.

2. In the dialog box, select the appropriate assignee, notification method, and add a message if applicable.
3. Click **SAVE**.

To reassign a group of PM Tasks:

1. Click **Go To → Preventive Maintenance → Task Reassign**.

The screenshot shows the "Task Reassign" dialog box. It has two main options: "Option 1 (Engineer to Engineer)" and "Option 2 (Equipment to Engineer)". Both options have "Assign From" and "Assign To" dropdown menus. Option 2 also includes a "Category" and "Equipment" dropdown menu. There is an "Assign" button at the bottom of each option.

2. Select **Option 1** or **Option 2**, and click **Assign**.
 - a. **Option 1**: Assign all PM tasks from one engineer to another engineer.
 - b. **Option 2**: Assign all PM tasks for a specific piece of equipment or equipment category to a specific engineer.

Adding a Comment to a Preventive Maintenance Task

This section describes how to add a comment to a Preventive maintenance task.

To add a comment to a PM task:

1. Locate and open the PM Task.
2. Click **ADD COMMENT**.

Motor Control Center - #151348033
Washington Avenue - {BEI DEMO - CARL}

ASSIGNED TO: **Joe Giarusso**

STATUS: Open
TASK: Motor Control Center
EQUIPMENT: Motor Control Centers
FREQUENCY: Annually

PROPERTY: Washington Avenue
TENANT: {BEI DEMO - CARL}
CREATED: 01/26/2015 12:05 AM

Task Note:
Due to the nature of the equipment controlled by this panel, it may not be possible to completely de-energize this equipment during this inspection. Use caution when working on energized equipment.

REASSIGN | ADD UNSCHEDULED | CHANGE STATUS | **ADD COMMENT** | SHARE | PRINT

3. Enter your comment and click **SAVE**. The comment will appear with a date/time stamp in the History panel for the PM Task.
4. The comment can be marked as Internal by clicking the **Keep comment internal** checkbox.

Adding a File to a Preventive Maintenance Task

The Files section allows you to add documents, pictures, schematics, and videos to a Preventive Maintenance task.

To add a file to a Preventive Maintenance task:

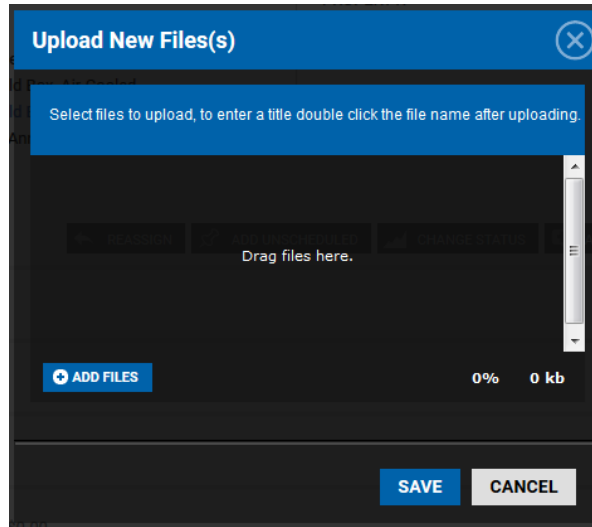
1. Locate and open a Preventive Maintenance task.
2. In the **Files** section of the task, click **+**.

Labor and Materials \$0.00

Files 0

History LAST ACTIVITY: 02/16/2015 12:44 PM EST

3. Use the **ADD FILES** function to access your computer hierarchy and select the document you wish to attach, or drag and drop the file into the window.



4. Click **SAVE**.

Sharing a Preventive Maintenance Task

This section describes how to share a Preventive maintenance task.

To share a PM task:

1. Locate and open the PM task.
2. Click **SHARE**.
3. By default a **Subject** and **Body** are provided, however, you may edit this by clicking into the field and updating it.
4. Use the recipient selector to designate the recipients. *Note: For full Share recipient selector instruction, see: **Adding Recipients to a Broadcast or Share Message**.*
5. Click **SEND**.

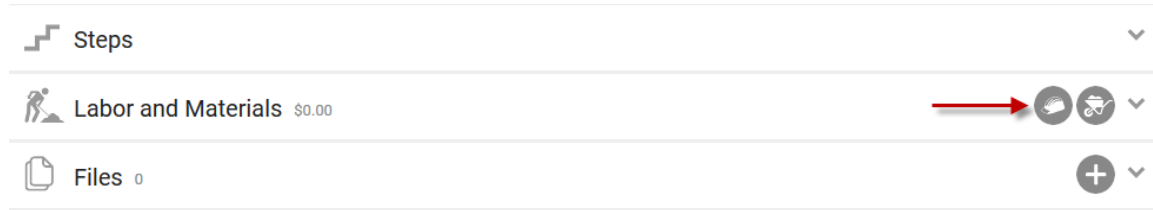
Adding Labor to a Preventive Maintenance Task

This section describes how to add labor to a preventive maintenance task.

To add labor to a PM task:

1. Locate and open the PM Task.

- Click the **Add Labor** icon in the **Labor and Materials** section of the task.



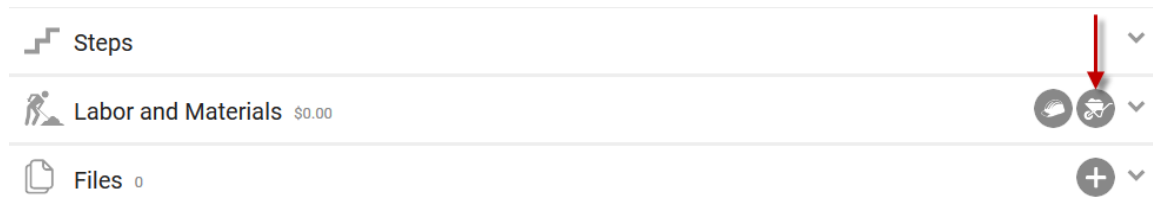
- From the **Name** drop down, select the name of the staff member or vendor who performed the labor.
 - Select the appropriate **Labor Rate**.
 - Enter in the number of hours.
 - Select a **Markup** (if applicable).
 - Indicate if this is a billable charge using the provided checkbox.
- Click **SAVE** or **SAVE AND ADD ANOTHER** to enter additional labor rates.

Adding Materials to a Preventative Maintenance Task

This section describes how to add a material to a preventive maintenance task.

To add a material to a PM task:

- Locate and open the PM task.
- Click the **Add Materials** icon in the **Labor and Materials** section of the task.



- Optionally, select a category to narrow the list of materials.
 - Select the appropriate **Material**.
 - Provide the quantity.
 - Select the **Markup** (if applicable).
 - Indicate if this is a billable charge using the provided checkbox.
- Click **SAVE** or **SAVE AND ADD ANOTHER** to enter additional materials.

Placing Preventive Maintenance on Hold

This section describes how to place an entire buildings preventative maintenance program on hold.

To place your Preventive Maintenance schedule on hold:

1. Click **Admin** → **Property Settings** → **PM Holds**.
2. Select a **PROPERTY** and change the **PM STATUS** to **On Hold**.

PROPERTY +
North Plaza

PM STATUS +
On Hold

Include Critical Tasks

REASON: +

To place **North Plaza** on PM Hold, change PM Status to 'On Hold'. Then, enter a reason the building is being placed on hold and click Save.

SAVE

3. (Optional) To include critical tasks in the hold, click **Include Critical Tasks**.
4. Provide a **REASON** for the hold, and click **SAVE**.

Printing a Preventative Maintenance Task

This section describes how to print a preventive maintenance task.


To print from the **PM Tasks List** page:


1. Select the checkboxes to the left of the PM Task (or group of PM Tasks) to be printed.
2. Click the **Actions** dropdown and select **Print Selected** to generate a printable PDF.


SEARCH	Request #	DEFAULT VIEW	Save View	ACTIONS	SHARE	EXPORT						
TYPE	REQUEST	PROPERTY	ASSIGNEE	STATUS	TASK	EQUIPMEN.	CATEGORY	Change Status	DUE	CHARGES	NOTE	
Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Reassign	Filter	Filter	Filter	
<input checked="" type="checkbox"/>	151383214	Cedar Landings	Joe Giarusso	Open	Cold Box, Air-Cooled	Cold Box, Air-Cooled	HVAC - Cold Boxes	Change Status	02/02/2015	03/04/2015	\$0.00	
<input checked="" type="checkbox"/>	151383206	Cedar Landings	Joe Giarusso	Open	Cold Box, Air-Cooled	Cold Box, Air-Cooled	HVAC - Cold Boxes	Reassign	02/02/2015	03/04/2015	\$0.00	
<input checked="" type="checkbox"/>	151348039	Cedar Landings	Joe Giarusso	Open	Motor Control Center	Motor Control Centers	ELECTRICAL - Motor Control	Print Selected	01/26/2015	02/25/2015	\$0.00	Due to the nature of the

To print from within a specific PM task:

1. Locate and open the PM task.
2. Click **PRINT** to generate a printable PDF.

 **Motor Control Center - #151348033**
Washington Avenue - {BEI DEMO - CARL}

 < 2 >
4

 ASSIGNED TO:
Joe Giarusso

STATUS: Open

TASK: Motor Control Center

EQUIPMENT: Motor Control Centers


FREQUENCY: Annually






PROPERTY: Washington Avenue

TENANT: {BEI DEMO - CARL}

CREATED: 01/26/2015 12:05 AM

Task Note:
Due to the nature of the equipment controlled by this panel, it may not be possible to completely de-energize this equipment during this inspection. Use caution when working on energized equipment.



← REASSIGN  ADD UNSCHEDULED  CHANGE STATUS  ADD COMMENT  SHARE  PRINT