Work Order Management Level 2

Course provides a detailed review of the tools available to manage Preventive Maintenance work, from PM Tasks through the closing of PM work orders.

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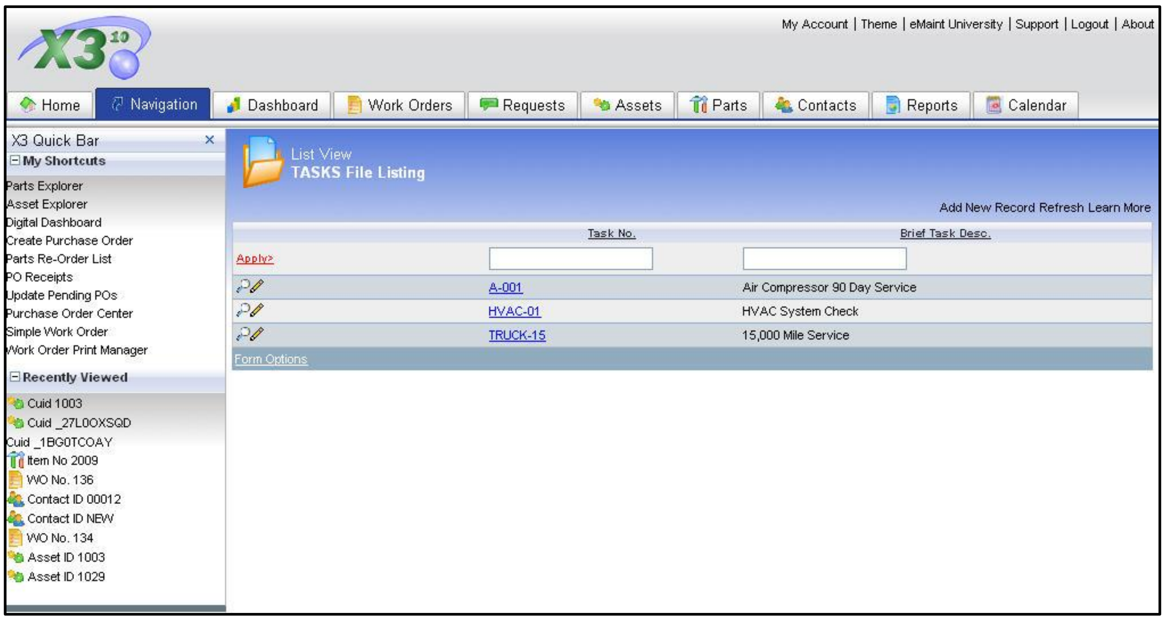
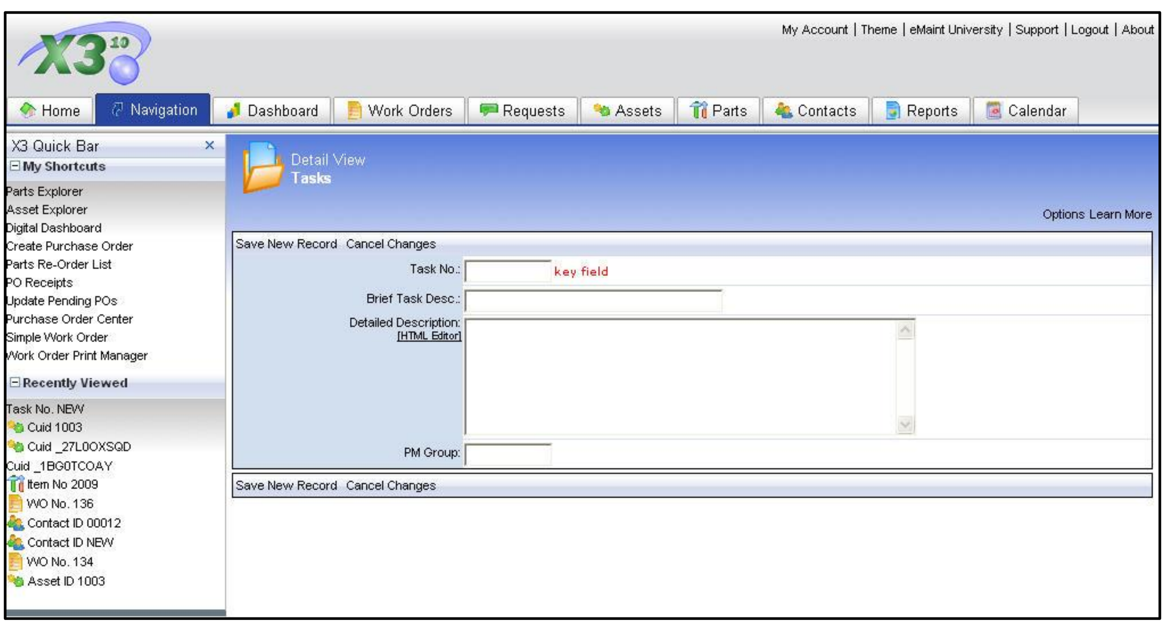
PM Tasks

Before creating maintenance schedules on your equipment, you should create a list of the tasks to be performed on those assets. These tasks are called PM Tasks. PM tasks are accessed from the **PM Tasks** menu option in the **Navigation** tab, which opens the Tasks File Listing. From the list view, you can add new tasks by clicking the **Add New Record** button in the upper left corner. Or you can access one of the existing records for viewing or editing by clicking on the task number of the selected PM task.

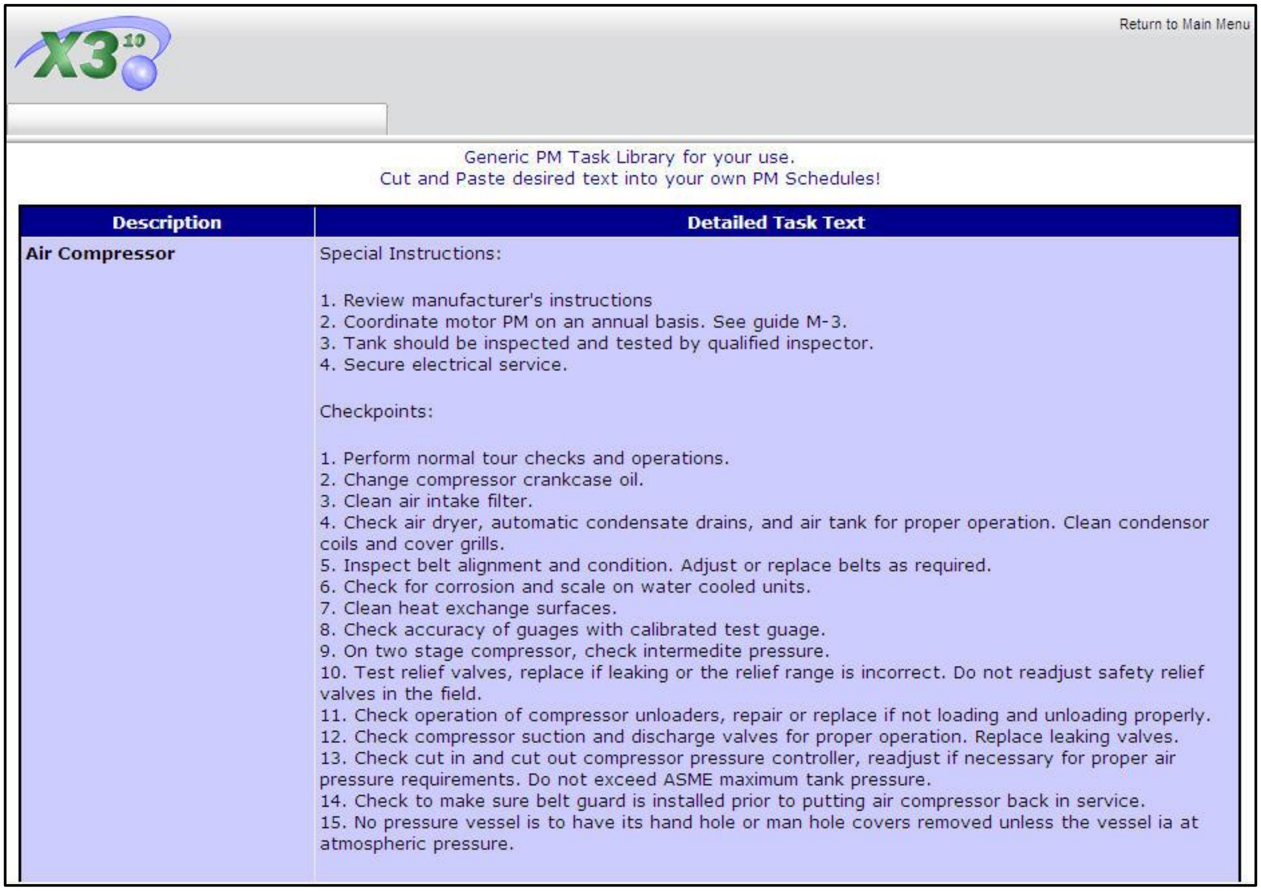


The PM Task Detail Screen has a 'Task No.' field to use for creating a unique alphanumeric ID for the task. The 'Brief Description' field is for defining the task. The 'Detailed Description' is an unlimited text field that can contain as much information as you wish.



The ‘PM Group’ field is used for defining or assigning a group identifier to a PM task in order to manage a group of PM’s and to adjust the schedule of PM’s as a group rather than adjusting the schedules individually. The PM Group can either be assigned at the PM Task level on this screen, or at the PM Schedule level when establishing a new PM schedule for a piece of equipment. For example, if you have several PM tasks that are associated with a particular group of equipment, such as LINE 1 of your production equipment, you can indicate the designation of LINE 1 as the PM Group on all the PM Tasks assigned to any piece of equipment on LINE 1. The process of managing PM Groups is covered later in this training manual.

You can copy and paste from any electronic document to add PM tasks to your listing. eMaint provides a “PM Task Library” for this purpose which is located in the Data Center section of the **Navigation** tab.



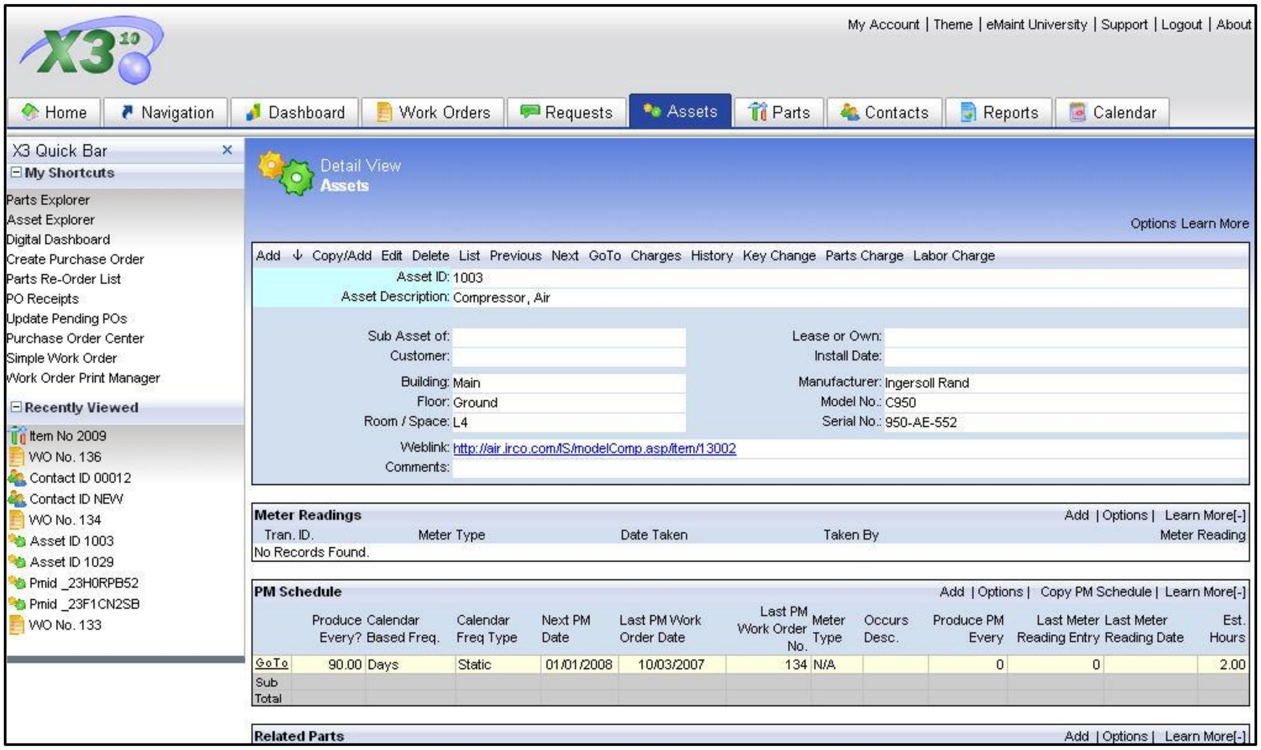
Return to Main Menu

Generic PM Task Library for your use.
Cut and Paste desired text into your own PM Schedules!

Description	Detailed Task Text
Air Compressor	Special Instructions: 1. Review manufacturer's instructions 2. Coordinate motor PM on an annual basis. See guide M-3. 3. Tank should be inspected and tested by qualified inspector. 4. Secure electrical service. Checkpoints: 1. Perform normal tour checks and operations. 2. Change compressor crankcase oil. 3. Clean air intake filter. 4. Check air dryer, automatic condensate drains, and air tank for proper operation. Clean condensor coils and cover grills. 5. Inspect belt alignment and condition. Adjust or replace belts as required. 6. Check for corrosion and scale on water cooled units. 7. Clean heat exchange surfaces. 8. Check accuracy of guages with calibrated test guage. 9. On two stage compressor, check intermedite pressure. 10. Test relief valves, replace if leaking or the relief range is incorrect. Do not readjust safety relief valves in the field. 11. Check operation of compressor unloaders, repair or replace if not loading and unloading properly. 12. Check compressor suction and discharge valves for proper operation. Replace leaking valves. 13. Check cut in and cut out compressor pressure controller, readjust if necessary for proper air pressure requirements. Do not exceed ASME maximum tank pressure. 14. Check to make sure belt guard is installed prior to putting air compressor back in service. 15. No pressure vessel is to have its hand hole or man hole covers removed unless the vessel ia at atmospheric pressure.

Creating PM Schedules

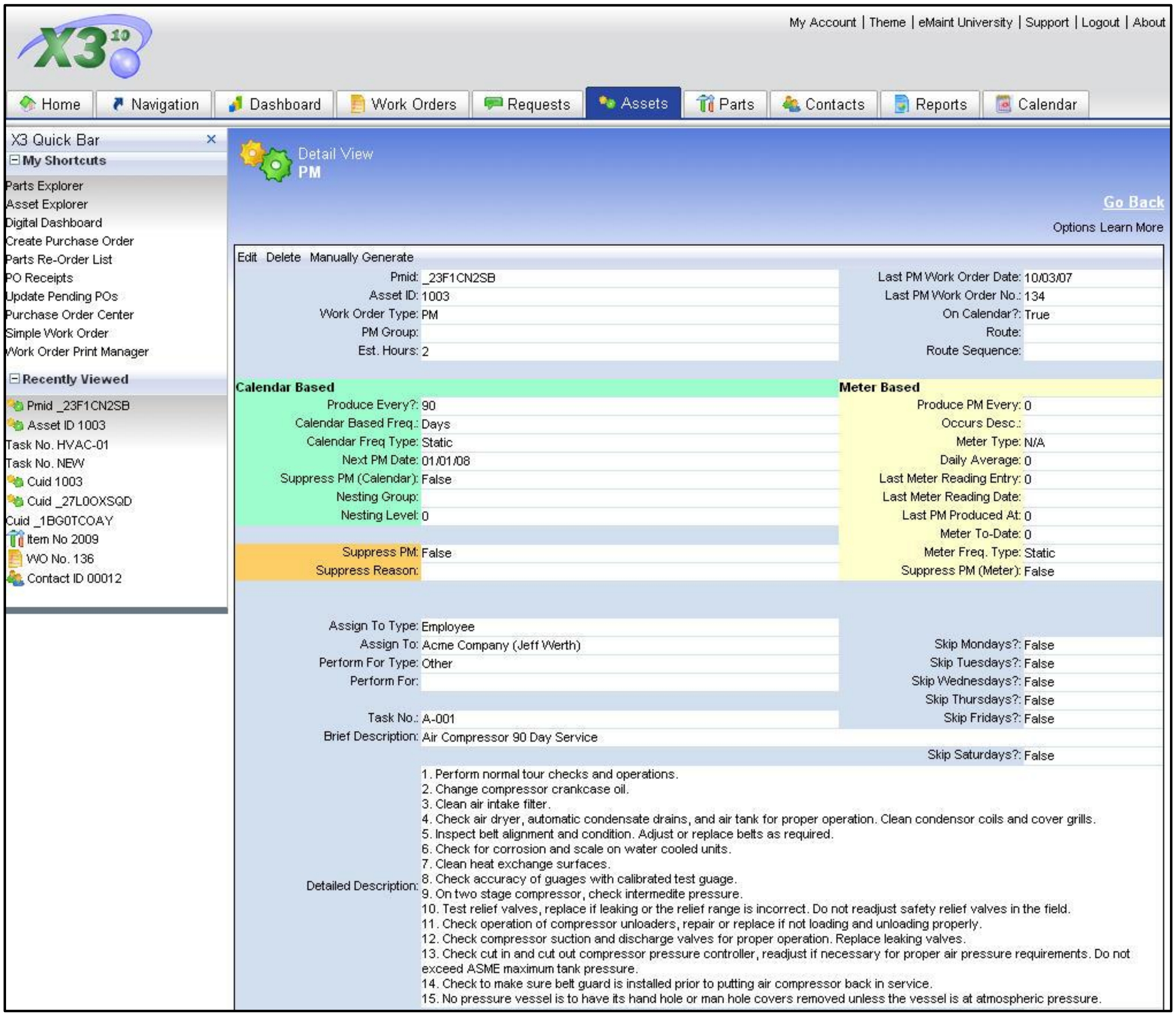
PM Work Orders are scheduled from the Asset File Information. The PM schedules for the asset are located on the detail record of that asset. All PM's that have been scheduled for an Asset will be listed under the PM Schedule section. If the PM section is blank on an asset record, it means you have not yet established a PM schedule for that asset. To access an existing PM schedule on an asset for viewing, editing, or deleting purposes, click the **GoTo** link to the left of each PM Schedule entry. To add a new schedule, click the **Add** link in the right-hand corner of the PM Schedule section for that asset.



All PM's must have an asset on which the schedule is performed. PM's can be calendar based, meter based, or both. You use one entry screen to establish both frequency types. The calendar and meter sections within the PM Schedule form are color coded to help differentiate them. The system allows individual PM schedules to be defined as both calendar and meter based. This means that you can have a PM schedule that is simultaneously calendar based (such as every three months) and meter-based (every 3,000 miles). Whichever occurrence happens first will trigger the PM. If the meter reading triggers the PM, the Next PM Date will be set to the next calendar interval date automatically, just as it would occur with a calendar generated PM.

Calendar Based PMs

Calendar Based PM's are scheduled work to be performed based on the specific date. Fields related to calendar based scheduling are shaded green. When setting up a Calendar Based PM, you must enter the first scheduled occurrence of the PM and the schedule interval for which future PM's will be generated. The interval can be one of days, weeks, or months with the number indicating the frequency of the interval (for example, if you want the PM to be scheduled to generate once a month, you would enter a '1' and select the 'Month' from the drop-down.)



The Calendar Freq. Type determines when the Next PM work order is due to generate. It can either be "Static" (the default setting) or "Shadow". Static PM's are based on the date of the last PM work order that was generated from the schedule. The next PM will generate based on the appropriate frequency listed, counting from the date of the last work order.

Shadow PM's are based on the close out date rather than the date generated. The next PM will generate according to the frequency listed, counting from the date that the last PM work order for the schedule was closed.

The field 'Ignore if Open (Calendar)' is for the suppression of only the calendar portion of the schedule. When this field is set to "True", if the last work order produced from this schedule is open, the generation of the PM is suppressed until the work order is closed. If the scenario does occur, the 'Deactivation Reason' field on the right-hand side of the screen will show the open work order number.

'On Calendar?' is the option to allow the PM schedule you have created to appear on the Maintenance Calendar as a projection.

The 'Assign To and 'Perform For' fields are linked to your Contacts listing. The 'Assign To' field is used to identify the person (or contractor) that will be doing the PM each time it is generated as a work order. The 'Perform For' field is used to identify the maintenance contact that the work is being done for. It could be a supervisor, tenant, customer, or other type of contact.

The 'Weblink' field lets you establish a link between the record and an external document - either a web page or a document residing on your network.

The 'Brief Description' and 'Work Description' fields are linked to the PM Tasks. To select a predefined PM Task, click the yellow file folder adjacent to 'Brief Description' to display the task list and click the **Select** link on the appropriate task. The 'Brief Description' and the 'Detailed Text' fields fill in automatically. If for some reason you want to enter a brief description and detailed text directly without picking from the PM Tasks List, you may do so as well.

Meter Based PMs

Meter Based PM's are based on an interval counter that generally involves usage. The interval descriptions are Hours, Miles, Units, Kilometers, and Misc. The value determines how often the Meter PM is produced. Meter related fields are shaded yellow.

The Meter type (Running or Totals) determines whether the meter reading values are added together or used as a stand-alone value. The Last PM Reading is the meter reading that was the current meter value when the last PM was produced. This value is updated every time the meter PM is generated. The 'Meter To-Date' field updates to show the total of the meter entries.

Meter Freq. Type allows you to chose whether the PM will be produced based on the reading at the time of generation or the reading at the close out. A 'Static' frequency means that the next PM will be produced based on the meter reading at the time of the PM work order's generation. A 'Shadow' frequency type means that the next PM will be produced based on the meter reading at the time of the PM work order's close out.

You have the ability to suppress the meter based PM also. Use the 'Ignore if Open (Meter)' field to suppress the next PM if the last PM work order produced from this meter is still open. The 'Deactivation Reason' field will show the related open work order.

The 'Assign To,' 'Perform for,' 'Weblink,' 'Brief Description,' and 'Work Description' are fields that will be the basis for the PM work order. These are described under the Calendar Based PM section above.

Deactivate PM

This suppression field allows you to o prevent the generation of PM work orders from this schedule regardless of the status of the work order produced from the schedule. Set the field to 'True' to suppress the PM schedule and enter the reason for the suppression in the 'Deactivation Reason' field.

Setting 'Skip Days' on PM's

Skipping days is ideal for situations where daily PM's must be scheduled but the maintenance shop is not operating 7 days a week. You may select to skip any day of the week by setting the day you wish to skip to 'True.' The default value of each day is 'False,' indicating that the PM will run on that particular day. The system will push forward those PM's due on that "skipped day" so that they will be scheduled on the next non-skipped day.

Important fields

There are four fields which, if you choose to populate them on the PM schedule or the asset, will allow you to better control your PM schedules should you choose to generate them into work orders using 'Generate PM Work Orders' instead of automatically generating them. On the PM Generation screen, there are options to filter by these four fields.

The first field is located on the asset detail itself: Site. Site is the only asset field that plays a part in the PM process. The three PM schedule fields available for filtering in the generation process are PM Group, Route, and Assignment.

Assignment – This is the Assign To person and pulls from the Maintenance Contact file.
Route # - Routing options on the PM form aid the shop that needs to define routes and define sequences within routes (of the 10 PM's that Employee x has scheduled, which is to be performed first, second, third, fourth, etc.). The sequence is not available on the filter.
PM Group - The PM Group can either be assigned at the PM Task level on this screen, or at the PM Schedule level when establishing a new PM schedule for a piece of equipment. For example, if you have several PM tasks that are associated with a particular group of equipment, such as LINE 1 of your production equipment, you can indicate the designation of LINE 1 as the PM Group on all the PM Tasks assigned to any piece of equipment on LINE 1.

PM Procedures

This section, located at the bottom of an established PM Schedule, lets you identify or associate multiple procedures with a PM Schedule and to indicate the sequence in which they should be performed. All PM Tasks or Procedures would still be created in your PM Tasks Listing within eMaint.

PM Procedures Add | Options | Learn More[-]

	Sequence	Task #	Task Description	Standard Time	Task Details
GoTo	1.00	A-001	Air Compressor 90 Day Service	1.25	1. Perform normal tour checks and operations. 2. Change compressor crankcase oil. 3. Clean air intake filter. 4. Check air dryer, automatic condensate drains, and air tank for proper operation. Clean condensor coils and cover grills. 5. Inspect belt alignment and condition. Adjust or replace belts as required. 6. Check for corrosion and scale on water cooled units. 7. Clean heat exchange surfaces. 8. Check accuracy of guages with calibrated test guage. 9. On two stage compressor, check intermedite pressure. 10. Test relief valves, replace if leaking or the relief range is incorrect. Do not readjust safety relief valves in the field. 11. Check operation of compressor unloaders, repair or replace if not loading and unloading properly. 12. Check compressor suction and discharge valves for proper operation. Replace leaking valves. 13. Check cut in and cut out compressor pressure controller, readjust if necessary for proper air pressure requirements. Do not exceed ASME maximum tank pressure. 14. Check to make sure belt guard is installed prior to putting air compressor back in service. 15. No pressure vessel is to have its hand hole or man hole covers removed unless the vessel is at atmospheric pressure.

If you want to define your PM Tasks as one complete task, rather than a series of procedures that constitutes the task, then create your PM schedules using the Brief Description and Detailed Text fields on the PM Schedule screen. However, if you want to establish PM schedules that are comprised of multiple procedures, some of which you might associate with multiple assets within your file, you may use the PM Procedures option to establish those tasks. For example, you may have lock-out/tag-out procedures or other safety procedures that need to be performed, in addition to the standard steps involved in a weekly or monthly PM for an asset, and these various tasks or procedures should be performed in a specific sequence in order to meet safety guidelines. If so, you can define these various procedures in your PM Task Listing file and then 'Add' those procedures to the PM Procedures within a PM Schedule.

If you have multiple procedures to associate with a PM, do not use the Brief Description/Detailed Text fields on the schedule form itself. Rather, use the PM Procedures section to select those multiple procedures from your PM Tasks in the system.

To add a PM Procedure: Click the 'Add' link on the PM Procedure section. Click the folder icon on the Task Description field to display the list of tasks in your PM Task File Listing. Select the first procedure that is appropriate to perform on this PM schedule from your PM Task Listing that is displayed. The task description and task details will populate. Select a numeric value (1, 2, etc.) from the Sequence field drop-down to indicate which procedure should be performed first, second, third, etc. Click the 'Save' link at the top of the screen.

Click the 'Go Back' link to return to the PM Procedures section to continue adding more procedures. Use the 'Options' link within the section to access the 'Columns Chooser' and select which columns (fields) to display within the section.

<u>To edit an existing PM Procedure</u>: Click the 'GoTo' link to the left of the procedure. The procedure will display. Click the 'Edit' link at the top of the procedure's form. Edit the record, save your changes, and click 'Go Back' to return to the PM Schedule.

NOTE: When a PM is generated and becomes an open PM Work Order, the procedures that are associated with the PM schedule will be displayed at the bottom of the Work Order detail screen in the Work Procedures section.

PM Parts

This section, located at the bottom of an established PM Schedule, lets you associate the parts needed to complete the PM task with the PM Schedule. If the quantity of the parts to be used is placed in Auto Issue Qty., these parts will be listed on the close out screen for charging when the PM work order is closed (see page 30). If you would prefer to charge them out through the Quick Parts option (discussed on page 28), then you can place the quantity to be charged in the Recommended Qty. field.

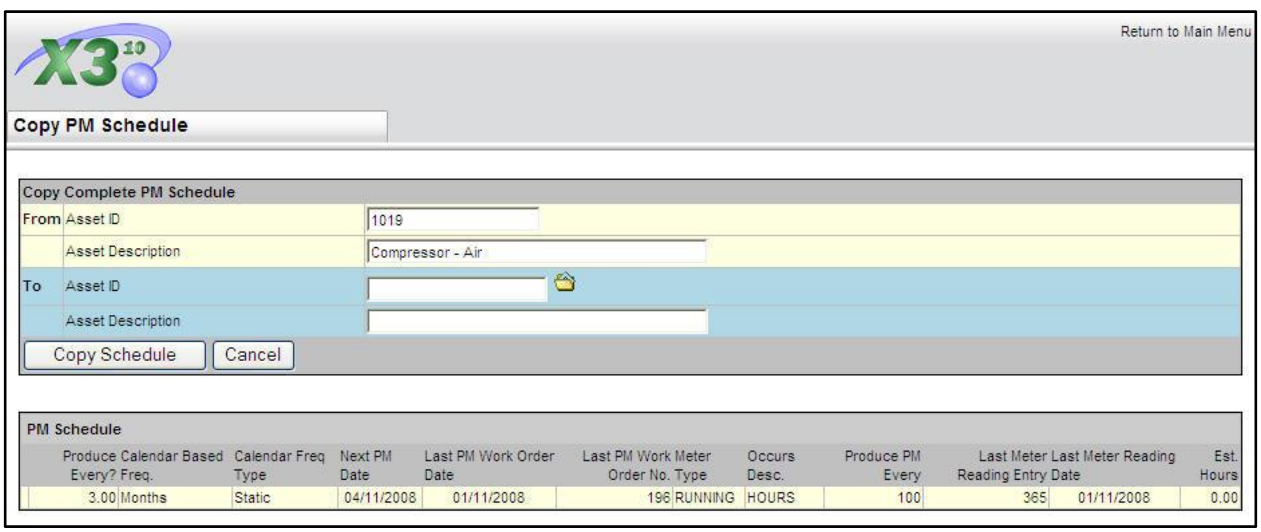
PM Parts — Add | Options | Learn More[-]

	Item	Descrip	Invloc	Auto Issue Qty	Unitms
GoTo	2122	T & P Relief Valve	MAIN	1.00	EA
GoTo	2005	Bearing, 6204-2RSJEM	MAIN	3.00	EA
Sub Total					

Regardless of which field you use, these parts will be available for quicker charging once the work order is created.

<u>Copy PM Schedule</u>

Once you have PM schedules established on one asset, you can copy those schedules to other assets by clicking the 'Copy PM Schedule' link on the asset which has the established schedule(s).

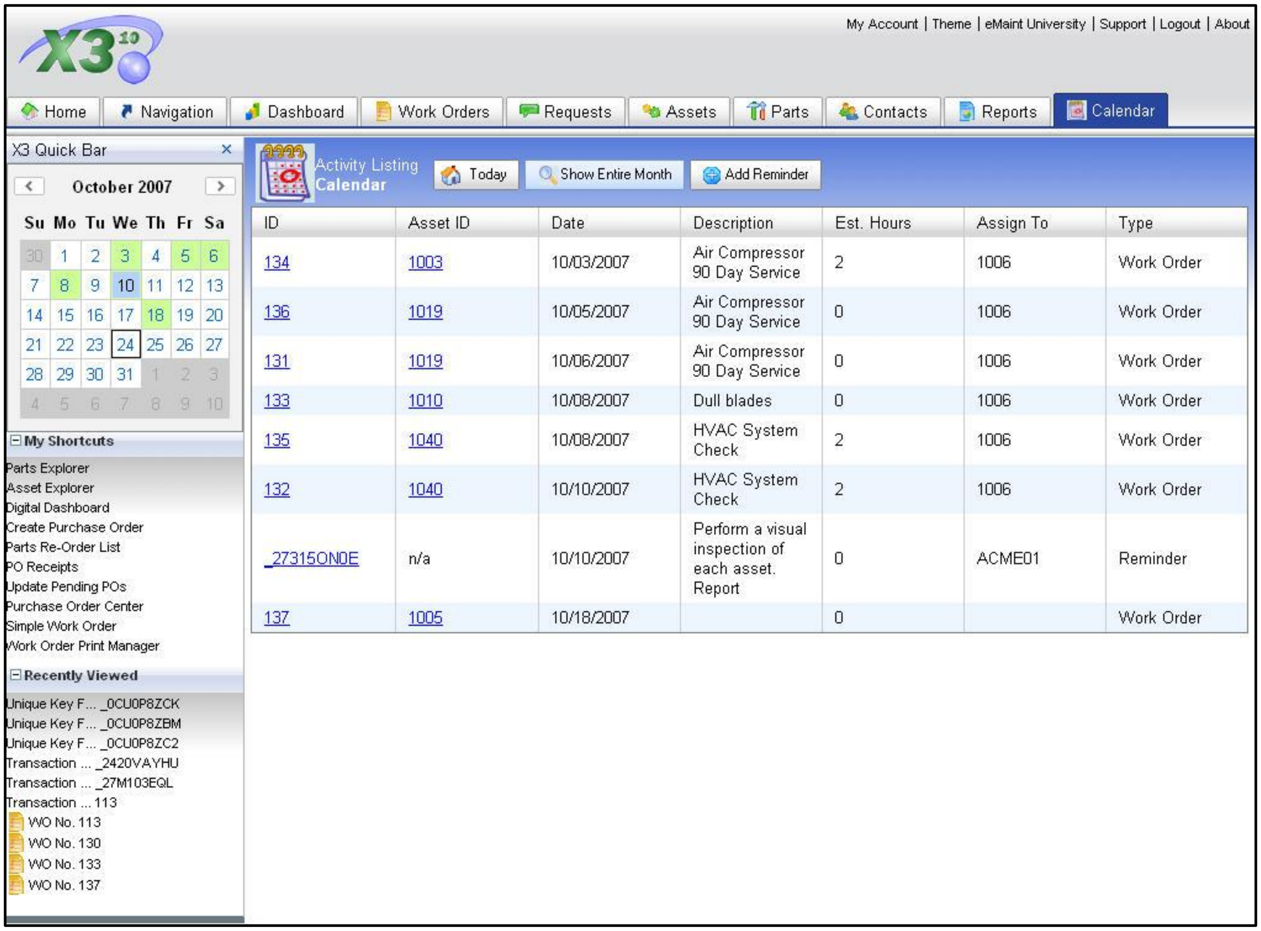


Choose the asset to which you wish to copy the PM schedule(s). All of the PM schedules from the current asset will be copied to the chosen asset. Once you click 'Copy Schedule,' you will be able to click a link which will take you to the newly copied schedule(s) on their new asset. From there you can make any modifications necessary for that asset.

Using the Calendar

The Maintenance Calendar gives you the ability to view the PM's that are projected to take place on any given date, aiding you in the process of managing your PM workload.*

(* Requires that your PM Schedules have the 'On Calendar' field set to True.)



ID	Asset ID	Date	Description	Est. Hours	Assign To	Type
134	1003	10/03/2007	Air Compressor 90 Day Service	2	1006	Work Order
136	1019	10/05/2007	Air Compressor 90 Day Service	0	1006	Work Order
131	1019	10/06/2007	Air Compressor 90 Day Service	0	1006	Work Order
133	1010	10/08/2007	Dull blades	0	1006	Work Order
135	1040	10/08/2007	HVAC System Check	2	1006	Work Order
132	1040	10/10/2007	HVAC System Check	2	1006	Work Order
_27315ON0E	n/a	10/10/2007	Perform a visual inspection of each asset. Report	0	ACME01	Reminder
137	1005	10/18/2007		0		Work Order

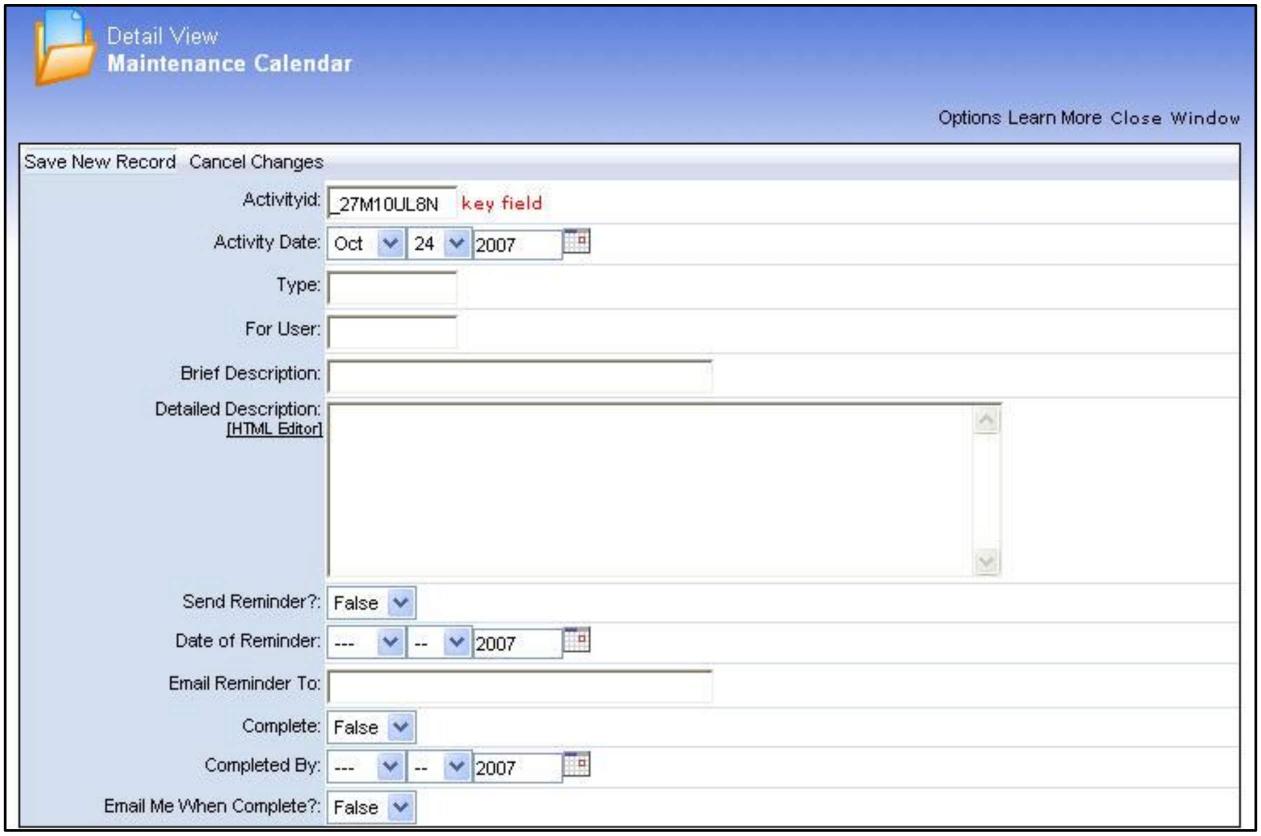
The Maintenance Calendar screen shows a calendar display on the left side and a listing of the day's Projected PM's on the right side.

When a date is blue on the calendar, it means activities are projected to take place on that date. Click the date on the calendar and a detailed view of the day's activities will appear on the right side. Each item displayed has a pencil icon to the left. You can click the pencil to open the edit view of the activity and make adjustments to it if necessary. Next to the day, month, and year displayed on the right side of the screen are symbols. You can click on either symbol to display the next or previous day, month, or year and the activities associated with it.

You can also use the Calendar to add an activity which exists outside of the PM schedules. This activity will be displayed in the "My Activities" section of the Control Panel.

Click the **Add New Activity** link on the Calendar to access the activity screen. Here you can enter a type, short description and detailed description of the activity. If you want a reminder email, simply click the reminder box, enter a date for the email to be sent, and make sure the email address is correct.

After you save the activity, it will be available for viewing and editing from the Maintenance Calendar and the Control Panel.

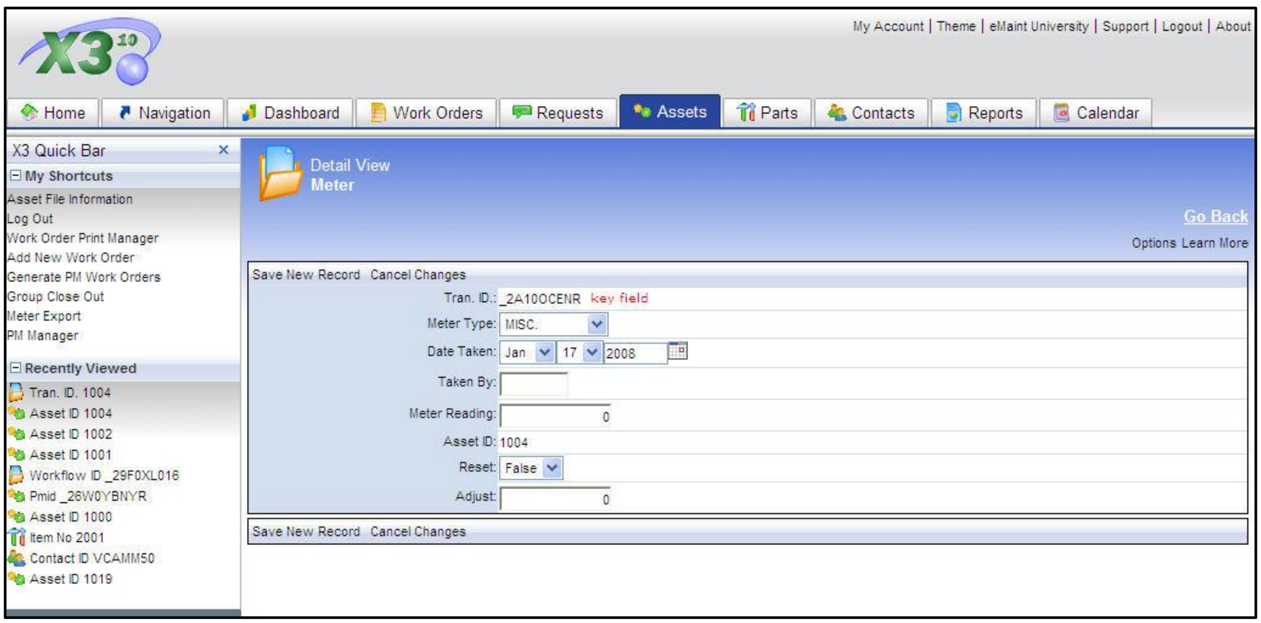


When the activity is complete, click the edit link for the activity and check the 'Complete?' box. The activity will then drop off of your Control Panel.

Meter Reading

Meter Reading values must be manually entered or electronically captured to update the data on each Asset. You can enter meter values manually by clicking the **Add** link located in the right corner of the Meter section.

Enter the 'Meter Reading,' 'Date Taken,' and Taken By' fields for standard meter readings. 'Reset' and 'Adjustment' are only needed if the meter counter needs to be reset. The adjustment value is the amount of meter units that occurred between the last meter reading and the point that the meter was reset. On the PM Schedule, the current Meter Reading will be displayed based on the meter reading value entered.

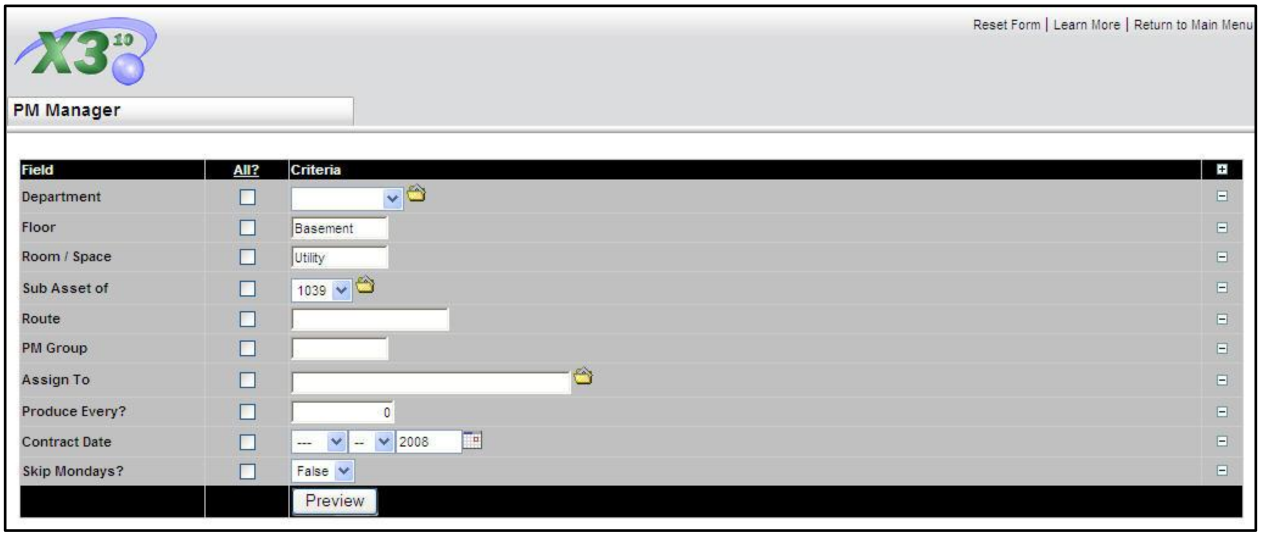


An asset may also have multiple PM schedules which are based on different meter types. As the different types of meters are entered, the reading entries will be separated by type in the Meter Reading section of the asset.

PM Manager

In the PM Manager you can manage the PM schedules using the PM Group and also other fields on your PM form and your Asset form. Located in the PM Center, the PM Manager is designed to aid you in defining, updating and modifying the routes, assignments, groups, and next PM dates for groups of PM schedules that have been established in the account.

If you have acquired a new employee and wish to distribute some of the PM Schedule workload for a specific route to this new employee, you can use the manager to choose the route and then select which tasks will be assigned to the new hire. If you want to add a PM Group to all PM Schedules for assets located on a specific floor of your plant, you can use that floor as your criteria and pull up all of those assets for the new PM Group designation. These are just two examples of the way in which PM Manager can help you manage the PM Schedules in your system.

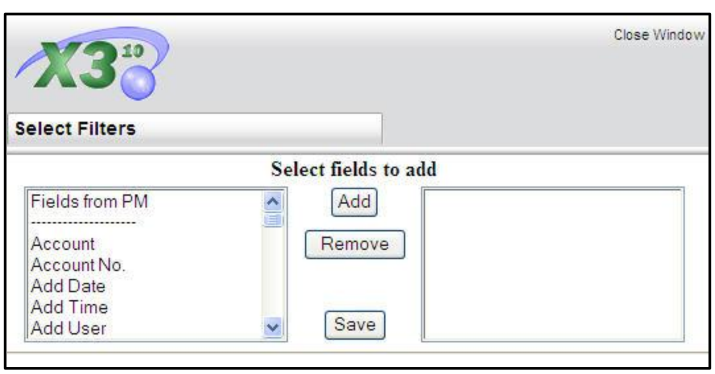


Before you begin adjusting your PM schedules, you should make sure that your PM Manager contains the fields you will use for management.

Modifying PM Manager Fields

You can choose the fields you would like to use in your PM Manager. In the right-hand column of the PM Manager screen, there is a plus sign in the black column heading; this sign is for adding a field. To add a field:

- Click the plus sign in the far right-hand corner of the black column-heading area. A new filter selection window will open with a list of all available fields in the left-hand box.

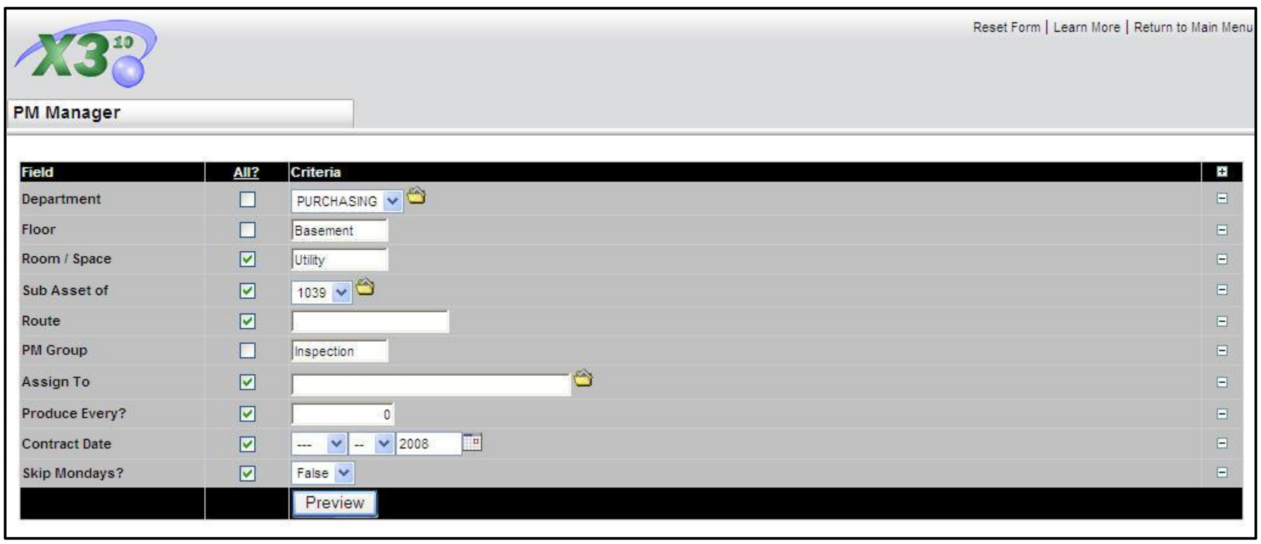


- Highlight the field in the list on the left-hand side.
- Click the ‘Add’ button to drop it into the selection box on the right.
- If you accidentally choose a field, you can highlight it on the right-hand list and click remove to send it back to the main list.
- Once you have selected all the fields you need, click ‘Save’ to update the PM Manager with the new fields.

To remove a field from PM Manager, click the minus sign to the far right of that field’s row on the Manager.

Selecting PM Records

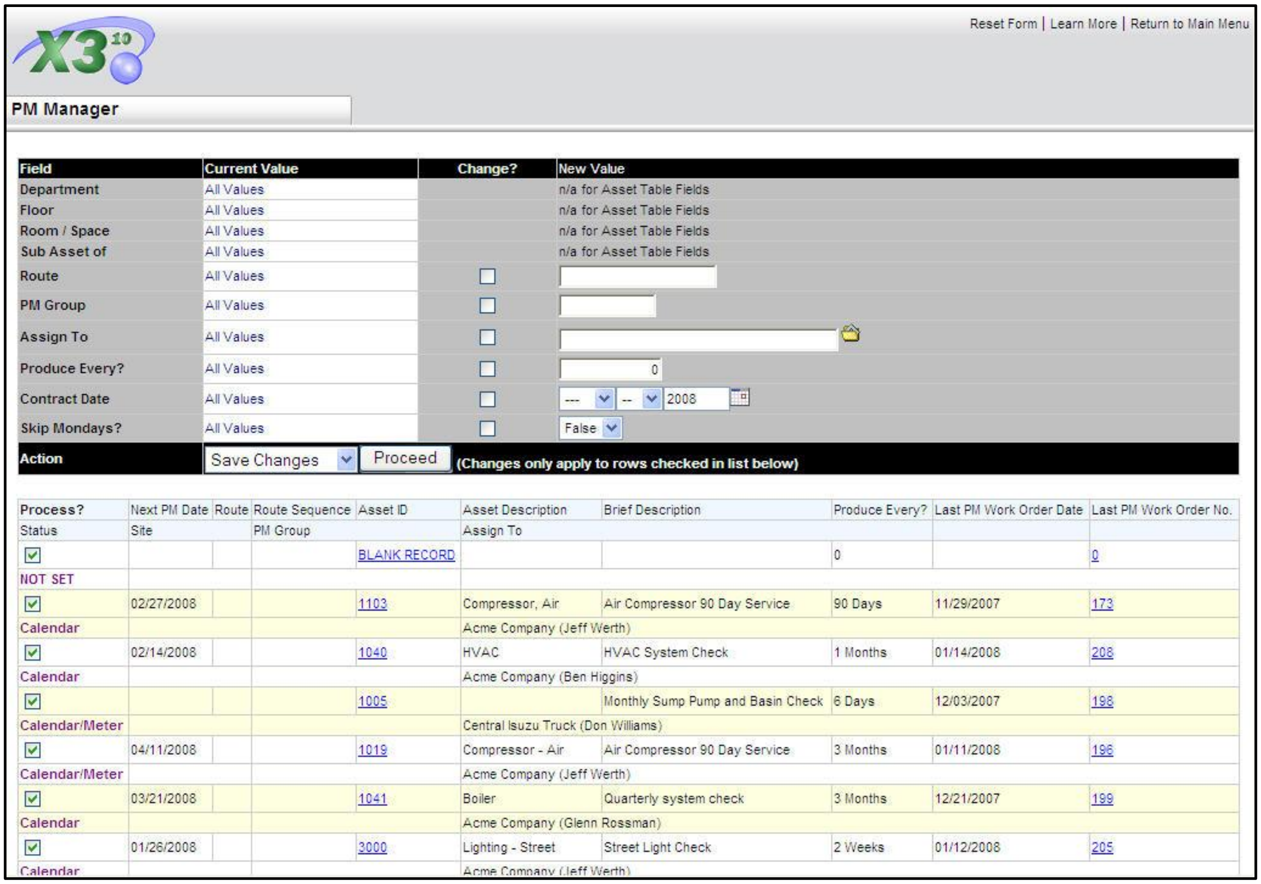
- The first step in PM management is to select a subset of all of the PM tasks in the system by choosing existing values from a series of fields that relate to either the Asset record or the PM Schedule.
- You can select to see a subset of records based on one or several of the fields by clicking the drop-down next to that field or by entering the value when there is no lookup.
- To view all values in a field, place a check in the ‘All?’ Column.
- Click ‘Preview’ to view the results of your selection.



Once you have selected a subset of PM tasks to display on screen, you can then update or change the PM values of the tasks related to any of the PM schedule fields. **You will not be able to modify any of the Asset fields**.

Change Values

- To update the PM values, select **Change Values** from the Action drop-down and click ‘**Proceed**.’
- Now the screen allows you to update or modify any fields from the PM schedule form.



- To update information on the records, simply click on the check boxes for those items in the center portion of the screen and select the appropriate values for the items to the right of the check boxes.

(*NOTE*: the Assign To lookup is pulling directly from the Maintenance Contacts and the other fields are also pulling directly from the values contained in the lookup for that field.)

- Only those items with check marks in the 'Process" box on the left-hand side of the screen will be updated. Deselect items in the list whose values you do not want to change by clicking on the check box to remove the checkmark.
- After making the selections, click 'Proceed.' The screen will indicate that the changes have been made.

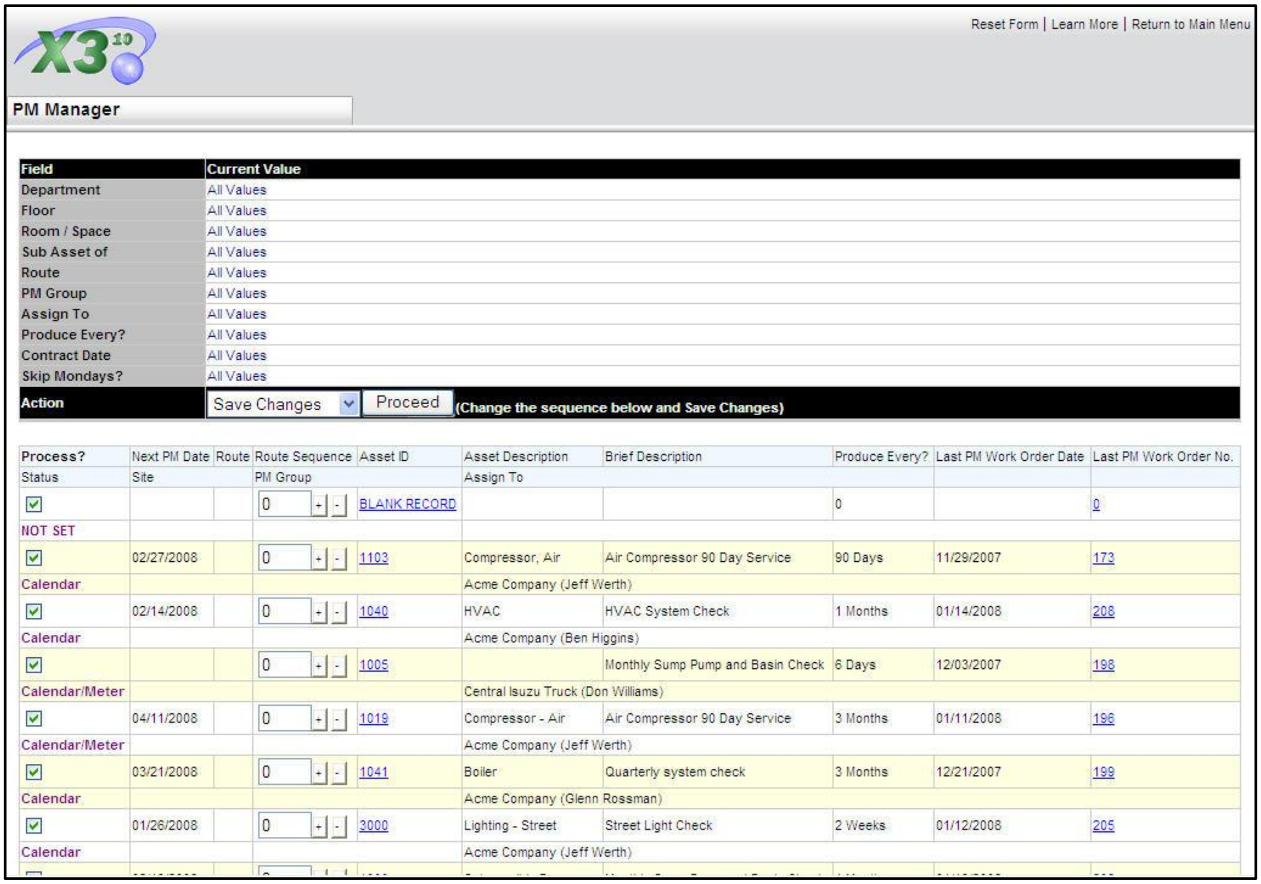
Adjust Next PM Dates

The PM Manager screen also enables you to select a group of PM Schedules and make adjustments to their 'Next PM Date'. This is a useful tool both for adjusting the Next PM Date and for establishing the initial PM Date for newly created PM Schedules. You can use the PM Group field as the criteria to make this adjustment or you can choose other fields from the PM Schedule or the Asset.

- Select a group of PM schedules to modify using the PM Manager filter criteria. You can choose to use only the PM Group field or you can use any other combination of fields on which to base your adjustment.
- Select the Action to 'Adjust Next PM Dates' and click '**Proceed.**'
- In the '**Adjust Next PM**' section on the form, you can indicate either a **+** or **–** before the number and then select Days, Weeks, or Months. For example, you might want to adjust 1 Week ahead or -3 days. You can also select 'Today' as an option to change the 'Next PM' date to today's date. Remove the checkmark from any items in the list that you don't want to modify. Click 'Proceed'.

Managing the Route Sequence:

For those eMaint clients who need to define PM's with Routes and then manage the Routes that are established, this feature will assist in that process. Each PM Schedule screen lets you indicate the PM Route and the sequence number for the Route. When you have the Route and the Route Sequence defined on a PM Schedule, you then have the ability to manage the defined Routes that have been established in the system using the Route Sequencer option.



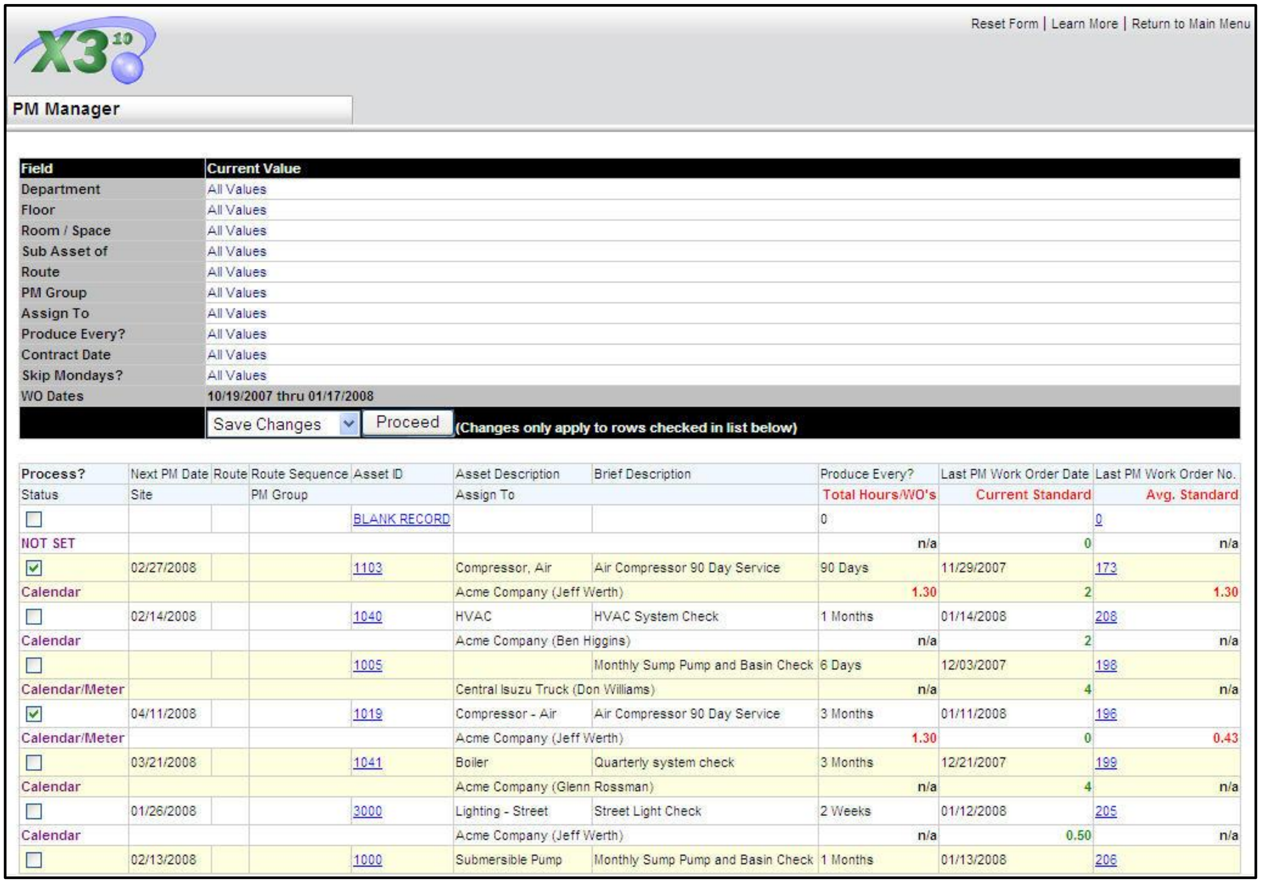
The screen enables you to define the sequence of the selected route.

- Select Route Sequencer from the Action list. Click 'Proceed.' The screen displays to let you define the Sequence number for each item in the list.
- Enter the sequence number either by typing it into the box or clicking the + sign. After you have entered the sequence numbers as desired, click 'Proceed' to save changes.

Update Standard Times

Update Standard Times re-calculates the estimated hours on the PM schedules to more accurately reflect the actual time it takes to complete the work.

Once you have used the filter to choose the group of PM schedules you wish to manage, you pick a date range upon which to base the recalculation. In the 'Total Hours/WO's' field, the system will show you the amount of time charged to the work orders and the total number of work orders produced by this PM schedule. The 'Current Standard' field displays the 'Est. Hours' field value on the PM schedule. The 'Average Standard' is the new estimated time based on the average of those work hours across the total work orders. When you click proceed, the new estimated hours will be placed on the PM schedule.



Reset Form | Learn More | Return to Main Menu

PM Manager

Field	Current Value
Department	All Values
Floor	All Values
Room / Space	All Values
Sub Asset of	All Values
Route	All Values
PM Group	All Values
Assign To	All Values
Produce Every?	All Values
Contract Date	All Values
Skip Mondays?	All Values
WO Dates	10/19/2007 thru 01/17/2008
	Save Changes Proceed (Changes only apply to rows checked in list below)

Process?	Next PM Date	Route	Route Sequence	Asset ID	Asset Description	Brief Description	Produce Every?	Last PM Work Order Date	Last PM Work Order No.
Status	Site		PM Group		Assign To		Total Hours/WO's	Current Standard	Avg. Standard
☐				BLANK RECORD			0		0
NOT SET							n/a	0	n/a
☑	02/27/2008			1103	Compressor, Air	Air Compressor 90 Day Service	90 Days	11/29/2007	173
Calendar					Acme Company (Jeff Werth)		1.30	2	1.30
☐	02/14/2008			1040	HVAC	HVAC System Check	1 Months	01/14/2008	208
Calendar					Acme Company (Ben Higgins)		n/a	2	n/a
☐				1005		Monthly Sump Pump and Basin Check	6 Days	12/03/2007	198
Calendar/Meter					Central Isuzu Truck (Don Williams)		n/a	4	n/a
☑	04/11/2008			1019	Compressor - Air	Air Compressor 90 Day Service	3 Months	01/11/2008	196
Calendar/Meter					Acme Company (Jeff Werth)		1.30	0	0.43
☐	03/21/2008			1041	Boiler	Quarterly system check	3 Months	12/21/2007	199
Calendar					Acme Company (Glenn Rossman)		n/a	4	n/a
☐	01/26/2008			3000	Lighting - Street	Street Light Check	2 Weeks	01/12/2008	205
Calendar					Acme Company (Jeff Werth)		n/a	0.50	n/a
☐	02/13/2008			1000	Submersible Pump	Monthly Sump Pump and Basin Check	1 Months	01/13/2008	206

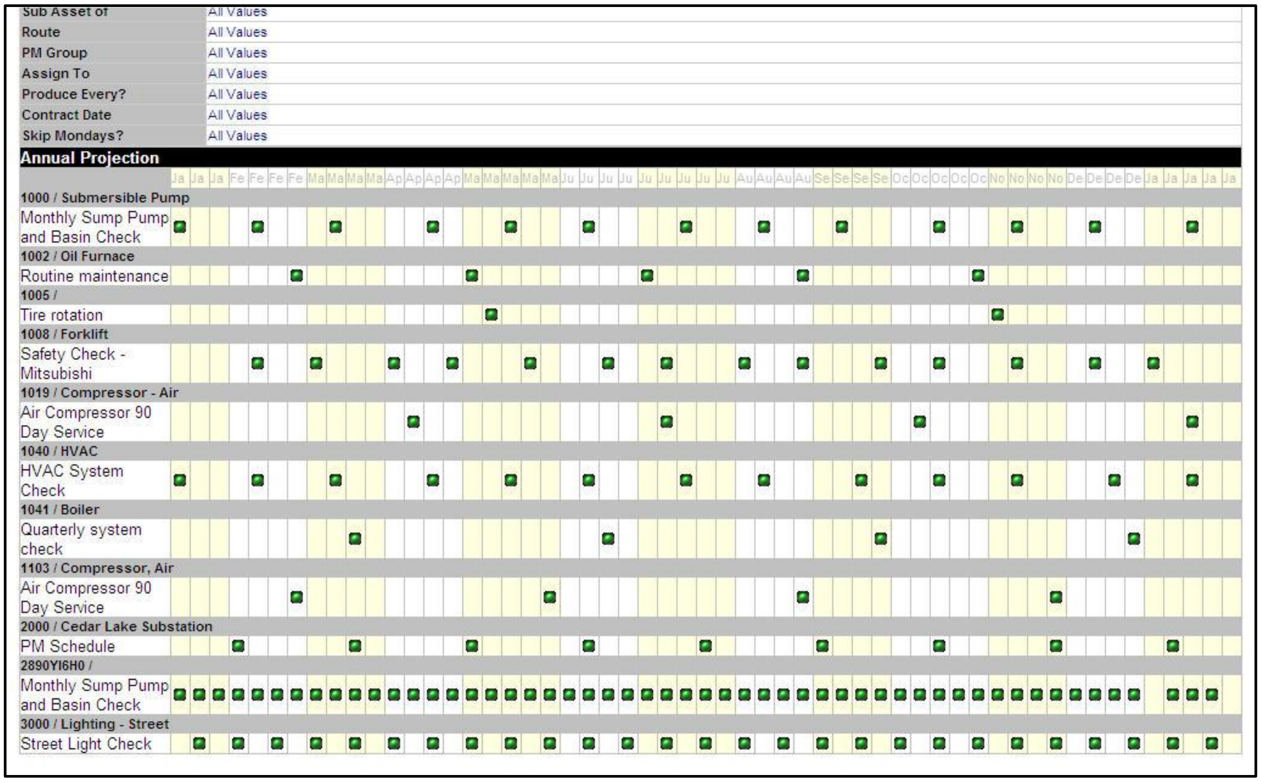
NOTE: It is recommended that you only perform this operation once a year.

Annual PM Projection

This option plots a projection of a group of PM schedules for the year on a calendar so that you can visualize your upcoming work. For this feature to work you must have your PM schedules configured as follows:

- 'On Calendar' must be set to 'True.'
- Meters must have a daily average entered.

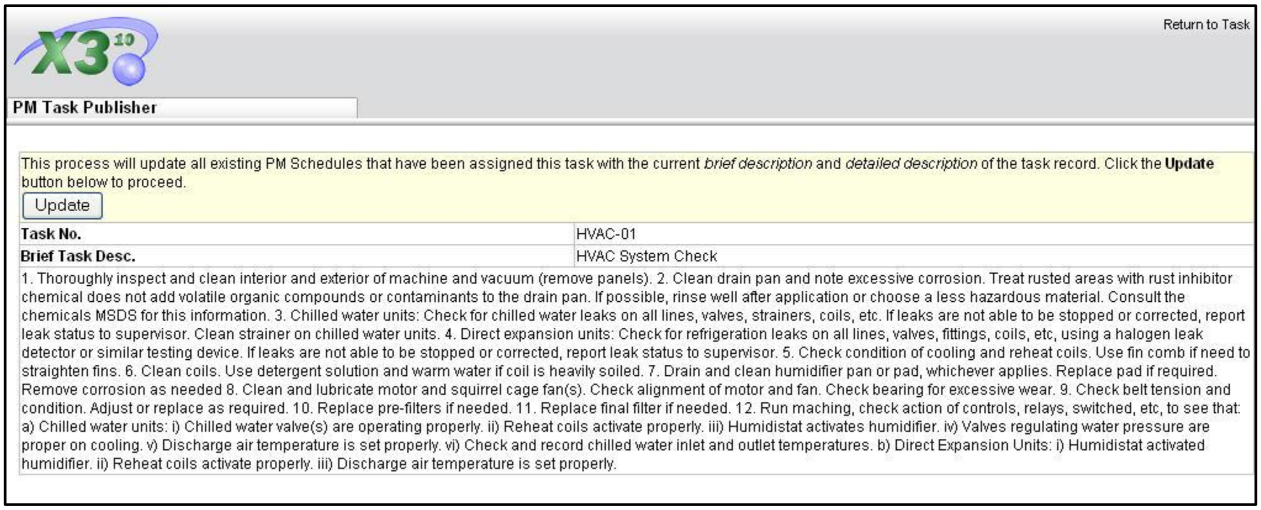
On the PM Manger, use the filters to choose the PM schedules you wish to see. When you select 'Annual PM Projection' from the drop down box, you will immediately see a calendar which shows the weeks of the months for the coming year across the top and a listing of the PM schedules on the left. The projections will be listed by the asset to which the schedules have been assigned. There will be a dot in the week slot across from the task if that PM schedule is projected to happen during the week.


Sub Asset of All Values
Route All Values
PM Group All Values
Assign To All Values
Produce Every? All Values
Contract Date All Values
Skip Mondays? All Values
Annual Projection
1000 / Submersible Pump
Monthly Sump Pump and Basin Check
1002 / Oil Furnace
Routine maintenance
1005 /
Tire rotation
1008 / Forklift
Safety Check - Mitsubishi
1019 / Compressor - Air
Air Compressor 90 Day Service
1040 / HVAC
HVAC System Check
1041 / Boiler
Quarterly system check
1103 / Compressor, Air
Air Compressor 90 Day Service
2000 / Cedar Lake Substation
PM Schedule
2890YI6H0 /
Monthly Sump Pump and Basin Check
3000 / Lighting - Street
Street Light Check

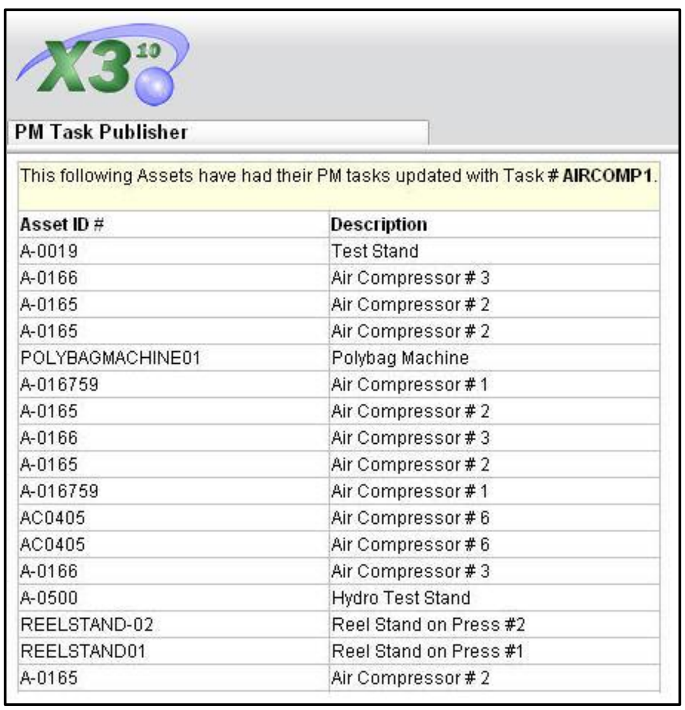
PM Task Changes

The other PM management tool available to you is located on the PM Task detail view. The 'Publish' link allows you to publish changes you make to PM tasks to all assets using that task on a PM schedule.

First click the 'Edit' link to make and save changes to the PM Task. Then click the 'Publish' link on the task you just edited. You will see a screen similar to the one below.



Clicking 'Update' will display a list of all assets which used that PM Task on a PM schedule and notify you that the task was updated to the change you just made.

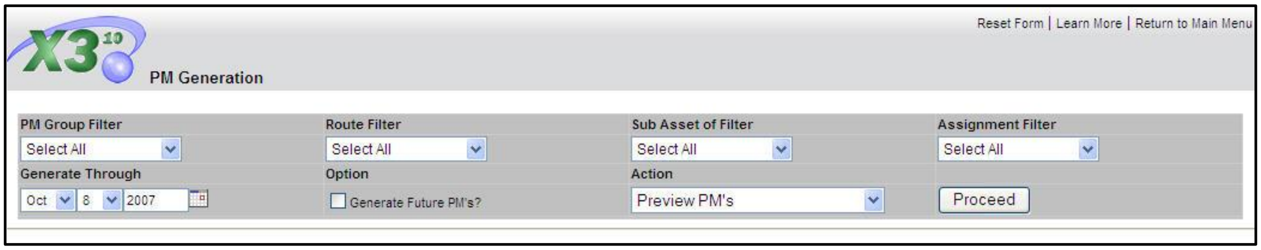


Asset ID #	Description
A-0019	Test Stand
A-0166	Air Compressor # 3
A-0165	Air Compressor # 2
A-0165	Air Compressor # 2
POLYBAGMACHINE01	Polybag Machine
A-016759	Air Compressor # 1
A-0165	Air Compressor # 2
A-0166	Air Compressor # 3
A-0165	Air Compressor # 2
A-016759	Air Compressor # 1
AC0405	Air Compressor # 6
AC0405	Air Compressor # 6
A-0166	Air Compressor # 3
A-0500	Hydro Test Stand
REELSTAND-02	Reel Stand on Press #2
REELSTAND01	Reel Stand on Press #1
A-0165	Air Compressor # 2

Generating PM Work Orders

There are two methods available for generating PM Work Orders: manual or automatic.

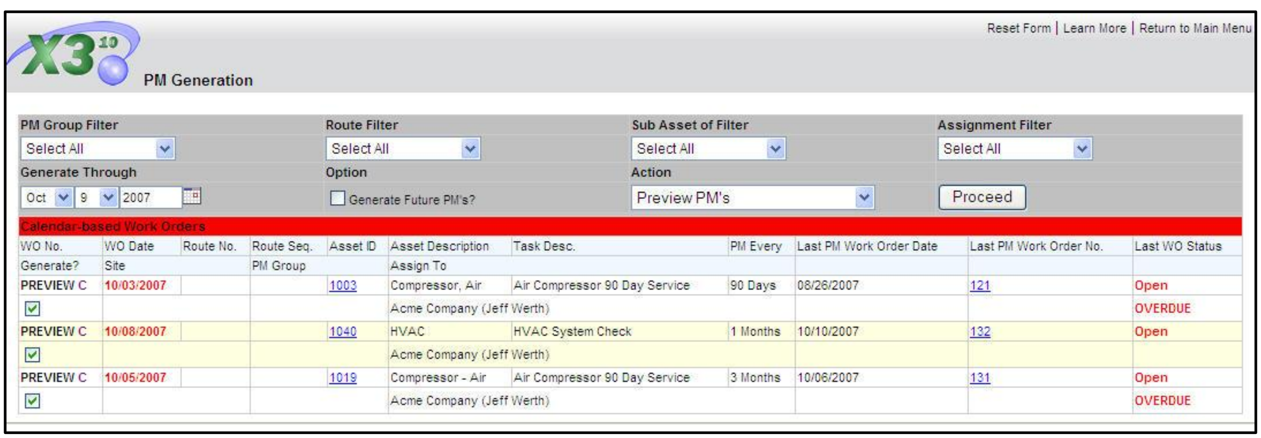
Manually Generating PMs



PM Work Orders are manually generated with the menu item called 'Generate PM Work Orders' or the 'Manually Generate' link on the individual PM schedules. When using 'Generate PM Work Orders' (shown above) indicate the date through which the PM's should be generated. It is optional to utilize any of the filters. To preview the PM's that are due to be generated through the date indicated, click 'Proceed.' The list of PM's to be generated will appear on screen.

Preview PM's

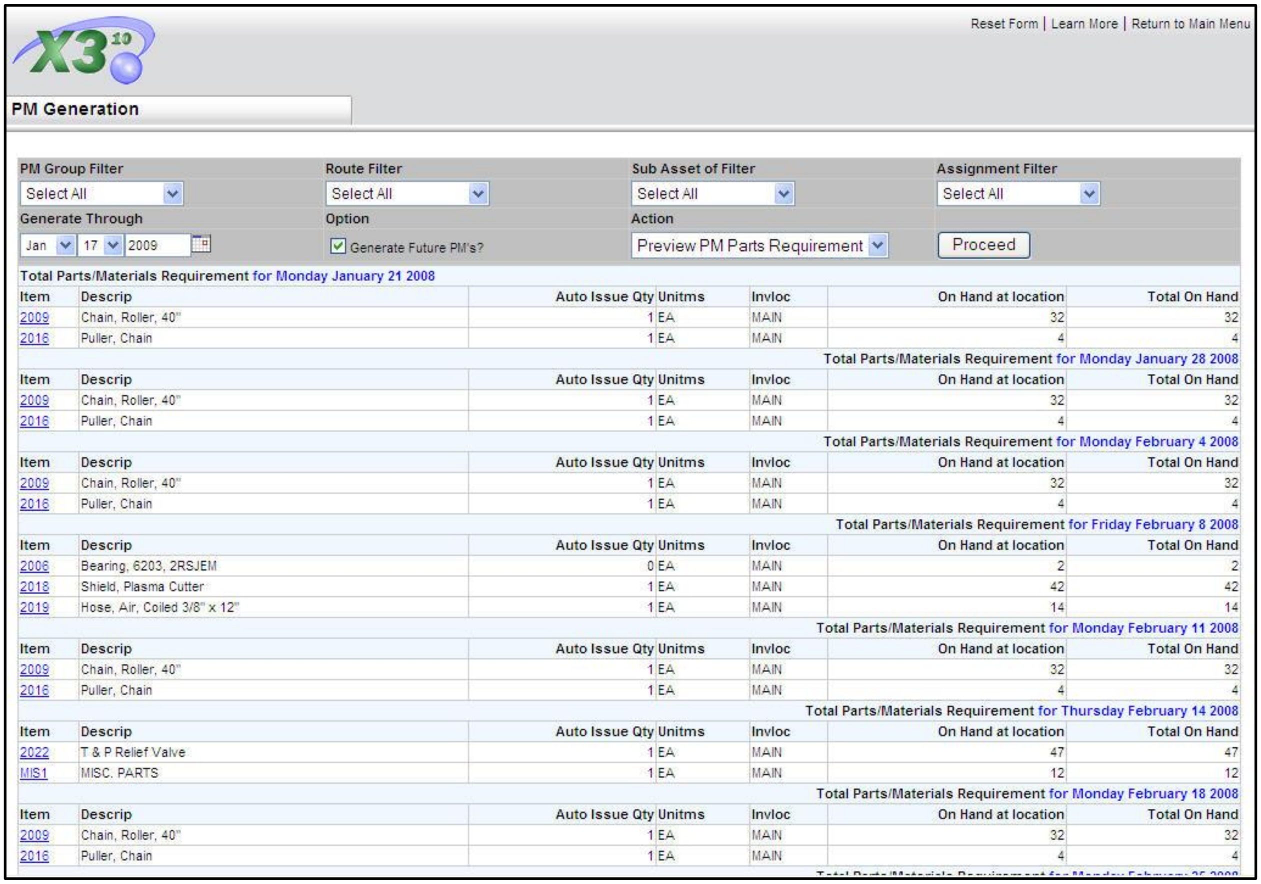
Indicate the date through which the PM's should be generated. To preview the PM's which are due to be generated through the date indicated, click 'Proceed.' The list of PM's to be generated will appear on screen.
When you select to Preview your PM's, the list that is displayed shows either a **C** or an **M** next to the Preview designation on the left side of the list. **C** indicates a calendar-generated PM; **M** indicates a meter generated PM.



Generating Future PM's – This option will enable PM's whose dates are in the future to be generated. For example, if you have a daily PM that is to be generated, and you indicate a 'Generate Through' date that is seven days from today's date, if you check this option, then seven PM Work Orders (one for each day) will be created; if you leave the option blank, only the single daily PM will be generated, based on the value of the Next PM Date field on that PM schedule.

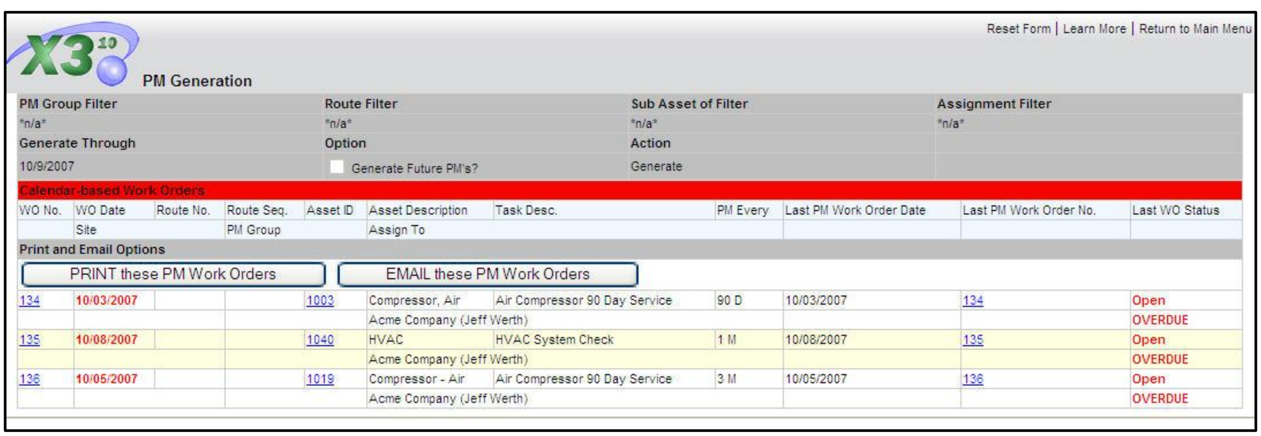
Preview PM Parts Requirements

This option allows you to see the parts you have associated with the PM tasks you have just previewed. Select the filter criteria for the PM's you would like to see, and instead of previewing them, click to view the parts requirement. The list shows the part number (with hyperlink), description, PM quantity associated with the PM schedule, and the quantity on hand. With this information, you can plot your purchasing strategy.

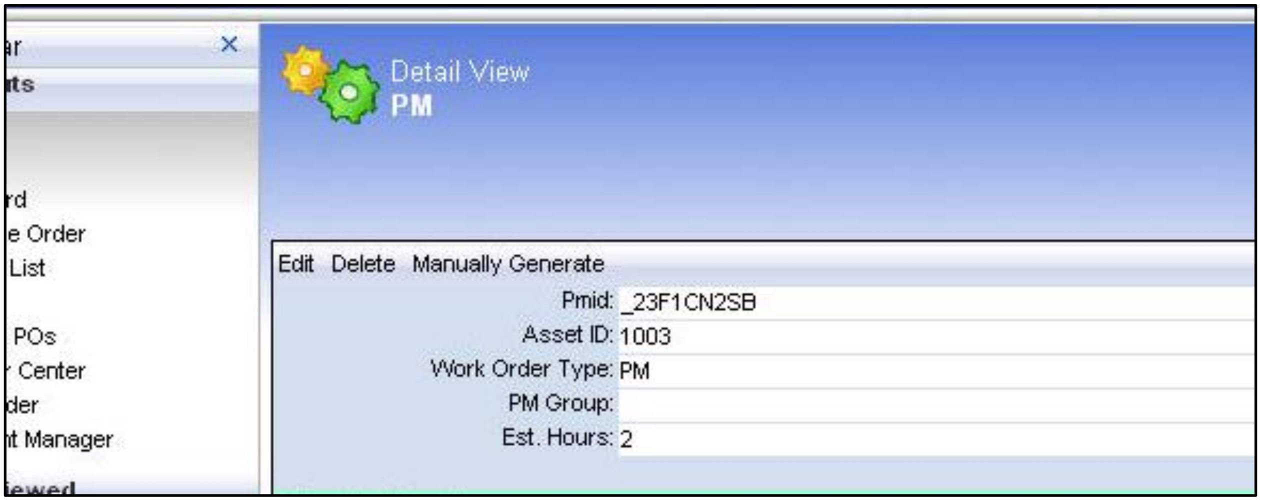


Generate PM's

To generate the PM's, switch the Action to 'Generate' and click 'Proceed.' The resulting PM work orders will be listed with the Work Order numbers assigned. Above the listed work orders are links to either "PRINT these PM Work Orders' or 'EMAIL these PM Work Orders.' Select either option by clicking either link. The PM work orders that appear on the list are now available in the Work Order Center. To see the detail of one of the work orders on the list, click on the individual work order number; the work order will display in a new screen.

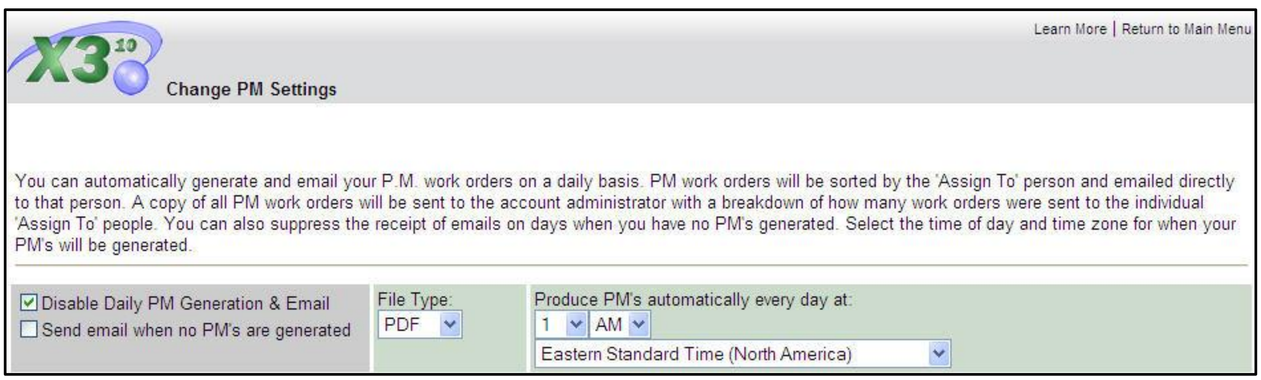


If you click 'Manually Generate' from the PM schedule itself (see picture below), you will immediately be shown the new work order in a separate window. You can print or email from that screen.



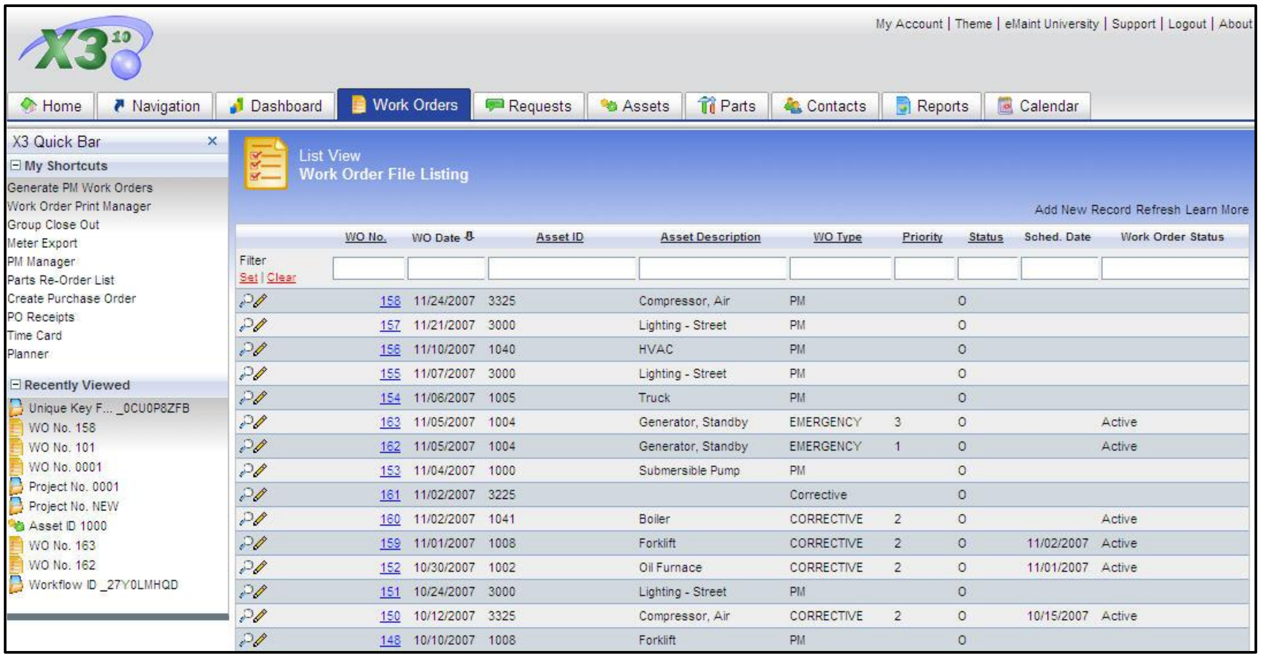
Automatically Generating PM's

In addition to generating PM's manually, there is an option to set the account to automatically generate PM Work Orders and email a PDF attachment of the generated work orders to the system administrator, along with copies of the work orders emailed to the Assign To and Perform Form contacts associated with the PM's. Access PM Email Settings by going to the Administration section of the Main Menu and selecting the option 'Change Your Settings.'



Work Order Center

Once a PM work order has been generated, it drops into the Work order Center for viewing and management. All work orders, regardless of whether they are generated from the PM schedules or approved through the request form, will reside in the Work Order Center.



Filtering and sorting the work order list

The sort and filter capabilities of the list view allow for quick retrieval of work orders. The text boxes under the column header line are used to filter the list for that field.

The list will match data from the work orders with the text entered in the textbox. Only the length of the entered text will be matched with the data from the work order. For example, entering 'J' in the 'Assign To' column would pull up all work orders that started with 'J' regardless of the last name or any other text after 'J'. For any filter to be set, press the 'Apply' link located on the left side of the line.

To sort the list, click on the header field to sort on that field. To locate information on the page, press Ctrl+F to bring up the standard 'Find' dialog box. This will help in locating text contained on the page itself, so it is important to use the filter functions to narrow the list as much as possible. Keeping simple filters in place such as an 'O' for the Work Order Status will always display that group of items when the list view is opened. If no filter is used, the number of work orders displayed per page is controlled by the 'Form Options' link at the bottom of the page. If a filter is active, all work orders that match will be displayed on the same page regardless of the number found.

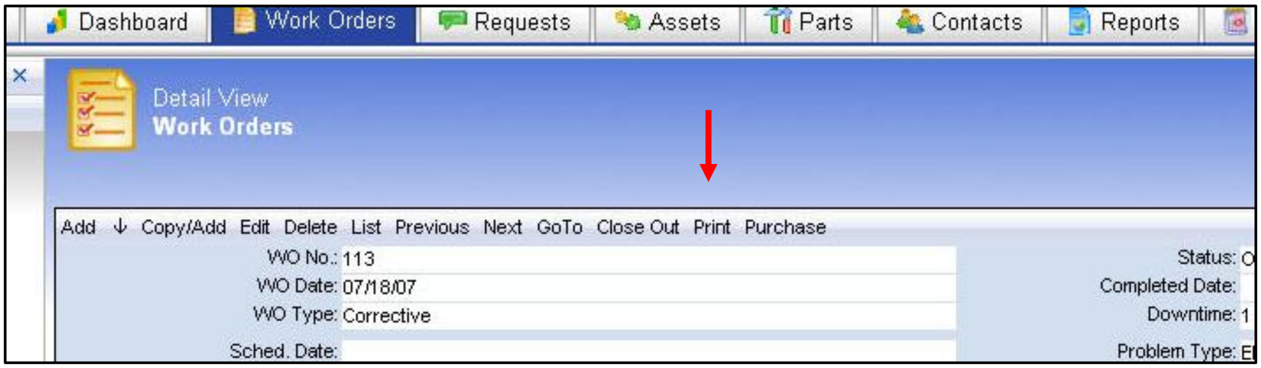
NOTE: The System Administration course provides information on applying a variety of different types of filters to view the subset of work orders that you are seeking.

Printing Work Orders

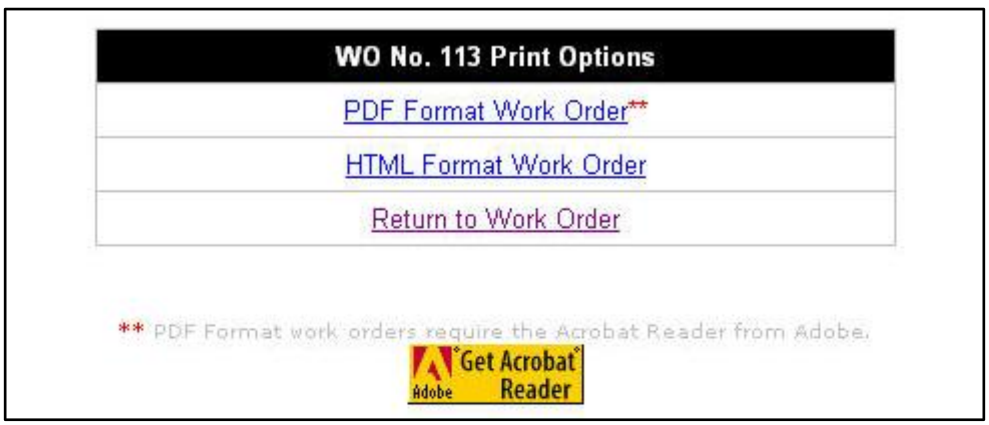
In eMaint you can either print a single work order from the detail screen of the work order or print a filtered group of work orders by selecting that option from the Work Center.

Printing a single work order

To print a work order from the detail view, click the 'Print' link on the menu bar at the top of the work order.



The next screen that appears is a screen with options to view the printable work order or return to the detail view of the work order.

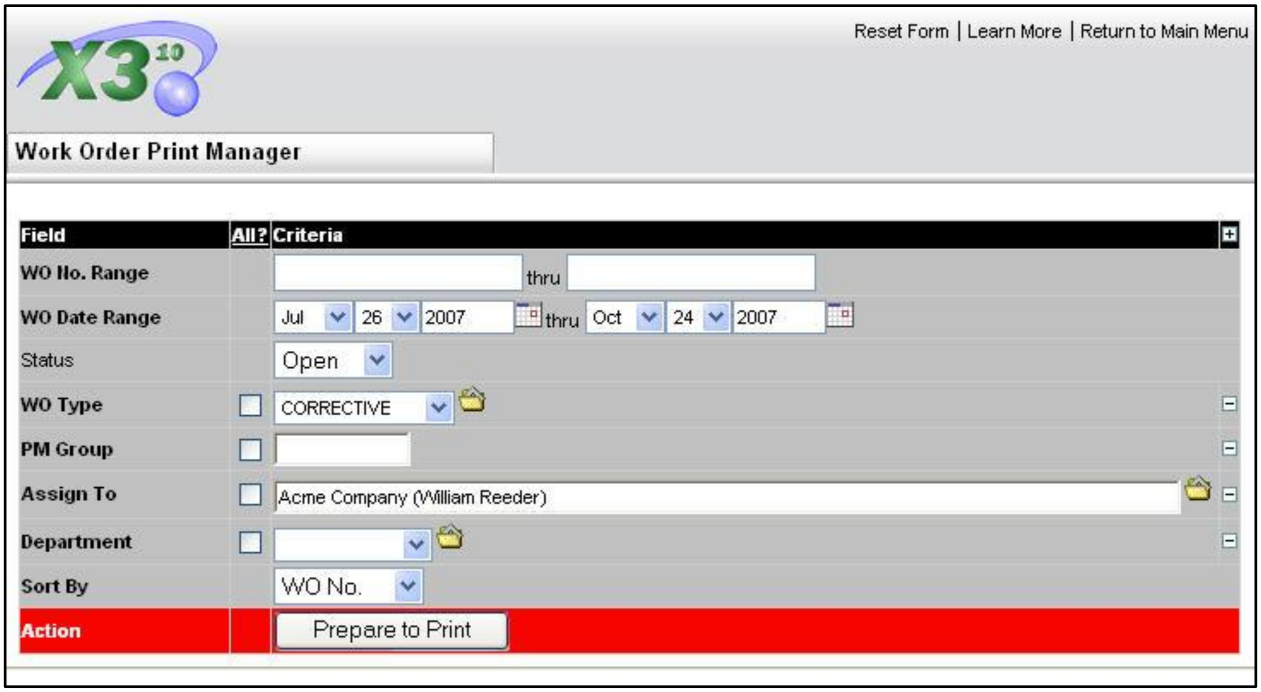


Click the option to view the printable work order in the format you wish. The work order will appear on screen in either Adobe Acrobat PDF or HTML format. There is a printer icon button on both screens. Clicking it will enable you to print the work order.

Printing multiple work orders

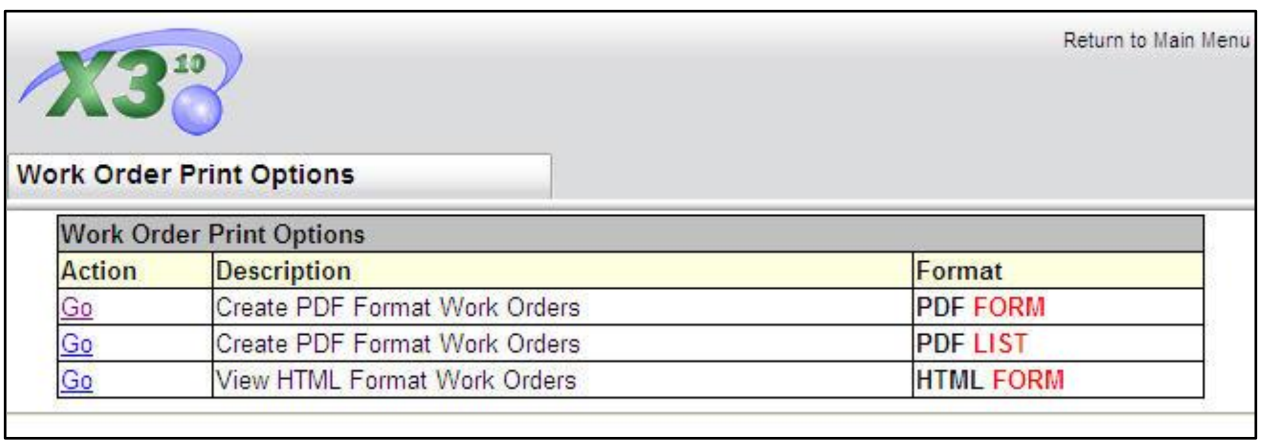
Work Order Print Manager is a feature which allows you to print multiple work orders using various filters and sorts.

- Select 'Work Order Print Manager' from within the Work Center.
- Any field by which you would normally filter your work orders can be made available on this screen.
- This screen is managed in the same manner as the PM Manager. (See page 13 for a full discussion.)
- You may choose as many filters as you would like.
- On a field which has a box in the 'All' column, you must check the box in order to turn off the filter for that field and view all available information.



- Once you have selected your filters, you are ready to click “Prepare to Print”. This button will search the Work Order Center for work orders which fit your set of criteria. Once it is finished, it will indicate how many records there are to print.
- If your search returned 0 results, click the ‘Reset Form’ link in the right-hand corner to try a different set of criteria.

You will then ‘Proceed to Print.’ At this screen, you can choose the format for printing.



Action	Description	Format
Go	Create PDF Format Work Orders	PDF FORM
Go	Create PDF Format Work Orders	PDF LIST
Go	View HTML Format Work Orders	HTML FORM

- Clicking ‘Go’ will give you a print icon which you will click for the preview of the work orders.

The option to print a PDF list consolidates all the work orders into a list which allows the user to check off a box when a task is completed. This format is especially helpful when printing PM tasks where the Brief Description of the task contains all task information.

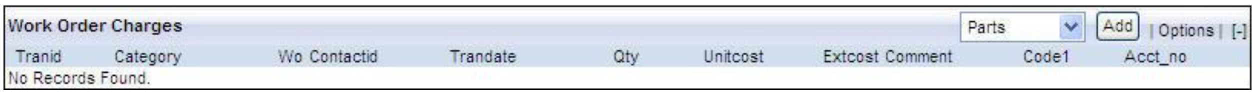
Tracking Charges Against Work Orders

Located beneath each work order (detail view) is the section to add charges to the work order. Once charges are recorded against a work order, those charges will appear at the bottom of the work order record in the detail view.

NOTE: Work orders with charges can not be deleted.

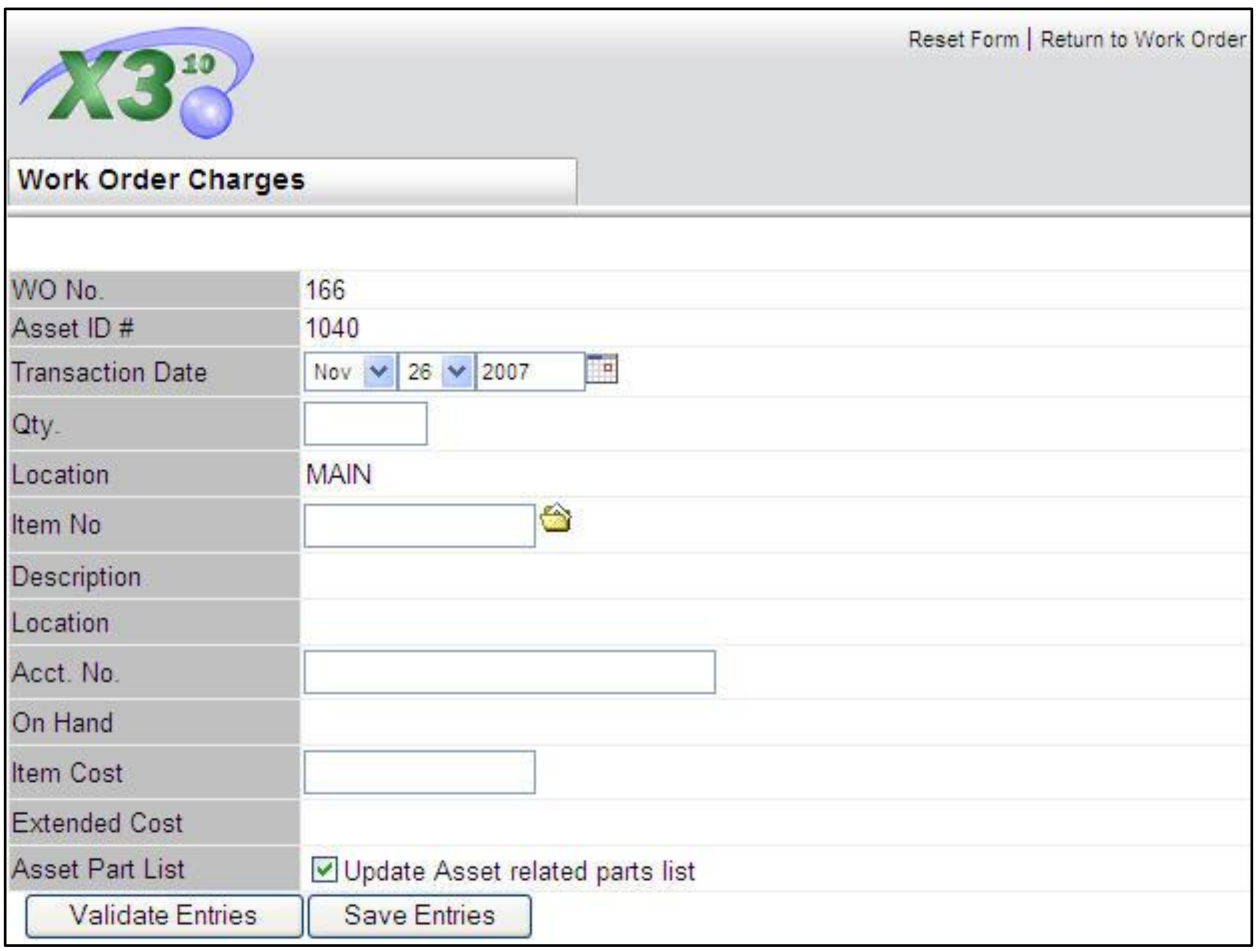
Charges against a work order can be defined in several ways: Parts, Labor, and a general Misc. charge. Each type has its own form for submitting charges. The charges are grouped and subtotaled by category.

Select the type of charge to be added. Then click the 'Add Charges' button.



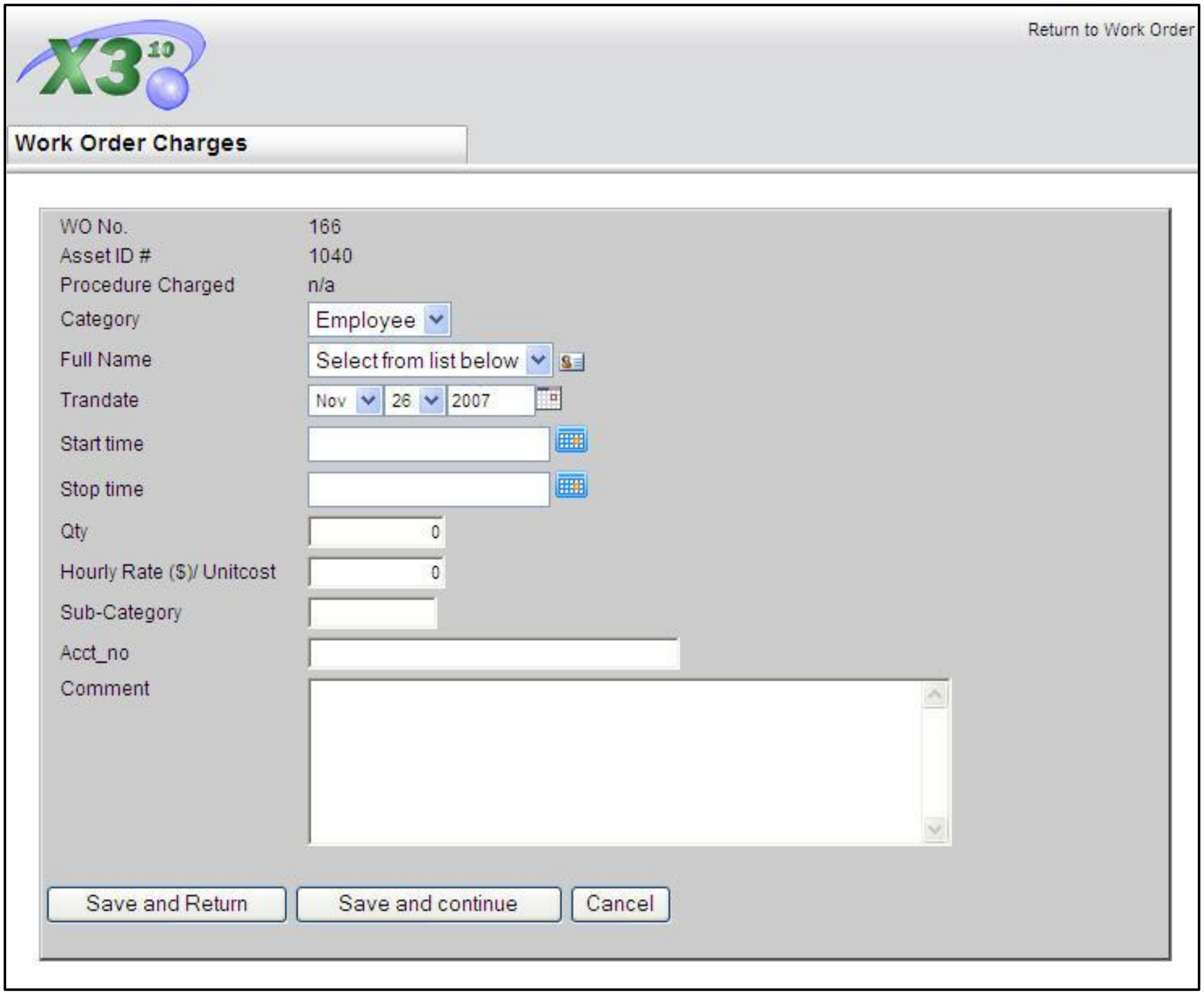
Parts

A Parts charge uses the Inventory file to validate the item number and pull the related information into the form. Unit cost and available current on-hand are pulled from the Inventory file. The quantity used cannot exceed the current on-hand; the transaction will only be accepted if the on-hand value is greater than or equal to the quantity used.



Labor

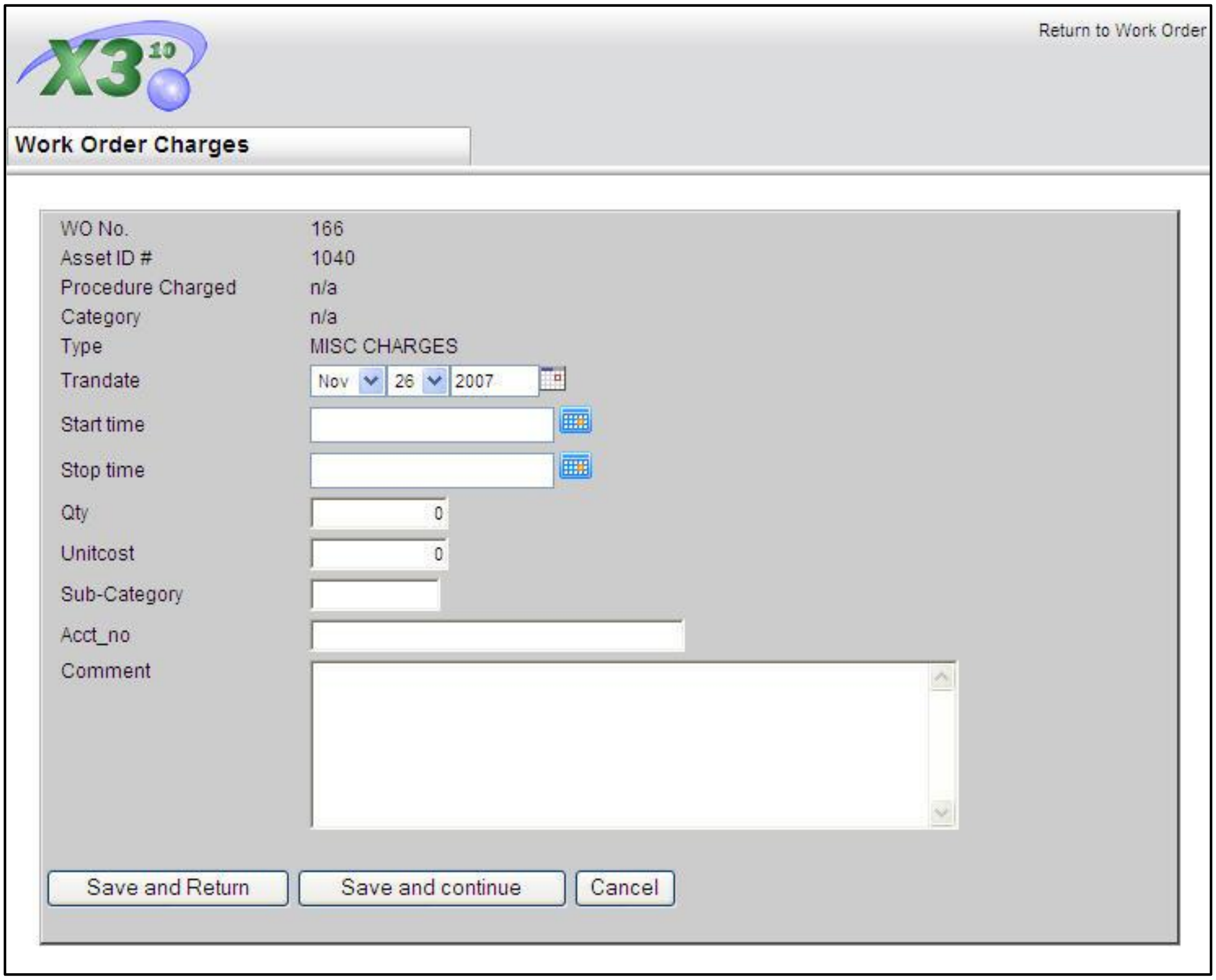
Labor charges use the Maintenance Contacts file to compile the listing of available contacts.



- First choose the Labor Category from the drop-down list. The list will contain all of the categories available in your Maintenance Contact list.
- You then choose the contact from the Contact Name list which now has been filtered to contain only those Maintenance Contacts which match the category chosen. Rate information will pull over from the contact record if present. (Click the contact icon to the right of the drop-down to view basic contact information for the chosen contact.)
- Enter the hours worked by the contact.
- Enter any additional information you wish on the screen.

Misc

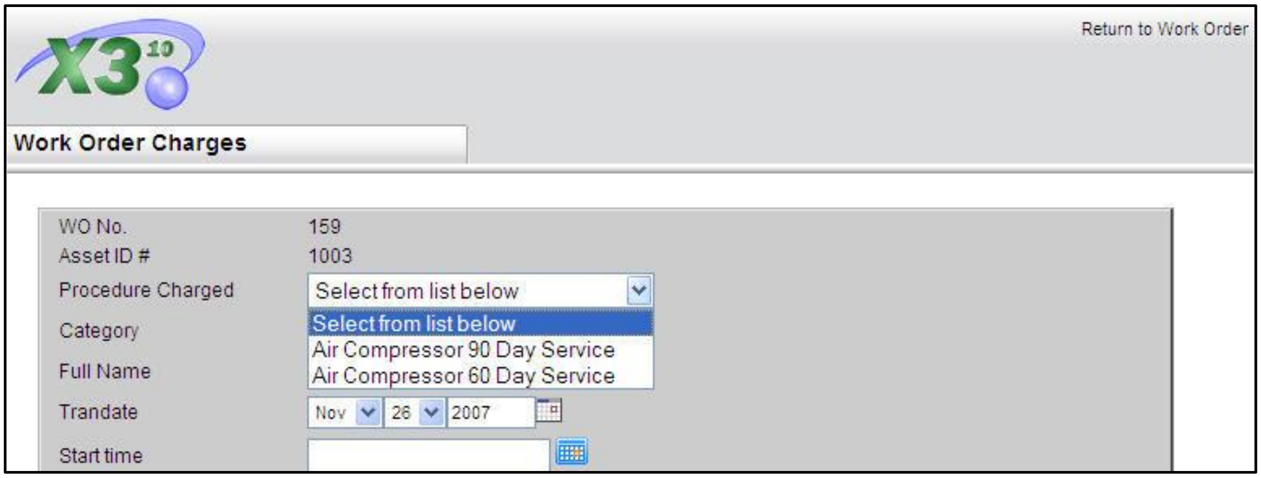
Misc. Charges can be any charge that does not fit into the categories defined above. Unit cost, quantity, and comments are entered for each misc. cost item. These charges are not related to any other table.



Tip: If you are not using eMaint to track your parts inventory but still want to track parts charges on work orders, you can use the Misc. Charges to track the parts charges. Use the comments field on the Misc. charge screen to describe the part used; and the comment will appear on the detail charges view.

Charges Against Work Procedures

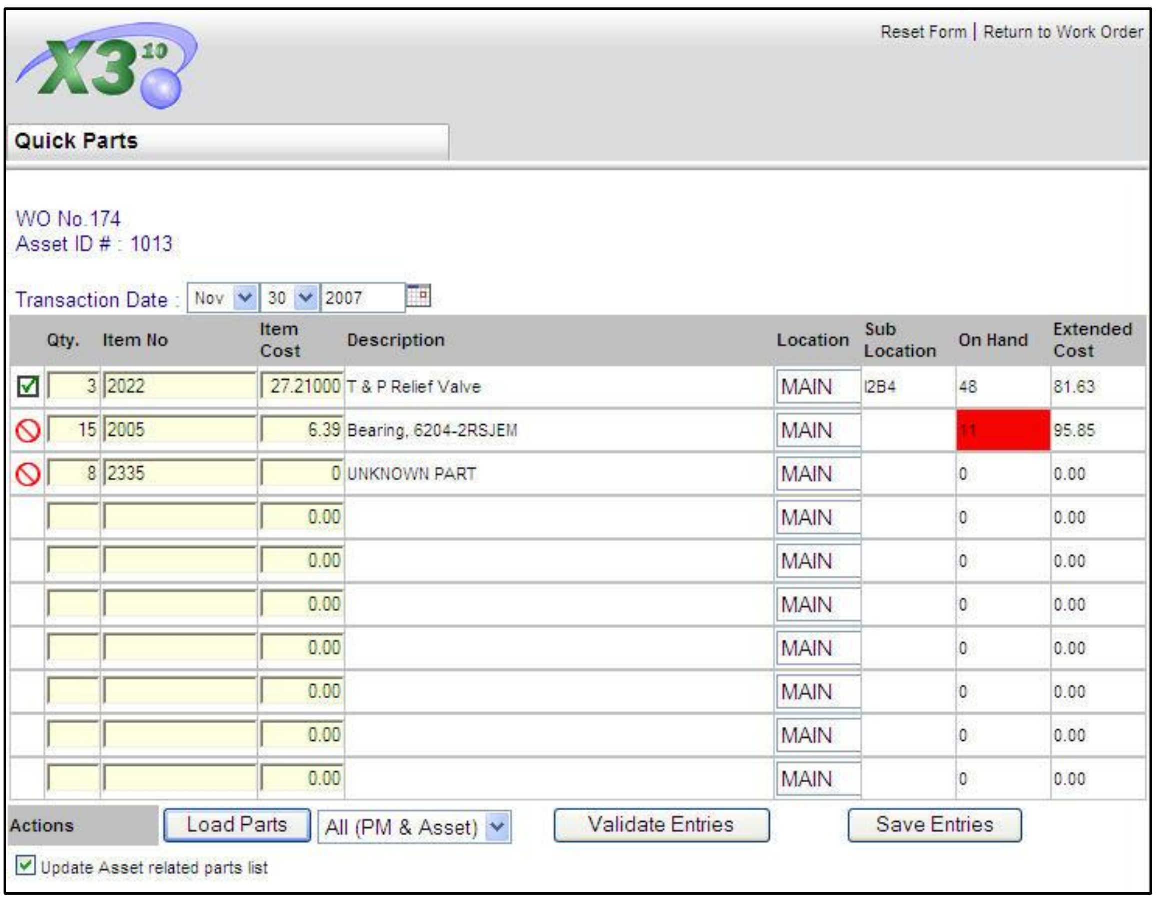
You can track charges against work procedures as well. If the work order has procedures listed in the Work Procedures section, then the task description from those procedures will be available on the charge out screen in a drop-down box. Choose a procedure from the drop-down if you wish to have the charge register against that procedure. Charging to a work procedure is an *option* and not mandatory.



The screen below shows a work order which has both a straight charge and a charge against a work procedure.

Quick Parts

Quick Parts charge pulls any related parts from the asset for which the work order was created and/or parts related to the PM schedule from which the work order was generated. You have the option of pulling the parts from both areas or from only the assets or only the PM. At this point you can change the quantity to accurately reflect what was used on the job. Save the entries to charge out the parts.



NOTE: Quick Parts does not have an option to charge to a work procedure. If you must charge to a procedure, use the standard Parts charge option.

Viewing and Editing the Charges on a Work Order

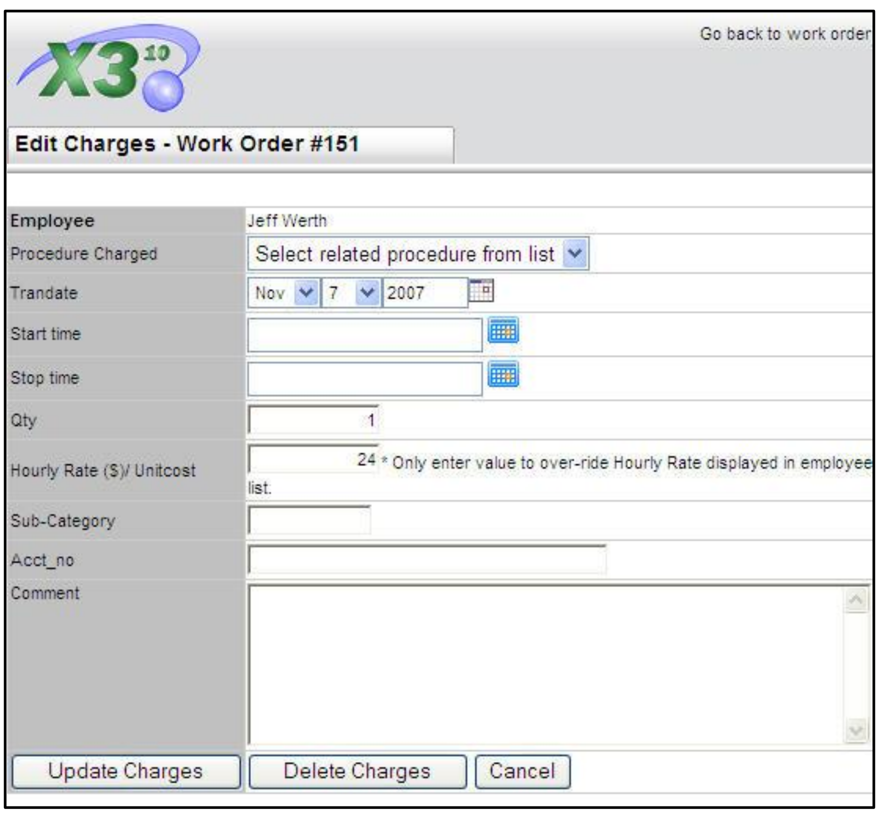
The charges that have been submitted are sorted and subtotaled by work procedure and category under the detail on the Work Order Center. The pencil graphic allows you to edit or remove the charge.

Work Order Charges — Quick Parts | Add | Options | [-]

	Tranid	Category	Wo	Contactid	Trandate	Qty	Unitcost	Extcost	Comment
Employee									
GoTo	_28J0UI42Y	Employee	163.00	1001	11/26/2007	1.20	35.00	42.00	
Sub						**1.20**		**42.00**	
Parts									
GoTo	_28J0UI087	Parts	163.00	2016	11/26/2007	1.00	17.30	17.30	
GoTo	_28J0UIOAD	Parts	163.00	2045	11/26/2007	9.00	19.45	175.05	
GoTo	_28J0UIOBO	Parts	163.00	2020	11/26/2007	2.00	12.99	25.98	
Sub						**12.00**		**218.33**	
Purchase									
GoTo	_28J0UUS5Q	Purchase	163.00	2020	11/26/2007	1.00	12.99	12.99	Hose, Air, Coiled 1/4" x 12"
GoTo	_28J0UUS6K	Purchase	163.00	2122	11/26/2007	1.00	27.21	27.21	T & P Relief Valve
GoTo	_28J0UUS6Z	Purchase	163.00	2006	11/26/2007	2.00	5.49	10.98	Bearing, 6203, 2RSJEM
Sub						**4.00**		**51.18**	
Total						**17.20**		**311.51**	

Editing or Removing Charges

To edit or remove a charge that has been applied to a work order, click the pencil icon that is next to the charge in question. This will display the edit screen.

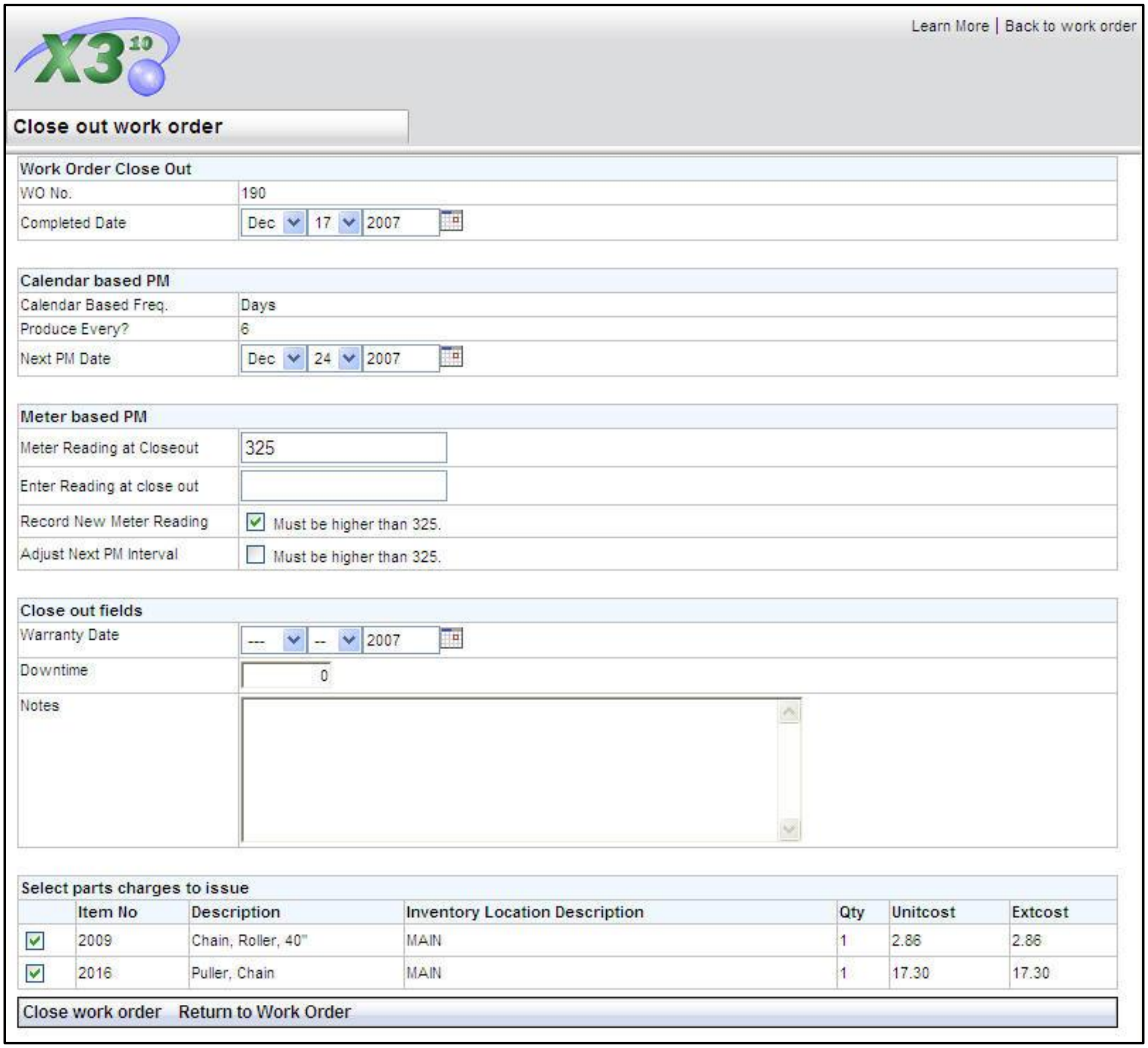


In this example, it is an employee charge that is to be edited. To delete the charge altogether, click the 'Delete Charges' button. To edit the transaction date, hours (or quantity) or rate, make the appropriate edits and click the 'Update Charges' button. You cannot edit the employee name. If you do not intend to edit this entry, click 'Cancel Changes.'

NOTE: If you recorded a charge for Employee A, but intended to record it for Employee B instead, you must first delete the charge for the incorrect employee entry and then add a new charge for the correct employee.

Closing PM Work Orders

The PM close out screen (seen below) is divided into 4 sections: Work Order Close Out, Calendar Based PM, meter choices, and Close out fields.



Calendar Based PM (will only show when PM is based on calendar)

The calendar frequency of the PM will be listed here. The next PM date is shown if the PM is a static frequency. Select a new date if you wish to change it. Shadow based PM's will indicate that the Next PM Date will be determined by the close out date.

Meter Options (will only show if work order Asset records a meter)

Here you can enter a new meter reading upon closing the work order. If the meter is a running meter, the message "Must be higher than X" will show next to the box. If it is a totals meter, there will be no message. If the asset has multiple meters, you will have the opportunity to pick which meter type is being entered from a drop-down. If no number is entered here, the system will simply close the work order without adding a meter reading.

The bottom section (shown above) called 'Select parts charges to issue' shows PM Parts which were set with an Auto Issue Qty. These may be deselected; but if checked, they will be charged to the work order upon close.

Shadow Frequency

Meter based PM	
Meter Reading at Closeout	0
Enter Reading at close out	
Record New Meter Reading	☑ Must be higher than 0.
Adjust Next PM Interval	☐ Must be higher than 0.

Shadow based PM's automatically adjust the next PM interval based on the meter reading at close out. The meter reading which shows on the screen will be used as the base for the next PM work order unless you add a reading before you close the work order. If you add a meter reading, that reading will be incorporated into the meter to-date and used as the base for the next PM's generation.

Because the system automatically adjusts the next PM interval on shadow based meters, there is no need to check the box 'Adjust Next PM Interval.'

Static Frequency

Here are examples that explain the options available at close out for static meters.

1) You have completed the PM work and simply want to record a new meter reading.

Meter based PM	
Meter Reading at Closeout	105
Enter Reading at close out	125
Record New Meter Reading	☑ Must be higher than 105.
Adjust Next PM Interval	☐ Must be higher than 105.

- Leave the box "Record a New Meter Reading" checked and enter the new reading (in this case 125).
- The system will indicate what the entry must be greater than (if it is a running meter). This line's value shows the last meter reading entered on this asset. In this case, 105 shows because the PM was generated at 105 HOURS.

Result: 'Last Meter Reading Entry' field on schedule is updated and a new meter is entered.

Meter Readings Add Options Learn More

Filter: Date Taken from Oct 16 2006 to Nov 16 2006 Filter Show All

	Tran. ID.	Meter Type	Date Taken	Taken By	Meter Reading
MISC.					
GoTo	_1Y20XBC28	MISC.	11/16/2006		105.00
GoTo	_1Y20XDUQJ	MISC.	11/16/2006	PLANDEMO	125.00

PM Schedule Add Options Copy PM Sched

	Calendar Based Freq.	Asset ID	Produce Every?	Calendar Freq Type	Next PM Date	Last PM Work Order Date	Last PM Work Order No.	Est. Hours	Assign To	PM Group	Route	Occurs Desc.	Produce PM Every	Meter To-Date	Last PM Produced At	Meter Freq. Type	Suppress PM (Meter)	Sup Rea
GoTo	N/A	COM2007	0.00	Static		11/16/2006	55088	0.00		METER		MISC.	100.00	125.00	105.00	Static	.F.	

2) You have completed the PM work and want to enter a new reading but the meter has advanced to such a point that you need to have the next PM schedule based off of the new reading instead of the reading when the PM was generated.

Meter based PM	
Meter Reading at Closeout	110
Enter Reading at close out	165
Record New Meter Reading	☑ Must be higher than 110.
Adjust Next PM Interval	☑ Must be higher than 110.

- Check both boxes.
- The meter entry must be greater than the “Record a New Meter Reading” value because you want to record a reading and also change the meter entry for the entry on which the next PM generation will be based.

Result: ‘Last PM Produced At’ & ‘Last Meter Reading Entry’ fields on schedule are updated along with a new meter reading being entered.

Meter Readings Add Options Learn More

Filter: Date Taken from Oct 16 2006 to Nov 16 2006 Filter Show All

	Tran. ID.	Meter Type	Date Taken	Taken By	Meter Reading
MISC.					
GoTo	_1Y20ZZBPU	MISC.	11/14/2006		110.00
GoTo	_1Y2101FFZ	MISC.	11/16/2006	PLANDEMO	165.00

PM Schedule Add Options Copy PM Schedule Learn More

	Produce Every?	Calendar Based Freq.	Calendar Freq Type	Next PM Date	Last PM Work Order Date	Last PM Work Order No.	Assign To	PM Group	Produce PM Every	Occurs Desc.	Last PM Produced At	Meter Freq. Type	Suppress Reason	Last Meter Reading Entry
GoTo	0.00	N/A	Static		11/16/2006	55091		METER	100.00	MISC.	165.00	Static		165.00

The pictures and the examples above refer to a running meter, but the options are available for totals as well. The same fields on the PM schedule will be updated, but you will not see values on the Close Out screen for values to be higher than a certain amount.

The screen below shows what the Close Out screen will look like when a TOTALS meter is involved. You still have the options you had with a RUNNING meter, but there will not be a display of "higher than" values since a Totals meter is not captured in the same manner as a Running meter.

Meter based PM	
Enter Reading at close out	
Record New Meter Reading	☑
Adjust Next PM Interval	☐

The picture below shows the result of recording a new reading of 20 and adjusting the interval on a TOTALS meter. The 'Last PM Produced At' field shows the new amount and there is a new meter reading.

GoTo	_1RO10M1YI	HOURS	03/31/2006	POREQ		20.00

PM Schedule Add Options Copy PM Schedule Learn More

	Calendar Based Freq.	Next PM Date	Last PM Work Order Date	Last PM Work Order No.	Meter Type	Occurs Desc.	Produce PM Every	Last Meter Reading Entry	Last Meter Reading Date	PM Group	Last PM Produced At	Assign To
GoTo	N/A		03/31/2006	966	TOTALS	HOURS	100.00	125.00	03/31/2006	MT2	125.00	

PM work orders can *NOT* be reopened once closed. Please be sure that the information you enter upon close is correct because you will not be able to change the close out information after the close.

Last updated: May 23, 2008