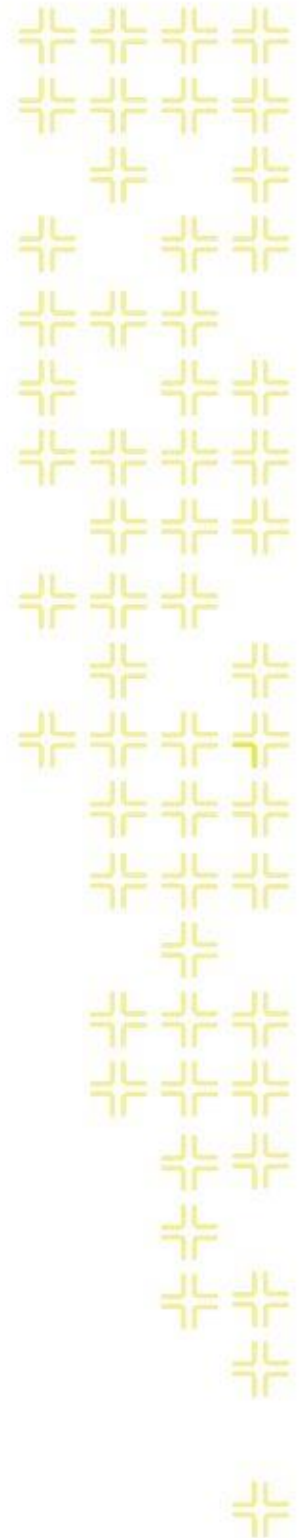




TRAINING GUIDE

# PM Beginner



# Beginning PM Training

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## Preventative Maintenance & Work Templates

The *Work PM/Template* module allows you to create Work Order Templates and scheduled Preventative Maintenance jobs (PMs). All information entered in this module will be carried over to work orders whether you are creating a WO template or a PM. That's why so much of the information in this module is exactly like the information that you enter in the *Work Orders* module. This even includes the data stored in the grids. The PM and Template are very similar to one another; the main difference is that one has a set schedule and the other can be used to generate a work order on demand by the user.

- PMs generate Work Orders automatically based on a schedule you define. They're useful for any regular job to be done on a routine basis.
- Work Order Templates don't generate Work Orders based on a schedule. Instead, they allow you to generate work orders quickly, whenever you wish. This is useful when you have regular activities that require complex entry of resource details, as most of the data in the template is pre-entered.

To help you create a preventative maintenance program, we'll go through several step-by-step examples. In the following pages, we'll walk you through three distinct types of PMs: One for a street sweep on a series of pavements, one for a bi-annual sewer pipe cleaning, and a group of PMs for a single fleet asset.

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## PM Type Checkboxes

The checkboxes in the header are used to indicate the type of record you are creating. PMs automatically generate on a schedule whereas Templates are made available to generate a Work Order at any time.

- A simple explanation of each checkbox is as follows:
  - The **WO Template** checkbox specifies that this PM/Template will not have a Schedule. It is to be used On-Demand on creation of a Work Order Record if desired.
  - The **PM Template** checkbox allows you to use this PM/Template record as a Template for creation of other PM Records.
  - The **Inactive** checkbox sets the PM to a Paused state. While this checkbox is checked the PM will not generate a Work on Schedule.
  - The **Scheduled PM** checkbox Activates the Schedule Fields in the Schedule Frame and Inactivates the WO Template checkbox.
  - The **Grouped PM** checkbox allows you to create one PM for multiple assets. You can then use the Grouped PM to generate a Work Order for each asset individually.
  - The **Tightly Linked PM** checkbox allows you to have a series of two or more sliding PMs that are generated based on a single, scheduled PM. Tightly linked PMs are not based on time (like a Scheduled PM), but instead are based on how often the initial PM is generated. When a Tightly Linked PM is generated along with a Scheduled PM, both PMs will be associated with a single Work Order.
  - The **Grouped Assets** checkbox allows you to create one PM for multiple assets. You can then group similar assets and generate work orders for each group that is defined.
  - The **Affected PM** checkbox works similarly to Tightly Linked PMs. The checkbox allows you to have one or multiple PMs generated based on a single, scheduled PM. When the scheduled PM generates the Affected PMs will generate as well.


## Creating a Street Sweeping PM

In the following example, we'll create a PM for a routine street sweeping program. This will help clean and maintain the pavements in your network. Since street routes in your network won't change on a regular basis, we'll be able to create a static asset list using a street subset. For this Demo, you'll see a configured PM/Template Dashboard Tab. You can also navigate to the Modules List and Select a module from there. Let's go over the steps in the example below.

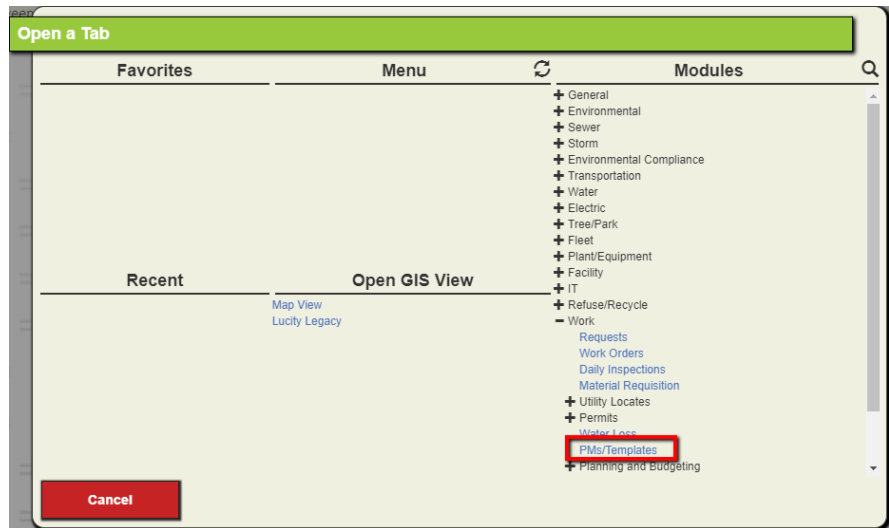
1. First, Select the Add Tab from the Application Tab.



2. To open the module select **Work > PM/Work Template** from the Modules menu.

3. Click the Add button  to enter *Add Mode*.

4. Create a unique code and



description in the PM/Template field of the header. Make the code easily recognizable.

- o For this example, we'll choose a PM/Template code of "T-SW-350" and a description of "Street Sweeping Route 350".

5. Check the "Scheduled PM" checkbox.

6. Select a Category and then a Main Task and Problem.

- o Be careful when selecting a Category; only those Categories that are an Inventory Items Classification in Category Setup will allow you to select assets in the asset grid.
- o Alternatively, Classification categories in Category Setup with folders like will not.
- o In this example, we've selected Category P60-Roads. This will allow us to add street segment assets to the asset grid.
- o We've also selected "Sweeping" as the Main Task and "Routine Maintenance" as the Problem.

7. Fill out other information you would like carried

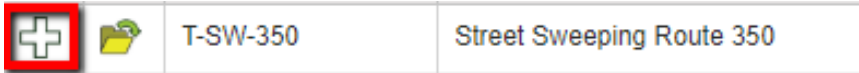
PM/Template *	PM/Template Text *				
T-SW-350	Street Sweeping Route 350				
Category *				<input type="checkbox"/> WO Template	<input type="checkbox"/> Scheduled PM
P60	Roads			<input type="checkbox"/> PM Template	<input type="checkbox"/> Grouped PM
Main Task				<input type="checkbox"/> Inactive	<input type="checkbox"/> Tightly Linked PM
STRT81	Sweeping				<input type="checkbox"/> Grouped Assets
Problem					<input type="checkbox"/> Affected PM
STRP000	Routine Maintenance				


over to the work order like the Supervisor.

## Adding Street Assets

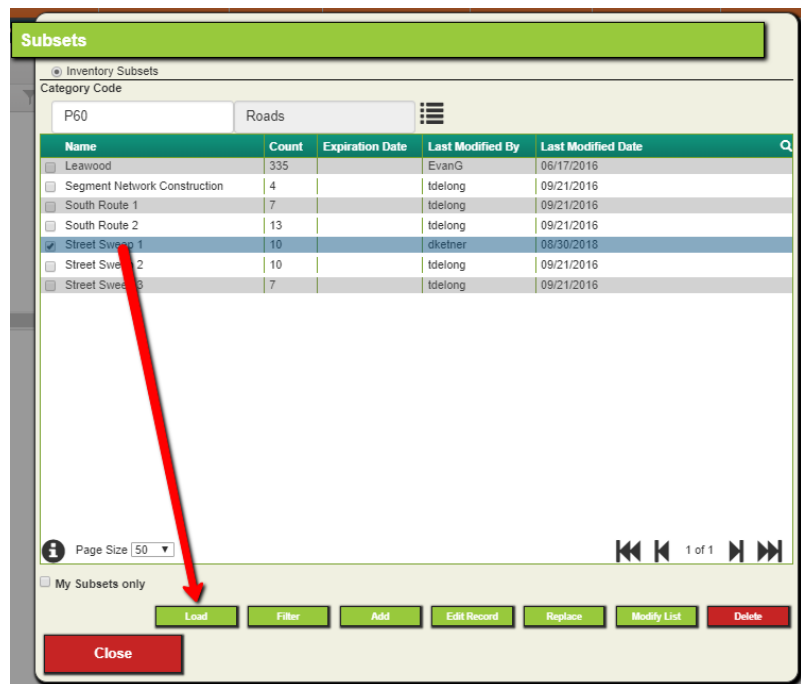
The **Assets** tab allows you to attach asset inventory records needed for the work order. For our street sweeping program, we'll attach a pavement subset. Subsets contain static lists of assets. Since street routes don't change on a regular basis, a subset is a good choice for this type of PM.

1. On our newly created Street Sweeping PM record Select the Expand Record sign to the far left of the record.



2. Select the PM Assets Grid Tab
3. Select the Subset Icon. 
4. Select your subset from the Subset Manager and click *Load*.

- In our example, we've selected a subset entitled "Street Sweep 1". This subset contains a predetermined list of streets on a static route. This type of subset is ideal for our street cleaning PM.




5. When the process is complete, all street segments in your subset will appear in the PM Assets grid.

Sequence No	System ID 1	Category	Category Text	Asset Type	Asset Type Text	Description
1	200414813190128	P60	Roads	7	Street Segment	LAMAR AVE
2	200414813180829	P60	Roads	7	Street Segment	LAMAR AVE
3	200414813182618	P60	Roads	7	Street Segment	LAMAR AVE
4	200414813184419	P60	Roads	7	Street Segment	LAMAR AVE
5	10108	P60	Roads	7	Street Segment	LAMAR AVE
6	14055	P60	Roads	7	Street Segment	W 110TH ST
7	14043	P60	Roads	7	Street Segment	W 110TH ST
8	10107	P60	Roads	7	Street Segment	WOODSON ST

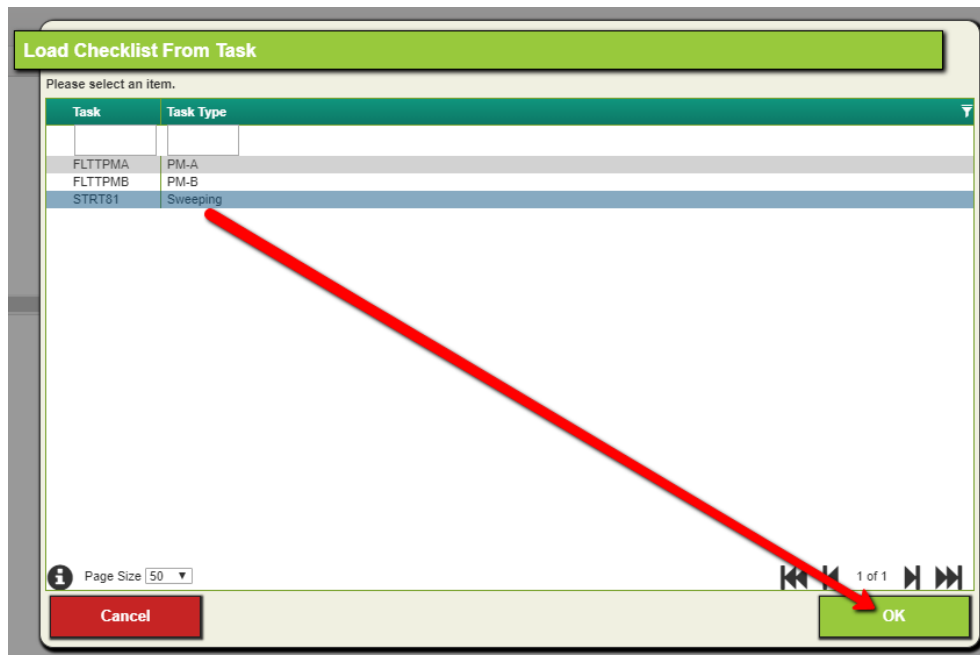
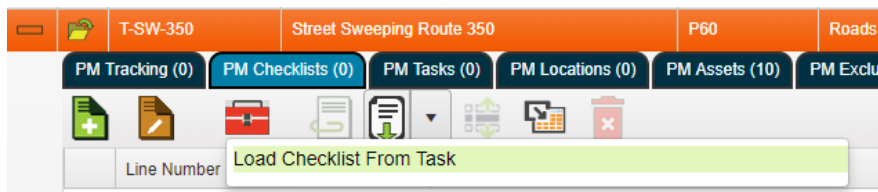
## Adding Checklist Items

Next, on the **Checklist** tab, we will include a list of tasks to be carried over to the work order. For our street sweeping task on this route, we've entered items of importance for the crew. For example, we've used this to perform DOT pre-trip inspection, Check engine oil level, Check components for wear and proper operation, etc.

1. To add a new checklist item, select the PM Checklists child grid tab and select the *Add Record button*.

 This allows you to add checklist items one at a time or you can load a predefined checklist assigned to the task. (To predefine a checklist: Work Task Setup > Task > Checklist items)

2. To load a checklist, select the toolkit and click on the Load Checklist From Task feature. This opens the Load Checklist From Task dialogue. For this example, select the Sweeping Task checklist and Click OK.





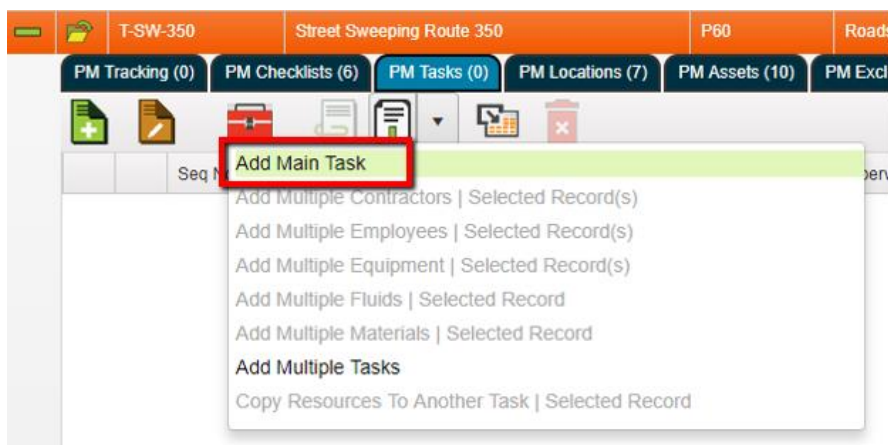
- On generation of the Work Order these checklist items will be added to the Work Order.

Line Number	Checklist
1	Perform Chassis DOT Pre-trip inspection.
2	Check engine oil level.
3	Check dirt shoes and dirt deflectors for wear and proper adjustment and operation.
4	Check main broom for wear and operation.
5	Check broom(s) for wear and operation.
6	Check conveyor for wear and alignment.

### Adding Tasks/Resources

On the **PM Tasks** grid tab, we'll include detailed information about the job including what the task is, who will work on it, and what equipment and materials need to be used to complete the task.

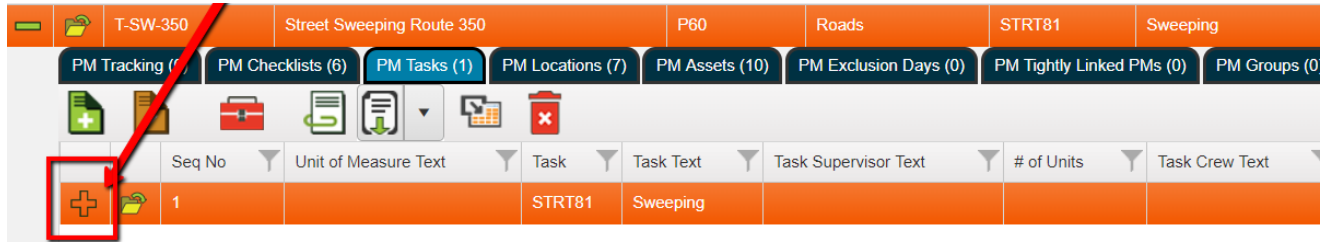
- Select the PM Tasks Child grid tab. 
- You have the option of selecting the Add Record  button in the PM Tasks grid or use the Toolkit to load the Main Task. The toolkit works best as long as your Main Task and your Resource Task are the same.



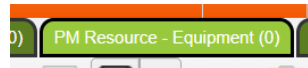
- In the example above, we've added the task, "STRT81 - Sweeping", to the record.




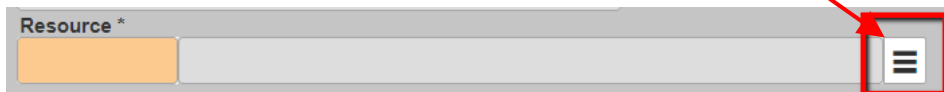
- To add Resources to the record, highlight the task you just added in the Resource Tasks grid and click on the Expand Record Icon to the far left of the record.



- Then select the PM Resource-Equipment grid tab.



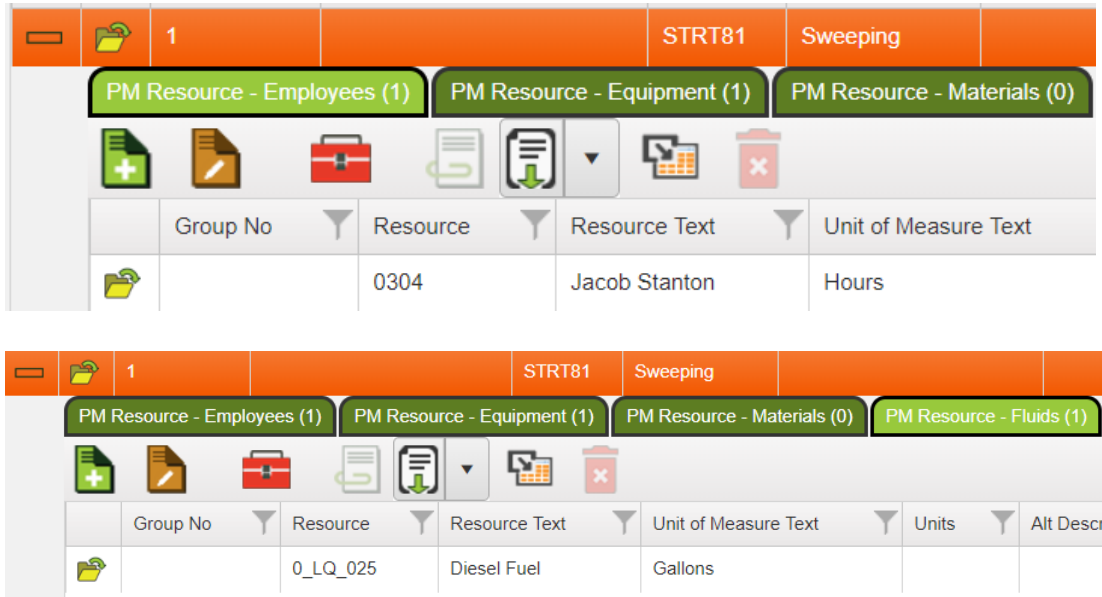
- Then Select the Add Record  button in the PM Resource – Equipment grid. The Work PM Resource – Equipment form opens. Then Select the Picklist Dropdown to the right of the Resource Field.



- Then Highlight the desired record and then click the Select Button
  - In our example, we've added a piece of equipment, the "003 - Street Sweeper Truck Elgin Megawind", to the record.



Our sample below displays the resources that we just added. In addition to the Street Sweeper Truck, we've also assigned an employee, Jacob Stanton, and included Diesel gasoline as a resource.



All of the information entered on this PM will be carried over to the generated work order. There, you'll be able to track employee hours, resource hours, and material amounts used.

### Scheduling your Street PM

The **Schedule** Frame within the PM Record is most important for scheduled PMs. Here, you can see where the Work Order generation schedule is set up.

1. The first step in scheduling work orders is to determine whether you would like to use a fixed or a floating schedule.
  - A **Fixed Schedule** generates a work order based on the Next Start Date. This type of PM will generate at a fixed interval regardless of when the last job was completed. For example, if you have a weekly work order that generates on a Monday, the next new work order will be generated the following Monday even if the last job wasn't finished until Thursday.
  - A **Floating Schedule** generates a work order based on the Last End Date. In the same example as above, if a work order was generated on Monday for your weekly task but you didn't finish the work until Thursday, your next work order will not generate until the following Thursday.
2. For our example, we'll demonstrate how to set up a fixed schedule. This will ensure that the route is swept on a regular basis.
  - Enter a Last Start Date. This is the last time the job was completed.

- Enter an Interval. This indicates how frequently you would like the job to be done. For our street sweeping PM, we'll set a bi-weekly interval.
- The Next due date will calculate automatically. This is the date that the Work Order will be generated. In the example below, a Work Order is due every two weeks, starting with the next one on September 1, 2018.

**Schedule**

Last Start Date: 8/18/2018  
 Start Date Interval: 2  
 Start Interval Code: 2 Weeks  
 Start Next Date: 9/1/2018  
 Days Ahead:

Last End Date:   
 End Date Interval:   
 End Interval Code:  Type:

Previous Odometer:   
 Odometer Interval:   
 Next Odometer:   
 Odometer Ahead:

Previous Hourmeter:   
 Hourmeter Interval:   
 Next Hourmeter:   
 Hourmeter Ahead:

Previous Other:   
 Other Interval:   
 Next Other:   
 Interval Ahead:

Status:  WO Number:  Initiated Date:

### Work Order Generation

Once you've saved your street sweeping PM, a work order will be generated on the next due date.

1. On the due-date, the PM status will be updated to read "2 – WO Generated". You'll also see the new Work Order Number and Initiated Date.

**Schedule**

Last Start Date: 9/1/2018  
 Start Date Interval: 2  
 Start Interval Code: 2 Weeks  
 Start Next Date: 9/15/2018  
 Days Ahead:


Last End Date:   
 End Date Interval:   
 End Interval Code:  Type:

Previous Odometer:   
 Odometer Interval:   
 Next Odometer:   
 Odometer Ahead:

Previous Hourmeter:   
 Hourmeter Interval:   
 Next Hourmeter:   
 Hourmeter Ahead:

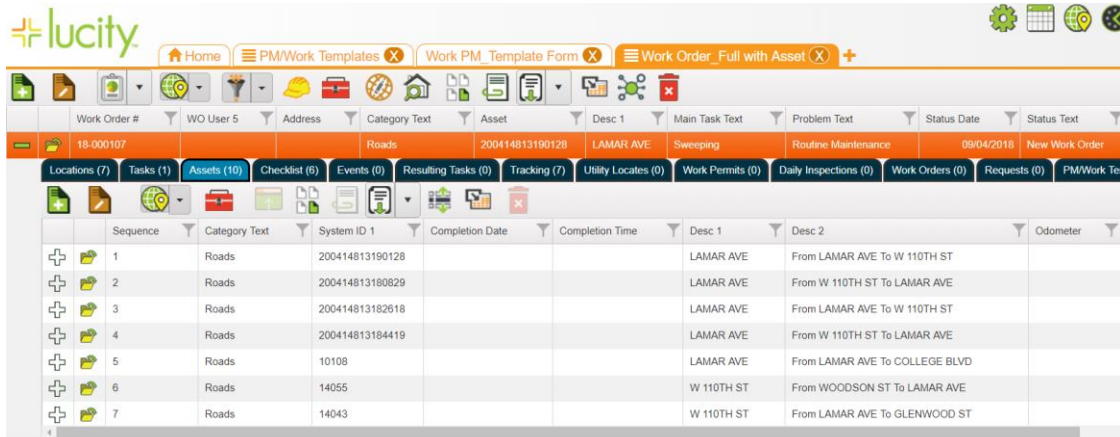
Previous Other:   
 Other Interval:   
 Next Other:   
 Interval Ahead:

Status: 2 WO Generated WO Number: 18-000107 Initiated Date: 9/4/2018

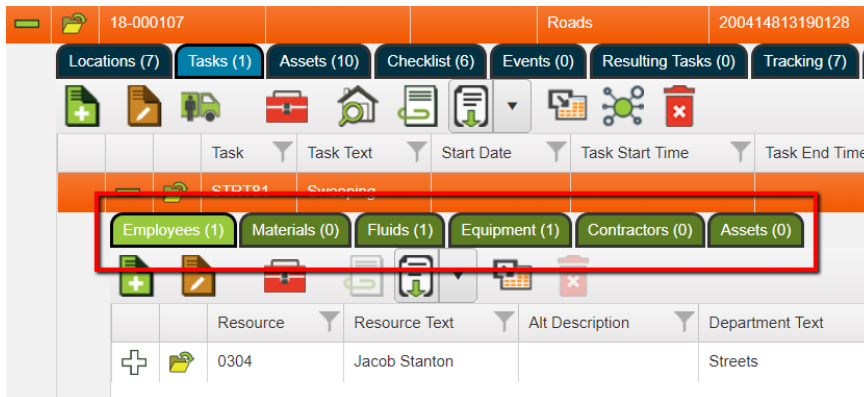
2. To access your generated work order, click on the Work Orders Grid tab. Highlight the record with a matching WO number and a status text of "New Work Order". Select the  Open in another View icon in the Work Orders grid to open the record (must be selected) in a Work Order View.

Work Order #	WO User	Address	Category	Asset	Desc	Main Task	Problem Text	Status Date	Status Text
18-000107	5		Roads	200414813190128	LAMAR AVE	Sweeping	Routine Maintenance	09/04/2018	New Work Order

- In the newly launched *Work Orders* View, you'll see the Category, Problem, and Main Task carried over from the PM. In addition, all of the assets from your street segment subset will appear on the Assets tab, as displayed below.



- If you open the Work Order's Tasks tab, you'll see the tasks that you added to the PM. To see the Resources that you added click the + sign to the left of Task Record to expand the record and then select the Resource Tab you would like to view.



Notes: \_\_\_\_\_

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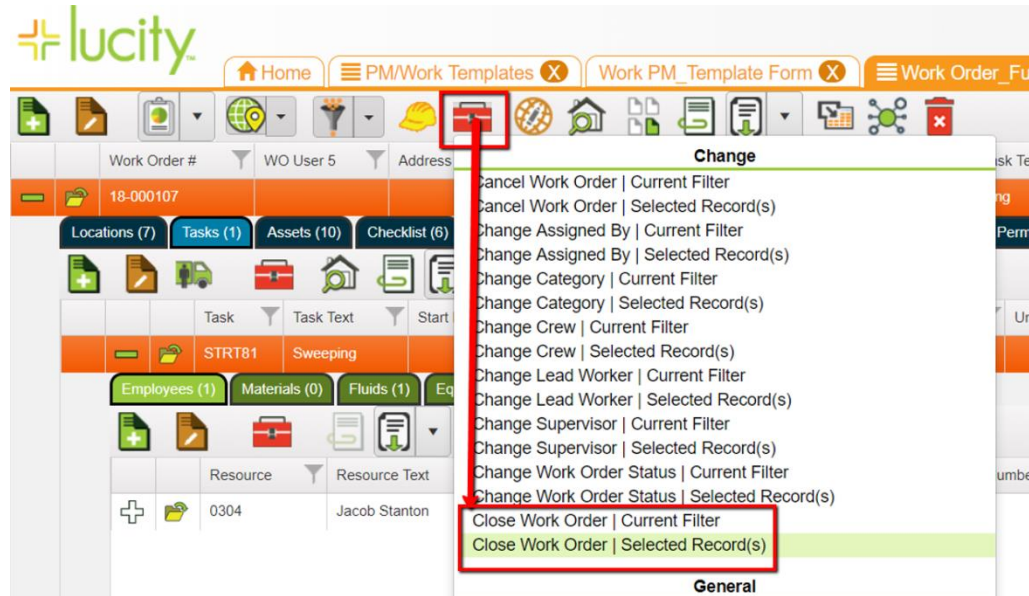
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- To complete this PM process, you'll need to close out the work order. Set the status to "999 – Complete" and enter an End Date. To perform this function Select the Toolkit at the Work Order Record Level and select the Close Work Order | Selected Record(s) Tool.



Notes: \_\_\_\_\_

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- Then select the status and enter the Start Date/Time and End Date/Time in the dialogue that opens as shown below.

The image shows a dialog box titled "Close Work Order | Selected Record(s)". It contains the following fields:

- Status:** A dropdown menu with a list icon to its right.
- Start Date:** A date picker field.
- Start Time:** Three input fields for HH, MM, and AM.
- End Date:** A date picker field.
- End Time:** Three input fields for HH, MM, and AM.
- Buttons:** A red "Cancel" button and a grey "OK" button.

- Now, go back to your street sweep PM Form. On the Scheduling Frame, you'll see that the status has been reset to "1 – Awaiting WO Generation". Additionally, you'll see that the Last Start Date, Last End Date, and Next due date have all been reset for the next work order generation. The PM status is updated to "1 – Awaiting WO Generation".

The image shows a "Schedule" form with the following fields and values:

- Last Start Date:** 9/1/2018 (highlighted with a red box)
- Last End Date:** 9/3/2018
- Start Date Interval:** 2
- End Date Interval:** (empty)
- Start Interval Code:** 2 Weeks
- End Interval Code:** Type
- Start Next Date:** 9/15/2018 (highlighted with a red box)
- End Next Date:** (empty)
- Days Ahead:** (empty)
- Status:** 1 Awaiting WO Generation (highlighted with a red box)
- WO Number:** (empty)
- Initiated Date:** (empty)

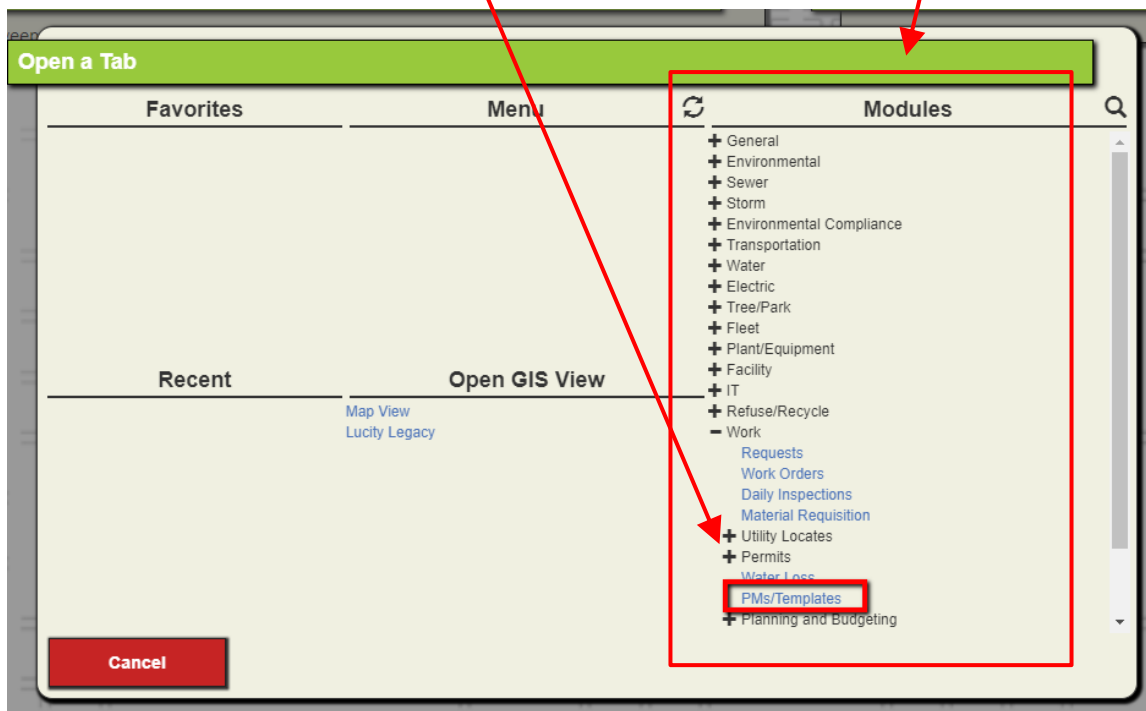
## Creating a Sewer Pipe Cleaning PM

In the following example, we'll create a PM for a bi-annual sewer pipe cleaning program. This will allow you to schedule cleaning and maintenance for your sewer network. Since sewer pipe cleaning is typically performed on a single District or basin at a time, we'll create our sample PM for all of the pipes in a single District. Since pipes leading in and out of a District may be changed, you'll want to use a dynamic asset list for this type of PM. To show you this feature, we'll demonstrate how to use a filter string in a PM.

1. Open the PM/Template View by Selecting the Add Tab Application Tab

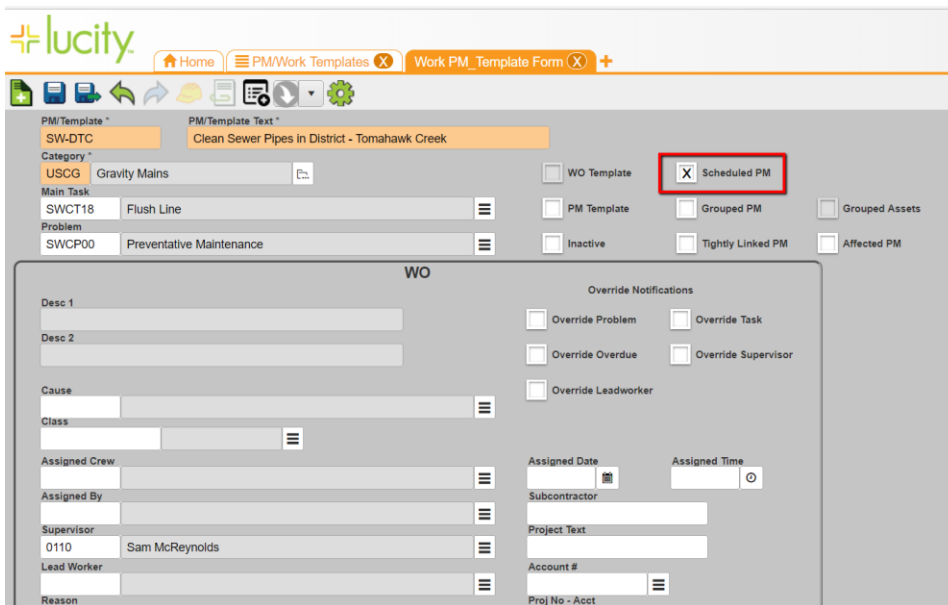


2. Then Open the PM/Templates View by selecting it from the Modules list on the Right side of the Open a Tab tool.



3. Click the Add button  to create a new PM Record.

4. Create a unique code and description in the PM/Template field of the header. Remember to choose a code that is easily recognizable.
  - o For this example, we've entered a PM/Template code of "SW-DTC" and a description of "Clean Sewer Pipes in District - Tomahawk Creek".
5. Select a Category, Main Task, and Problem from the pick lists.
  - o In this example, we've selected Category "USCG – Gravity Mains".
  - o We've also selected "Flush Line" as the Main Task and "Preventative Maintenance" as the Problem.
6. Select the Scheduled PM checkbox. As we mentioned earlier, this distinguishes the PM record from a Work Template.



7. Then Select Save and Close. 

Notes: \_\_\_\_\_

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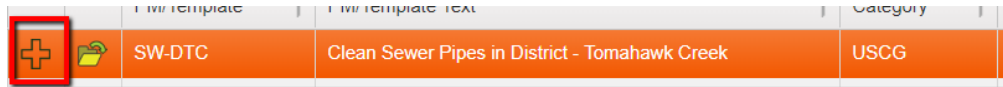
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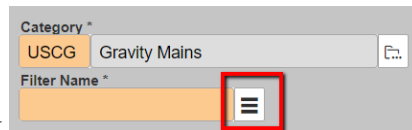
## Adding Sewer Assets


Remember, the **Assets** tab is used to include assets that are needed for the work order. We anticipate that pipes going in and out of a District will change over time, thus, we'll need to use a dynamic asset list instead of a static asset list. In order to include a dynamic asset list, we won't be adding individual asset records to this tab. Instead, we'll use the Filter Text String feature. Let's go over the steps to use this function.

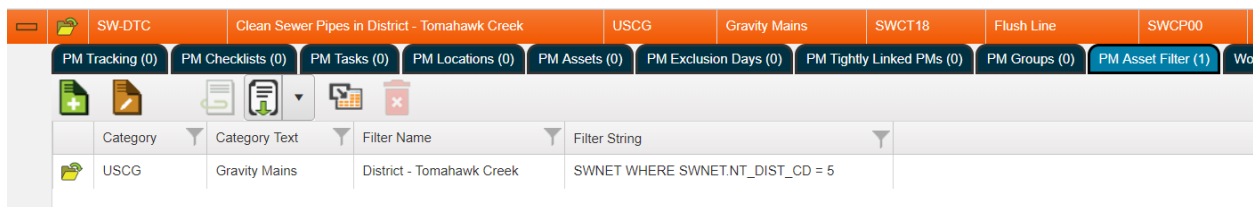
1. On our newly created Clean Sewer Pipes in District – Tomahawk Creek PM record select the Expand Down icon to the left of the record.



2. In the PM Asset Filter Tab **PM Asset Filter (0)**, click the Add Record  button and the Work PM\_Asset Filter Form dialogue will appear.



3. Select the Filter Name Filter List  icon.
4. Then highlight the filter to allow the system to dynamically update based on assets that meet the Filter criteria. The Where Clause will be displayed on the right-hand side of the box. Click *Select and then Save the Filter String*.
  - o In our example below, we've selected the filter, "District – Tomahawk Creek".
  - o The filter clause reads "SWNET WHERE SWNET.NT\_DIST\_CD = '5'", meaning that we have filtered for all sewer pipe records where the District Code equals 5.
  - o These filters are all created in the *Sewer Pipe Inventory* module.



5. After you have selected your filter, the Category and Filter Name will appear on the PM Assets Filter grid.

## Scheduling your Sewer PM

As we discussed earlier, the **Schedule** Frame within the PM Record is where you can see where the Work Order generation schedule is set up.

We'll once again use this frame to create our Work Order generation schedule. This time, we'll show you how to set up a Floating Schedule for your sewer pipe cleaning. Remember, a Floating Schedule generates a work order based on the Last End Date. This means that the work orders will be reset based on the last time the job was completed.

1. Enter the last date the sewer pipes were cleaned in the Last End Date field. The Last Start Date fields will be disabled.
2. Enter an interval. The Next due date will be automatically calculated by the system.
  - o For our example, we've chosen to set up a bi-annual sewer cleaning schedule using a two year interval.
3. The status will read "1 – Awaiting WO Generation" until the due date is reached. At that time, the status will be updated to read "2 – WO Generated" and the WO Number and Initiated Date will appear. You can see an example of this change below:

The screenshot shows the 'Schedule' frame with the following fields and values:


Last Start Date	Start Date Interval	Start Interval Code	Start Next Date	Days Ahead
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Last End Date</b> 9/1/2016	<b>End Date Interval</b> 2	<b>End Interval Code</b> 4 Years	<b>End Next Date</b> 9/1/2018	
Previous Odometer	Odometer Interval	Next Odometer	Odometer Ahead	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Previous Hourmeter	Hourmeter Interval	Next Hourmeter	Hourmeter Ahead	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Previous Other	Other Interval	Next Other	Interval Ahead	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<b>Status</b> 1 Awaiting WO Generation	WO Number	Initiated Date		
	<input type="text"/>	<input type="text"/>		

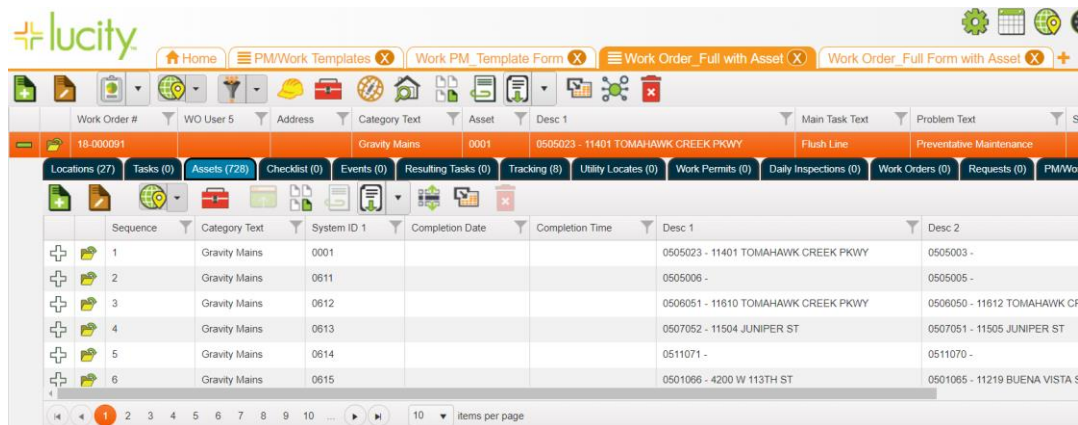
The screenshot shows the 'Schedule' frame with the following fields and values:

Last Start Date	Start Date Interval	Start Interval Code	Start Next Date	Days Ahead
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Last End Date</b> 9/1/2016	<b>End Date Interval</b> 2	<b>End Interval Code</b> 4 Years	<b>End Next Date</b> 9/1/2018	
Previous Odometer	Odometer Interval	Next Odometer	Odometer Ahead	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Previous Hourmeter	Hourmeter Interval	Next Hourmeter	Hourmeter Ahead	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Previous Other	Other Interval	Next Other	Interval Ahead	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<b>Status</b> 2 WO Generated	WO Number	Initiated Date		
	18-000091	9/2/2018		

## Work Order Generation

Since we set up a dynamic asset list using the Filter String feature, the exact assets are not determined until the work order is generated. When that occurs, the system reads the filter string and retrieves the matching records.

- In our example, we chose a filter for all sewer pipes located in District – Tomahawk Creek. When the system generates a work order, it will check the *Sewer Pipe Inventory* database to find all pipes in that District.
1. Open the Work Orders tab in the PM and highlight the New Work Order, then select the  Open In Another View Button from the Work Order Grid Toolbar.
  2. Then expand the Work Order record and Select the Assets Tab
  3. On the Work Order’s Assets tab, you’ll see all of the pipes listed. Based on our filter, these are only the pipes located in District – Tomahawk Creek.



4. Also note that the Category, Problem, and Main Task from the PM have all been carried over to the generated work order.
5. Now, close your work order by updating the status to “999 – Complete” and entering an end date.
6. The PM’s status will be reset to “1 – Awaiting WO Generation” and the Next due date will be adjusted.

**Schedule**

Last Start Date	Start Date Interval	Start Interval Code	Start Next Date	Days Ahead
<b>Last End Date</b> 9/5/2018	End Date Interval 2	End Interval Code 4 Years	<b>End Next Date</b> 9/5/2020	
Previous Odometer	Odometer Interval	Next Odometer	Odometer Ahead	
Previous Hourmeter	Hourmeter Interval	Next Hourmeter	Hourmeter Ahead	
Previous Other	Other Interval	Next Other	Interval Ahead	
<b>Status</b> 1 Awaiting WO Generation	WO Number	Initiated Date		

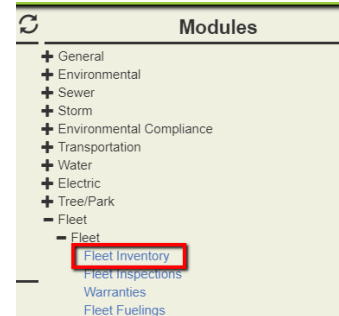
## Creating a Fleet PM A

In this example, we'll create a series of PM tasks for a single fleet asset. We intend to perform an oil change every 3,000 miles, an oil and transmission fluid change every 15,000 miles, and an oil, transmission, and radiator flush every 30,000 miles. In this example we will select the Fleet Asset from the Fleet Inventory and generate a PM from the Inventory Record.

1. Navigate to the Fleet Asset. Open the Add Tab from the Application Tab



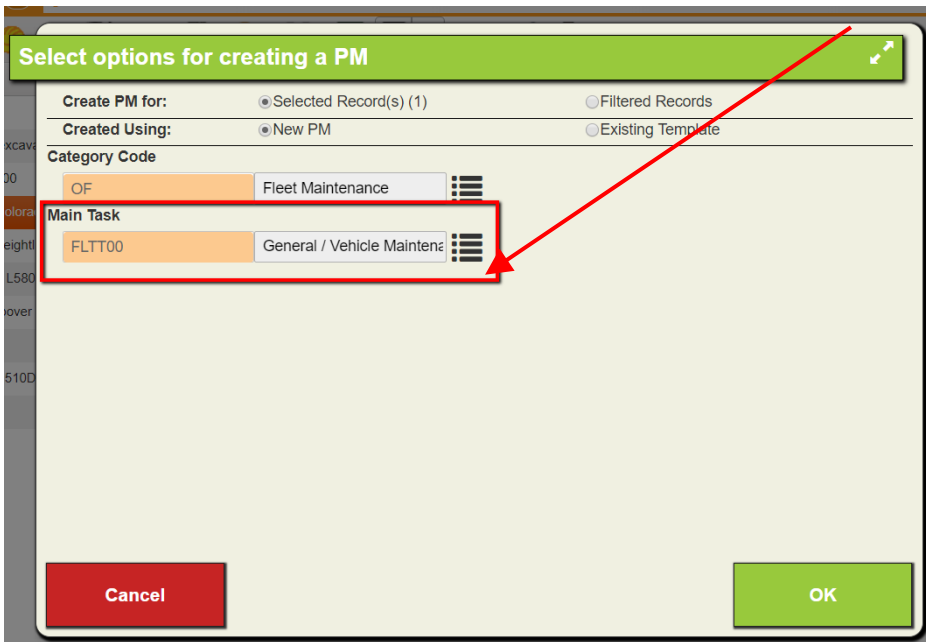
Then Select **Fleet>Fleet>Fleet Inventory** from the Modules List on the Right.



2. In this example, we need to create a series of PMs on an Individual Fleet Asset. Use a filter to locate fleet asset record "0008- Pick Up, Mini 4x4 Chevrolet Colorado".


		0008	Pick Up, Mini 4x4 Chevrolet Colorado	Operational	Vehicle	Chevrolet	2006	Colorado
--	--	------	--------------------------------------	-------------	---------	-----------	------	----------

3. Click the create new PM/Template icon on the Fleet Inventory Grid toolbar. The Category and Asset ID will be carried over to the *PM/Template* module. Select the Main Task of "FLTT00 – General/Vehicle Maintenance" from the Main Task Pick List. Then Select OK.



4. Then Select OK on the Select Options for Creating a PM Tool.

5. The system will create the PM ID AND Description from the Asset ID and Main Task ID. The PM Description will also be generated by the system from the Asset Description and the Main Task Description. We will update these fields for this example.
  - In our example on the following page, we've titled the PM, "PM A – Pick Up, Mini 4x4 Chevrolet Colorado-General / Vehicle Maintenance A".
6. Select a Main Task and Problem from the pop-up pick lists by clicking on the field caption buttons.
  - You can see below that the Fleet Maintenance category has been carried over from the related asset.
  - Then, we chose "General/Vehicle Maintenance" as the Main Task and "Routine Maintenance" as the Problem.

7. Uncheck the WO Template Checkbox and Check the Scheduled PM Checkbox. This distinguishes the Scheduled PM from a Work Template.
8. Click  to save the record.

Notes: \_\_\_\_\_

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## Scheduling your Fleet PM A

Once again, the most important frame for scheduled PMs is the Schedule Frame on the Work PM\_Template Form. On this frame, you can see where the Work Order generation schedule is set up. Earlier we discussed setting up this oil change PM A to generate every 3,000 miles. Complete the steps below to create the appropriate Work Order generation schedule based on meter readings.

1. On the Schedule frame enter a Previous Odometer reading in the Previous Odometer field.
  - We've entered 52,956 miles, the odometer reading found on the *Fleet Inventory* record.
2. Then, enter the interval – 3,000 miles. The odometer reading for when the PM is due will be calculated automatically by the system.

Schedule				
Last Start Date	Start Date Interval	Start Interval Code	Start Next Date	Days Ahead
<input type="text"/>	<input type="text"/>	Type <input type="text"/>	<input type="text"/>	<input type="text"/>
Last End Date	End Date Interval	End Interval Code	End Next Date	
<input type="text"/>	<input type="text"/>	Type <input type="text"/>	<input type="text"/>	
Previous Odometer	Odometer Interval	Next Odometer	Odometer Ahead	
52956	3000	55956	<input type="text"/>	
Previous Hourmeter	Hourmeter Interval	Next Hourmeter	Hourmeter Ahead	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Previous Other	Other Interval	Next Other	Interval Ahead	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Status	WO Number	Initiated Date		
<input type="text"/>	<input type="text"/>	<input type="text"/>		

3. Then Save and Close the Form.

## Creating a Fleet PM B

We discussed creating a series of PMs for a single fleet asset. As we've already established the first PM-A for an oil change at 3,000 miles, we'll move on to PM-B. As we mentioned earlier, this PM will be for an oil and transmission fluid change to be generated every 15,000 miles.

1. Navigate back to the *Fleet Inventory* record, click to create a new PM for this Asset.
2. The Fleet category and Asset code will be automatically carried over by the system.
3. Click OK in the dialogue box.

**Continue with Creation?**

001: One or more of the selected assets are already attached to a PM Template. Would you like to include these assets on the PM Template anyway? (Assets not already on a PM Template will be added either way.)

001:

001:

4. Click on Folder to open Template Form.

	0008-FLTT00	Pick Up, Mini 4x4 Chevrolet Colorado-General / Vehicle Maintenance	OF	Fleet Maintenance	FLTT00	General / Vehicle Maintenance
--	-------------	--	----	-------------------	--------	-------------------------------

5. Uncheck the WO Template Checkbox and Check the Scheduled PM Checkbox. This distinguishes the Scheduled PM from a Work Template.
  - In our example, we've named the PM/Template "PM B – Pick Up, Mini 4x4 Chevrolet Colorado-General / Vehicle Maintenance B".
  - You can see below that the Fleet Maintenance category has been carried over from the related asset.
  - Then, we chose "General/Vehicle Maintenance" as the Main Task and "Routine Maintenance" as the Problem.

PM/Template *		PM/Template Text *			
PM B		Pick Up, Mini 4x4 Chevrolet Colorado-General / Vehicle Maintenance B			
Category *		<input type="checkbox"/> WO Template		<input checked="" type="checkbox"/> Scheduled PM	
OF Fleet Maintenance		<input type="checkbox"/> PM Template		<input type="checkbox"/> Grouped PM	
Main Task		<input type="checkbox"/> Inactive		<input type="checkbox"/> Tightly Linked PM	
FLTT00	General / Vehicle Maintenance			<input type="checkbox"/> Grouped Assets	
Problem				<input type="checkbox"/> Affected PM	
FLTP79	Routine Maintenance				

6. Save the record. 

Notes: \_\_\_\_\_

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## Scheduling your Fleet PM B


We'll now set up PM B's Work Order generation schedule in the same manner as we did for PM A.

1. On the Schedule frame enter a Previous Odometer reading in the Previous Odometer field.
  - We've entered 52,956 miles, the odometer reading found on the Fleet Inventory record. Then, enter the interval – 15,000 miles.
2. The odometer reading for when the PM is due will be calculated automatically by the system.

Schedule				
Last Start Date	Start Date Interval	Start Interval Code	Start Next Date	Days Ahead
<input type="text"/>	<input type="text"/>	Type	<input type="text"/>	<input type="text"/>
Last End Date	End Date Interval	End Interval Code	End Next Date	
<input type="text"/>	<input type="text"/>	Type	<input type="text"/>	
Previous Odometer	Odometer Interval	Next Odometer	Odometer Ahead	
52956	15000	67956	<input type="text"/>	
Previous Hourmeter	Hourmeter Interval	Next Hourmeter	Hourmeter Ahead	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Previous Other	Other Interval	Next Other	Interval Ahead	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Status	WO Number	Initiated Date		
<input type="text"/>	<input type="text"/>	<input type="text"/>		

## Creating a Fleet PM C

Now that you've set up PMs A and B for your fleet asset, let's complete the process by creating PM C. Remember, this will be for an oil change, transmission fluid change, and radiator flush performed at 30,000 miles. For this PM, we'll repeat all of the steps we followed for the first two PMs.

- Navigate back to the Fleet Inventory record, click  to create a new PM for this Asset.
- The Fleet category and Asset code will be automatically carried over by the system.
- The system will create the PM ID AND Description from the Asset ID and Main Task ID. The PM Description will also be generated by the system from the Asset Description and the Main Task Description. We will update these fields for this example.
  - For this example, we've named the PM/Template "PM C – Pick Up, Mini 4x4 Chevrolet Colorado-General / Vehicle Maintenance C".
  - We've selected "Maintenance" as the Main Task and "Oil, Transmission Fluid, Radiator Flush" as the problem.



- Uncheck the WO Template Checkbox and Check the Scheduled PM Checkbox. This distinguishes the Scheduled PM from a Work Template.

- Save the record. 


### Scheduling your Fleet PM C

We'll now set up PM-C's Work Order generation schedule in the same manner as we did for PM-A and PM-B.

1. On the Schedule frame enter a Previous Odometer reading in the Previous Odometer field.
  - We've entered 52,956 miles, the odometer reading found on the Fleet Inventory record. Then, enter the interval – 30,000 miles.
2. The odometer reading for when the PM is due will be calculated automatically by the system.

### Viewing PMs Related to an Asset

In previous versions of Lucity you could create a relationship between multiple PMs to an Asset Record. This process is slightly different in Lucity 18R2. To view associated PM/Template records do the following.

1. Navigate to the Asset Record you would like to review for related PM records.
2. Highlight the Record and select the Expand Record icon .

- Select the PM/Work Templates Tab to see the related PM records to the highlighted asset.



PM/Template	PM/Template Text	Category	Category Text	Main Task	Main Task Text	Problem	Problem Text	WO Template	PM Template
PM C	Pick Up, Mini 4x4 Chevrolet Colorado-General / Vehicle Maintenance	OF	Fleet Maintenance	FLTT00	General / Vehicle Maintenance			<input type="checkbox"/>	<input type="checkbox"/>
PM B	Pick Up, Mini 4x4 Chevrolet Colorado-General / Vehicle Maintenance	OF	Fleet Maintenance	FLTT00	General / Vehicle Maintenance			<input type="checkbox"/>	<input type="checkbox"/>
PM A	Pick Up, Mini 4x4 Chevrolet Colorado-General / Vehicle Maintenance	OF	Fleet Maintenance	FLTT00	General / Vehicle Maintenance			<input type="checkbox"/>	<input type="checkbox"/>

## Work Order Generation

### PM A

Based on the schedules you set up for your three PMs, work orders will be generated for this fleet asset when the vehicle's odometer reads 15,956 miles, 67,956 miles, and 82,956 miles (for PMs A, B, and C, respectively). In order for these work orders to be generated, you'll need to record increased odometer readings. We can perform this task by creating a fleet fueling record or Travel Log

- On the *Fleet Inventory* record, Select the Expand Record icon and then select the Fuelings tab. The following window will appear.
- As you can see, the previous odometer reading (52,956) is listed in the Eval frame of the Fleet Inventory record.

**Eval**

Current Date 1/26/2017	Current Odometer 52956	Current Hourmeter	Current Other Meter		
Start Date	Starting Odometer	Starting Hourmeter	Starting Other Meter		
Amount Used Date	Used Odometer	Used Hourmeter	Used Other Meter	Used Cost	Total Maint Cost
0	52956	0	0	0	0
	Maximum Odometer	Maximum Hourmeter	Maximum Other Meter	Maximum Cost	
	250000				

- You'll want to enter the current reading and fuel used. The system will automatically calculate the fluid cost and difference between the odometer readings. To enter a reading select the Fuelings Tab




from the Asset Inventory Grid. Then Select the Add Record Button.


- In our example, we've entered an odometer reading of 56,000 miles. This reading is in excess of the 3,000 mile generation requirement for PM-A.

Fleet *		Pick Up, Mini 4x4 Chevrole	
Employee		Fueling ID	
Michael		12345	

Current Readings		Previous Readings		Fuel/Cost
Date *	Time	Previous Date	Previous Time	Date Differ
9/2/2018	05:14 PM	1/26/2017	05:50 AM	584
Odometer		Previous Odometer		Odometer
56000		52956		30
Fuel Amount				Hourmeter
25				
Cost Per Unit				Other Mete
2.9				
Total Fuel Cost				
72.5				
Fuel				
0_LQ_026	Unleaded - Regular			

4. Save and close the record. 
5. The Status on PM-A's Schedule Frame has now been updated to read "2 – WO Generated". The WO Number and Initiated Date are also listed.

Schedule				
Last Start Date	Start Date Interval	Start Interval Code	Start Next Date	Days Ahead
Last End Date	End Date Interval	End Interval Code	End Next Date	
Previous Odometer	Odometer Interval	Next Odometer	Odometer Ahead	
52956	3000	55956		
Previous Hourmeter	Hourmeter Interval	Next Hourmeter	Hourmeter Ahead	
Previous Other	Other Interval	Next Other	Interval Ahead	
Status	WO Number	Initiated Date		
2 WO Generated	18-000230	9/5/2018		

6. To view information about the generated Work Order, open the Work Orders tab. You'll see the new Work Order listed. Use the Open in another View tool to open the Work Order in a Work Order View. 
7. The new Work Order contains the same Category, Problem, Main Task, Asset, and Checklist that you included in the PM-A record.

## Work Order Form

Work Order # 18-000230 Status 2 New Work Order

Category \* OF Fleet Maintenance

Asset ID 0008

Desc 1 0008 Pick Up, Mini 4x4 Chevrolet Colorado

Desc 2 Vehicle

Problem FLTP79 Routine Maintenance

Priority

Main Task FLTT00 General / Vehicle Maintenance

## Assets Tab

Sequence	Asset Type	Category	Completion Date	Asset ID	Desc 1
1	Fleet	Fleet Maintenance		0008	Pick Up, Mini 4x4 Chevrolet Colorado


## Checklist Tab

Line Number	Checklist	Completed
1	Change Engine Oil	<input type="checkbox"/>
2	Check and top off Fluids	<input type="checkbox"/>
3	Check Tire Pressure	<input type="checkbox"/>
4	Check Windshield Wipers - Replace as needed	<input type="checkbox"/>
5	Check all lights - brake, Headlights, turn signals, dome	<input type="checkbox"/>

- Click on the PM/Work Templates tab of the Work Order to see the associated Oil Change PM-A.

PM/Template	PM/Template Text	Category	Category Text	Main Task	Main Task Text
PM A	Pick Up, Mini 4x4 Chevrolet Colorado-General / Vehicle Maintenance	OF	Fleet Maintenance	FLTT00	General / Vehicle Maintenance

- To close the Work Order:

- You must first enter an Odometer reading for the Fleet Asset.
  - Go to the Asset tab for the work order and open the Work Order Assets Form. 

- Enter Odometer Reading in the Odometer Field.  For this example, enter 56,025.

<b>Category *</b>	OF Fleet Maintenance	<b>Completion Date</b>	9/5/2018	<b>Completion Time</b>	05:58 PM	
<b>Asset Type</b>	Fleet	<b>Asset Rec #</b>	0008	<b>Odometer</b>	56025	
<b>Desc 1</b>	Pick Up, Mini 4x4 Chevrolet Colorado				<b>Units</b>	
<b>Desc 2</b>	Vehicle				<b>WO Cost</b>	0
<b>PM Description</b>	Pick Up, Mini 4x4 Chevrolet Colorado				<b>Sequence</b>	1

- Then, open the Work Order Form, enter an End Date and set the Status to “999 – Complete” and any other Required Fields.

<b>Work Order #</b>	18-000230	<b>Status</b>	999 Complete	<b>Status Date</b>	9/5/2018	<b>Sta</b>	06:
<b>Work Order</b>							
<b>Category *</b>	OF Fleet Maintenance	<b>Comment From Request</b>					
<b>Asset ID</b>	0008						
<b>Desc 1</b>	0008 Pick Up, Mini 4x4 Chevrolet Colorado						
<b>Desc 2</b>	Vehicle						
<b>Problem</b>	FLTP79 Routine Maintenance	<b>Start Date</b>	9/5/2018				
<b>Priority</b>		<b>End Date</b>	9/5/2018				
<b>Main Task</b>	FLTT00 General / Vehicle Maintenance	<b>Department</b>	OF Fleet				

10. PM A's status has now been updated to read “1 – Awaiting WO Generation”.


Schedule					
<b>Last Start Date</b>	<b>Start Date Interval</b>	<b>Start Interval Code</b>	<b>Start Next Date</b>	<b>Days Ahead</b>	
<b>Last End Date</b>	<b>End Date Interval</b>	<b>End Interval Code</b>	<b>End Next Date</b>		
9/5/2018					
<b>Previous Odometer</b>	<b>Odometer Interval</b>	<b>Next Odometer</b>	<b>Odometer Ahead</b>		
56025	3000	59025			
<b>Previous Hourmeter</b>	<b>Hourmeter Interval</b>	<b>Next Hourmeter</b>	<b>Hourmeter Ahead</b>		
<b>Previous Other</b>	<b>Other Interval</b>	<b>Next Other</b>	<b>Interval Ahead</b>		
<b>Status</b>	<b>WO Number</b>		<b>Initiated Date</b>		
1 Awaiting WO Generation					

## PM B


Now that we've generated and closed a Work Order for the Oil Change PM-A, we'll once again increase the odometer reading for our fleet asset by adding another fueling record. This time, we'll increment the mileage so that both PMs A and B will be generated.

1. On the *Fleet Inventory* record, Fueling tab, right click and select *Add Record*.
  - Remember, you'll want to track the fuel used, its cost, and the new odometer reading. The system will automatically calculate the increase.
  - For our example, we've entered a new odometer reading of 68,000 miles. This will trigger both PMs A and B to generate Work Orders.
2. As you can see below, the status for both PMs have now been reset to "2 – WO Generated".
  - Because these PMs are independent of each other, two separate Work Orders exist: 16-176099 and 16-176098.

### PM A

Status	WO Number	Initiated Date
2	WO Generated	18-000231
		9/5/2018 

### PM B

Status	WO Number	Initiated Date
2	WO Generated	18-000232
		9/5/2018 

3. Now, consider the issue with this methodology. If you consistently follow your PM Routine for Oil Changes every fifth time you reach the Mileage threshold to generate a New Work Order you will generate 2 Work Orders. One for just an Oil Change and one for an Oil Change and to Change the Transmission Fluid.
  - You have 2 options, Update both Work Orders or cancel the PM-A Oil Change Only Work Order.
  - For this example, I will cancel the Work Order Generated by PM-A
  - The status on both PMs will be reset to "1 – Awaiting WO Generation" and the odometer readings will update as well.
  - We will cover how to avoid this issue in the Advanced PM Training by Demonstrating How to create a Tightly Linked PM record.

## Creating a Work Template

Here we'll use a Template to set up a daily job that is complex because of the number of resource entries required for Project Accounting. Overall, the setup for a Work Template is similar to the setup for a PM.

The screenshot shows a software interface for creating a Work Order (WO) Template. The interface is divided into several sections:

- PM/Template \*:** SWQ WO Template
- PM/Template Text \*:** SWQ Template
- WO Template:**  (checked)
- Scheduled PM:**
- Grouped PM:**
- Inactive:**
- Out-of-Service:**
- PM Template:**
- Grouped Assets:**
- Affected PM:**
- Tightly Linked PM:**

**WO Section:**

- Category \*:** PMMG4 Storm WQ Management Plan
- Problem:** PMMGP4\_01 Broken / Damaged
- Priority:** [Empty]
- Main Task:** PMMGT4\_01 Repair
- Cause:** [Empty]
- Supervisor:** [Empty]
- Assigned Crew:** [Empty]
- Lead Worker:** [Empty]
- Reason:** [Empty]
- Department:** OC Compliance
- Division:** [Empty]
- Maintenance Zone:** [Empty]

**Schedule Section:**

Last Start Date	Start Date Interval	Start Interval Code	Start Next Date	Days Ahead
[Empty]	[Empty]	[Empty]	[Empty]	[Empty]
Last End Date	End Date Interval	End Interval Code	End Next Date	
[Empty]	[Empty]	[Empty]	[Empty]	
Previous Odometer	Odometer Interval	Next Odometer	Odometer Ahead	
[Empty]	[Empty]	[Empty]	[Empty]	


1. The Template, like the PM, must be given a Code and Description (a unique name). This is important because when creating a Work Order from a Template, you'll need to be able to identify your Template in a list.
2. Note that the WO Template checkbox is marked. This turns off the scheduling function for this record. This is the only thing that distinguishes the work template from a PM.
3. Now, you can enter all of the information you want to appear on the Work Order. This may include any Employee, Equipment, or Material Resources, or any other field to be carried over to the generated Work Order.
4. In this example, this organization Installs Meters for two different Cities and bills each city for the install. On the Tasks/Resources tab in this template, one employee was entered two times; once for each City he routinely works. We've also entered corresponding Project Numbers. This way, a Work Order containing many entries with many complex Project Numbers doesn't need to be created each and every day.

- We've also entered an Alt Description. This description will appear in the Resource grid on the generated Work Order allowing you to easily identify the record.
  - Make sure that the corresponding Project Number is populated.
5. Now, the information you want to appear on the Work Order will appear each and every time you need it.


## Using Work Templates

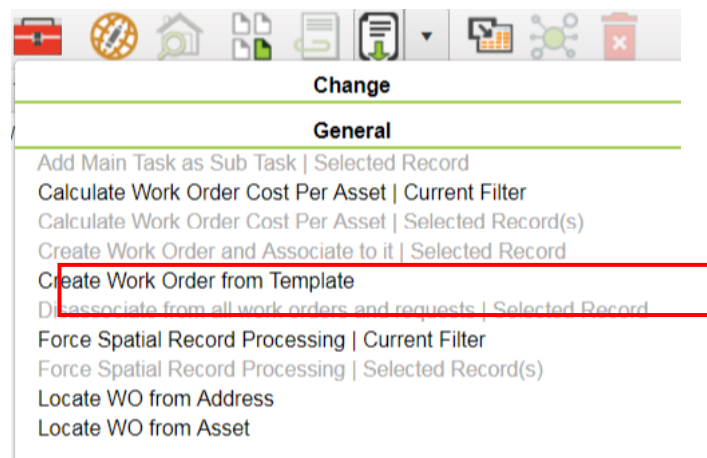
Work Templates are set up just like PMs; however, they do not have generation schedules and the Scheduled PM checkboxes are not marked. You can easily generate a Work Order from a Template as often and whenever you wish from either the *PM/Template* or *Work Orders* modules.

From the *PM/Template* module View:

- Highlight in the grid the Template you want to generate a Work Order from.
- Click the Create New Work Order button  at the top of the view toolbar.
- A work order will be generated based on the currently displayed template.

From the *Work Orders* module View:

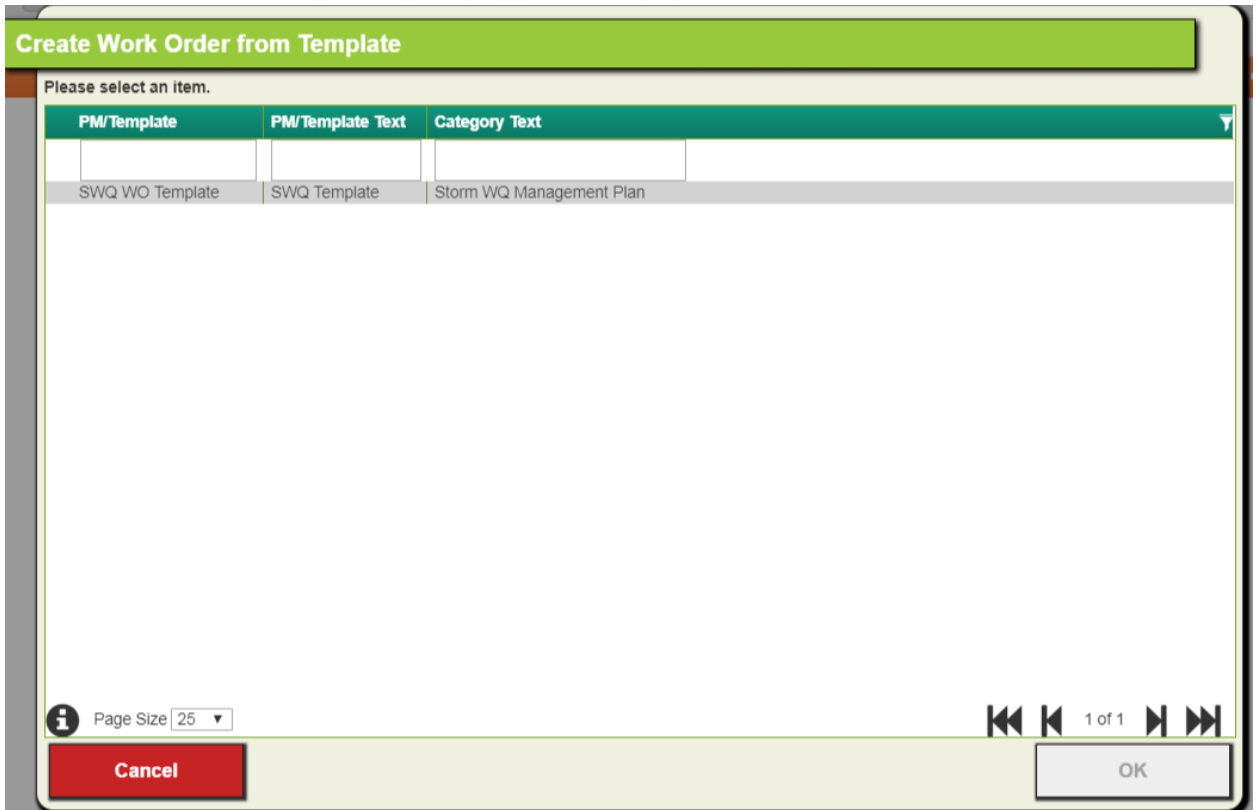
- Click the Toolkit button  at the top of the view toolbar.



- You'll find several tools listed in the toolkit. Execute the tool, "Create Work Order From Template".



- A list of all available Work Templates will appear. Highlight the Template you want to use then Select OK and a Work Order will be generated.



Notes: \_\_\_\_\_

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