

Part 2.1: Maintenance Functions – PM

Calem Enterprise Training

Summer 2022

Austin, Texas



Goals

I know how to setup PM

I know how to create a time schedule for PM Plans

I know how to create a PM Plan

I know how to create a PM Round and Round Stops

I know how to create a PM for Round or Inspection

I know how to create a PM by meter readings/triggers

I know how to generate WO to test PMs

I know how to populate PM module via excel files

Asset and
Location

Maintenance
Schedules

Contract and SLA

Work Order

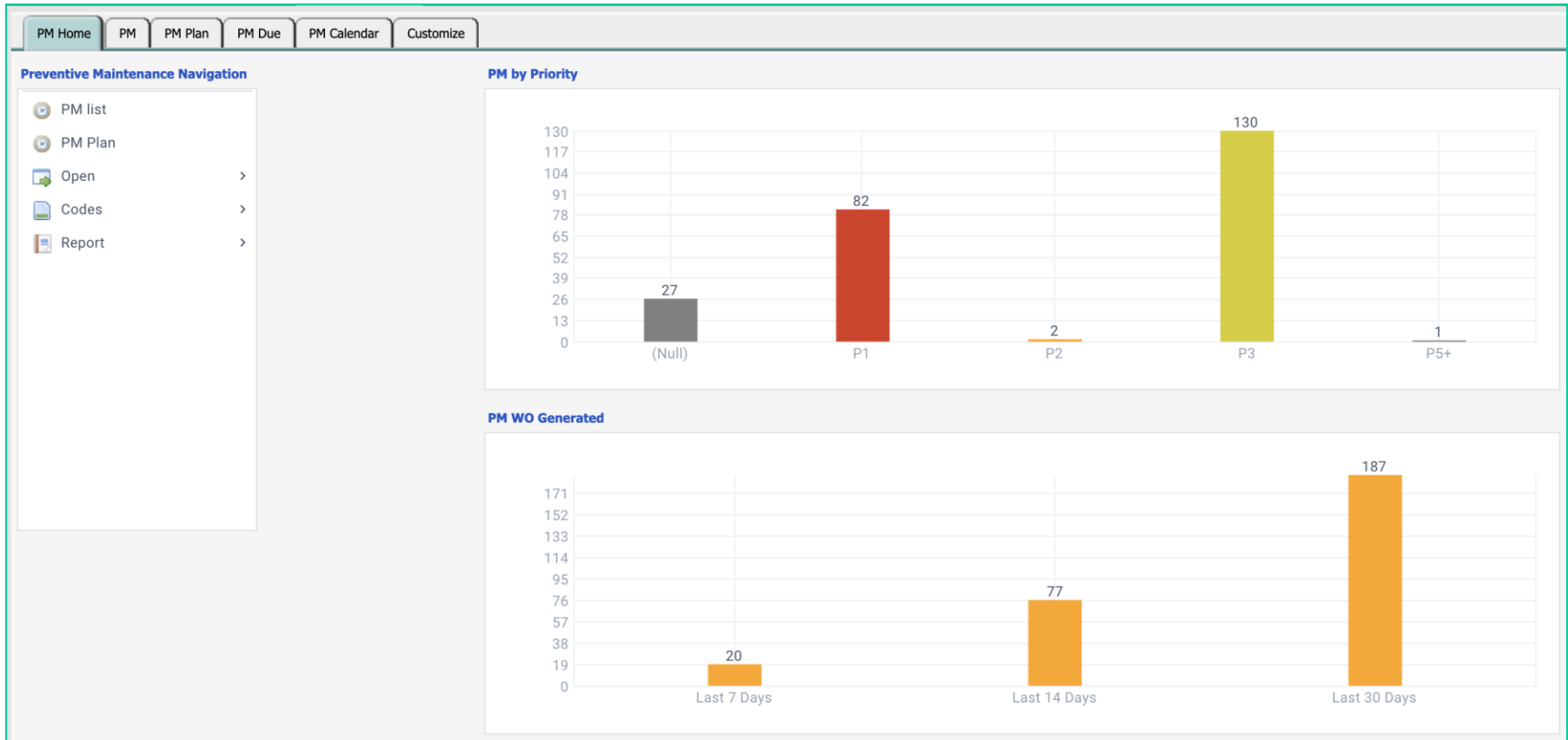
Service Request

Change Management

Product – Preventive Maintenance (PM)

CalemEAM

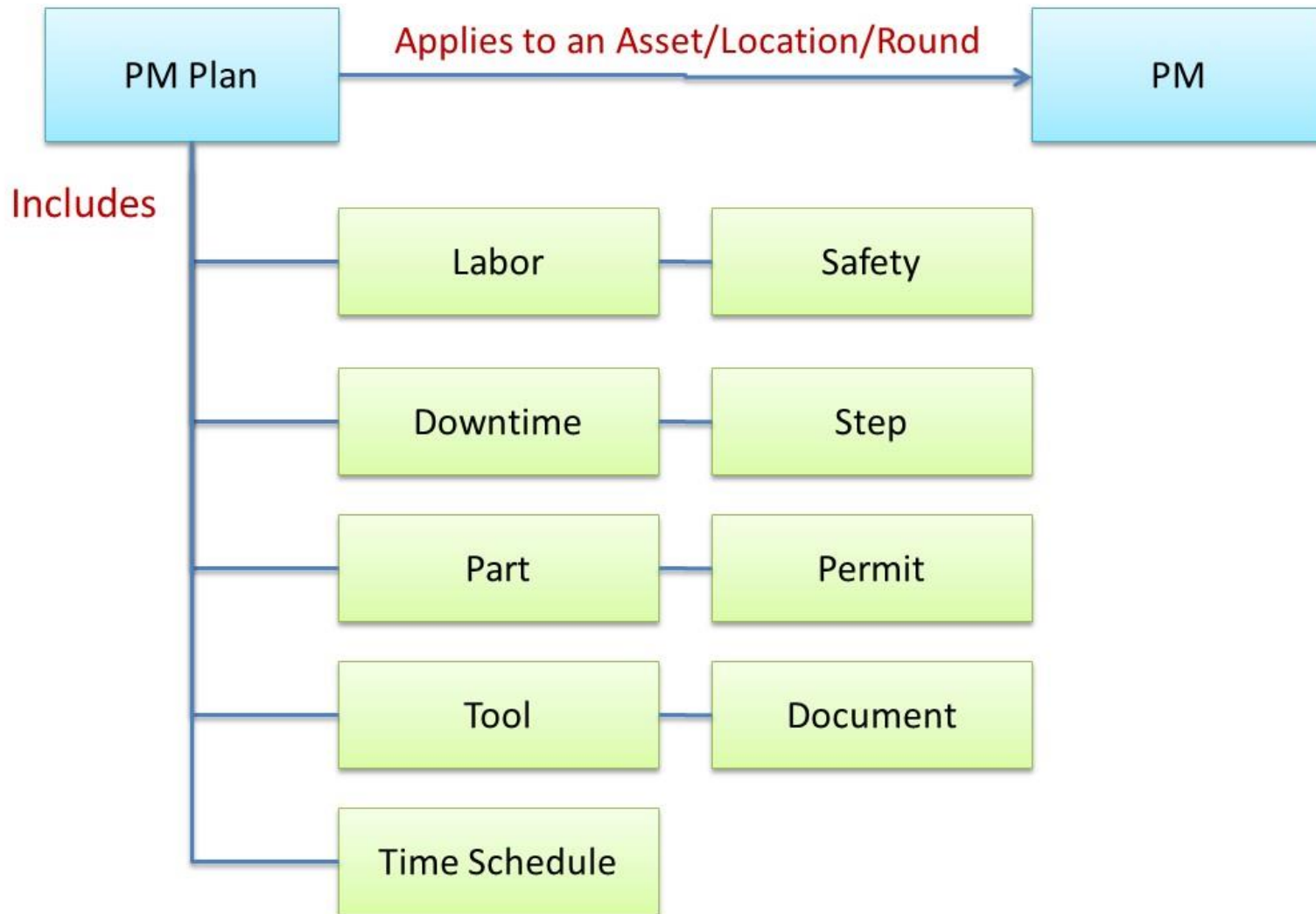
- Work Orders are generated from PMs



PM Module – PM Plan

CalemEAM

- PM Plan is a job specification






Schedules	PM Plan Attributes
By time	Fixed repeat schedule
By time and standing WO	Floating repeat schedule
By condition	Fixed meter readings
By condition and standing WO	Floating meter readings
By time and meter	Fixed repeat sched/meter
By time/meter and standing WO	Floating repeat sched/meter
No schedule	Meter trigger
No schedule	On-demand Template
No schedule	Boilerplate Safety/Steps


PM Module – Create PM Plan (1)

CalemEAM

[PM Plan list List](#) > PM Plan Create

PM Plan


 Save  Cancel  Customize

 Ready to save changes.


Plan #:

Subject:

Status:

PM type: 

Category:

Specialty: 

Duration (hours):

Schedule type:


Release type:

Review reqd?: ☐

Reference?: ☐

Site access?: ☐

No default steps?: ☐

Meter Set: 

Sort #:

☐ Weekly ☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thur ☐ Fri ☐ Sat

☐ Every weeks on

☒ Repeat schedule:

☐ Day of week

☒ Day of month

☐ Every days

Description:

PM Module – Create PM Plan (2)

CalemEAM

- **Plan #:** the PM Plan number
- **Subject:** a short description
- **Status:** Active. An inactive PM Plan is ignored in work order generation
- **PM Type:** a type code. It's optional.
- **Category:** default is Preventive maintenance
- **Specialty:** a work order specialty code
- **Duration (hours):** estimated hours taken for perform this PM Plan
- **Schedule type:** default is by time. It can be by meter, or by time and meter.
- **Release type:** fixed for release by time regardless of work order completion status. "Floating" release type will not generate work orders till previous work orders from this PM are completed.
- **Review required:** acceptance of completed work order is required before a work order can be closed.
- **Reference:** a PM plan of reference cannot be used directly in PMs. They can be cloned and used in PMs.

PM Module – Create PM Plan (3)

CalemEAM







- **Site access:** PM Plan can be site specific if checked. Use “PM | Open | PM Plan Site” to assign sites that can use this PM Plan if checked.
- **No default steps:** do not copy boilerplate steps (see <http://www.calemeam.com/calemcustomers-2/boiler-plate-steps-in-pm-plan>)
- **Meter set:** if the PM Plan is a meter collection job (see <http://www.calemeam.com/calemcustomers-2/meter-reading-rounds>)
- **Sort #:** a custom sort field for sorting PM Plans
- **Repeat schedule:** the frequency of repeat of this PM Plan. This repeat schedule will be used in the PMs of the PM Plan unless overwritten in PMs.
- **Description:** A long description of the PM Plan.

PM Module – PM Plan Form

CalemEAM

Plan Main	PM	Labor	Material	Step	Document	Cloned	Log	Permit	Customize
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PM Plan (1 of 118)

      Customize

Plan #:

Subject:

Status:	<input type="text" value="Active"/>	PM type:	
Category:	<input type="text" value="Emergency"/>	WO type:	
Schedule type:	<input type="text" value="By time and meter"/>	Duration (hours):	<input type="text" value="20"/>
Release type:	<input type="text" value="Floating"/>	Sched code:	<input type="text" value="M 4"/>
Repeat schedule:	<input type="text" value="Every 4 months on First Sun"/>		
Labor hours:	<input type="text" value="2"/>	Downtime hours:	<input type="text" value="2"/>
PM pattern:	<input type="text"/>	PM seq:	<input type="text"/>
Review reqd?:	<input checked="" type="checkbox"/>	Reference?:	<input type="checkbox"/>
Site access?:	<input checked="" type="checkbox"/>	Parent plan:	
No default steps?:	<input type="checkbox"/>		
Sort #:	<input type="text" value="desc 001 (new)"/>		

Description:

PMs using the PM Plan

Plan Main
PM
Labor
Material
Step
Document
Cloned
Log
Permit
Customize

PM Plan (1 of 118)

Customize

Plan #: 0911-METER-300

Subject: Meter-based PM job for 0911 (new)

PM list (8)

Customize

<input type="checkbox"/>	PM #	Asset #	Location	Subject	Status	Next due	Last modified
<input type="checkbox"/>	0911-2345-Meter-300	0911-2345	B02.HQ	Meter-based PM job for 0911 (new)	Active	3/27/16 7:00 ...	12/16/15 10:35 P...
<input type="checkbox"/>	0911-METER-300-001	JJ.CA.AC-001	OH-CA-001	Meter-based PM job for 0911 (new)	Active	12/15/15 7:00..	7/28/15 1:54 PM ...
<input type="checkbox"/>	0911-METER-300-155	200-001	CA.Building2	Meter-based PM job for 0911 (new)	Active	10/15/15 7:00..	6/2/15 11:08 AM...
<input type="checkbox"/>	0911-METER-300-325	100HP-3	OFFICE.IT	Meter-based PM job for 0911 (new)	Active	12/15/15 7:00..	7/28/15 1:54 PM ...
<input type="checkbox"/>	0911-METER-300-811	100HP-014	B02.HQ	Meter-based PM job for 0911 (new)	Active		12/11/13 10:37 A...
<input type="checkbox"/>	0911-METER-300-991	401402-16	OFFICE.IT	Meter-based PM job for 0911 (new)	Active	12/15/15 7:00..	7/28/15 1:54 PM ...
<input type="checkbox"/>	0911-METER-300-995	forum_998	OFFICE.IT	Meter-based PM job for 0911 (new)	Active		12/11/13 10:58 A...
<input type="checkbox"/>	AR1-MT-TRIGGER-001...	AR1-AUX-PORT	CA.BuildingMain-...	Meter-based PM job for 0911 (new)	Active	12/15/15 7:00..	7/28/15 1:54 PM ...

PM Plan – Labor and Downtime

CalemEAM

Plan Main

PM

Labor

Material

Step

Document







Cloned

Log

Permit

Customize

PM Plan (1 of 118)






Customize

Plan #:

Subject:




Labor (1)



Customize

<input type="checkbox"/>	Job role	Hours	Crew size	Note
<input type="checkbox"/>	IT.Applications	2		

Downtime (1)



Customize







<input type="checkbox"/>	Hours	Note	Last modified
<input type="checkbox"/>	2		2/3/13 2:38 PM ...


PM Plan – Part & Tool


CalemEAM

Plan Main	PM	Labor	Material	Step	Document	Cloned	Log	Permit	Customize
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PM Plan (1 of 118)

      Customize

Plan #:  0911-METER-300




Subject:  Meter-based PM job for 0911 (new)

PM part (1)

   Customize

<input type="checkbox"/>	Item	Qty	Uom	Stock type	Note
<input type="checkbox"/>	AS-SHIP-2350	2		Other	AS model ship

PM tool (1)

   Customize







<input type="checkbox"/>	Item	Qty	Uom	Stock type	Note
<input type="checkbox"/>	LATITUDE-D820	2		Stock	Dell Latitude D820


PM Plan – Safety & Step


CalemEAM

Plan Main	PM	Labor	Material	Step	Document	Cloned	Log	Permit	Customize
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PM Plan (1 of 118)

      Customize

Plan #:  0911-METER-300





Subject:  Meter-based PM job for 0911 (new)

PM safety (2)

    Customize

<input type="checkbox"/>	Seq	Description
<input type="checkbox"/>	10	Make sure all power is turned off.
<input type="checkbox"/>	20	Put up signs

PM step (3)

    Customize







<input type="checkbox"/>	Seq	Description
<input type="checkbox"/>	10	Clean up env and place a tag.
<input type="checkbox"/>	20	Drain and refill
<input checked="" type="checkbox"/>	30	Take readings


PM Plan – Document & Comment


CalemEAM

Plan Main	PM	Labor	Material	Step	Document	Cloned	Log	Permit	Customize
-----------	----	-------	----------	------	----------	--------	-----	--------	-----------






PM Plan (1 of 118)

      Customize

Plan #:  0911-METER-300





Subject:  Meter-based PM job for 0911 (new)

PM document (1)

    View file  Customize

<input type="checkbox"/>	Seq	Document	Note	Last modified
<input type="checkbox"/>	10	upload_tpl_samples.zip		6/26/15 10:40 AM...

Comment (0)

    Customize

<input type="checkbox"/>	Comment	Last modified
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PM Plan – Permits

CalemEAM

Plan Main

PM

Labor

Material

Step

Document

Cloned

Log

Permit

Customize

PM Plan (1 of 118)

Customize

Plan #: 0911-METER-300

Subject: Meter-based PM job for 0911 (new)






Permit (2)


Customize


PM Module – PM Round

CalemEAM

PM Round (1 of 2)

     Customize

PM Round:  ARNG-01 **Inactive?:** ☐


Site:  [ARNG](#)








Status to Child: ☒

Note:

Last modified: Sun, 7/1/18 6:55 PM Central **Modified by:** [Calem Eam](#)

Time created: Sat, 6/30/18 2:19 PM Central **Created by:** [Calem Eam](#)

 **PM Round Stop (4)**

 Add Asset  Add Location      Customize

<input type="checkbox"/>	Seq	Asset Tag	Location	Plan #	Site
<input type="checkbox"/>	10		Bld1.Flr1		ARNG
<input type="checkbox"/>	20		Main-Loc-002		ARNG
<input type="checkbox"/>	30		SERVICE BUILDING		ARNG
<input type="checkbox"/>	40		SGARD-91		ARNG

- Use PM Round to perform PMs for multiple assets/locations
- Each asset or location represents a round stop to perform PM
- Each asset/location will be generated as a child work order for the PM

PM Module – Create PM (1)

CalemEAM

PM is the application of a PM Plan to an Asset/Location

- PM = PM Plan + Asset/Location + PM Round (Optional)
- Set “PM Plan”, an “Asset” or a “Location”
- Set “Next due” to generate WO from the PM
- Set “Days Ahead” to generate WO ahead of due time. Default is 7 days.

[PM list List](#) > PM Create

PM

Save Cancel Customize

The field value for the lookup is not valid.: Plan #

Plan #: **Status:** Active

Asset or Location

Asset #:

Location:

Other

Service site:

Next due: **At:** Central

Days ahead:

Last released:

Cost center:

Contract:

Release count:

Last done:

Dept:

Account:

PM Module – Create PM (2)

CalemEAM

- Set PM Round to do maintenance for a set of assets | locations.
- Set Meter Set for taking readings of a set of meters.
- Set SLA contract for PMs to be controlled by contract's validity

[PM list List](#) > PM Create

PM

Save Cancel Customize

The field value for the lookup is not valid.: Plan #

Plan #: **Status:** Active

Asset or Location (not both)

Asset Tag:

Location:

Other

Service site:

Next due: Central

Days ahead:

Last released:

Cost center:

SLA Contract:

Release count:

Last done:

Dept:

Account:

PM Round: **Meter Set:**

PM Module – Create PM (3)

CalemEAM

- Set Work Order Release Info: Status, Assignment
- Overwrite schedule in PM Plan only when necessary

Work Order Release

Priority:	P3	Is inspection?:	<input type="checkbox"/>
WO Status:	Approved	Inspect child assets:	<input type="checkbox"/>
Origination:	PM	Requester:	
Assigned to:		Team assigned:	
Enforce finish:	<input type="checkbox"/>	SLA Time:	
Value:		SLA UOM:	Days
Pre-Due email?:	<input type="checkbox"/>	Pre-Due UOM:	Days
Pre-Due value:		Days to change:	
To Released status:	<input type="checkbox"/>	PM?:	<input checked="" type="checkbox"/>
Ignore blackout?:	<input type="checkbox"/>	PM in-store?:	<input type="checkbox"/>
Schedule overwrite?:	<input type="checkbox"/>		

Repeat schedule:











- ☐ Weekly ☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thur ☐ Fri ☐ Sat
- ☐ Every weeks on Sun
- ☒ Every months on
 - ☒ Day of week First Sun
 - ☐ Day of month 1
- ☐ Every days

Start from: Until:

PM Form - Inspection

CalemEAM

- You may add more assets to the inspection list
- A single PM work order with in its inspection list
- WO cost will be tracked at the PM asset or location

PM Main	Inspection	Meter	Sequence	Work Order	Log	Customize
PM (3 of 147)						
     Customize						
PM #:  0911-METER-300-155						
Subject: Meter-based PM job for 0911 (new)						
PM Asset (0)						
    Customize						
<input type="checkbox"/>	Asset #	Asset note	Note	Last modified		
No re						

PM Round vs Inspection

CalemEAM

PM Round	PM Inspection
A PM WO and Child PM WO for each round stop	A PM WO with assets in inspection list
Round stop can be locations	Inspection lists with assets
Child PM WO can be assigned to users	Multiple users can be assigned to a WO
Costs are reported to round stop location/asset	Costs are reported to PM asset or location

- See <http://www.calemeam.com/calemcustomers-2/when-to-use-pm-inspection-and-rounds>

PM Form - Meter

CalemEAM

- Release by meter reading interval
- Release by meter triggers

PM Main

Inspection

Meter





Sequence


Work Order

Log

Customize

PM (3 of 147)







 Customize

PM #:

Subject:

PM Meter (0)









☐

Meter #	Release by meter	Reading interval	Reading released	Reading due
No r				

PM trigger (0)



 Customize

☐

Meter #	Trigger	Last modified
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PM Form - Sequence


CalemEAM

- Release other PMs with the PM
- Exclude other PMs when this PM is released

PM Main	Inspection	Meter	Sequence	Work Order	Log	Customize
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PM (3 of 147)

     Customize

PM #:  0911-METER-300-155





Subject: Meter-based PM job for 0911 (new)

PM Sequence (0)

    Customize

<input type="checkbox"/>	Seq	Child PM	Note	Last modified
No results found.				

PM Excluded (0)

    Customize

<input type="checkbox"/>	Child PM	Note	Last modified
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PM Form – Work Orders

CalemEAM

Work Orders generated from the PM

PM Main

Inspection

Meter

Sequence

Work Order

Log

Customize

PM (3 of 147)

Customize

PM #: 0911-METER-300-155

Subject: Meter-based PM job for 0911 (new)

Work Order (7)






Customize


#	Wo #	Asset #	Location	Status	Priority	Time requested	Need by	Last modified
1	64991	200-001		New	P1	11/29/13 8:19 PM...	1/15/14 8:00 PM E..	2/22/16 6:14 PM ...
2	69758	200-001		New	P1	3/4/14 7:51 PM E...	4/15/14 8:00 PM E..	2/22/16 6:14 PM ...
3	74097	200-001		New	P1	5/28/14 9:43 AM ...	7/15/14 8:00 PM E..	2/22/16 6:14 PM ...

Audit Log of PM

PM Main	Inspection	Meter	Sequence	Work Order	Log	Customize
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PM (3 of 147)

     Customize

PM #:  0911-METER-300-155

Subject: Meter-based PM job for 0911 (new)

PM Log (0)




  Customize


#	Table name	Field name	From	To	User	Time
No results found.						



Get PM Calendar for a time period



[PM Calendar Report List](#) > PM Calendar Report Create

PM Calendar Report

 Save  Cancel  Customize

 Value is required: Start date

Start date:  

End date:  

Add filter?: ☐

Title:

CalemEAM

- Generated from PMs based on repeat schedules
- Start date and duration

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PM Calendar – Annual

CalemEAM

2015	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
FloatingPM					100HP-006							
FloatingPM					100HP-007							
FloatingPM					SHIP-TEST-001							
NHI-Testing					100HP-005							
CG-001					DELL-SVR-0004							
CG-001					SHIP-TEST-001							
CG-F01					DELL-SVR-0004							
FLOAT-001					100HP-013							
FLOAT-001					DELL-SVR-0004							
WKLY-CG-001					100HP-008							
BiMonthlyPM					Sensor-001							
FIXED-001					DELL-SVR-0004							
Bi-Weekly_zc					100HP-015							
Bi-Weekly_zc					45678							
Bi-Weekly_zc					FARADAY							
Bi-Weekly_zc					HBE-TEST-002							
Bi-Weekly_zc					MySite-01400							
WKLY-BEARING-REP					100HP-3							
WKLY-BEARING-REP					401402-16							
WKLY-PM					233-455-901							
WKLY-PM					401402-17							
VEHICLE-M3				200-001								
VEHICLE-M3				7890677								

- Data Upload Part 3: PM
 - <http://www.calemeam.com/calemcustomers-2/data-upload-part-3-preventive-maintenance>
- Review PM Plan schedules in JSON
 - Option to upload with JSON schedules
 - Option to upload without JSON schedules for manual setup

- **Create a PM Plan**
 - Set a repeat schedule of every three months on first Monday
 - Add Labor, Downtime, Part, and Tool
 - Add Safety and Step, Doc, and Permit
- **Create a PM Round**
- **Creating a PM**
 - Set initial due time
 - Set a PM to generate 30 days before its due time
 - Launch server process to manually generate work orders to verify
- **PM Calendar Generation for the year**

Next Module – Contract & SLA

CalemEAM

Asset and
Location

Maintenance
Schedules

Contract and SLA

Work Order

Service Request

Change Management

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